



FINAL

# Human Health and Community Safety Study Plan

*May 2021*





# MARTEN FALLS FIRST NATION ALL SEASON COMMUNITY ACCESS ROAD

*Human Health and Community Safety Study Plan*

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## Revision History

Rev #	Date	Revision Description
Draft	May 2020	Submitted "Human Health and Community Safety Study Plan" to the Agency.
Final	May 2021	Revised to address federal and provincial agency comments.



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# MARTEN FALLS FIRST NATION ALL SEASON COMMUNITY ACCESS ROAD

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**ALL SEASON COMMUNITY ACCESS ROAD**

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## Acronyms and Abbreviations

Agency, the ...	Impact Assessment Agency of Canada
CAR .....	Community Access Road
CEM .....	Conceptual Exposure Model
COPCs.....	Chemicals of Potential Concern
EA .....	Environmental Assessment
GBA+ .....	Gender Based Analysis Plus
HHRA.....	Human Health Risk Assessment
IA .....	Impact Assessment
IAA.....	<i>Impact Assessment Act</i>
IS .....	Impact Statement
km .....	kilometre
LSA .....	Local Study Area
MECP .....	Ontario Ministry of the Environment, Conservation and Parks
MFFN.....	Marten Falls First Nation
OCAP .....	Ownership, Control, Access, Possession
PDA .....	Project Development Area
RSA .....	Regional Study Area
SAR .....	Species at Risk
TISG .....	Tailored Impact Statement Guidelines
ToR.....	Terms of Reference
VC.....	Valued Component







# 1. Introduction

The Proponent of the Community Access Road (CAR or the Project) is Marten Falls First Nation (MFFN), a remote First Nation community in northern Ontario located at the junction of the Albany and Ogoki rivers, approximately 430 kilometres (km) from Thunder Bay, Ontario. The MFFN community is proposing an all-season Community Access Road that will connect the MFFN community to Ontario's provincial highway network (Highway 643) to the south via the existing Painter Lake Road. MFFN, as the Proponent of the Project, has formed a MFFN CAR Project Team that includes MFFN CAR Community Member Advisors and MFFN CAR Project Consultants who act with input, guidance and direction from the MFFN Chief and Council.

This document outlines the Study Plan for the Human Health and Community Safety discipline to support a coordinated Impact Assessment (IA) required for Project review by the Impact Assessment Agency of Canada (the Agency) under the federal *Impact Assessment Act* (IAA) and Environmental Assessment (EA) required for Project review by the Ontario Ministry of the Environment, Conservation and Parks (MECP) under the Ontario *Environmental Assessment Act*.

## 1.1 Federal and Provincial Terminology

The study plans have been prepared using federal terminology, however, the respective provincial terminology has been provided in **Table 1-1** for reference. The terms can be used interchangeably.

**Table 1-1: Equivalent Federal and Provincial Terms**

Provincial Term	Federal Term
Criteria	Valued Component
Impact Management Measure	Mitigation Measure
Net Effects	Residual Effects
Record of Consultation	Record of Engagement





## 1.2 Project Study Plans

This Study Plan is one of a group of study plans created for the Project. **Table 1-2** includes the study plans for each environmental<sup>1</sup> discipline currently planned for the Project and the valued components (VCs) covered by the study plans where applicable.

**Table 1-2: Project Study Plans and Valued Components**

Environmental Discipline	Study Plan Name	Valued Component(s)
<b>Aboriginal and Treaty Rights and Interests</b>	<ul style="list-style-type: none"> <li>■ Aboriginal and Treaty Rights and Interests Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Indigenous Current Use of Lands and Resources for Traditional Purposes</li> <li>■ Cultural Continuity (ability to practice and transmit cultural traditions)</li> </ul>
<b>Atmospheric Environment</b>	<ul style="list-style-type: none"> <li>■ Atmospheric Environment and Greenhouse Gases Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Air Quality</li> <li>■ Greenhouse Gas Emissions</li> </ul>
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>■ Climate Adaptation and Resiliency Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Climate Change</li> </ul>
<b>Acoustic and Vibration Environment</b>	<ul style="list-style-type: none"> <li>■ Acoustic and Vibration Environment Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Noise</li> <li>■ Vibration</li> </ul>
<b>Physiography, Geology, Terrain and Soils</b>	<ul style="list-style-type: none"> <li>■ Physiography, Terrain and Soils Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Physiography, Terrain and Soils</li> </ul>
<b>Surface Water</b>	<ul style="list-style-type: none"> <li>■ Surface Water Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Surface Water</li> </ul>
<b>Groundwater and Geochemistry</b>	<ul style="list-style-type: none"> <li>■ Groundwater and Geochemistry Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Groundwater</li> </ul>
<b>Vegetation</b>	<ul style="list-style-type: none"> <li>■ Vegetation Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Wetland and Riparian Ecosystems</li> <li>■ Upland Ecosystems</li> <li>■ Designated Areas (Areas of Natural and Scientific Interest, Environmentally Significant Areas, Significant Woodlands, Critical Landform / Vegetation Associations)</li> <li>■ Traditional Use Plants and SAR Plant Populations (including species with special conservation status or rarity in the province)</li> </ul>
	<ul style="list-style-type: none"> <li>■ Peatlands Study Plan</li> </ul>	<ul style="list-style-type: none"> <li>■ Peatland Ecosystems (bogs and fens)</li> </ul>

1. The use of the term environment in this document is inclusive of the components of the environment that are included in the Ontario Environmental Assessment Act definition, which includes a general description of the social, cultural, built and natural environments.





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Environmental Discipline	Study Plan Name	Valued Component(s)
<b>Wildlife</b>	■ Wildlife Study Plan	<ul style="list-style-type: none"> <li>■ Bats (including SAR-bats such as: Little Brown Myotis [<i>Myotis lucifugus</i>], Northern Myotis [<i>Myotis septentrionalis</i>] and Tricolored Bat [<i>Perimyotis subflavus</i>])</li> <li>■ Fur Bearers (proxy VC<sup>2</sup> American Marten [<i>Martes americana</i>], Beaver [<i>Castor canadensis</i>] and Wolverine [<i>Gulo gulo</i>])</li> <li>■ Amphibians and Reptiles</li> <li>■ Pollinating Insects</li> </ul>
	■ Ungulates (Moose and Caribou) Study Plan	<ul style="list-style-type: none"> <li>■ Moose (<i>Alces alces</i>)</li> <li>■ Caribou, boreal population (<i>Rangifer tarandus</i>)</li> </ul>
	■ Bird Study Plan	<ul style="list-style-type: none"> <li>■ Forest Birds (proxy VC of Red-eyed Vireo [<i>Vireo olivaceus</i>] for deciduous forest, Ovenbird [<i>Seiurus aurocapilla</i>] for mixedwood forest, Dark-eyed Junco [<i>Junco hyemalis</i>] for coniferous forest and disturbed forest</li> <li>■ Raptors (proxy VC of Osprey [<i>Pandion haliaetus</i>] for diurnal raptors and Boreal Owl [<i>Aegolius funereus</i>] for nocturnal raptors</li> <li>■ Shorebirds (proxy VC of Wilson's Snipe [<i>Gallinago delicata</i>])</li> <li>■ Waterfowl (proxy VC of Mallard [<i>Anas platyrhynchos</i>])</li> <li>■ Bog / Fen Birds and Other Wetland Birds (proxy VC of Palm Warbler [<i>Setophaga palmarum</i>] for bogs, Common Yellowthroat [<i>Geothlypis trichas</i>] for fens; and Northern Waterthrush [<i>Parkesia noveboracensis</i>] for swamps .</li> <li>■ SAR birds: Canada Warbler (<i>Cardellina canadensis</i>), Chimney Swift (<i>Chaetura pelagica</i>), Common Nighthawk (<i>Chordeiles minor</i>), Eastern Whip-poor-will (<i>Antrostomus vociferous</i>), Eastern Wood-Pewee (<i>Contopus virens</i>), Evening Grosbeak (<i>Coccothraustes vespertinus</i>), Olive-sided Flycatcher (<i>Contopus cooperi</i>), Bald Eagle (<i>Haliaeetus leucocephalus</i>), Peregrine Falcon (<i>Falco peregrinus</i>), Short-eared Owl (<i>Asio flammeus</i>), Bank Swallow (<i>Riparia riparia</i>), Barn Swallow (<i>Hirundo rustica</i>), Black Tern (<i>Chidonias niger</i>), Rusty Blackbird (<i>Euphagus carolinus</i>), Yellow Rail (<i>Coturnicops noveboracensis</i>)</li> </ul>
<b>Fish and Fish Habitat</b>	■ Fish and Fish Habitat Study Plan	<ul style="list-style-type: none"> <li>■ Lake Sturgeon (<i>Acipenser fulvescens</i>)</li> <li>■ Walleye (<i>Sander vitreus</i>)</li> <li>■ Brook Trout (<i>Salvelinus fontinalis</i>)</li> <li>■ Northern Pike (<i>Esox lucius</i>)</li> <li>■ Lake Whitefish (<i>Coregonus clupeaformis</i>)</li> <li>■ Chain Pickerel (<i>Esox niger</i>)</li> <li>■ Yellow Perch (<i>Perca flavescens</i>)</li> </ul>

<sup>2</sup> A proxy VC is used when looking at the effects of one species that represents many others.





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Environmental Discipline	Study Plan Name	Valued Component(s)
		<ul style="list-style-type: none"> <li>■ Cisco (<i>Coregonus artedii</i>)</li> <li>■ Burbot (<i>Lota lota</i>)</li> <li>■ Longnose Sucker (<i>Catostomus catostomus</i>)</li> <li>■ White Sucker (<i>Catostomus commersonii</i>)</li> <li>■ Forage / Prey Species (including species such as Lake Chub [<i>Couesius plumbeus</i>])</li> <li>■ Lower Trophic Organisms (e.g., benthic invertebrates)</li> </ul>
<b>Social</b>	■ Social Study Plan	<ul style="list-style-type: none"> <li>■ Housing and Accommodation</li> <li>■ Community Service and Infrastructure</li> <li>■ Transportation</li> <li>■ Community Well-being</li> <li>■ Populations and Demographics</li> </ul>
<b>Economy</b>	■ Economic Study Plan	<ul style="list-style-type: none"> <li>■ Regional Economy</li> <li>■ Labour Force and Employment</li> <li>■ Government Finances</li> </ul>
<b>Land and Resource Use</b>	■ Land and Resource Use Study Plan	<ul style="list-style-type: none"> <li>■ Land Use Compatibility</li> <li>■ Parks and Protected Areas</li> <li>■ Extractive Industry</li> <li>■ Forestry Industry</li> <li>■ Energy and Linear Infrastructure</li> <li>■ Recreation and Tourism</li> </ul>
<b>Human Health and Community Safety</b>	■ Human Health and Community Safety Study Plan	<ul style="list-style-type: none"> <li>■ Public Safety</li> <li>■ Public Health</li> <li>■ Diet</li> <li>■ Environmental Factors Influencing Health</li> </ul>
<b>Visual Aesthetics</b>	■ Visual Aesthetics Study Plan	<ul style="list-style-type: none"> <li>■ Visual Contrast / Character</li> <li>■ Visibility</li> <li>■ Visual Sensitivity</li> </ul>
<b>Archaeological and Cultural Heritage</b>	■ Cultural Heritage Study Plan	<ul style="list-style-type: none"> <li>■ Archaeological Sites and Resources</li> <li>■ Built Heritage Resources and Cultural Heritage Landscapes</li> </ul>

It should be noted that while there is not a consultation study plan, the Project has developed the *Consultation and Engagement Plan to Support the Environmental Assessment / Impact Statement* (AECOM 2020) (referred to as the Impact Statement [IS] / EA Consultation Plan).





## 2. Purpose and Objectives

The key objectives of conducting an IA / EA are to describe the existing environment, gather sufficient information to predict Project-related effects (positive and negative, direct and indirect) of the Project and alternatives on the environment, determine measures needed to avoid or minimize adverse Project effects and enhance beneficial Project effects where feasible, and to undertake consultation and engagement throughout. The purpose of this Study Plan is to explain:

- A baseline<sup>3</sup> study methodology that will result in a comprehensive description of the existing environment potentially impacted by the Project;
- How efficient and transparent data management and analysis will be undertaken;
- Effects assessment scoping inputs specific to Human Health and Community Safety that will allow for potential effects of the Project on the existing environment to be appropriately assessed in the IS / EA Report; and
- How the Study Plan aligns with federal and provincial requirements and guidance, including the Agency's Tailored Impact Statement Guidelines (TISG), dated February 24, 2020 (the Agency 2020c), for this Project and applicable provincial agency comments on the Draft Terms of Reference (ToR)<sup>4</sup>.

As required by the IAA and referenced in TISG Section 7.3, work plans will also be developed for disciplines as required. It is anticipated the work plans will include further details on how to action the study plans; for example they would contain scheduling information.

This Study Plan has been completed to be consistent with the Marten Falls Community Access Road Project TISG that were issued by the Agency. The Human Health and Community Safety Study Plan addresses issues related to:

- Biophysical determinants of health including air quality, noise, vibration, country foods and drinking water; and
- Social determinants of health including:
  - Diet and substance abuse;
  - Access to health services (community and educational services are excluded);
  - Food availability (material circumstances are excluded); and,
  - Psychosocial factors, violence and criminal activity.

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3. *Baseline refers to the current conditions of the environment potentially impacted by the Project. Baseline conditions serve as a reference against which changes due the Project are measured.*

4. *If necessary, the Study Plan will be updated to reflect the approved ToR if approval is obtained.*





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Health determinants related to social structures and equity factors will primarily be documented in other plans and reports. Related items not included in this Study Plan, but requested in the TISG, are covered under separate study plans for Social and Economics. Items not included explicitly within this Study Plan may be referenced and considered in the assessment of effects to relevant components of the Social environment such as community well-being.

The Human Health and Community Safety Assessment considers environmental and social determinants of health. In conducting the Human Health and Community Safety Assessment, information from the following disciplines will be considered:

- **Air Quality** – Potential changes to air quality will be considered as part of the human health risk assessment that will be conducted in support of the Human Health and Community Safety Assessment. Changes to air quality may influence human health.
- **Noise** – Potential changes to noise will be considered as part of the Human Health and Community Safety Assessment. Changes to noise may be an annoyance, as defined by Health Canada, to sensitive receptors near the Project activities. Noise related annoyances can have human health implications.
- **Surface Water and Groundwater** – Potential changes to surface water and/or groundwater quality (particularly in relation to drinking water sources) will be considered as part of the human health risk assessment that will be conducted in support of the Human Health and Community Safety Assessment. Changes to surface water and groundwater quality may impact human health.
- **Social Assessment** – Changes to traffic patterns and transportation may have an effect on the health of individuals in the Project area due to the potential for traffic accidents.
- **Economic Assessment** – Potential changes to food price levels and livelihoods of the local communities may alter the diet of those living in local communities.
- **Aboriginal and Treaty Rights and Interests Assessment** – Potential changes to Traditional land use and resource harvesting may influence human health. These changes will be considered in the assessment including social determinants and country food considerations.

Other relevant disciplines may also be considered depending on the nature of the information received, including the Land and Resource Use Assessment.





For the purposes of establishing appropriate context, the Study Plan begins with background and relevant information on:

- Study Plan related discussions with the Agency, the MECP and applicable agencies to date (**Section 3**);
- The approach to Project consultation and engagement (**Section 4**);
- How Indigenous Knowledge will be collected and used in the IA / EA (**Section 5**); and
- The spatial and temporal boundaries that will be used for the IA / EA (**Section 6**).

## 2.1 Approach to Handling Confidential Information

### 2.1.1 Indigenous Knowledge

Permission from the Indigenous community will be sought before including Indigenous Knowledge in the IS / EA Report, regardless of the source of the Indigenous Knowledge. Sensitive and / or confidential information will be specifically collected through the Indigenous Knowledge Program to inform the IS / EA Report, and its use and publication will be governed by Indigenous community-specific Indigenous Knowledge Sharing Agreements. Sensitive and / or confidential information collected through Indigenous Knowledge Sharing Agreements will be protected from public or third-party disclosure and will be established between the Proponent and Indigenous communities participating in the Indigenous Knowledge Program prior to the sharing and use of any sensitive information. Instances where Indigenous Knowledge sharing has taken place during consultation activities (e.g., meetings) will be recorded in the Record of Consultation and Engagement, including where Indigenous Knowledge was incorporated into Project decisions and into the IS / EA Report (i.e., specifics will not be included in the Record of Consultation and Engagement given the potential sensitivity and / or confidentiality of the information shared).

### 2.1.2 Health Information

If applicable, a process for handling confidential health information will be developed. This process will conform to Ownership, Control, Access, Possession (OCAP) (First Nations Information Governance Centre 2020) requirements and will also aim to preserve the confidentiality of individual persons providing information to the Project.





### 3. Study Plan Technical Discussions

To facilitate the development of satisfactory study plans and eventually a satisfactory IS / EA Report, MFFN previously submitted draft study plans in an effort to hold technical discussions with the Agency, the MECP and applicable agencies. A summary of technical discussions and correspondence held to date on this Study Plan has been provided in **Table 3-1**.

A technical meeting was held on October 29, 2020 to discuss various aspects of the initial draft Human Health and Community Safety Study Plan. Attendees included representatives of the Agency, Wage and Gender Equality Canada, Health Canada, Indigenous Services Canada, MECP, the Public Health Agency of Canada and the MFFN CAR Project Team.

**Table 3-1: Summary of Study Plan Technical Discussions**

Attendees / Responsible Party	Correspondence	Discussion Point	Solution
<ul style="list-style-type: none"> <li>■ The Agency</li> </ul>	<ul style="list-style-type: none"> <li>■ Comments received following the Agency review of draft Study Plan.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>27-August-2020:</b> Comments and clarification questions received, including editorial comments, additional information requirements regarding study plan, baseline studies, data collection, Chemicals of Potential Concern and the human health risk assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Additional details and clarification provided within the Study Plan, and responses to these comments are attached in <b>Appendix B</b>.</li> </ul>
<ul style="list-style-type: none"> <li>■ MECP</li> </ul>	<ul style="list-style-type: none"> <li>■ Comments received following the MECP review of draft Study Plan.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>08-August-2020:</b> Comments and clarification questions received, including editorial comments, additional information requirements regarding study design, study areas, Chemicals of Potential Concern and information sources.</li> </ul>	<ul style="list-style-type: none"> <li>■ Additional details and clarification provided within the Study Plan, and responses to these comments are attached in <b>Appendix B</b>.</li> </ul>
<ul style="list-style-type: none"> <li>■ The Agency</li> <li>■ Health Canada</li> <li>■ MECP</li> <li>■ Indigenous Services Canada</li> </ul>	<ul style="list-style-type: none"> <li>■ Technical discussion of comments received following agency review of draft Study Plan, teleconference meeting.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>29-October-2020:</b> Country Food Tissue Sampling</li> </ul>	<ul style="list-style-type: none"> <li>■ Country food tissue sampling has not yet determined to be necessary, as the potential effects of the Project have not yet been identified. This information will be available through the Human Health Risk Assessment (HHRA).</li> </ul>







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Attendees / Responsible Party	Correspondence	Discussion Point	Solution
<ul style="list-style-type: none"> <li>■ Women and Gender Equality Canada</li> <li>■ Public Health Agency of Canada</li> <li>■ MFFN CAR Project Team</li> </ul>			<p>The MFFN CAR Project Team will provide the HHRA Problem Formulation and appendices to the Federal Review Team. The MFFN CAR Project Team will give the Agency notice of when to expect the HHRA Problem Formulation. The HHRA Problem Formulation will determine the need for a country food tissue sampling program. <b>Section 7.2.1</b> of this Study Plan outlines the approach to the Problem Formulation.</p> <ul style="list-style-type: none"> <li>■ A follow-up meeting with the Agency can be scheduled to discuss the results of the HHRA Problem Formulation once it has been reviewed by the Federal Review Team.</li> </ul>
		<ul style="list-style-type: none"> <li>■ <b>29-October-2020:</b> Collecting Information on Country Food Harvesting Practices during initial Indigenous consultation activities</li> </ul>	<ul style="list-style-type: none"> <li>■ Information on country food harvesting will be collected as outlined in <b>Section 7.2.1</b> of this Study Plan. The primary data will be collected through the Indigenous Knowledge Program and these data will be disaggregated by gender and age.</li> </ul>
		<ul style="list-style-type: none"> <li>■ <b>29-October-2020:</b> Community Engagement expectations</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Section 4</b> of this Study Plan includes a summary description of the engagement activities to be undertaken with interested Indigenous communities. Communities will be engaged to determine their interest in potential impacts of the Project on Human Health and Community Safety.</li> </ul>
		<ul style="list-style-type: none"> <li>■ <b>29-October-2020:</b> Data Verification and OCAP</li> </ul>	<ul style="list-style-type: none"> <li>■ The MFFN CAR Project Team will consider working with Chief and Council of applicable Indigenous communities and including OCAP principles in the Data Sharing Agreement. Data verification activities will be undertaken with those who provided the information by, for example, the sharing of meeting notes or survey results.</li> </ul>





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Attendees / Responsible Party	Correspondence	Discussion Point	Solution
			<ul style="list-style-type: none"><li>■ Where possible, the MFFN CAR Project Team will receive written responses for data verification from Indigenous communities. Meaningful opportunities will be provided to communities to respond to the data verification requests and this effort will be reflected in the IS / EA Report.</li></ul>





## 4. IS / EA Report Consultation and Engagement Process

### 4.1 Interested Persons and Government Agencies

The Proponent will provide Project notices and advise of opportunities for consultation and engagement with interested persons<sup>5</sup> which includes, at a minimum, members of the public outlined in the *Public Participation Plan for the Marten Falls Community Access Road Project Impact Assessment* (the Agency 2020) (referred to as the Public Participation Plan). This will include the opportunity to provide input on the existing environment, VCs, effects assessment methods, effects assessment results, and mitigation and follow-up program measures as applicable. A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input. The study plans have recognized public and agency input received on the Project to date. Government agencies and interested persons will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process. The Project's approach to handling confidential and sensitive information is outlined in **Section 2.1**.

### 4.2 Indigenous Communities

The Proponent will provide Project notices and opportunities for consultation and engagement with Indigenous communities identified in **Table 4-1**, which is inclusive of all Indigenous communities identified in the *Indigenous Partnership and Engagement Plan for the Marten Falls Community Access Road Project Impact Assessment* (the Agency 2020a) (referred to as the Indigenous Engagement and Partnership Plan).

Indigenous communities will be provided the opportunity to be involved at critical decision-making points throughout the IS / EA Report so that the Proponent can consider and incorporate, where appropriate Indigenous Knowledge and Indigenous land and resource use information into the Project as it pertains to the existing environment, VCs, effects assessment methods, effects assessment results, and mitigation and follow-up program measures. A variety of activities will be offered so that Indigenous communities are

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5. Interested persons, as defined in the IS / EA Consultation Plan, are individuals and groups (e.g., associations, non-governmental organizations, industry and academia) who could have an interest in the Project, including but not limited to communities in the region, those with commercial interests (e.g., forestry, trappers, outfitters, other mineral tenure holders in the area) and recreational users or those with recreational interest (e.g., campers, hunters and environmental groups).





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informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input. The study plans have recognized Indigenous community input received on the Project to date. Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process.

**Table 4-1: Identified Neighbouring Indigenous Communities, including their Provincial Territorial Organizations and / or Tribal Council Affiliations**

Tribal Council Affiliation	Indigenous Community or Organization
<b>Matawa First Nations Management</b> (Nishnawbe Aski Nation)	<ul style="list-style-type: none"> <li>■ <b>Marten Falls First Nation</b> (Proponent and potentially affected Indigenous community)</li> <li>■ Aroland First Nation</li> <li>■ Constance Lake First Nation</li> <li>■ Eabametoong First Nation</li> <li>■ Ginoogaming First Nation</li> <li>■ Neskantaga First Nation</li> <li>■ Nibinamik First Nation</li> <li>■ Webequie First Nation</li> </ul>
<b>Matawa First Nations Management and the Union of Ontario Indians / Nishnawbe Aski Nation</b>	<ul style="list-style-type: none"> <li>■ Long Lake #58 First Nation**</li> </ul>
<b>Mushkegowuk Council</b> (Nishnawbe Aski Nation)	<ul style="list-style-type: none"> <li>■ Attawapiskat First Nation</li> <li>■ Fort Albany First Nation</li> <li>■ Kashechewan First Nation</li> </ul>
<b>Shibogama First Nations Council</b> (Nishnawbe Aski Nation)	<ul style="list-style-type: none"> <li>■ Kasabonika Lake First Nation</li> <li>■ Kingfisher Lake First Nation</li> <li>■ Wapekeka First Nation</li> <li>■ Wawakapewin First Nation</li> <li>■ Wunnumin Lake First Nation</li> </ul>
<b>Independent First Nations Alliance</b> (Nishnawbe Aski Nation)	<ul style="list-style-type: none"> <li>■ Kitchenuhmaykoosib Inninuwug First Nation</li> </ul>
<b>Independent First Nations</b> (Nishnawbe Aski Nation)	<ul style="list-style-type: none"> <li>■ Mishkeegogamang First Nation</li> <li>■ Weenusk First Nation</li> </ul>
<b>Nokiiwin Tribal Council</b>	<ul style="list-style-type: none"> <li>■ Animiigoo Zaagi'igan Anishinaabek First Nation *</li> </ul>
<b>Métis Nation of Ontario</b>	<ul style="list-style-type: none"> <li>■ Métis Nation of Ontario; Region 2*</li> </ul>
<b>Independent Métis Nation</b>	<ul style="list-style-type: none"> <li>■ Red Sky Independent Métis Nation*</li> </ul>

Notes: \* Indigenous communities or organizations identified by the MECP who should be consulted on the basis that they may be interested in the Community Access Road.

\*\* The MECP indicated in a letter to MFFN that Long Lake #58 First Nation was moved from interest-based to rights-based.





## 4.3 Consideration of Identity and Gender-Based Analysis Plus in Engagement

To fulfill requirements of the IAA, the Consultation and Engagement Program will consider a diverse range of perspectives from interested persons and interested Indigenous communities and their members identified in the Agency's Indigenous Engagement and Partnership Plan and the Public Participation Plan. This will include at a minimum providing ongoing opportunities for engagement to:

- **Neighbouring Indigenous communities, including relevant subpopulations:**
  - Women;
  - Youth; and
  - Elders.
- **Non-Indigenous communities including:**
  - Women;
  - Youth; and
  - Activity-based subgroups (e.g., recreationalists, snowmobilers, tourism establishment operators).

The Proponent will also consult and engage with other subpopulations identified by communities during consultation and engagement. The information from these activities and any additional identity groups identified by communities through consultation and engagement will be considered by applicable environmental disciplines for the purposes of data collection and considering disproportionate effects.

During consultation and engagement, these aforementioned groups will be consulted and engaged with on targeted input. Specialized knowledge will be gathered through other disciplines such as Social, Economic, Land and Resource Use and Aboriginal and Treaty Rights and Interests that will support the Human Health and Community Safety assessment. The data collection programs for these disciplines is expected to include targeted interviews, focus groups, questionnaires and other niche tools to gather information from diverse populations to resolve gaps in socio-economic secondary data. These diverse populations include the aforementioned identity groups, which are also referenced in the IS / EA Consultation Plan, and those identified by communities during consultation and engagement. Subject to interest, community-led primary data collection and secondary data sharing for Indigenous Knowledge and Indigenous land and resource use will be completed through the Indigenous Knowledge Program and associated materials (see **Section 5**).





When feedback is received from interested persons and Indigenous communities, issues, comments and questions will be tracked, which is consistent with the process described in the IS / EA Consultation Plan. Specific to Gender-Based Analysis Plus (GBA+) objectives, this will include efforts to engage with diverse populations. It is expected this will include activities specific to subgroups and tabulation of consultation and engagement participation with respect to identity factors. This will provide summary statistics to demonstrate the diversity achieved in consultation and engagement.

## 4.4 Consultation on Human Health and Safety

In conjunction with the Indigenous Knowledge Program and the Consultation and Engagement Program, information will be solicited on country food harvesting and consumption patterns for all age and gender categories. This information will be collected from Indigenous communities who have identified use of land within applicable areas of Project impact. If outcomes of this consultation effort are not sufficiently detailed, they may be used to guide the development of more detailed and specific surveys within applicable Indigenous communities.





## 5. Consideration of Indigenous Knowledge in the IS / EA Report

The following provides a general description of how Indigenous Knowledge will be considered in the IA / EA process. The extent to which Indigenous Knowledge is considered by each specific VC will vary depending on the nature of the VC, the potential for Project effects on the VC and whether Indigenous Knowledge that relates to a VC is provided / obtained. As such, not all aspects of the general approach described below may apply to all VCs / study plans.

There are two concurrent and complementary avenues for Indigenous communities and groups to be engaged with and provide input on the Project: the Indigenous Knowledge Program and the Consultation and Engagement Program. Both programs serve to support the collection of Indigenous perspectives, values, and input on the Project, including Aboriginal and Treaty Rights and how they may be impacted by the Project, to be integrated throughout the IA / EA process. However, the Indigenous Knowledge Program specifically aims to solicit and incorporate information that is considered sensitive and may have confidentiality requirements, including Indigenous Knowledge and information on Indigenous land and resource use. Indigenous Knowledge Sharing Agreements will be established between the Proponent and Indigenous communities participating in the Indigenous Knowledge Program prior to the sharing and use of any sensitive information.

All Indigenous communities and groups identified by the MECP and the Agency through the Indigenous Engagement and Partnership Plan have the opportunity to participate in the Indigenous Knowledge Program. The Indigenous Knowledge Program provides interested Indigenous communities an opportunity to: share existing Indigenous Knowledge and information on Indigenous land and resource use and cultural values that may be relevant to the Project, and / or complete Project-specific studies to collect and share Indigenous Knowledge and information on Indigenous land and resource use and cultural values. The Indigenous Knowledge Program includes opportunities for Indigenous communities and groups to meet with the Proponent to discuss the program, ask questions, and share concerns and interests. In support of this, the Proponent has created an Indigenous Knowledge Program Guidance Document (the Guidance Document) that provides:

- An overview of the Indigenous Knowledge Program and information on how Indigenous Knowledge, Indigenous land and resource use and cultural values and practices can be collected and / or shared;





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- Information on how Indigenous Knowledge and information on Indigenous land and resource use and cultural values and practices may be used in the planning and design processes; and
- A suite of guidance materials that were developed based on the information requirements of both the federal and provincial assessment processes, including: question guides to support the collection of information on historical and current community context; Indigenous Knowledge that may be relevant to the various technical disciplines; information on Indigenous land and resource use, cultural values and practices and associated spatial data; and perspective on potential Project-related effects and associated mitigation and / or enhancement measures.

The Guidance Document will also support participating Indigenous communities in providing Project-specific information in a manner that facilitates meaningful incorporation into the IS / EA Report.

The IS / EA Consultation Plan outlines the process for obtaining information and feedback about the Project from Indigenous communities (i.e., the Consultation and Engagement Program). All Indigenous communities identified by the MECP and the Agency have the opportunity to participate in the Consultation and Engagement Program through community-specific meetings, Public Information Centres, web conferences, and other formats. All Indigenous communities identified by the MECP and the Agency will be provided information related to the Project and invited to participate at various points throughout the IA / EA process.

There are also opportunities for technical teams to engage with Indigenous communities to solicit perspectives and information relevant to the Project, including information related to collection of existing information and the development of the IS / EA Report. The Proponent also invites feedback and inputs throughout the Project via the Project website and ongoing communications with the Proponent.

The Indigenous Knowledge and Consultation and Engagement programs are designed to be complementary and provide multiple opportunities for communities to offer feedback and information, including perspectives on Aboriginal and Treaty Rights and interests and how these may be impacted by the proposed Project. Relevant information collected through both the Indigenous Knowledge and Consultation and Engagement programs, including potential effect pathways on Aboriginal and Treaty Rights and interests, will be shared with each of the relevant disciplines throughout the IA / EA to: guide and inform VCs; support characterization of the existing environment; identify the potential effects of the Project on VCs; help identify mitigation measures and potential monitoring programs; and ultimately guide Project planning. The nature of how the Indigenous Knowledge becomes integrated into the IS / EA Report will be dictated by the specific information provided by each Indigenous community and the parameters set out in







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the Indigenous Knowledge Sharing Agreements. A description of how Indigenous Knowledge was considered in the IA / EA and in each of the technical discipline areas will be included in the IS / EA Report.

It is also important to note that information collected through the various activities (e.g., field studies and programs, effects assessments) of each discipline area (e.g., wildlife, vegetation, cultural heritage) will be shared with the Indigenous Knowledge Program leads. This will support the establishment of the existing environment and the effects assessment for the Aboriginal and Treaty Rights and Interests environmental discipline, as well as the identification of potential mitigation measures and monitoring programs, given the interrelated nature of Indigenous peoples and other environmental disciplines.

The Proponent will strive to respectfully collaborate with Indigenous communities on how Indigenous Knowledge and information on Indigenous land and resource use and cultural values will become part of the IS / EA Report, and how potential effects to Aboriginal and Treaty Rights and interests will be assessed. It is expected that measures to support this may include but are not limited to: engaging Indigenous communities to solicit information on Indigenous Knowledge and Indigenous land and resource use and cultural values to inform baseline conditions, providing Indigenous communities with draft sections of the IS / EA Report to illustrate how Indigenous Knowledge and information on Indigenous land and resource use and cultural values has been integrated and to confirm it has been presented appropriately, and completing collaborative working sessions with Indigenous communities for the effects assessment on Aboriginal and Treaty Rights and Interests. Further information on how potential effects on Indigenous rights will be assessed is provided in the Aboriginal and Treaty Rights and Interests Study Plan.





## 6. Assessment Boundaries

### 6.1 Temporal Boundaries: Project Phases

Project phases, which are temporal boundaries, are developed to establish the timeframes within which potential effects of the Project will be considered in the IS / EA Report. The Project is planned to occur in two phases, which are briefly described below and shown in **Figure 6-1**.

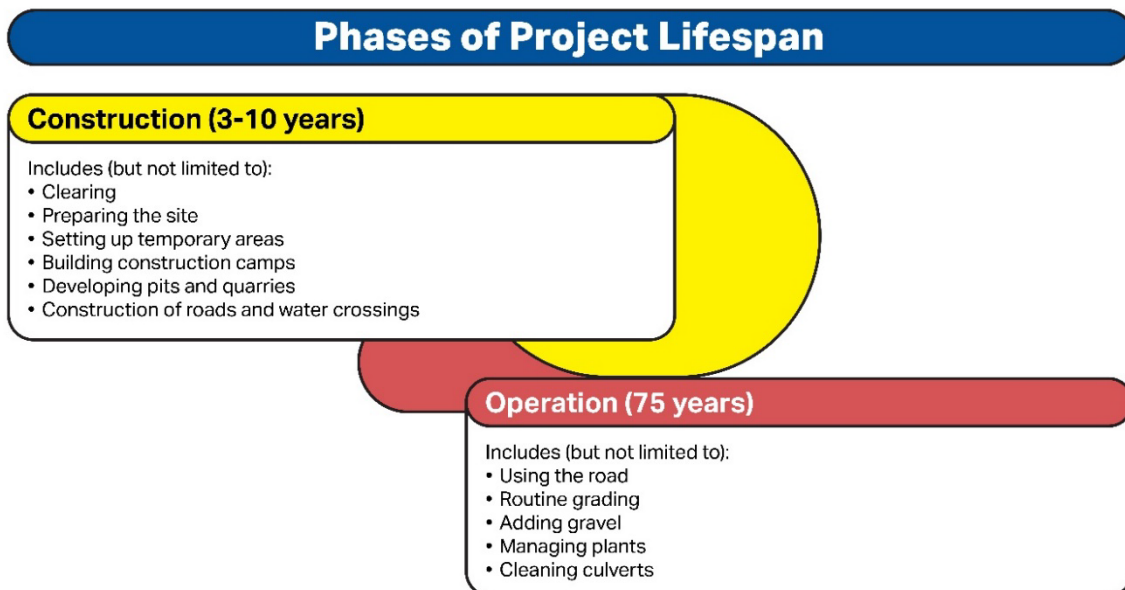
- **Construction Phase:**

The time from start of construction, including site preparation activities, to the start of operations and maintenance of the CAR. Decommissioning of construction works is included in the construction phase. The construction phase is anticipated to take approximately 3 to 10 years to complete.

- **Operations and Maintenance Phase:**

The operations and maintenance phase starts once construction activities are complete and lasts for the life of the Project. The operations and maintenance phase of the Project is considered to be 75 years based on the expected timeline for when major refurbishment of road components (e.g., bridges), is anticipated.

**Figure 6-1: Project Schedule**





There are currently no plans to decommission the CAR as there is no expected / known end date for its need. Therefore, future suspension, decommissioning and eventual abandonment of the CAR will not be considered in the IS / EA Report. It will be considered if and when a decommissioning or abandonment application is made for the road.

In determining the temporal boundaries, in particular the long operations and maintenance phase, consideration was given to the long-term effects on the well-being of present and future generations (Sustainability Principle #2<sup>6</sup>). The final temporal boundaries to be used in the IS / EA Report will be based on regulatory agency guidance, professional judgement and input received through the Project consultation process.

## 6.2 Spatial Boundaries: Study Areas

### 6.2.1 General Information

Study areas identify the geographic extents within which potential effects of the Project are likely to occur and will be considered in the IS / EA Report. The existing conditions and potential effects are documented for three study areas selected for the Project:

- **Project Development Area (PDA):** area of direct disturbance;
- **Local Study Area (LSA):** the area where most of the direct effects of the Project are likely to occur; and
- **Regional Study Area (RSA):** the area where indirect effects of the Project are likely to occur.

The PDA encompasses the 100 metre wide CAR right-of-way (ROW), temporary construction access roads, work areas, worker camps, and pits, quarries and associated access roads. The preliminary LSA currently being considered within the scope of the ongoing provincial regulatory review process generally includes the area within 2.5 km of the centreline of Alternative 1 and Alternative 4. The preliminary study area generally allows for the documentation of existing conditions and prediction of potential environmental effects for the Project. A 5 km wide study area also allows for route refinements during development of Project design (e.g., adjustment of the alignment to avoid sensitive features).

The specific location of Project components, including the roadway, quarries, pits and temporary infrastructure, are not yet known and will be included in the IS / EA Report. While most of the Project

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6. Sustainability Principles #2 is one of four sustainability principles included in Section 25 of the Project's TISG as further elaborated on in Section 9.7.





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components are expected to be located within the preliminary 5 km wide study area, benefits (e.g., reduced environmental disturbance, avoidance of sensitive features, technical considerations, concerns received through consultation) for locating Project components on lands outside of the 5 km wide study area may become known during the IA / EA process. If the need to locate Project components outside the 5 km wide study area is determined to be required or of benefit to the Project, the study area would be adjusted.

The study area for each environmental discipline may vary from the above-described general study area based on the potential for the Project to directly or indirectly affect each environmental discipline; therefore, discipline-specific LSAs and RSAs have been defined for the Project. In defining the final LSAs and RSAs, each environmental discipline will consider:

- Location and other characteristics of the environmental discipline relative to the Project;
- The anticipated extent of the potential Project effects;
- Federal, provincial, regional, and local government administrative boundaries;
- Indigenous groups listed in **Table 4-1**;
- Community knowledge and Indigenous Knowledge;
- Current or traditional land and resource use by Indigenous communities;
- Exercise of Aboriginal and Treaty Rights of Indigenous peoples, including cultural and spiritual practices; and
- Physical, ecological, technical, social, health, economic and cultural considerations.

The study areas included in this document are preliminary, covering the extent to which readily available information suggests the Project may have noticeable effects on the environment. The size, nature and location of past, present and reasonably foreseeable projects will be taken into consideration in the development of the cumulative effects assessment study area(s). The appropriate study area(s) to assess cumulative effects are dependent on the VCs predicted to have direct residual adverse effects as a result of the Project, and therefore, cannot be defined until the IS / EA Report has sufficiently advanced.

Relevant information related to construction and operation will be described as it relates to the PDA. However, much of the social determinants of health analysis will focus on communities, particularly those in the LSA. Detailed community health profiles will be developed for communities listed in the Community Health LSA. The Community Health RSA will be profiled in less detail with key interactions and thematic information provided. Statistics collected on the RSA will focus on larger regional areas such as unorganized regional districts. While many Indigenous communities are located within the RSA, these communities will not be profiled individually.





The Proponent remains open to receiving information from other communities on their activities and how interlinkages between the Project and those communities may result in human health and community safety effects. To be included in the Community Health LSA, a community must demonstrate direct community-level health or social-economic interest in the Project footprint; from changing access to the MFFN community due to the Project; or due to potential direct and indirect effects Project effects on the environment that impact the human health and community safety environment. Considerations related to future mining activity or access to potential mining opportunities beyond the relevant local study areas will be reflected in the Community Health RSA. Based on the information provided, the Proponent will evaluate the individual communities that warrant inclusion in the local or regional study areas.

Members in other communities who are involved in land use activities within the Project area are being assessed and considered under the Aboriginal Treaty Rights and Interests Assessment, and Land and Resource Use Assessment.

As further detailed in **Section 4**, the Proponent will continue to provide opportunities for neighbouring Indigenous communities and interested persons to provide input and inform the effects assessment, including the LSAs and RSAs.

## 6.2.2 Human Health and Community Safety Study Areas

The LSA and RSA boundaries for the Human Health and Community Safety study, which includes the Human Health Risk Assessment (HHRA), are detailed in **Table 6-1** and shown on **Figure 6-2**. These boundaries are intended to be a starting point, and areas of interest and concerns related to the Project will be confirmed as information is gathered. It is anticipated that the HHRA will consider each community separately. However, if there are many common features and conditions across the communities, the HHRA may assess a more generic community that represents and applies to all individual communities, in a conservative manner. Rationale will be provided to support whichever approach to the HHRA of study area communities is ultimately undertaken.

**Table 6-1: Human Health and Community Safety Study Areas**

Study Area	Geographic Extent	Rationale
<b>Community Health LSA</b>	<ul style="list-style-type: none"> <li>■ The communities of:               <ul style="list-style-type: none"> <li>• MFFN;</li> <li>• Aroland First Nation; and</li> <li>• Municipality of Greenstone.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ These communities are likely to have observable changes in health due to construction and / or the increased access to lands and communities associated with the Project. Increased access to services may place additional strain on the regional service centre.</li> </ul>





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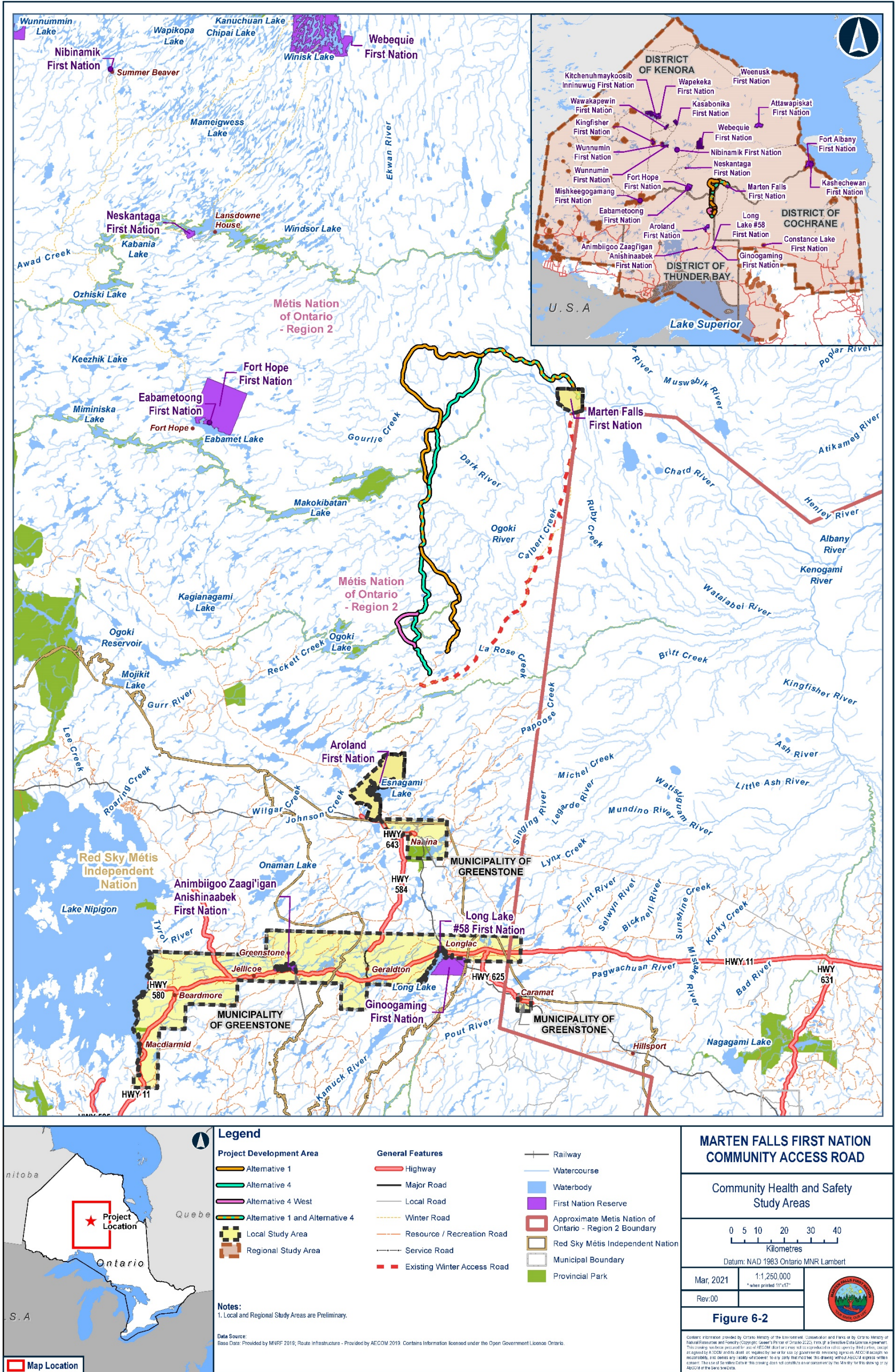
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Study Area	Geographic Extent	Rationale
<b>Community Health RSA</b>	<ul style="list-style-type: none"> <li>■ The unorganized regional districts of:               <ul style="list-style-type: none"> <li>– Kenora, including the following Indigenous communities:                   <ul style="list-style-type: none"> <li>• Attawapiskat First Nation</li> <li>• Eabametoong First Nation</li> <li>• Kasabonika First Nation</li> <li>• Kashechewan First Nation</li> <li>• Kitchenuhmaykoosib Inninuwug</li> <li>• Kingfisher Lake First Nation</li> <li>• MFFN</li> <li>• Mishkeegogamang First Nation</li> <li>• Neskantaga First Nation</li> <li>• Nibinamik First Nation</li> <li>• Wapekeka First Nation</li> <li>• Wawakapewin First Nation</li> <li>• Webequie First Nation</li> <li>• Weenusk First Nation</li> <li>• Wunnumin Lake First Nation</li> </ul> </li> <li>– Thunder Bay, including the following Indigenous communities:                   <ul style="list-style-type: none"> <li>• Animbiigoo Zaagi'igan Anishinaabek First Nation</li> <li>• Aroland First Nation</li> <li>• Ginoogaming First Nation</li> <li>• Long Lake #58 First Nation</li> <li>• Red Sky Independent Métis Nation</li> </ul> </li> </ul> </li> <li>• Métis Nation of Ontario, Region 2</li> </ul>	<ul style="list-style-type: none"> <li>■ Communities in these regions could be impacted from the Project (e.g., through employment opportunities and / or change in demand for regional health services).</li> </ul>
<b>Environmental Health LSA</b>	<ul style="list-style-type: none"> <li>■ The maximum boundary of the air quality, noise, and surface water local study areas.</li> </ul>	<ul style="list-style-type: none"> <li>■ Changes to the air quality, noise levels and surface water quality in the Project area may impact the health of individuals near the Project.</li> </ul>
<b>Environmental Health RSA</b>	<ul style="list-style-type: none"> <li>■ The maximum boundary of the air quality, and surface water regional study areas.</li> </ul>	<ul style="list-style-type: none"> <li>■ Changes to the air quality, and surface water quality in the Project area may impact the health of individuals near the Project.</li> </ul>





Figure 6-2: Human Health and Community Safety Local and Regional Study Areas





## 7. Baseline Study Design

### 7.1 Desktop Assessment

A desktop review of existing information sources will be completed to identify information gaps that will need to be addressed through further study including potentially primary data collection activities. A preliminary list of applicable information sources has been included in Appendix A and reflects federal and provincial guidance received to date. This Study Plan focuses on the additional studies that are anticipated to be required to gather information beyond what is currently available through existing information sources, including those as described in Section 7.2 'Sources of baseline information' in the Agency's TISG for this Project.

#### 7.1.1 Secondary Data Collection

Secondary source data will be collected for relevant land use activities within the Project area. The information will be collected for the purposes of assessing the effects of the Project on human health and community safety. The secondary data will be collected from:

- Statistics Canada;
- Municipal, provincial and Indigenous government / community websites;
- Municipal plans and reports;
- Provincial plans and reports;
- Local service providers;
- Regional reports;
- Industry reports;
- Academic research;
- Web-based sources such as firm websites; and,
- Previous relevant EAs.

Other secondary data sources publicly and readily available will also be considered and utilized as applicable. This will include sources identified in Appendix 1 of the TISG.







Data collected from secondary sources will be disaggregated when available and analyzed to cover a diverse range of subgroups applicable to the Project area. Attention will be paid to norms, roles and relations, power structures, and needs, constraints and opportunities. The purpose of the disaggregation will be to understand disproportionate effects that may result from the Project.

## 7.1.2 Primary Data Collection

### 7.1.2.1 Social Determinants of Health

The Public Health Agency of Canada advises that social determinants of health are the broad range of personal, social, economic and environmental factors that determine individual and population health. The main determinants of health include<sup>7</sup>:

1. Income and social status
2. Employment and working conditions
3. Education and literacy
4. Childhood experiences
5. Physical environments
6. Social supports and coping skills
7. Healthy behaviours
8. Access to health services
9. Biology and genetic endowment
10. Gender
11. Culture
12. Race / Racism

Social determinants of health refer to a specific group of social and economic factors within the broader determinants of health. These relate to an individual's place in society, such as income, education or employment. Experiences of discrimination, racism and historical trauma are important social determinants of health for certain groups such as Indigenous peoples. Data on the above factors will be collected to establish baseline conditions for communities in the Community Health LSA from which to assess whether the Project is likely to result in changes to any of these factors which could in turn impact health conditions.

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7. <https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html>





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Primary data collection will include field work to collect qualitative data on the social determinants of health with communities in the Community Health LSA. The MFFN CAR Project Team will undertake community visits for the purpose of data collection. The community visits are expected to include interviews, focus groups and other discussions with key community members to provide information on the social, health and safety related issues. The community visits will include:

- Data collection methods including interviews, focus groups and surveys designed with respect to cultural norms and the social and economic situation in a community;
- Focused data collection on gaps identified in the secondary sources related to criteria and indicators such as quality factors for services and infrastructure;
- Community consultation coordinators integrated in the data collection process to improve capacity;
- Engagement with knowledge holders including community government officials such as Chief, Council and band office staff;
- Engagement with relevant identity groups for the community including women, youth and elders, if culturally appropriate;
- Engagement with Indigenous community consultation co-ordinators to verify if the approach is applicable to the community and receive feedback prior to commencing activities; and,
- Cultural norms and participant confidentiality respected in all activities.

Primary data collection activities will be aligned with OCAP principles in relation to the protection of personal information collected for the IS / EA Report.

As part of the primary data collection program, information on the use of country foods will be collected from communities in the Community Health LSA and the potential for the Project to impact this will be assessed. These data collection program will be coordinated with the program to collect Indigenous Knowledge. See Appendix B of the Aboriginal and Treaty Rights and Interests Study Plan for sample questions related to country food harvesting. The specific details on the program to collect the information are to be developed.

Primary data collection will also explore mental health considerations and perceptions of risk as they relate to a road project.

The specific scope of the primary data collection program will be informed by the final community health study areas. However, it is anticipated data collection will focus on the communities most likely to be impacted by the Project including MFFN and Aroland First Nation. Primary data will also be collected in the





regional service centre of Geraldton. These communities are likely to experience the most Project-related change due to the location of the Project and its resulting access. Other communities could be included with the Community Health LSA as previously noted in this Study Plan (**Section 6.2**).

The primary data collection will be informed by the same objectives as the overall data collection. However, the primary data collection program will have the added focuses of filling gaps identified in secondary data and informing further secondary data collection based on issue-specific items raised through primary data collection. This includes the collection of Indigenous and local knowledge of the Social and Economic environments, disaggregated qualitative data by identity factors when volunteered and other information relevant to understanding the current state of human health and safety conditions in the Project area.

Data used in the Social Determinants of Health Assessment will be disaggregated (where possible) and analyzed to understand differences in norms, roles and relations for diverse subgroups; the different level of power they hold; their differing needs, constraints and opportunities, and the effects of these differences in their lives related to the social determinants of health VCs and indicators. Those who provide information will be provided with the opportunity to validate that the information has been accurately recorded.

### 7.1.2.2 Tissue Sampling

The TISG references the need to undertake a tissue sampling program. If the problem formulation step of the HHRA identifies that an assessment of country food consumption is required, a tissue sampling program will be developed. This program will involve working with Indigenous communities to collect appropriate tissue samples from commonly harvested game species. The Proponent will advise the Agency of the results of the HHRA problem formulation step in regard to the needs for a tissue sampling program.

## 7.2 Study Methods

As noted in the TISG, human health effects are connected to environmental, social and economic effects. Human health effects are divided into two categories: social determinants of health and environmental determinants of health – though there may be interplay between effects. These effects will consider the biophysical, social and economic effects as they are related to health. These considerations will also consider perceptions of harm and the perceived risk to health. Throughout these assessments, GBA+ will be used to consider effects to disaggregated populations and will consider Indigenous Knowledge. The assessment will consider and utilize the sources and methods included in the TISG including Appendix 1.

Considering that the proposed Project is to construct and operate a new access road to the MFFN community, the main health and safety concerns related to the Project that will be the focus of the IA / EA





include: public safety related to vehicle use of the road once operational; changes in diet of community members; changes in public health conditions / services; and changes to environmental conditions (e.g., air emissions, noise, water / soil contamination from use of fuels / lubricants during road construction and during road operation).

## 7.2.1 Social Determinants of Health

The Social Determinants of Health Assessment will assess potential Project impacts using the same methodologies and frameworks as the larger Project IS / EA Report as described in the MFCAR Effects Assessment Methodology document. As per the TISG, the assessment will include:

- Predicted effects on the key criteria and indicators;
- Consideration of existing conditions data and impact assessments for criteria and indicators from other relevant reports. These include Social, Economy, Land and Resource Use Assessments and Indigenous Knowledge. The considerations include levels of health as described in the TISG such as:
  - Level-1 health determinants related to behavioural factors
  - Level-2 health determinants related to access to services
  - Level-2 health determinants related to material circumstances (economic factors)
  - Level-2 health determinants related to psychosocial factors for well-being
  - Level-3 health determinants related to structural and equity factors

These factors will be influenced by the GBA+ assessment and consider feedback from stakeholders and Indigenous communities.

- Assess disproportionate effects using a GBA+ framework such as the Public Health Agency of Canada Health Inequalities Tool;
- Consider relevance of the Project to existing plans and aspirational community goals;
- Define impact management measures with respect to diverse subgroups, where applicable and feasible (see below); and
- Consider future expenditure related to new community facilities, services and / or infrastructure due to Project effects.

It is recognized that the Project could impact the mental well-being of people in the potentially affected communities. This could result from a variety of factors including for example: improved social connections;





presence of outsiders in the community; changes in valued environmental features; concerns of impact on future generations; and feelings regarding change to the remoteness of the community. Related issues such as teen suicides and the impact that the Project could have on suicide rates will be considered.

As an initial step, potential effect pathways will be determined to provide a framework for the assessment of impact on the social determinants of health. It is expected that the MFFN community is the community most likely to experience changes to social determinants of health at it is the only community that will experience access changes. It is also noted that MFFN is the Proponent for the Project. Considering that the project will involve improved access to MFFN, the following are examples of pathways to be explored.

- Employment opportunities could improve and incomes could rise for more community members;
- There may be improved access to education opportunities;
- The potential for improved social support systems in the MFFN community; and
- Improved access to health services.

The Social Determinants of Health Assessment will be informed by academic literature, best practices in social impact assessment and previous similar IA / EAs. The methodology to complete the Social Determinants of Health Assessment will include gathering local knowledge and utilising consultation processes to analyze the concerns of interested and affected communities related to the VCs and indicators. Community stakeholders in the Community Health LSA and RSA will be involved in the assessment of health impacts, the analysis of alternatives, and the preparation of mitigation and monitoring plans.

## 7.2.2 Environmental Determinants of Health

To evaluate Environmental Determinants of Human Health, a human health risk assessment (HHRA) framework will be applied. This will include the problem formulation step of HHRA, which will be conducted to identify potential chemicals, exposure pathways, environmental media (e.g., air, soil, surface water, groundwater) and human receptors that may require evaluation.

Given requirements for recent IA / EAs of road projects, it is anticipated that there will be a need to at least conduct a focused HHRA of air emissions during Project construction and operations phases.

All HHRA's have several key steps, as follows:

- Problem Formulation
- Exposure Assessment





- Hazard (Toxicity) Assessment
- Risk Characterization
- Risk Management or Remedial Recommendations

As an initial step towards determining if a HHRA study is necessary or has sufficient data to proceed, a problem formulation (the first step in the HHRA process) will be conducted. Problem formulation steps do not involve exposure or risk modelling, but rather, focus on the key inputs into a HHRA. A problem formulation determines whether or not there are human receptors, environmental media, exposure pathways, chemicals of concern, or other stakeholder concerns, that should be evaluated in relation to the Project. If the problem formulation determines that a HHRA is required, then a HHRA study would be conducted according to current Health Canada guidance documents and recommended approaches. In that event, the Agency would be consulted for input. In addition, there would be community engagement activities. These activities would inform the communities on the HHRA plan and would also collect data from the communities to inform the HHRA, such that it reflects local land use patterns and human activities to the extent possible. There would also be community engagement to inform the communities of HHRA outcomes, and any recommended further assessment activities or mitigation. If the problem formulation determines that a HHRA study is not warranted in relation to the Project, rationale will be provided.

The HHRA problem formulation step provides the foundation for carrying out a HHRA study. Key tasks that comprise problem formulation are briefly described as follows:

- **Compiling of Issues of Concern:** Based on the outcomes of community engagement programs, human health-related issues of concern would be compiled and tabulated. The documented issues would be considered in the subsequent tasks of problem formulation with respect to whether or not and how they could be evaluated using HHRA tools and methods.
- **Study Area Characterization:** This task comprises a review of study area information and relevant documentation that pertains primarily to potential human exposure to chemicals in study area environmental media. This would include identifying contamination sources in relation to the Project and reviewing study area environmental media chemistry data that has been collected or estimated to date. This task would also include a data gap analysis. Data gap assessment is imperative to help to ensure that study area environmental media chemistry data are adequate and appropriate for risk assessment purposes. If key data gaps are identified, supplemental data collection may be necessary (if practical) to fill such gaps prior to commencing with further HHRA tasks and steps. If supplemental field investigations are required (e.g., for purposes of collecting study area soil, water, and / or country food item chemistry data), such investigations and programs will be scoped and designed to enable adequate data for HHRA purposes. Efforts will





be made, wherever possible, to retain study area Indigenous community members and / or staff for assistance / capacity building with respect to designing and implementing such field programs.

- **Selection of Exposure Pathways and Routes:** This task would be conducted via review and consideration of: study area baseline environmental media chemistry data (if available); locations of previously impacted areas within the study area (should any exist); Project emissions profiles or inventories (sources and types of emissions, and estimated emission rates and concentrations in study area media); physical-chemical, environmental fate and behaviour, and toxicological properties of contaminants of interest that may be present in study area environmental media and in Project emissions profiles / inventories; land uses with the study area including access constraints (if any); biophysical study area features that may affect exposure to Project-associated contaminants (e.g., surface coverings such as soil and vegetation, drainage / flow patterns, soil texture, depth to groundwater); groundwater use (potable or non-potable); surface water (potable or non-potable) use and presence or proximity to surface water bodies; proximity of receptor locations (e.g., residences, camps / cabins, hunting / fishing / harvesting locations) to Project emissions sources; areal extent of study area potentially impacted by Project emissions.
- **Identification of Chemicals of Potential Concern (COPCs):** This task would review Project emissions inventories / profiles and screen them to identify chemicals within emissions that may pose a potential human health concern. Various screening tools would be applied to applicable study area environmental media, as necessary, to identify chemicals in these media that may pose a human health concern. Screening tools and considerations would be expected to include the following: application of regulatory Canadian benchmarks (including federal and Ontario benchmarks) for air, soil, and drinking water benchmarks that are derived to be protective of human health; comparison of study area environmental chemistry data to environmental chemistry data for reference (background) areas (if such data are available); physical-chemical and environmental fate and behaviour properties of the emissions / contaminants of interest (e.g., partitioning to different media, degradation / transformations, tendency to bioaccumulate or biomagnify); essential nutrient status; ubiquity of certain chemicals in certain media; statistical and spatial relationships of contaminants in environmental media; local geology / geochemistry; speciation (chemical forms) of contaminants in study area environmental media.
- **Selection of Exposure Scenarios:** This task reviews and considers outcomes of study area characterization, exposure pathway and route selection, and COPC identification steps of problem formulation, as well as consideration of applicable regulatory HHRA guidance. The exposure scenarios in a HHRA must reflect the means by which human receptors are most likely





to come into contact with chemicals in study area environmental media and / or locally harvested food items, as a function of study area access and use patterns. Outcomes of community engagement and key IA / EA component studies will be used to refine the development of exposure scenarios.

- **Selection and Characterization of Human Receptors:** This task also reviews and considers the outcomes of study area characterization, exposure pathway and route selection, and COPC identification steps of problem formulation, as well as consideration of applicable regulatory HHRA guidance. This step also considers various behavioural and physiological factors that might increase a particular human receptors' COPC exposures relative to others, as well as the known sensitivity of certain human life stages to chemical exposures. Outcomes of community engagement will be used to refine the selection of relevant human receptors and receptor life stages within the HHRA. All potentially vulnerable human life stages would be considered.
- **Development of Conceptual Exposure Model (CEM):** This task summarizes the information from the previous steps of problem formulation in a simple visual manner that provides a representation of potential exposure pathways that link the identified COPCs to the human receptors of interest. CEMs are commonly revised and refined as the HHRA progresses, and as additional study area data are collected. The outcomes of community engagement will be used to refine and develop the CEM for the HHRA.

As noted previously, a HHRA of construction and operations phase air emissions is potentially necessary. Based on knowledge of HHRAs conducted in support of IAs of similar projects, air emissions during the Project construction phase are considered likely to comprise the Project COPCs for the most part, recognizing that additional or different COPCs may potentially be identified for the operations phase, or in other study area media as well. The key COPCs present in construction phase air emissions (from diesel and gasoline powered vehicles and equipment) would be anticipated to include the following:

- Nitrogen oxides (NO<sub>x</sub>);
- Particulate matter (e.g., PM<sub>2.5</sub>, PM<sub>10</sub>, total suspended particulate);
- Carbon monoxide (CO);
- Sulphur dioxide (SO<sub>2</sub>);
- Diesel particulate matter (DPM);
- Benzene, toluene, ethylbenzene, and xylene (BTEX); and,
- Polycyclic aromatic hydrocarbons (PAHs).







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Construction phase air emissions would be temporary and likely highly localized to the areas of work during the specific timeframes planned for each section of road development. Following construction, the operation of the CAR would also contribute changes in local air quality from the use of the road by vehicular traffic (i.e., all-season availability compared to current use of winter road only). The emissions of interest would be expected to be the same as those during the construction phase.

If a HHRA beyond an evaluation of construction and operations phase air emissions is warranted (following the completion of the HHRA problem formulation step), it is expected that such a study may consider the environmental media of: outdoor ambient air, soil, surface water, sediments, drinking water, and potentially country foods. A more comprehensive HHRA, if necessary, would also be expected to consider all human receptor age classes (i.e., infant, toddler, child, adolescent, adult) for both males and females. Potential exposure pathways that would likely be considered in a more comprehensive HHRA include:

- Soil ingestion / dermal contact;
- Drinking water ingestion;
- Outdoor air and dusts inhalation; and,
- Country foods ingestion.

In the event that country foods ingestion warrants evaluation in a HHRA (if determined during the HHRA problem formulation step), the assessment of country foods would require consideration of a dietary survey that could be administered among the local Indigenous communities to determine which country foods are harvested and consumed, and at what rates, frequencies, and quantities (i.e., traditional country food harvesting patterns), and what times of year (seasonal versus year-round harvesting). Such a survey could also determine the harvesting locations of country food items, which would inform whether or not the Project is likely to influence country food contamination at a given harvesting location. While efforts will be made to collect information on harvesting patterns during engagement and consultation activities, it is recognized that the information obtained through such programs may yield limited or insufficient data towards developing adequately robust consumption rates, frequencies and scenarios for HHRA purposes. In that event, more detailed dietary surveys would need to be developed and administered. However, it is anticipated that engagement and consultation programs could yield information that would be helpful in identifying / determining the need for potential community diet surveys, identifying key harvested food items, and identifying the key harvesting locations. If diet surveys are conducted, they will be designed to be stratified by age class and by gender, recognizing that there are often differences in country food consumption patterns between males and females and between age classes.





Country food items of interest may include but not necessarily be limited to various bird and mammal game species, fish, berries and various other traditional plants.

In the event that dietary surveys are not feasible to conduct, consideration will be given to using surrogate data from First Nations Food, Nutrition & Environment Study (FNFNES 2021) programs in order to estimate COPC exposures from country food item consumption exposure pathways. It is recognized that this is not ideal and not community-specific, but may become necessary.

A comprehensive HHRA, if necessary, would be anticipated to consider Project emissions and contaminants that are additional to those related to vehicle and equipment air emissions. This may include substances that may be already present in study area media (under baseline study area conditions), due to historical land uses within the Project footprint (including previous mineral exploration sites, or due to existing natural geological hazards). A comprehensive HHRA may also be anticipated to investigate the potential for Project-associated emissions to release or mobilize certain chemicals that may bioaccumulate in fish species that are harvested and consumed by local Indigenous communities.

If a comprehensive HHRA is deemed unnecessary following the completion of the problem formulation step (e.g., due to lack of operable exposure pathways, lack of identified chemicals of concern in relevant study area media), rationale will be provided and communicated to the Agency. Similarly, if certain chemicals, exposure pathways and receptors are deemed unnecessary to evaluate in certain media, or if there is reason to deviate from or modify Health Canada-recommended approaches, rationale will be provided for such exclusions and / or changes.

It is possible that a HHRA study may be deemed unnecessary for technical reasons (such as lack of exposure pathways or lack of chemicals of concern in study area media), but still be conducted to enable addressing public or other stakeholder concerns raised about human health issues. This would only occur though if HHRA tools and methods are capable of addressing the issue(s) effectively. The HHRA problem formulation step would inventory and list all documented public and other stakeholder concerns that relate to Project human health effects, and these concerns would be considered for all problem formulation tasks.

To facilitate communication regarding a HHRA study potentially being unnecessary, various checklists provided in Health Canada HHRA guidance documentation would be completed and provided.





## 8. Data Management and Analysis

Data management including quality assurance / quality control (QA / QC) will be employed to minimize potential for data entry and analysis errors, prepare data sets for analysis and limit sensitive data distribution in accordance to established agreements.

It is expected that there will be a multitude of data issues and limitations based on the Project area. This may include:

- The suppression of data by Statistics Canada due to low population numbers, particularly when disaggregating data related to income and other sensitive factors;
- Individuals volunteering to self-identify during the primary data collection program to support disaggregated data reporting; and,
- Community-specific research and planning documentation to support all elements of data collection including community-specific studies and specialized plans.

These issues may limit the information available to be reported by the Proponent as part of the IS / EA Report, particularly related to disaggregated data to support a GBA+ analysis. None of these issues are likely to limit the ability of the Proponent to assess Human Health and Community Safety effects but may result in more frequent assumptions related to the applicability of data across communities.





## 9. Effects Assessment

The following sections provide discipline-specific input and considerations as they pertain to the methodology for effects assessment. The Project is in the early stage of the IS / EA Report preparation and it is expected that the effects assessment methodology will be refined iteratively based on regulatory agency guidance, professional judgment and input received through the Project consultation and engagement process.

### 9.1 Project-Environment Interactions

The Project activities that may result in changes to the environment are described within the identified temporal and spatial boundaries. This includes identification of both direct and indirect changes by comparing the existing setting to the conditions anticipated to occur as a result of the Project. For each environmental discipline, the likely Project-environment interactions will be identified based on professional judgment, activities listed in TISG Section 3.2 as well as projects of similar magnitude and / or location.

A preliminary analysis of Project-environment interactions for the Human Health and Community Safety discipline is provided in **Table 9-1** and will be confirmed during the IA / EA process to identify the Project-environment interactions that are likely to have a potential effect, and to identify measures to avoid or minimize potential negative effects and enhance benefits.

**Table 9-1: Project – Environment Interactions**

Project Phases	Project Activities	Human Health and Community Safety Discipline
<b>Construction Phase</b>	<i>Mobilization of Equipment and Supplies</i>	X
	<i>Temporary Construction Staging Areas<sup>1</sup></i>	X
	<i>Temporary Access Roads and Trails<sup>1</sup></i>	X
	<i>Temporary Construction Camps<sup>1</sup></i>	X
	<i>ROW Clearing and Grubbing</i>	X
	<i>Brush and Timber Disposal</i>	X
	<i>Pits and Quarries<sup>1</sup></i>	X
	<i>Drilling / Blasting / Aggregate Production</i>	X
	<i>Road Construction (stripping, subgrade excavation, embankment fill placement, grading, ditching)</i>	X
	<i>Bridge and Culvert Installation (approach embankments, foundations, substructures, superstructures, traffic protection, erosion controls)</i>	X
	<i>Construction Site Restoration</i>	X





Project Phases	Project Activities	Human Health and Community Safety Discipline
<b>Construction Phase:</b>	<i>Pits and Quarries</i>	<b>X</b>
<b>Decommissioning</b>	<i>Temporary Camps, Roads / Trails and Staging Areas</i>	<b>X</b>
<b>Operations Phase</b>	<i>Road Usage</i>	<b>X</b>
	<i>Maintenance<sup>2</sup></i>	<b>X</b>

Notes: 1. Includes construction and use of  
 2. Includes General Maintenance (e.g., grading, erosion control, quarrying, borrow pits), Seasonal Maintenance (e.g., snow clearing, bridge and culvert maintenance), and Special Maintenance (e.g., slope failures, road settlement / break-up.).

## 9.2 Valued Components and Indicators

VCs are the environmental, health, social, economic or additional elements or conditions of the natural and human environment that may be impacted by a proposed project and are of concern or value to the public, Indigenous peoples, federal authorities and interested parties (the Agency 2020b). Indicators represent the resource, feature, or issue related to the VC that, if changed, may demonstrate an effect on the environment. The indicators and rationale for selection and measurement of potential effects, to be used to assess and evaluate the alternative routes in the IS / EA Report are provided in **Table 9-2**. The table includes both quantitative and qualitative indicators. The final list of VCs and indicators to be used in the IS / EA Report will be based on regulatory agency guidance, professional judgement and input received through the Project consultation and engagement process.

The VCs of the Human Health and Community Safety discipline have been determined through consideration of the following factors listed in the TISG<sup>8</sup>:

- VC presence in the study area;
- the extent to which the VC is linked to the interests or exercise of Aboriginal and Treaty Rights of Indigenous peoples, and whether an Indigenous group has requested the VC;
- the extent to which the effects (real or perceived) of the Project and related activities have the potential to interact with the VC;
- the extent to which the VC may be under cumulative stress from other past, existing or future undertakings in combination with other human activities and natural processes;

8. The TISG also states that information from ongoing and completed regional assessments in the proposed area of the Project should be used to inform VCs for the Project. In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs. The VCs will be consulted and engaged on early in the IA/ EA process and finalized taking into consideration the input received. Therefore, only information relevant to the Project that arises from the regional assessment of the Ring of Fire within an appropriate timeline will inform the VCs for the Project.





- the extent to which the VC is linked to federal, provincial, territorial or municipal government priorities (e.g., legislation, programs, policies);
- the possibility that adverse or positive effects on the VC would be of particular concern to Indigenous groups, the public, or federal, provincial, territorial, municipal or Indigenous governments; and
- whether the potential effects of the Project on the VC can be measured and / or monitored or would be better ascertained through the analysis of a proxy VC.

Inputs received to date from Indigenous communities, agencies and interested persons through the Consultation and Engagement Program, including inputs received on the Draft ToR, have also been used to inform the selection of the VCs and indicators for the Human Health and Community Safety Study Plan.

**Table 9-2: Human Health and Community Safety Indicators**

Valued Component	Indicators	Rationale for Selection	Sources of Information
Public Safety	Project-related Accidents	<ul style="list-style-type: none"> <li>■ Considers occurrence of work-related injuries reported at the Project site as a result of construction and maintenance activities.</li> <li>■ Project construction and maintenance activities have the potential to injure members of the work force and community members.</li> </ul>	<ul style="list-style-type: none"> <li>■ Primary data;</li> <li>■ Social Assessment;</li> <li>■ Municipal, provincial and Indigenous government websites;</li> <li>■ Indigenous plans and reports;</li> <li>■ Provincial plans and reports;</li> <li>■ Regional reports;</li> <li>■ National reports;</li> <li>■ Academic research;</li> <li>■ Web-based sources; and,</li> <li>■ Previous relevant EAs.</li> </ul>
	Road Use Accidents	<ul style="list-style-type: none"> <li>■ Considers changes in vehicular accidents on the CAR (e.g., with other vehicles, wildlife) and on roads leading to the Project as a result of an increase in traffic.</li> <li>■ Project operation may lead to vehicle accidents harming individuals including those who may walk, hitchhike or cycle along the road).</li> </ul>	<ul style="list-style-type: none"> <li>■ Primary data;</li> <li>■ Social Assessment;</li> <li>■ Municipal, provincial and Indigenous government websites and reports;</li> <li>■ Regional reports;</li> <li>■ National reports;</li> <li>■ Academic research;</li> <li>■ Web-based sources; and,</li> <li>■ Previous relevant EAs.</li> </ul>
	Violence and Harassment	<ul style="list-style-type: none"> <li>■ Resulting interactions between members of the work force and local community members that may result in violence or harassment.</li> <li>■ Conflict between construction work force and the local communities may impact the health of individuals involved.</li> </ul>	<ul style="list-style-type: none"> <li>■ Primary data;</li> <li>■ Social Assessment;</li> <li>■ Municipal, provincial and Indigenous government websites and reports;</li> <li>■ Regional reports;</li> <li>■ National reports;</li> </ul>





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Valued Component	Indicators	Rationale for Selection	Sources of Information
		<ul style="list-style-type: none"> <li>Address potential safety risks to Indigenous women from users of the road during the operations period e.g., human trafficking).</li> </ul>	<ul style="list-style-type: none"> <li>Academic research;</li> <li>Web-based sources; and,</li> <li>Previous relevant EAs.</li> </ul>
<b>Public Health</b>	Access to Health Services	<ul style="list-style-type: none"> <li>By providing all season road access, the Project may improve access to health services including specialized medical services which can have an overall positive impact on public health.</li> <li>Regarding access to health services, mobility levels of MFFN residents will be considered.</li> <li>The Project may also influence the supply and demand for health services during the construction period which will also be assessed.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data;</li> <li>Social Assessment;</li> <li>Economic Assessment;</li> <li>Municipal, provincial and Indigenous government websites;</li> <li>Indigenous plans and reports;</li> <li>Provincial plans and reports;</li> <li>Local service providers;</li> <li>Regional reports;</li> <li>Industry reports;</li> <li>Academic research;</li> <li>Web-based sources; and,</li> <li>Previous relevant EAs.</li> </ul>
	Social and Economic Structures	<ul style="list-style-type: none"> <li>The Project may influence social and / or economic structures which could also have potential impacts to health. Some of these include new employment opportunities / income, access to education, community well-being and changes to material structures such as living conditions and access to goods. Changes to these structures may influence physical and mental health of community members in the study area.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data;</li> <li>Social Assessment;</li> <li>Economic Assessment;</li> <li>Municipal, provincial and Indigenous government websites and reports;</li> <li>Local service providers;</li> <li>Regional reports;</li> <li>Academic research;</li> <li>Web-based sources; and,</li> <li>Previous relevant EAs.</li> </ul>
	Substance Abuse	<ul style="list-style-type: none"> <li>The Project may facilitate easier access to drugs and alcohol.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data;</li> <li>Social Assessment;</li> <li>Municipal, provincial and Indigenous government websites and reports;</li> <li>Local service providers;</li> <li>Academic research;</li> <li>Web-based sources; and,</li> <li>Previous relevant EAs.</li> </ul>
	Mental Health	<ul style="list-style-type: none"> <li>The Project could impact the mental well-being of people in the potentially affected communities. This could result from a variety of factors including for example: improved social connections; presence of outsiders in the community; changes in valued environmental features; concerns of impact on future generations; and feelings regarding change to the remoteness of the community.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data;</li> <li>Social Assessment;</li> <li>Municipal, provincial and Indigenous government websites and reports;</li> <li>Local service providers;</li> <li>Academic research;</li> <li>Web-based sources; and,</li> <li>Previous relevant EAs.</li> </ul>





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Valued Component	Indicators	Rationale for Selection	Sources of Information
<b>Diet</b>	Food Consumption	<ul style="list-style-type: none"> <li>The Project may improve access to additional food supply and alter food price levels and livelihoods altering the diet of those in the local community.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data;</li> <li>Social Assessment;</li> <li>Economic Assessment</li> <li>Municipal, provincial and Indigenous government websites;</li> <li>Indigenous plans and reports;</li> <li>Provincial plans and reports;</li> <li>Local service providers;</li> <li>Regional reports;</li> <li>Academic research;</li> <li>Web-based sources; and previous relevant EAs.</li> </ul>
	Food Supply	<ul style="list-style-type: none"> <li>The Project may result in a change in consumption of traditional and non-traditional foods due to changes in access to harvesting areas; resource competition and access to non-traditional food stuffs including price changes.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data;</li> <li>Social Assessment;</li> <li>Economic Assessment</li> <li>Municipal, provincial and Indigenous government websites;</li> <li>Indigenous plans and reports;</li> <li>Provincial plans and reports;</li> <li>Local service providers;</li> <li>Regional reports;</li> <li>Academic research;</li> <li>Web-based sources; and,</li> <li>Previous relevant EAs.</li> </ul>
<b>Environmental Factors Influencing Human Health</b>	Air Quality	<ul style="list-style-type: none"> <li>The Project may alter local and regional air quality which could impact human health.</li> </ul>	<ul style="list-style-type: none"> <li>Atmospheric Environment Assessment</li> </ul>
	Noise	<ul style="list-style-type: none"> <li>The Project may alter noise levels which could impact human health.</li> </ul>	<ul style="list-style-type: none"> <li>Acoustic and Vibration Assessment</li> </ul>
	Country Foods	<ul style="list-style-type: none"> <li>The Project may potentially alter contaminant levels in harvested country food items.</li> </ul>	<ul style="list-style-type: none"> <li>Atmospheric Environment Assessment</li> <li>Surface Water Assessment</li> <li>Physiography, Terrain and Soils Assessment</li> <li>Human Health Risk Assessment (if deemed necessary)</li> <li>Tissue residue data collection programs (if deemed necessary)</li> </ul>
	Surface Water and Groundwater	<ul style="list-style-type: none"> <li>The Project may alter surface water and groundwater quality which could impact human health.</li> </ul>	<ul style="list-style-type: none"> <li>Surface Water Assessment</li> <li>Groundwater and Geochemistry Assessment</li> </ul>
	Other Environmental Conditions and Changes	<ul style="list-style-type: none"> <li>Changes to the environmental conditions within the Project area may negatively impact health due to perceptions of harm.</li> </ul>	<ul style="list-style-type: none"> <li>Relevant physical, biophysical, social, and economic studies conducted as part of the IA / EA;</li> <li>Primary data;</li> <li>Academic research; and,</li> <li>Government reports.</li> </ul>







## 9.3 Potential Effects

A direct effect occurs through the direct interaction of an activity with an environmental discipline. The Project-environment interactions currently anticipated, based upon preliminary analysis, to result in direct effects to Human Health and Community Safety discipline have been identified in **Table 9-1**. The potential direct effects resulting from the Project-environment interactions will be confirmed during the IA / EA process and will be based on input received through the Indigenous Knowledge Program and Consultation and Engagement Program, regulatory agency guidance, and professional judgement.

An indirect effect occurs when a change to one environmental discipline resulting from a Project activity causes a change to another environmental discipline (e.g., changes in air quality could indirectly affect human health). **Table 9-3** provides a preliminary identification of how Human Health and Community Safety may be affected by changes to other environmental disciplines.





**Table 9-3: Potential Discipline Interactions**

Discipline and Associated Valued Components	Aboriginal and Treaty Rights and Interests	Atmospheric Environment	Acoustic and Vibration Environment	Physiography, Geology, Terrain and Soils	Surface Water	Groundwater and Geochemistry	Vegetation	Wildlife	Fish and Fish Habitat	Social	Economy	Land and Resource Use	Human Health and Community Safety	Visual Aesthetics	Archaeological and Cultural Heritage
<b>Human Health and Community Safety</b> ■ Public Safety ■ Public Health ■ Diet ■ Environmental Factors Influencing Health	X	X	X	-	X	-	X	X	X	X	X	-		-	-

Notes: X = Potential pathway for indirect effect as a result of the Project.  
 - = No pathway for indirect effect is anticipated as a result of the Project.





## 9.4 Methods for Predicting Future Conditions

The Human Health and Community Safety Assessment will assess Project effects using similar methodologies and frameworks as outlined in the MFCAR Effects Assessment Methodology document.

The Human Health and Community Safety Assessment will be informed by academic literature, best practices and previous similar EAs. The methodology to complete the Human Health and Community Safety Assessment will include gathering local knowledge and utilising inputs from consultation activities to analyze the concerns of interested and affected communities related to the VCs and indicators as per **Section 9.2**. Community members in the Community Health LSA and RSA will be engaged with regarding the assessment of Human Health and Community Safety effects, the analysis of alternatives, and the preparation of mitigation and monitoring plans. Data used in the Human Health and Community Safety Assessment will be disaggregated (where possible) and analyzed to understand differences in norms, roles and relations for diverse subgroups; the different level of power they hold; their differing needs, constraints and opportunities, and the effects of these differences in their lives related to the Human Health and Community Safety VCs and indicators.

Considerations related to Painter Lake Road and Anaconda Road will be addressed qualitatively based on the understanding that Aroland First Nation will be conducting their own study on improvements to these roads.

## 9.5 Mitigation and Enhancement Measures

Once potential effects have been identified, the effects assessment will explore technically and economically feasible mitigation measures to avoid or minimize the identified negative effects and enhancement measures to increase positive effects beyond those that are already inherent to the design. These measures will consist of industry-standard practices, federal and provincial standard specifications, regulator-mandated measures, best management practices, Indigenous and community recommendations and recommendations from industry and environmental professionals based on expertise, scientific publications, experience and judgement.

It is important that mitigation and enhancement measures are achievable, measurable and verifiable and monitored for compliance and effectiveness during all temporal phases as part of the Project follow-up monitoring plan. Required environmental monitoring will verify the potential environmental effects predicted in the IS / EA Report, evaluate the effectiveness of mitigation and enhancement measures, and identify the process the Proponent will follow if mitigation and enhancement measures are not effective.





## 9.5.1 TISG Section 20 Requirements

The TISG (Section 20) provides one reference to the need for mitigation in relation to potential health impacts as noted in **Table 9-4**. As well, considering that the health and safety assessment will examine social determinants of health, **Table 9-4** also provides reference to potentially applicable social mitigation measures, which are also presented in the Social Environment Study Plan.

**Table 9-4: TISG Section 20 Requirements for Human Health and Community Safety**

Item #	TISG Section 20 Requirement	Response
1	<ul style="list-style-type: none"> <li>Propose mitigation measures to reduce all potential adverse effects to health conditions of all potentially impacted communities and Indigenous groups and present opportunities for enhancing positive effects;</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation measures will be developed to address potential adverse effects to health conditions on all potentially impacted communities. As well, opportunities to enhance positive effects will be recommended where applicable.</li> </ul>
2	<ul style="list-style-type: none"> <li>Describe mitigation measures that are specific to each environmental, health, social or economic effect identified. Mitigation measures are to be written as specific commitments that clearly describe when and how the proponent intends to implement them, what decision-making criteria will be used, and the outcome these mitigation measures are designed to address;</li> </ul>	<ul style="list-style-type: none"> <li>The Human Health and Community Safety Assessment will include a description of applicable mitigation measures deemed to be required subject to the results of the impact assessment.</li> </ul>
3	<ul style="list-style-type: none"> <li>Describe mitigation measures that are specific to identified effects to Indigenous peoples;</li> </ul>	<ul style="list-style-type: none"> <li>The Human Health and Community Safety Assessment will include a description of applicable mitigation measures deemed to be required subject to the results of the impact assessment, including measures that may be specific to Indigenous people.</li> </ul>
4	<ul style="list-style-type: none"> <li>Describe mitigation measures proposed by Indigenous peoples and the consideration of those in the Project;</li> </ul>	<ul style="list-style-type: none"> <li>The Human Health and Community Safety will include a description of applicable mitigation measures deemed to be required subject to the results of the impact assessment, including measures that may be specific to Indigenous people including measures that may have been suggested by Indigenous people.</li> </ul>
5	<ul style="list-style-type: none"> <li>Propose differentiated mitigation measures for all potential adverse effects identified, if applicable, so that adverse effects do not fall disproportionately on vulnerable populations, certain Indigenous groups, or certain communities, and they are not disadvantaged in sharing any development benefits and opportunities resulting from the Project. These mitigation measures should be developed in collaboration with those who are vulnerable and / or disadvantaged;</li> </ul>	<ul style="list-style-type: none"> <li>The development of applicable mitigation measures will take into account identified potential impacts on vulnerable populations and developed with the input of interested persons from those vulnerable populations.</li> </ul>





Item #	TISG Section 20 Requirement	Response
6	<ul style="list-style-type: none"> <li>Describe how disproportionate effects that were identified in the GBA+ results were used to inform mitigation and enhancement measures.</li> </ul>	<ul style="list-style-type: none"> <li>The Human Health and Community Safety Assessment will describe any identified disproportionate effects to sub-populations.</li> </ul>

## 9.6 Residual Effects

Residual effects are the effects remaining after the application of mitigation measures. The IS / EA Report will describe in detail the potential adverse and positive residual effects in relation to each temporal phase of the Project (e.g., construction, operation). Residual effects will be described using criteria to quantify or qualify adverse and positive effects, taking into account any important contextual factors. The residual effects will therefore be described in terms of the direction, magnitude, geographic extent, duration, frequency, likelihood, and whether effects are reversible or irreversible<sup>9</sup>. Ecological and socio-economic context may also be relevant when describing a residual effect. Context relates to the existing setting, its level of disturbance and resilience to adverse effects. Context can also relate to timing as it applies to assessing the worst-case scenario (e.g., effect during migratory or calving season for wildlife). Where appropriate, information regarding residual effects will be disaggregated by sex, gender, age and other community relevant identifying factors to identify disproportionate residual effects for diverse subgroups.

For magnitude, environmental discipline-specific definitions are required and are proposed below in **Table 9-5**.

**Table 9-5: Human Health and Community Safety Magnitude Definition**

Magnitude Level	Definition	Rationale
<b>Negligible</b>	<ul style="list-style-type: none"> <li>An effect that may or may not be discernible but is within the historical variability as defined by baseline conditions.</li> <li>The effect is limited to a small number of people and would occur very infrequently if at all.</li> <li>The effect is extremely unlikely to result in adverse changes to human health. The existing health system is expected to have the ability to address / mitigate it.</li> </ul>	<ul style="list-style-type: none"> <li>Negligible effects are small and may not be noticeable. These effects do not represent a change in day-to-day life at a community-level.</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>An effect that is small but discernable and within historical variability as defined by baseline conditions.</li> <li>The effect is limited to a small number of people and would occur infrequently.</li> </ul>	<ul style="list-style-type: none"> <li>Low effects are noticeable by a few community members but would occur infrequently. These effects do not represent</li> </ul>

9. TISG Section 13.1 identifies additional effects characteristics for certain disciplines (e.g., wetlands, birds, terrestrial wildlife, species at risk). These additional effects characteristics are described in the respective discipline-specific study plans.





Magnitude Level	Definition	Rationale
	<ul style="list-style-type: none"> <li>■ The effect is unlikely to result in adverse changes to human health, but may pose a nuisance. The existing health system is expected to have the ability to address / mitigate it.</li> </ul>	a change in day-to-day life at a community-level.
<b>Medium</b>	<ul style="list-style-type: none"> <li>■ An effect that is clearly discernable and beyond the historical variability as defined by baseline conditions.</li> <li>■ The effect occurs to a larger number of people within a community and would occur with some frequency.</li> <li>■ The effect may potentially result in adverse changes to human health, but the changes are unlikely to be severe and would be expected to be mild or moderate. The existing health system is expected to largely have the ability to address / mitigate it.</li> </ul>	<ul style="list-style-type: none"> <li>■ Medium effects are noticeable by many community members. These effects may or may not represent a change to day-to-day life but can be mitigated by the current health system.</li> </ul>
<b>High</b>	<ul style="list-style-type: none"> <li>■ An effect that is clearly discernable and beyond the historical variability as defined by baseline conditions.</li> <li>■ The effect is widespread in a community or through multiple communities and is expected to occur frequently / have a long duration.</li> <li>■ The effect is likely to result in adverse changes to human health that may range from moderate to severe. The existing health system is expected to struggle in its ability to address / mitigate it.</li> </ul>	<ul style="list-style-type: none"> <li>■ High effects are noticeable to a larger number / proportion of community members. These effects represent a change to day-to-day life and cannot be mitigated by the current health system resulting in systemic change to baseline health conditions.</li> </ul>

## 9.7 Consideration of Sustainability Principles

The following provides a generic description of how sustainability principles will be considered in the effects assessment. The extent to which sustainability principles apply to a specific VC will vary depending on the nature of the VC and the potential for Project effects on the VC.

The effects assessment approach for the Project has included the consideration of the sustainability principles outlined in the Project TISG and the Agency’s guidance on sustainability. The sustainability principles that have been considered include:

1. Consider the interconnectedness and interdependence of human-ecological systems;
2. Consider the well-being of present and future generations;
3. Consider positive effects and reduce adverse effects of the Project; and
4. Apply the precautionary principle by considering uncertainty and risk of irreversible harm.

The interconnectedness and interdependence of human-ecological systems will be considered through the assessment of potential indirect effects of each alternative. An indirect effect occurs when a change to one





environmental discipline resulting from a Project activity causes a change to another environmental discipline (e.g., changes in vegetation could indirectly affect wildlife). A preliminary assessment of indirect effects has been included in **Section 9.3**.

The well-being of present and future generations will be considered in the effects assessment through the application of the long-term operations phase temporal boundary of 75 years (**Section 6.1**) and through the effects characteristics description of duration and reversibility for each residual effect predicted.

The consideration of positive effects and reducing adverse effects of the Project is fundamental to the effects assessment methodology through the identification of mitigation measures to reduce potential adverse effects and the identification of the preferred alternative through the evaluation of advantages (e.g., positive effects) and disadvantages (e.g., adverse effects).

The effects assessment will apply the precautionary principle by clearly describing and documenting all uncertainties and assumptions underpinning the analysis and identifying information sources. The effects assessment will consider risk of irreversible harm through the effects characteristics description of reversibility for each residual effect predicted and will describe any uncertainty associated with the assessment of residual effects.

The scope of the sustainability assessment will be defined by issues of importance identified by Indigenous communities and interested persons through consultation and engagement activities, while also ensuring to be inclusive of the diversity of views expressed. The selection of VCs that will be the focus of the sustainability assessment will be aligned with the issues of importance identified by Indigenous communities and interested persons, as well as residual effects identified through the effects assessment process. The sustainability assessment will describe how the planning and design of the Project, in all phases including follow-up monitoring, considered the sustainability principles.

## 9.8 Consideration of Identity and Gender-Based Analysis Plus in Effects Assessment

The Proponent recognizes that communities and sub-populations within those communities may be impacted differently by the Project with respect to VCs and indicators. As such, the Project aims to collect baseline information for the purpose of assessing differential effects and establishing relevant mitigation measures, as further elaborated on in **Section 4.3**. GBA+ will not be limited to community feedback; when offered or discussed in secondary texts, additional sub-population information as is applicable to the relevant assessment will be incorporated.





As noted in **Section 7.2**, GBA+ will be integrated throughout the Human Health and Community Safety Assessment. This analysis will be derived from our matrix-based approach for baseline collection which will be foundational to understanding and assessing differential effects to sub-populations. The approach to GBA+ will be largely qualitative, drawing on professional knowledge, best practices and relevant literature.

## 9.9 Follow-up Programs

A follow-up program verifies the accuracy of the effects assessment and evaluates the effectiveness of mitigation measures. Section 26 of the TISG provide a general reference to the need to develop monitoring activities that pose risks to health conditions. The identification of Human Health and Community Safety follow-up programs for the Project are not described in this Study Plan as the information needed to determine the need for and form of impact monitoring is dependent on the outcome of the effects assessment and on the results of consultation and engagement with Indigenous communities, agencies and interested persons.

Based on the results of the Human Health and Community Safety Assessment work, follow-up program recommendations will be made subject to their applicability and necessity. These programs may be targeted to specific communities and / or specific adverse effects and / or potential positive effects of the Project.







## 10. Assumptions

The MFFN CAR Project Team is not aware at this time of key assumptions that will be recognized in the Human Health and Community Safety Assessment. These will be determined during the IA / EA process. Key assumptions made and used in the assessment of Human Health and Community Safety impacts will be documented in the IS / EA Report.





## 11. Concordance with Federal and Provincial Guidance

This section provides the best information currently available on how federal and provincial requirements identified for the Project to date will be addressed. **Table 11-1** outlines how the Human Health and Community Safety Assessment will conform with the TISG. Presented in **Table 11-2** are the comments received on the draft provincial ToR that relate to the Human Health and Community Safety Assessment. **Table 11-3** outlines proposed deviations from the TISG requirements.

The final concordance with federal and provincial requirements will be included in the IS / EA Report, and will be based on regulatory agency guidance, professional judgement and input received through the Project consultation and engagement process.





**Table 11-1: Study Plan Federal Concordance – Conformance with Requirements**

ID #	Federal TISG Reference <sup>10</sup>	Requirement / Comment / Concern	Response	Study Plan Reference
1	TISG Section 6	<ul style="list-style-type: none"> <li>The Impact Statement must describe in the analysis a list of the:               <ul style="list-style-type: none"> <li>– Potential effects on the environmental, health, social and economic conditions of each Indigenous group, including sub-populations (e.g., Indigenous women and youth) that may be differentially impacted by the Project;</li> <li>– The predicted degree (e.g., high, moderate, low) of those effects; and</li> <li>– Resulting impacts on the exercise of Aboriginal and Treaty rights.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Effects on Human Health and Community Safety will be described consistent with these parameters as indicated in Section 9 of this Study Plan.</li> </ul>	<ul style="list-style-type: none"> <li>Section 9.0</li> </ul>
2	TISG Section 9	<ul style="list-style-type: none"> <li>Baseline information is required on existing human health conditions to understand where health inequalities currently exist in all potentially impacted local communities, including municipalities, and Indigenous groups. This information must include:               <ul style="list-style-type: none"> <li>– The current state of physical, mental and social well-being; and</li> <li>– A social determinants of health approach that moves beyond the biophysical health considerations.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Social determinants of health information including inequalities will be considered and data will be collected, where available. See list of VCs and indicators and respective data sources in Table 9.2.</li> </ul>	<ul style="list-style-type: none"> <li>Section 9.2</li> </ul>
3	TISG Section 9	<ul style="list-style-type: none"> <li>A determinants of health approach should recognize:               <ul style="list-style-type: none"> <li>– Health is more than the absence of disease;</li> <li>– Is a state of overall well-being; and</li> <li>– Is impacted by many factors (or determinants) including social and physical environment and Indigenous views of health.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Disease, overall well-being, and social and biophysical determinants of health will be considered in data collection. See list of VCs and indicators and respective data sources in Table 9.2.</li> </ul>	<ul style="list-style-type: none"> <li>Section 9.2</li> </ul>
4	TISG Section 9	<ul style="list-style-type: none"> <li>Approach places emphasis on:               <ul style="list-style-type: none"> <li>– Causes of physical diseases and mental illnesses (health-related behavioural and biological factors; and health determinants - service access and social, cultural and economic factors); and</li> <li>– Equal emphasis on the causes of these causes (health determinants - structural and equity factors).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Data on the causes of health issues will be collected and described.</li> <li>Equality and disproportionate health effects will be considered in data collection and the IA / EA. Further, as noted in this Study Plan, health determinants related to social structures and equity factors will primarily be documented in other plans and reports. Related items not included in this Study Plan, but requested in the TISG, are covered under separate study plans for Social and Economics. Items not included explicitly within this Study Plan may be referenced and considered in the assessment of effects to relevant components of the Social environment such as community well-being.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.1.2.1</li> <li>Section 7.2</li> </ul>
5	TISG Section 9	<ul style="list-style-type: none"> <li>The scope and content will reflect the specific project context, taking into account:               <ul style="list-style-type: none"> <li>– Input of public and Indigenous groups; and</li> <li>– Indicators that are meaningful for the effects analysis.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Input from Indigenous communities will be considered and meaningful indicators will be used.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.1.2.1</li> </ul>
6	TISG Section 9	<ul style="list-style-type: none"> <li>The information provided must:               <ul style="list-style-type: none"> <li>– Provide a comprehensive understanding of the current community health status, while respecting the need to protect personal information and standards for the management of Indigenous data;</li> <li>– Describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;</li> <li>– Provide disaggregated data and gender statistics;</li> <li>– Conduct intersectional gender analysis to examine differences in the status of diverse subgroups (e.g., women, youth, and elders) and their differential access to resources, opportunities and services, and describe any relevant indicators and how they are reflective of community input;</li> <li>– Identify the environmental and social area of influence of the Project in preparing the report on baseline health conditions; and</li> <li>– Be disaggregated and analyzed to support the analysis of disproportionate effects as per the GBA+ and consideration of disproportionate effects to surrounding communities (e.g., health disparities), including Indigenous communities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Community health profiles will be developed for communities within the Community Health LSA, including Indigenous communities and municipalities, using secondary sources and primary data, where available. High-level regional profiles will be included as well.</li> <li>Indigenous Knowledge and engagement will be utilized. Data will be disaggregated based on relevant identity factors including sex and age. Gender will not be considered unless publicly available or volunteered by respondents to the primary program. This information will inform relevant intersectional analysis. Privacy and confidentiality will supersede all data requirements including disaggregation. Information from primary sources will only be reported with the informed consent of subjects. See Section 4.3 of this Study Plan.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.1.2.1</li> <li>Section 4.3</li> </ul>
7	TISG Section 9	<ul style="list-style-type: none"> <li>Identify the environmental and social area of influence of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>Study areas have been defined with respect to these concerns.</li> </ul>	<ul style="list-style-type: none"> <li>Section 6.2</li> </ul>

10. Federal TISG Reference should be the Section or subsection, page etc. that clearly identifies where comment/issue we are addressing can be found (ex. Section 8.1 of TISG)





ID #	Federal TISG Reference <sup>10</sup>	Requirement / Comment / Concern	Response	Study Plan Reference
8	TISG Section 9	<ul style="list-style-type: none"> <li>■ To understand the community and Indigenous context and baseline health profile:               <ul style="list-style-type: none"> <li>– Complete a community health profile that describes the overall health of the community across standard health indicators including any specific community identified health concerns (real or perceived) that may be impacted by the Project, this profile may include additional health information and community-relevant information;</li> <li>– Describe any context-specific definitions of health and well-being, including from the perspective of the relevant Indigenous cultures, including the community and spiritual well-being;</li> <li>– Describe relevant community and Indigenous history or context, including historical impacts on health, such as intergenerational trauma;</li> <li>– Use a social determinants of health approach to identify and describe the causal chain on relevant health outcomes, including how gender will impact outcomes, across diverse subgroups;</li> <li>– Use relevant social determinants of health based on community input, if possible, to reflect the setting and circumstances of the impacted communities - otherwise guidance may be drawn from the suite of determinants recognized by the Public Health Agency of Canada or the Determinants of Indigenous Peoples' Health in Canada;</li> <li>– Describe and characterize the existing health services and programs and any service delivery arrangements such as with the Geraldton Hospital, including health care provider capacity;</li> <li>– Describe how the Project may impact access to health services;</li> <li>– Describe the current health effects (physical, social, and mental) of geographic isolation and lack of economic development, to better understand the potential improvements;</li> <li>– Provide the approximate number, distance and identity factors of likely human receptors, including any foreseeable future receptors, that may be impacted by changes in air, water, country food quality, and noise level – at a minimum provide a map showing approximate locations of permanent residences, temporary land uses and known locations of sensitive human receptors;</li> <li>– Describe drinking water sources which may be affected by the Project, including surface and/or groundwater, their distance from project activities and approximate wellhead capture zones;</li> <li>– Provide baseline contaminant concentrations in drinking water and in the tissues of country foods consumed by Indigenous groups and local communities (for game samples work with local indigenous groups to gather tissues-samples as appropriate);</li> <li>– Describe the consumption of country foods outside of the commercial food chain, including food that is trapped, fished, hunted, harvested or grown for consumption, medicinal purposes or has cultural value - specify species used, the quantity, frequency, harvesting locations, and how data was collected;</li> <li>– If Human Health Risk Assessment is required provide baseline contaminant concentrations in the tissues of country foods consumed by Indigenous groups and local communities; and</li> <li>– Describe the status of food security and food sovereignty within the Indigenous groups and local communities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Data collection, information sources, study areas and assessment methods have been designed respective of the guidance included here. This will include drawing on other impact assessments (bio-physical, social, and economic), data sources provided by the Agency, and relevant primary and secondary data sources including the socio-economic primary data program and Indigenous Knowledge program.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.0</li> </ul>
9	TISG Section 9	<ul style="list-style-type: none"> <li>■ All collection, analysis and reporting of data must adhere to relevant ethical and cultural protocols. In the event of deviation from recommended baseline characterization approaches and methods or when determining such characterization is not warranted, a detailed rationale/explanation should be provided.</li> </ul>	<ul style="list-style-type: none"> <li>■ In all collection, analysis and reporting of data the Health Canada guidance documents will be used as best practices to be followed in the collection of baseline information to assess real and perceived project-related impacts to human health due to the changes in air quality, noise, drinking and recreational water quality, country foods and / or multiple pathways of exposure to contaminants.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.0</li> </ul>
10	TISG Section 16	<ul style="list-style-type: none"> <li>■ The adverse and positive effects of the Project on human health, particularly regarding the effects of the higher-level health determinants on well-being, must be assessed.</li> </ul>	<ul style="list-style-type: none"> <li>■ Adverse and positive effects will be considered.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.0</li> </ul>
11	TISG Section 16	<ul style="list-style-type: none"> <li>■ Assessment of the effects of the Project on human health must consistently take into account real and perceived risk and carry out baseline studies using recognized methodological best practices to determine perceived risk.</li> </ul>	<ul style="list-style-type: none"> <li>■ Real and perceived risk, as identified through engagement, will be considered in the assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.0</li> </ul>
12	TISG Section 16	<ul style="list-style-type: none"> <li>■ Describe the interconnections between human health and other valued components and interactions between effects, particularly where it is suggested a potential impact occurring indirectly as a result of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>■ The approach proposed is holistic and considers other relevant disciplines and potential impacts of the Project that could result in impacts to human health and safety.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.0</li> </ul>





ID #	Federal TISG Reference <sup>10</sup>	Requirement / Comment / Concern	Response	Study Plan Reference
13	TISG Section 16	<ul style="list-style-type: none"> <li>Include interactions within and across the higher-level health determinants in order to identify the pathways of health effects that are most likely to be affected by project-related changes to the determinant(s) of health.</li> </ul>	<ul style="list-style-type: none"> <li>Interactions between effects will be considered as part of the holistic approach.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.0</li> </ul>
14	TISG Section 16	<ul style="list-style-type: none"> <li>The indicators should:               <ul style="list-style-type: none"> <li>Be developed using best practice, Agency guidance, and through engagement with Indigenous groups and the public; and,</li> <li>Have a rationale for the indicators chosen.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Agency guidance has been and will continue to be utilized. Indicator rationale is included in Table 9.2.</li> </ul>	<ul style="list-style-type: none"> <li>Section 9.2</li> <li>Table 9-2</li> </ul>
15	TISG Section 16	<ul style="list-style-type: none"> <li>Describe how community and Indigenous knowledge was used to collect baseline data and assess health effects and disaggregate the source of community or Indigenous knowledge, as well as social, economic, and health data, by representation by sex, age and other community-relevant identity factors to support identification of disproportionate effects through the application of GBA+.</li> </ul>	<ul style="list-style-type: none"> <li>Primary information sources and data disaggregation with respect to the identity of those sources will be provided if informed consent is provided by interview subjects. Otherwise, confidentiality will be maintained. Secondary information will be disaggregated as the source allows into relevant identity factors including sex and age.</li> </ul>	<ul style="list-style-type: none"> <li>Section 4.3 and 7.0</li> </ul>
16	TISG Section 16	<ul style="list-style-type: none"> <li>Analysis should discuss circumstances in a community where diverse subgroups, because of their particular circumstances, could experience adverse effects from the Project more severely than others, or be excluded from potential benefits, including Indigenous peoples or other community relevant subgroups (e.g., women, youth, elders).</li> </ul>	<ul style="list-style-type: none"> <li>This information will be included within the relevant assessments (including social and economic) and will be considered in the IA / EA.</li> </ul>	<ul style="list-style-type: none"> <li>Section 4.3</li> <li>Section 7.0</li> </ul>
17	TISG Section 16	<ul style="list-style-type: none"> <li>Apply determinants of health approach to show that there is an understanding of linkages and effect pathways, as well as the disproportionate effects across subgroups.</li> </ul>	<ul style="list-style-type: none"> <li>Interactions between effects will be considered as part of the holistic approach.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.0</li> </ul>
18	TISG Section 16.1	<ul style="list-style-type: none"> <li>Impact Statement must:               <ul style="list-style-type: none"> <li>provide an assessment of adverse and positive effects on human health in consideration of, but not limited to, potential changes in: air quality, noise exposure, effects of vibration, current and future availability (including contamination and quality) of country foods, and current and future availability of water for drinking/recreational/cultural uses;</li> <li>Identify predicted effects of the Project on the quality and quantity of ground or surface water use for domestic uses based on the most stringent guideline values of the Canadian Drinking Water Quality Guidelines, Ontario Drinking Water Quality Standards or Ontario Soil, Groundwater and Sediment Standards;</li> <li>Describe and quantify the healthy risk from exposure to COPCs via consumption of country foods and differential risk for vulnerable subgroups;</li> <li>Conduct a problem formulation exercise/preliminary model predictions to determine whether a Human Health Risk Assessment is required;</li> <li>Rationale/explanation if problem formulation/preliminary model predictions indicated a Human Health Risk Assessment is not warranted;</li> <li>If a Human Health Risk Assessment is required, the assessment must identify all potential contaminant exposure pathways for contaminants of concerns to adequately characterize potential biophysical risks to human health;</li> <li>Provide a detailed rationale/explanation if a determination is made that an assessment of any COPCs or exposure pathways should be excluded and/or screened out of the assessment;</li> <li>Describe and quantify the project-related activities, and provide an inventory of contaminants of potential concern and their sources, potential exposure pathways, adverse human health effects and the potential human receptors of these effects;</li> <li>Describe nuisances and environmental, social and economic changes that could potentially be sources of adverse human health effects and the potential human receptors of these effects;</li> <li>Provide a description of public concerns if raised regarding concern for human health effects despite project meeting air, water or noise emissions at local, provincial, territorial or federal guidelines;</li> <li>Describe food security effects to availability, use and consumption of country foods and health impacts of these effects; and</li> <li>Describe any project-related changes that may result in positive health effects.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The approach to environmental determinants of health is captured in section 7.2.1. This approach defines how the Human Health and Community Safety Study Plan will address the listed requirements including the approach to the HHRA problem formulation.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.2.1</li> </ul>





ID #	Federal TISG Reference <sup>10</sup>	Requirement / Comment / Concern	Response	Study Plan Reference
19	TISG Section 16.2	<ul style="list-style-type: none"> <li>■ With respect to Social Determinants of Health, the Impact Statement must:               <ul style="list-style-type: none"> <li>– Consider the social and economic valued components, and their respective indicators, and their potential links to effects on health;</li> <li>– Consider adverse and positive effects on health based on the social and economic valued components, and their respective indicators - specific priority indicators must be determined or validated by community members;</li> <li>– Describe how community and Indigenous knowledge was used in assessing human health effects;</li> <li>– Describe effects on the safety of women and girls from project activities including worker accommodation, and as a result of new roads in remote areas;</li> <li>– Identify predicted visual or other aesthetic effects of the project on existing land use in the study area;</li> <li>– Apply GBA+ across all relevant determinants of health and document how potential changes to these determinants may have differential effects on diverse subgroups or may create or exacerbate existing health disparities identified in baseline assessment;</li> <li>– Describe where biological factors can intersect with socio-economic position and other health determinants to compound vulnerability on subgroups;</li> <li>– Describe and quantify specific thresholds and document if different thresholds were considered for vulnerable populations - provide rationale and justification if specific thresholds are not used;</li> <li>– Identify which health effects (negative or positive) are expected to be short-term or long-term, as well as which may be contingent upon future economic development projects or road connections; and</li> <li>– Describe any positive health effects.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ The IA / EA will consider a holistic approach including biophysical, social and economic factors as they relate to health. Both potential positive and negative effects will be considered. Specific factors identified including those related to identity will be considered in the IA / EA. Social determinant effects will be described qualitatively consistent with the magnitude definitions in Section 9.6. Quantification will be pursued when possible but may not be feasible for social factors related to human health and community safety. However, the magnitude of effect will be noted with respect to different sub-groups and relevant identity factors, where applicable.</li> <li>■ Indigenous Knowledge will be collected and utilized.</li> <li>■ See Visual Environment Study Plan for approach to the assessment of potential Project visual impacts.</li> <li>■ The IA / EA will identify short and long term effects. The IA / EA will also consider cumulative effects.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.0</li> <li>■ Section 9.0</li> </ul>
20	TISG Section 16.2	<ul style="list-style-type: none"> <li>■ Describe variation of effects during different project phases and times of year, as well as the project-related effects on the community health profile.</li> </ul>	<ul style="list-style-type: none"> <li>■ Project effects will be described respective of Project phases (construction and operations phases) and with respect to the indicators. Project health and safety effects are not expected to vary by times of the year.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 9.0</li> </ul>
21	TISG Section 16.2	<ul style="list-style-type: none"> <li>■ Complete the checklists provided in the Health Canada guidance documents. Any deviation from recommended assessment approaches/methods or when determining such assessment is not warranted requires a detailed rationale/explanation.</li> </ul>	<ul style="list-style-type: none"> <li>■ Completion of a consolidated checklist applicable to the Project may be considered by the Proponent, if provided by Health Canada.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 9.0</li> </ul>





**Table 11-2: Study Plan Provincial Draft ToR Concordance - Conformance with Requirements**

ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
1	Draft ToR Comment from the Ministry of the Environment, Conservation and Parks (ID #118)	<ul style="list-style-type: none"> <li>■ <b>#19 Appendix A, page 2</b></li> <li>– Indigenous Knowledge may be a data source for the Ungulates and Human Health disciplines. Please add Indigenous Knowledge as a data source for Ungulates and Human Health.</li> </ul>	<ul style="list-style-type: none"> <li>■ A critical component of the EA is the integration of Indigenous Knowledge into Project planning and design. Indigenous Knowledge has been included as a possible data source for Ungulates and Human Health in Appendix A.</li> </ul>	<ul style="list-style-type: none"> <li>■ A critical component of the IA / EA is the integration of Indigenous Knowledge into Project planning and design. Indigenous Knowledge has been included as a possible data source for the Human Health and Community Safety Study Plan.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 2.1.1</li> </ul>
2	Draft ToR Comment from the Ministry of the Environment, Conservation and Parks (ID #161)	<ul style="list-style-type: none"> <li>■ <b>#5 9.1 Environmental Commitments Pg. 59</b></li> <li>– Broad statement of a commitment to develop and implement measures that may relate to effects that may be an issue.</li> <li>– In the EA ensure, itemized impacts to natural environment and human health. Include risk level and mitigation factors to minimize environmental and health impacts.</li> <li>– Ex, waste oil spills, med level, training on prevention, spill kits, contract with approved hauler to remove waste material.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 9.1 of the ToR includes a commitment to the development and implementation of impact management measures during the EA. This commitment applies to each environmental discipline identified in the ToR, including the natural environment and human health, where potential effects are predicted due to the Project.</li> <li>■ Section 5.2.2 of the ToR states that a Spill Management Plan will be developed to manage accidental releases. Specific impact management measures, such as those noted in the comment (e.g., training and prevention, spill kits on site, etc.), and recommendations for waste management and spills response will be developed during the EA.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 9.5 of this Study Plan includes a commitment to the development and implementation of impact management measures during the IA / EA. This commitment applies to human health, where potential effects are predicted due to the Project.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 9.5</li> </ul>
3	Draft ToR Comment from Aroland First Nation (ID #224)	<ul style="list-style-type: none"> <li>■ <b>"7.2.11 Socio- Economic and Built Environment 8.3 Assess and Evaluate Net Effects"</b></li> <li>– AFN expects significant potential impacts from the CAR if the CAR connects to the Ontario provincial highway network at Painter Lake. Traffic to and from the CAR will pass directly by Aroland First Nation's reserve community, and through a significant portion of Aroland's traditional territory. The potential direct changes and impacts that may be experienced by Aroland First Nation are not described in this section of the ToR. The exploration of these potential changes should be part of MFFN's consultation plan with AFN.</li> <li>– AFN submits that many of the effects of the Project, if the if the CAR connects to the Ontario provincial highway network at Painter Lake, driving traffic to and from a road that bisects and runs adjacent to AFN's reserve, will result in direct effects on AFN community members, and AFN rights and interests. This perspective should inform the assessment and evaluation of net effects in the ToR.</li> <li>– AFN submits that potential impacts form the CAR, if the CAR connects to the Ontario provincial highway network at Painter Lake, be subject to specific consultation activities with AFN to include, but not be limited to, potential negative and positive effects on AFN: <ul style="list-style-type: none"> <li>• traffic</li> <li>• access to AFN's traditional territory</li> <li>• strain on public safety services</li> <li>• changes to population</li> <li>• changes to hunting/harvesting</li> <li>• changes to diet</li> <li>• effects on human health</li> <li>• changes to protected area lands</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ MFFN looks forward to engaging with AFN and receiving input on potential negative and positive effects of the Project on AFN to inform the assessment and evaluation of net effects in the ToR. As outlined in Table 4-2 of Appendix B, the EA Consultation Plan, MFFN plans to consult with Indigenous communities throughout the EA process to receive targeted input on such items as evaluation criteria and potential effects.</li> <li>■ MFFN appreciates the input on potential negative and positive effects of the Project and confirms that potential effects listed will be considered in the EA. For clarification, in the list below the Environmental Discipline and criteria included in Appendix A that align with the effect AFN noted has been provided.</li> <li>■ <u>Social Discipline</u> <ul style="list-style-type: none"> <li>– traffic: considered under Transportation criteria</li> <li>– strain on public safety services: Community Services and Infrastructure criteria</li> <li>– changes to population: Populations and Demographics criteria</li> <li>– changes to regional access to education, training, recreation, and health services: Community Services and infrastructure criteria</li> </ul> </li> <li>■ <u>Human Health and Community Safety</u> <ul style="list-style-type: none"> <li>– changes to diet: Diet criteria</li> <li>– effects on human health: all criteria under the Human Health and Community Safety discipline</li> </ul> </li> <li>■ <u>Indigenous Rights and Interests Discipline</u> <ul style="list-style-type: none"> <li>– access to AFN's traditional territory: Ability to Exercise Aboriginal and Treaty Rights</li> <li>– changes to hunting/harvesting: Ability to Exercise Aboriginal and Treaty Rights</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ MFFN looks forward to engaging with Aroland First Nation and receiving input on potential negative and positive effects of the Project on Aroland First Nation to inform the assessment and evaluation of net effects. MFFN plans to consult with Indigenous communities throughout the IA / EA process to receive targeted input on such items as evaluation criteria and potential effects.</li> <li>■ MFFN appreciates the input on potential negative and positive effects of the Project and confirms that potential effects listed will be considered in the IA / EA.</li> <li>■ <u>In regard to Human Health and Community Safety, the following noted concerns will be examined:</u> <ul style="list-style-type: none"> <li>– changes to diet: Diet criteria</li> <li>– effects on human health: all criteria under the Human Health and Community Safety discipline</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9-2</li> </ul>





ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
		<ul style="list-style-type: none"> <li>• changes to recreation and commercial land uses</li> <li>• changes to access and use of traditional teaching sites</li> <li>• changes to industry and resource extraction activities such as mining, aggregate, forestry, linear infrastructure and energy projects</li> <li>• changes to the regional economy</li> <li>• changes to the local economy</li> <li>• changes to the cost of living in the community</li> <li>• changes to regional access to education, training, recreation, and health services</li> </ul>	<ul style="list-style-type: none"> <li>– changes to access and use of traditional teaching sites: Availability and Access to Sites and Areas for Cultural Practices</li> <li>■ <u>Land and Resource Use Discipline</u> <ul style="list-style-type: none"> <li>– changes to protected area lands: Parks and Protected Areas criteria</li> <li>– changes to industry and resource extraction activities such as mining, aggregate: Extractive Industry criteria</li> <li>– changes to industry and resource extraction activities such as forestry: Forestry Industry criteria</li> <li>– changes to industry and resource extraction activities such as linear infrastructure and energy projects: Energy and Linear Infrastructure criteria</li> </ul> </li> <li>■ <u>Recreation and Tourism Discipline</u> <ul style="list-style-type: none"> <li>– changes to recreation and commercial land uses: Recreation and Tourism criteria</li> </ul> </li> <li>■ <u>Economy Discipline</u> <ul style="list-style-type: none"> <li>– changes to the regional economy: Regional Economy criteria</li> <li>– changes to the local economy: Regional Economy criteria</li> <li>– changes to the cost of living in the community: Regional Economy criteria</li> </ul> </li> </ul>		
4	Draft ToR Comment form Aroland First Nation (ID #226)	<p>■ <b>8.2 Proposed Criteria and Indicators</b></p> <ul style="list-style-type: none"> <li>– Invasive species could provide an indicator of the status of the Wetland Ecosystems, Upland Ecosystems, Designated Areas and Critical landform / Vegetation Associations. Size in concert with distribution could provide a more fulsome indicator of the status of the Wetland Ecosystems, Upland Ecosystems, Designated Areas and Critical landform / Vegetation Associations.</li> <li>– Direct (e.g., vehicle collisions) and indirect (e.g., population isolation) impacts of the project on SAR wildlife should be considered an indicator. Indigenous Knowledge could provide further information on the indicators for moose and caribou. Indigenous Knowledge could provide further information on the species of fish to be considered. AFN expects this project will impacts its communities' rights and interests; as such, AFN requires a detailed Indigenous Knowledge Land Use and Occupancy Study, Socio- Economic and Built Environment Impact Assessment, and Cultural Heritage Resource assessments to adequately assess how AFN may be affected and determine mitigation/accommodation measures.</li> <li>– For groundwater indicators, include spring water sources</li> <li>– For vegetation, include presence of invasive species in each category</li> <li>– For vegetation, expand on the "Distribution" "indicator to Distribution and Size For wildlife include, direct and indirect impacts of the project on wildlife SAR For ungulates, include Indigenous Knowledge</li> <li>– For fish and fish habitat, ensure fish species important to Indigenous communities are included</li> </ul>	<ul style="list-style-type: none"> <li>■ MFFN appreciates Aroland First Nation's input on the potential indicators to be included in the EA. Many if not most of the suggested indicators were included in the list of criteria and indicators, as outlined in Appendix A of the Draft ToR. Please note that Appendix A has been revised to include Indigenous Knowledge as data source for ungulates. Please also note that many of the suggested indicators Aroland First Nation has provided for Indigenous Knowledge and Land Use are captured in other discipline areas (e.g., wildlife, vegetation).</li> <li>■ In addition, as noted in Section 3.4.2.1 of the ToR, an Indigenous Knowledge Program has been initiated for the Project, which will include Project-specific Indigenous Knowledge Studies (which include Indigenous land and resource use).</li> <li>■ Information collected and shared with MFFN through this program will be used to inform criteria and indicators, as well as identify specific features and species of value to Indigenous communities including Aroland Frist Nation.</li> </ul>	<p>■ MFFN appreciates Aroland First Nation's input on the potential indicators to be included in the IA / EA. In regard to the comment on impact on country foods, a Diet valued component is included as outlined in Table 9-2 of this Study Plan. The impact of the project on country food harvesting and use will be assessed.</p>	<p>■ Table 9-2</p>







ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
		<ul style="list-style-type: none"> <li>- For Indigenous Knowledge and Land use - Traditional Use of Land and Resources and Aboriginal and Treaty Rights, in addition to what is listed in the Draft ToR, include:               <ul style="list-style-type: none"> <li>• Number and value of fish spawning</li> <li>• Number and value of mammal habitat</li> <li>• Number and value of mammal migration</li> <li>• Number and value of bird habitat</li> <li>• Number and value of bird migration stopovers</li> <li>• Number and value of reptile/amphibian habitat</li> <li>• Number and value of plant habitat</li> <li>• Number and value of mineral licks</li> <li>• Number and value of species at risk</li> <li>• Number and value of spring water sources valued by Indigenous people</li> <li>• Number and value of boat launches</li> <li>• Number and value of commercial harvesting locations</li> <li>• Number and value of historical village/archaeological locations</li> <li>• Number and value of historic trails locations</li> <li>• Number and value of changes noticed to the environment</li> <li>• Number and value of teaching sites valued by Indigenous people for transferring knowledge between generations</li> <li>• Number and value of meeting sites valued by Indigenous people for cultural, recreational and social purposes</li> </ul> </li> <li>- <b>For all Human Health criteria include information available from First Nation governments</b></li> <li>- <b>For Human Health – Diet, include a specific country foods study undertaken in collaboration with AFN</b> For Cultural Heritage landscapes, include data from provincial and federal databases</li> <li>- For archaeological resources:               <ul style="list-style-type: none"> <li>• Include an investigation of historic shorelines</li> <li>• Include an investigation of pictographs and petroglyphs</li> <li>• Include an investigation of all sites identified as indicating archaeological potential as identified in the Standards and Guidelines for Consultant Archaeologists (2011)</li> <li>• Do not use the alternative standards and guidelines for assessing archaeology in Northern Ontario. Because less is known about the archaeology of the north, additional rigor should be undertaken, not less – the regular</li> </ul> </li> <li>- Standards and Guidelines for Consultant Archaeologists (2011) should be employed for this project.</li> </ul>			





ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
5	Draft ToR Comment from Attawapiskat First Nation (ID #258)	<ul style="list-style-type: none"> <li>Section 7.1.4.12 (p. 43):               <ul style="list-style-type: none"> <li>The EA must analyze the important connection between traditional subsistence harvesting and human health. The fish and wildlife populations harvested in the western portions of Attawapiskat territory are a shared resource with Marten Falls First Nation, and developments in the area of the proposed road will therefore have consequences for the health of our community. The foods that make up for a shortfall in country foods tend to be high in sugar and fat. The inability to access country foods therefore has links to diseases such as diabetes, stroke, heart disease, high blood pressure, cancer, and obesity.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The EA will consider dietary factors within the Human Health and Community Safety section as indicated in Section 7.2. The assessment will be conducted respective to the EA study areas.</li> </ul>	<ul style="list-style-type: none"> <li>The IA / EA will consider dietary factors within the Human Health and Community Safety Study Plan as indicated in Table 9-2. The assessment will be conducted respective to the EA study areas.</li> </ul>	
6	Draft ToR Comment from Neskantaga First Nation (ID #351)	<ul style="list-style-type: none"> <li>The final report of the National Inquiry into MMIWG detailed how resource extraction projects can drive violence against Indigenous women in several ways, including issues related to transient workers, harassment and assault in the workplace, rotational shift work, substance abuse and addictions, and economic insecurity. How will Marten Falls ensure that these impacts are studied with respect to the distinct culture and geographic vulnerability of each of the remote communities?</li> </ul>	<ul style="list-style-type: none"> <li>The Project to be studied within the EA is the Marten Falls Community Access Road, which does not include resource extraction beyond aggregate for the road construction. It is anticipated the potential mining projects would conduct their own assessment of these important risks as components of their socio-economic impact assessments. Depending on the findings of the Project assessment, these factors may be considered within the cumulative effects assessment.</li> </ul>	<ul style="list-style-type: none"> <li>The Project to be studied within the EA is the MFFN CAR, which does not include resource extraction beyond aggregate for the road construction. It is anticipated the potential mining projects would conduct their own assessment of these important risks as components of their socio-economic impact assessments. Depending on the findings of the Project assessment, these factors may be considered within the cumulative effects assessment.</li> <li>Specifically related to the MFFN CAR Project, as outlined in Table 9-2 under the VC Public Safety, the indicator Violence and Harassment will be assessed.</li> </ul>	Table 9-2
7	Draft ToR Comment from Neskantaga First Nation (ID #396)	<ul style="list-style-type: none"> <li>Will the baseline studies consider mental health and well-being in Neskantaga and other affected communities?</li> </ul>	<ul style="list-style-type: none"> <li>MFFN recognize this is a sensitive issue within the context of this region. Mental health will be considered as part of the federal Impact Assessment that is also to be completed for the Project. The provincial EA will collect valuable baseline data on health and well-being for communities within the study areas for the social discipline.</li> </ul>	<ul style="list-style-type: none"> <li>MFFN recognize this is a sensitive issue within the context of this region. Mental health will be considered as part of the federal Impact Assessment that is also to be completed for the Project. We note reference to the indicator Other Environmental Conditions and Changes which will consider changes to the environmental conditions within the Project area that may negatively impact health due to perceptions of harm.</li> <li>The provincial EA will collect valuable baseline data on health and well-being for communities within the study areas for the social discipline.</li> </ul>	Table 9-2
8	Draft ToR Comment from Neskantaga First Nation (ID #397)	<ul style="list-style-type: none"> <li>How will the Marten Falls demonstrate that the project will improve mental health and wellbeing in the context of mitigating the ongoing crises? What kinds of evidence will Marten Falls rely on to demonstrate this?</li> </ul>	<ul style="list-style-type: none"> <li>MFFN recognize this is a sensitive issue within the context of this region. Mental health will be considered as part of the federal Impact Assessment that is also to be completed for the Project. The provincial EA will consider potential changes to health and well-being (Section 7.2.10 of ToR) as result of the Project including identifying impact management measures relevant to the Project.</li> </ul>	<ul style="list-style-type: none"> <li>MFFN recognize this is a sensitive issue within the context of this region. Mental health will be considered as part of the federal Impact Assessment that is also to be completed for the Project.</li> <li>The IS / EA Report will consider potential changes to health and well-being as result of the Project including identifying impact management measures relevant to the Project. Under the VC Public Health, the indicator Social and Economic Structures would assess these types of effects.</li> </ul>	Table 9-2





ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
9	Draft ToR Comment from the Ministry of Energy, Northern Development and Mines (ID #491)	<ul style="list-style-type: none"> <li>■ <b>8. ROFS Section 5.1 Page 10, 11</b> <ul style="list-style-type: none"> <li>– Par. 5 Consider adding to the rationale: community social needs, community health needs, community economic needs, community education needs, community wellness, basic service needs. These are key reasons for the proposed MFFN CAR road Par. 3 Consider adjusting text related to MFFN realignment of the winter road and MNRF 2011 approval. Review purpose, rationale, and what was actually completed (only ½ of upgrades completed)</li> <li>– Par.3 Reference to ROF and lack of access should be a separate paragraph and highlighted at the end of the section - could be confused with rationale for the CAR.</li> </ul> </li> <li>■ <b>Pg. 11, par. 1</b> <ul style="list-style-type: none"> <li>– – Ontario Infrastructure Plan – please use the correct title</li> <li>– Suggest enhancing the sections to emphasize the key rationale for the road</li> <li>– Correct name of the MOI plan Building Better Lives: Ontario's Long-Term Infrastructure Plan 2017. Please make change throughout document.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Comments have been taken into consideration and the text of Section 5.1 altered accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>■ Comments have been taken into consideration in the VCs and indicators presented in Table 9-2. We also note that some of these suggested considerations are also identified as indicators in other study plans including Social and Economics.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9-2</li> </ul>
10	Draft ToR Comment from the Ministry of Energy, Northern Development and Mines (ID #518)	<ul style="list-style-type: none"> <li>■ <b>34. ROFS Section 7.1.4.12 Pg. 43</b> <ul style="list-style-type: none"> <li>– Human Health – suggest adding Community Safety to the Heading because both human health and community safety are discussed in this section</li> <li>– Suggest adding Community Safety to the Heading</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Community safety has been added to the heading title for Human health and has been considered under this discipline.</li> </ul>	<ul style="list-style-type: none"> <li>■ The Study Plan is now titled Human Health and Community Safety and includes references to Community Safety throughout.</li> </ul>	<ul style="list-style-type: none"> <li>■ Throughout the Study Plan</li> </ul>
11	Draft ToR Comment from the Ministry of Energy, Northern Development and Mines (ID #519)	<ul style="list-style-type: none"> <li>■ <b>35. ROFS Section 7.2 Pg. 47, 48</b> <ul style="list-style-type: none"> <li>– Table 7.4 Social, Economic and Built Environment – suggest including social cohesion</li> <li>– Under Human Health discipline include Community safety (see comment 32)</li> <li>– Suggest adding in as a potential effect changes to social cohesion in the Social discipline</li> <li>– Suggest adding community safety to discipline heading</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Community well-being includes social cohesion as a component of the assessment. Community safety has been added to the human health heading title. The section is now titled Human Health and Community Safety.</li> </ul>	<ul style="list-style-type: none"> <li>■ Community well-being includes social cohesion as a component of the assessment. Community Safety has been added to the Human Health heading title. The Study Plan is now titled Human Health and Community Safety.</li> </ul>	<ul style="list-style-type: none"> <li>■ Study Plan Title</li> </ul>
12	Draft ToR Comment from the Ministry of Energy, Northern Development and Mines (ID #521)	<ul style="list-style-type: none"> <li>■ <b>37. ROFS Section 7.2.11 Pg. 52-53</b> <ul style="list-style-type: none"> <li>– Par. 1, Bullet 1 suggest including changes to community cohesion her as well.</li> <li>– Bullet 2, suggest including public safety</li> <li>– Suggest adding in changes to community cohesion at the end of bullet 1.</li> <li>– Suggest adding in public safety after human health in line 1 of bullet 2.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Social cohesion has been added to bullet 1 as requested. Public safety is included in bullet 3.</li> </ul>	<ul style="list-style-type: none"> <li>■ Social cohesion has been added as a consideration in the assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ See Social Study Plan</li> </ul>





ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
13	Draft ToR Comment from the Ministry of Energy, Northern Development and Mines (ID #533)	<ul style="list-style-type: none"> <li>■ <b>49. ROFS Appendix A Pg. 3,5</b> <ul style="list-style-type: none"> <li>– Pg. 3: Is Indigenous knowledge an environmental discipline or does it inform disciplines? Perhaps the discipline is Traditional Land Use. See also Table 7-1 and make consistent</li> <li>– Indigenous knowledge can inform many disciplines.</li> <li>– Pg 5: Suggest naming the discipline Human Health and Community Safety.</li> <li>– Consider mental health as another indicator of Health under the Health discipline</li> <li>– Suggest changing name of discipline to Traditional Land Use and ensure that Indigenous Knowledge is a data source</li> <li>– Suggest naming the discipline Human Health and Community Safety.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Comment taken into consideration and Table 7-1, Table 7-2 and Appendix A have been edited accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>■ The Study Plan is now titled Human Health and Community Safety. Mental health will be considered as part of the federal Impact Assessment that is also to be completed for the Project.</li> </ul>	<ul style="list-style-type: none"> <li>■ Study Plan Title.</li> </ul>
14	Draft ToR Comment from Long Lake #58 First Nation (ID #552)	<ul style="list-style-type: none"> <li>■ Transportation: LL58 understands that the project will lead to increased traffic through LL58's homelands in the future, most notably once a connection is established to the Ring of Fire.</li> <li>■ LL58 needs to understand potential implications for the health and safety of our members while travelling on the provincial highway system, and what increased traffic loads will mean to our membership (especially in light of the increasingly tragic traffic accidents with transport trucks observed in recent years). LL58 would like to see measures in-place to improve driver safety throughout the Trans-Canada Highway system.</li> </ul>	<ul style="list-style-type: none"> <li>■ The ToR has proposed vehicular accidents as an indicator of personal safety to be assessed as part of the alternatives assessment. The safety features of the proposed Project will be addressed through the design and engineering of the road.</li> </ul>	<ul style="list-style-type: none"> <li>■ Vehicular accidents are proposed as an indicator of personal safety to be assessed as part of the alternatives assessment. The safety features of the proposed Project will be addressed through the design and engineering of the road.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9.2</li> </ul>
15	Draft ToR Comment from Ginoogaming First Nation (ID #569)	<ul style="list-style-type: none"> <li>■ Transportation: GFN understands that the project will lead to increased traffic through GFN's homelands, most notably once a connection is established to the Ring of Fire. GFN needs to understand the potential implications for the health and safety of our members while travelling on the provincial highway system, and what increased traffic loads will mean to our membership (especially in light of the increasingly tragic traffic accidents with transport trucks observed in recent years). GFN would like to see measures in-place to improve driver safety throughout the Trans-Canada Highway system.</li> </ul>	<ul style="list-style-type: none"> <li>■ The ToR has proposed vehicular accidents as an indicator of personal safety to be assessed as part of the alternatives assessment. The safety features of the proposed Project will be addressed through the design and engineering of the road.</li> </ul>	<ul style="list-style-type: none"> <li>■ Vehicular accidents are proposed as an indicator of personal safety to be assessed as part of the alternatives assessment. The safety features of the proposed Project will be addressed through the design and engineering of the road.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9.2</li> </ul>
16	Draft ToR Comment from Webequie First Nation (ID #617)	<ul style="list-style-type: none"> <li>■ <b>7.1.4.12 Socio-Economic and Built Environment (Page 39) "Will consider six components: Social, economy, land and resource use, recreation and tourism, human health and visual esthetics"</b> <ul style="list-style-type: none"> <li>– Please include these components: <ul style="list-style-type: none"> <li>• -gender relations,</li> <li>• -human safety (in addition to health)</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Community safety has been added to the heading title for Human health and will be considered under this discipline. Gender and other identity factors have and will continue to be considered as part of the federal Impact Assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Community Safety has been added to the title for this Study Plan and will be considered under this discipline. Gender and other identity factors have and will continue to be considered as part of the federal Impact Assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Study Plan Title</li> </ul>
17	Draft ToR Comment from Webequie First Nation (ID #620)	<ul style="list-style-type: none"> <li>■ <b>7.1.4.12 Socio-Economic and Built Environment (Page 40)</b> <ul style="list-style-type: none"> <li>– Gender considerations also missing from Economy sections – there is an imbalance in labour between men and women? And if so how does this impact women's health and safety and the gender relations, and then, how will/how can the CAR impact the issues related to women and gender?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ A GBA+ framework will be utilized for the federal Impact Assessment that is also to be completed for the Project to consider gender and other identity factors.</li> </ul>	<ul style="list-style-type: none"> <li>■ A GBA+ framework will be utilized for the federal Impact Assessment including for the Health and Community Safety assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 4.3</li> </ul>





ID #	Commenter	Requirement / Comment / Concern	Response Related to Draft Provincial ToR	Response (edited to Study Plan context)	Study Plan Reference
18	Draft ToR Comment from Fort Albany First Nation (ID #663)	<ul style="list-style-type: none"> <li>■ <b>Section 7.2.11 Socio-Economic and Built Environment p. 53</b> <ul style="list-style-type: none"> <li>– The ToR provides a list of potential effects on the socio-economic and built environment. This list does not consider effects associated with increased access for illicit activities.</li> <li>– Please include increased access for illicit activities (e.g., transportation and sale of illegal drugs) in the list of potential effects.</li> <li>– Increased access to remote communities is known to result in health and wellbeing impacts as a result of increased illicit activities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ The ToR will be revised to reference that the EA will examine the potential for increased illicit activities.</li> </ul>	<ul style="list-style-type: none"> <li>■ The health assessment will examine the potential for increased illicit activities and potential for easier access to drugs and alcohol.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9.2</li> </ul>
19	Draft ToR Comment from Fort Albany First Nation (ID #678)	<ul style="list-style-type: none"> <li>■ <b>Appendix A Draft Criteria &amp; Indicators for Alternatives Evaluation p. 4</b> <ul style="list-style-type: none"> <li>– The ToR includes indicators for Community Well-being, but does not include indicators to capture impacts from increased disposable income, increased access to southern communities and increased access to illicit activities (e.g., transportation and sale of drugs).</li> <li>– Please include indicators of Community Well-being that capture impacts from increased disposable income, increased access to southern communities and increased access to illicit activities (e.g., transportation and sale of drugs), or indicate how the proposed indicators capture these elements.</li> <li>– The project has the potential to result in impacts associated with increased disposable income, increased access to southern communities and increased access to illicit activities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ These potential noted impacts will be considered as part of the EA.</li> </ul>	<ul style="list-style-type: none"> <li>■ The health assessment will examine the potential for increased illicit activities and potential for easier access to drugs and alcohol,</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9.2</li> </ul>





**Table 11-3: Study Plan Federal and Provincial Concordance - Requirement Deviations**

ID #	Federal TISG Reference <sup>11</sup> or Provincial Draft ToR Comment Reference	Requirement / Comment / Concern	Response (Rationale for not meeting requirement)	Justification (for not complying with requirement including for example scientific research, precedence)	Proposed TISG Amendment
1	<ul style="list-style-type: none"> <li>TISG Section 16.2</li> </ul>	<ul style="list-style-type: none"> <li>Describe and quantify specific thresholds and document if different thresholds were considered for vulnerable populations - provide rationale and justification if specific thresholds are not used;</li> </ul>	<ul style="list-style-type: none"> <li>Social determinant effects will be described qualitatively consistent with the magnitude definitions in Section 9.6.</li> </ul>	<ul style="list-style-type: none"> <li>Quantified data may not be available.</li> </ul>	<ul style="list-style-type: none"> <li>Quantification will be pursued when possible but may not be feasible for social factors related to human health and community safety. However, the magnitude of effect will be noted with respect to different sub-groups and relevant identity factors, where applicable.</li> </ul>

11. Federal TISG Reference should be the Section or subsection, page etc. that clearly identifies where comment/issue we are addressing can be found (ex. Section 8.1 of TISG)





## 12. References

AECOM Canada Ltd., 2020:

Marten Falls First Nation Proposed Terms of Reference Marten Falls Community Access Road – Environmental Assessment, Appendix B: Consultation & Engagement Plan to Support the Environmental Assessment / Impact Statement.

First Nations Information Governance Centre, 2020:

Our Data. Our Stories. Our Future. <https://fnigc.ca/splash/>

Impact Assessment Agency of Canada, 2019:

*Impact Assessment Act*. <https://laws-lois.justice.gc.ca/eng/acts/l-2.75/>

Impact Assessment Agency of Canada, 2020:

Public Participation Plan for the Marten Falls Community Access Road Project Impact Assessment. <https://iaac-aeic.gc.ca/050/documents/p80184/133934E.pdf>

Impact Assessment Agency of Canada, 2020a:

Indigenous Partnership and Engagement Plan for the Marten Falls Community Access Road Project Impact Assessment. <https://iaac-aeic.gc.ca/050/documents/p80184/133936E.pdf>

Impact Assessment Agency of Canada, 2020b:

Glossary of Terms for the impact assessment of designated projects under the IAA. <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/glossary-of-terms.html>

Impact Assessment Agency of Canada, 2020c:

Tailored Impact Statement Guidelines for the Marten Falls Community Access Road Project. <https://iaac-aeic.gc.ca/050/documents/p80184/133937E.pdf>

Ontario Government, 1990a:

*Environmental Assessment Act*. <https://www.ontario.ca/laws/statute/90e18>





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# Appendix A

## Preliminary List of Data Sources







## Secondary Data Sources

- Marten Falls CAR IA Social Assessment Reporting
- Marten Falls CAR IA Economic Assessment Reporting
- Marten Falls CAR IA Aboriginal and Treaty Rights Reporting
- Municipal, provincial and Indigenous government websites;
- Indigenous plans and reports;
- Provincial plans and reports;
- Federal Reports and Data;
- Academic research; and,
- Previous relevant EA Reports.

## COPC Toxicological Benchmarks References

Canadian Council of Ministers of the Environment:

Canadian Ambient Air Quality Standards (CAAQS)..

[https://www.ccme.ca/en/current\\_priorities/air/caqs.html](https://www.ccme.ca/en/current_priorities/air/caqs.html)

Canadian Council of Ministers of the Environment:

Canadian Environmental Quality Guidelines.

[https://www.ccme.ca/en/resources/canadian\\_environmental\\_quality\\_guidelines/index.html](https://www.ccme.ca/en/resources/canadian_environmental_quality_guidelines/index.html)

Ministry of the Environment, Conservation and Parks (MECP), 1999:

Water Management Policies, Guidelines, Provincial Water Quality Objectives of the Ministry of Environment and Energy. July, 1994. Reprinted February, 1999. PIBS 3303E.

Ministry of the Environment, Conservation and Parks (MECP), 2008:

Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario: An Integrated Approach. May, 2008. Standards Development Branch, Ontario Ministry of the Environment. PIBS 6658e

Ministry of the Environment, Conservation and Parks (MECP), 2011:

Rationale for the Development of Soil and Groundwater Standards for Use at Contaminated Sites in Ontario. April 2011. Prepared by: Standards Development Branch. Ontario Ministry of the Environment. PIBS 7386e01.





## Health & Social Impact Assessment Guidance

Government of Canada:

Positive Mental health Surveillance Indicator Framework <https://health-infobase.canada.ca/positive-mental-health/Publications>

Government of Canada:

Social Determinants of Health and Health Inequalities. <https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html>

Greenwood, M., s. de Leeuw and N.M. Lindsay, 2015:

Determinants of Indigenous Peoples' health, Second Edition: Beyond the Social. <https://www.canadianscholars.ca/books/determinants-of-indigenous-peoples-health>

Health Canada, 2017:

Evaluating Human Health Impacts in Environmental Assessments: Air Quality. <http://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-air-quality.html>.

Health Canada, 2018:

Guidance for Evaluating Human Health Impacts in Environmental Assessments: Country Foods.

Health Canada, 2019:

Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment.

Impact Agency of Canada:

Guidance: Gender-based Analysis Plus in Impact Assessment <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/gender-based-analysis.html>

International Finance Corporation, 2009:

Introduction to Health Impact Assessment: <https://www.ifc.org/wps/wcm/connect/e7f68206-7227-4882-81ad-904cd6387bb7/HealthImpact.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-e7f68206-7227-4882-81ad-904cd6387bb7-jqeABQN>





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*Human Health and Community Safety Study Plan*

Public Health Expertise and Reference Centre. 2014:

Social Impact Assessment in the Environmental Sector: health network support guide.

<https://www.inspq.qc.ca/en/publications/1800>

Stakeholder Participation Working Group of the 2010 HIA of the Americas Workshop, 2012:

Guidance and Best Practices for Stakeholder Participation in Health Impact Assessments.

<https://humanimpact.org/wp-content/uploads/2012/03/HIA-Best-Practices-2012.pdf>

## Food Assessment Guidance

First Nations Food, Nutrition and Environment Study:

[www.FNFNES.ca](http://www.FNFNES.ca)

Health Canada. 2017:

*Evaluating Human Health Impacts in Environmental Assessments: Country Foods.* Available at <http://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-country-foods.html>.

Health Canada:

Health Canada Guidance Document Checklists: Air Quality, Noise, Drinking and Recreational Water Quality, Country Foods, and Human Health Risk Assessment

University of Ottawa, Université de Montréal, and Assembly of First Nations, 2014:

First Nations Food, Nutrition & Environment Study, Results from Ontario 2011 – 2012.

[http://www.fnfnes.ca/docs/FNFNES\\_Ontario\\_Regional\\_Report\\_ENGLISH\\_2019-10-16.pdf](http://www.fnfnes.ca/docs/FNFNES_Ontario_Regional_Report_ENGLISH_2019-10-16.pdf).



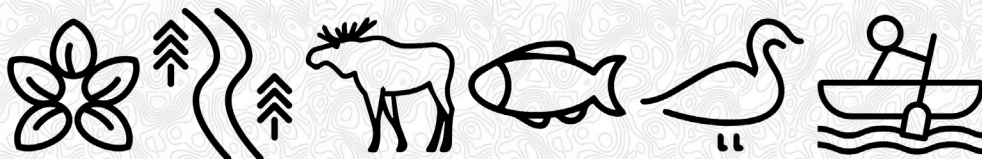


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# Appendix B

## Agency Comments on the Draft Study Plan





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# Draft Study Plan Comments – Federal





Comment # / Ref #	DRAFT Study Plan Section	TISG Section	Comment / Context	Action Item	Final Response	Study Plan Reference
HH-01	■ General Comment	■ <b>Section 5, Section 6, Section 7, Section 13, Section 19.2, Section 25</b>	■ In addition to the required actions detailed below, other required actions to be addressed in the update to this study plan are detailed in a separate table titled "2020-07-02 – IAAC to MFFN - General Comments on MFCAR Draft Study Plans". The Agency has provided these other required actions to highlight common sections of the Tailored Impact Statement Guidelines (Guidelines) where requirements were not met in the draft study plans submitted to the Agency. These additional actions must be addressed in the updated study plans.		■ We have reviewed the relevant comments and incorporated where appropriate. Please refer to the General Comments Table Response submitted separately to the Agency for specific responses.	■ Various Sections
HH-02	■ General Comment	■ <b>Section 5</b> – "...The Agency expects the proponent to engage with, at a minimum, the members of the public listed in the Public Partnership Plan..."	■ The required actions detailed below apply to all potentially impacted members of the public.		■ The updated Study Plan includes a commitment to engage with the public as per the <i>Public Participation Plan for the Marten Falls Community Access Road Project Impact Assessment</i> .	■ Section 4.1
HH-03	■ General Comment	■ <b>Section 6</b> – "...The Agency requires the proponent to engage with, at a minimum, the communities listed in the Indigenous Engagement and Partnership Plan..."	■ The required actions detailed below apply to all potentially impacted Indigenous groups.		■ The updated Study Plan includes a commitment to engage with the Indigenous Communities as per the <i>Indigenous Partnership and Engagement Plan for the Marten Falls Community Access Road Project Impact Assessment</i> .	■ Section 4.2
HH-04	■ General Comment	■ <b>Section 22</b> – "The proponent must identify and assess the Project's cumulative effects using the approach described in the Agency's guidance documents related to cumulative environmental, health, social and economic effects."	■ Ensure that the Impact Statement analyzes cumulative effects assessment for the Project, including cumulative health effects.		■ The updated Study Plan includes a commitment to assess potential cumulative health effects.	■ Section 7.2
thrHH-05	■ General Comment	■ <b>Section 9</b> – "...To understand the community and Indigenous context and baseline health profile, the proponent must... <ul style="list-style-type: none"> <li>• describe any context-specific definitions of health and wellbeing, including from the perspective of the relevant Indigenous cultures, including community and spiritual wellbeing;</li> <li>• describe relevant community and Indigenous history or context, including historical impacts on health, such as intergenerational trauma...</li> <li>• Examples of social determinants of health... <ul style="list-style-type: none"> <li>○ housing availability, housing affordability, and home ownership, disaggregated by sex and gender;</li> <li>○ education levels (number of residents completed high school, college or higher), disaggregated by sex and gender...</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not provide detail regarding several baseline data recommended to be collected as indicators of social determinant of health in Section 9 of the Guidelines. While many of the indicators of social determinants of health are provided as examples, explanations are not provided for the omission of the proposed indicators and whether Indigenous groups suggested alternative indicators better suited to the Project.</li> <li>■ For example, there is no indication of indicators regarding: <ul style="list-style-type: none"> <li>– context-specific definitions of health and well-being (including community and spiritual wellbeing);</li> <li>– relevant community and Indigenous history or context (including</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Provide detailed information in the study plan regarding the indicators to measure social determinants of health.</li> <li>■ If an indicator is excluded, explain the omission of that proposed indicator, and whether Indigenous groups suggested alternative indicators better suited to the Project.</li> </ul>	<ul style="list-style-type: none"> <li>■ The updated Study Plan includes a list of VCs and indicators and respective data sources. Further comments are as follows.</li> <li>■ The indicator "Social and Economic Structures" will consider the potential for impact on community well being. The Social Study Plan also includes the VC Community Well Being, the assessment of which will be considered in the Health and Community Safety Assessment.</li> <li>■ Historical health information will be considered in the description of baseline health conditions of communities in the Community Health LSA.</li> <li>■ Education levels will be described in the description of baseline Social conditions.</li> <li>■ Social cohesion is an indicator in the Social Assessment as outlined in the Social Study Plan.</li> </ul>	■ Table 9-2, Social Study Plan





Comment # / Ref #	DRAFT Study Plan Section	TISG Section	Comment / Context	Action Item	Final Response	Study Plan Reference
		<ul style="list-style-type: none"> <li>o social cohesion or social capital;...</li> <li>o mobility (proportion of residents who hold driver's licences and own vehicles, intra- and intercommunity transportation), disaggregated by sex and gender..."</li> </ul>	<p>historical impacts on health, such as intergenerational trauma);</p> <ul style="list-style-type: none"> <li>- education levels disaggregated by sex and gender (e.g., number of residents completed high school, college or higher);</li> <li>- social cohesion or social capital;</li> <li>- mobility (proportion of residents who hold driver's licences and own vehicles, intra- and inter-community transportation), disaggregated by sex and gender; etc.</li> </ul>		<ul style="list-style-type: none"> <li>■ In regard to the health assessment, mobility levels will be examined as part of the assessment of the indicator Access to Health Services as well as in relation to the indicator Social and Economic Structures, which will consider potential changes to access to goods and services.</li> </ul>	
HH-06	<ul style="list-style-type: none"> <li>■ <b>Section 2.0: Purpose and Objectives</b></li> <li>- "Health determinants related to social structures and equity factors will primarily be documented in other reports."</li> <li>- "Items not included explicitly within this study plan may be referenced and considered in the assessment of effects to relevant components of human health and community safety such as community well-being."</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Section 16</b></li> <li>- "...The assessment must illustrate an understanding of linkages and effect pathways, so that when a change in one domain is predicted, there is an understanding of what other effects or consequences may be felt across the other domains. Applying a "determinants of health approach" in the assessment of human health effects will support the identification of these linkages, as well as of disproportionate effects across subgroups..."</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not provide enough clarity as to which "Health determinants related to social structures and equity factors" are considered in other study plans and which have their baseline information documented in other relevant, baseline study reports.</li> </ul>	<ul style="list-style-type: none"> <li>■ Update the study plan to clearly cross-reference other study plans when items not included explicitly within the human health study plan are considered in the assessment of effects to relevant components of human health and community safety such as community wellbeing.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9-2 outlines for each indicator the information sources that will be considered, including reference to the other assessments / study plans.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9-2</li> </ul>
HH-07	<ul style="list-style-type: none"> <li>■ <b>Section 3.0</b></li> <li>- Information received from interested persons and groups will be documented with a description of how the information was considered within the Human Health and Community Safety Assessment. An example of how this will be documented is included in Table 1. (...) In addition to engagement data, it is expected Indigenous Knowledge will be integrated into the Human Health and Community Safety Assessment, where applicable. (...) Indigenous Knowledge collected through means other than</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Sections 5</b></li> <li>- "...The Agency expects the proponent to engage with, at a minimum, the members of the public listed in the Public Partnership Plan..."</li> <li>■ <b>Section 6</b></li> <li>- "...The Agency requires the proponent to engage with, at a minimum, the communities listed in the Indigenous Engagement and Partnership Plan..."</li> <li>■ <b>Section 7.4</b></li> <li>- "...The spatial and temporal boundaries determined and established for the impact assessment will vary depending on the valued component and are considered separately for each valued component, including valued components related to the environmental, health, social and economic conditions of Indigenous peoples, or other potential effects</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not include information on when and how input, such as but not limited to, baseline data collection, indicators, and the assessment of impacts on human health and community safety, will be collected from the public and Indigenous groups to meet the requirements of several Sections of the Guidelines, in particular Sections 5, 6, 7.4.</li> <li>■ Regarding primary data collection, the study plan requires additional detail on how the methodologies to be implemented to meet the expectations of Sections 9, 16 and 16.2 of the Guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide further details on when and how input will be collected from the public and Indigenous groups to meet the requirements of Sections 5, 6 and 7.4 of the Guidelines.</li> <li>■ Describe the methodologies to be implemented to meet the expectations of Sections 9, 16 and 16.2 of the Guidelines that: <ul style="list-style-type: none"> <li>- Specify types of engagement activities (surveys, questionnaires, community sessions, chief and council sessions, workshops, etc.).</li> <li>- Describe how Gender Based Analysis plus (GBA+) has been/will be applied to the consideration of engagement activities.</li> <li>- Identify any specific methods targeted to specific subgroups.</li> <li>- Specify participants in engagement activities (reflecting the Indigenous groups listed in the Indigenous Engagement and</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.1.2.1 provides information on the planned primary data collection activities in relation to the social determinants of health including the use of interviews, focus groups and other discussions with community members.</li> <li>■ The Study Plan includes a commitment to collect disaggregated qualitative data by identity factors when volunteered to support the Human Health and Community Safety Assessment. Section 4.3 provides a commitment to consider gender and other identity factors in engagement activities for the purposes of data collection to support the IS / EA Report.</li> <li>■ Table 4-1 provides a list of the Indigenous communities that will be engaged with as part of the engagement program to support the IS / EA Report.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.1.2.1</li> <li>■ Table 4-2</li> <li>■ Section 4.3</li> </ul>





Comment # / Ref #	DRAFT Study Plan Section	TISG Section	Comment / Context	Action Item	Final Response	Study Plan Reference
	engagement (Indigenous Knowledge program and Socio-economic Primary Data Collection program) will be integrated into the reporting with relevant contextual information.”	<p>and impacts referred to above. The spatial and temporal boundaries to be used in the impact assessment are outlined and discussed through the tailoring process, and include comments and input from federal and provincial government departments and agencies, local government, Indigenous groups, the public and other interested parties. The proponent should engage with Indigenous groups when defining spatial and temporal boundaries for valued components, especially for those that are identified by Indigenous groups...”</p> <p>■ <b>Section 9</b></p> <p>– “...The scope and content of the human health baseline will reflect the specific project context, taking into account input of public and Indigenous groups, and should include indicators that are meaningful for the effects analysis. The information provided must:...</p> <ul style="list-style-type: none"> <li>• describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;</li> </ul> <p>– ...Relevant social determinants of health should be selected based on community input, if possible, to reflect the setting and circumstances of the impacted communities...”</p> <p>■ <b>Section 16</b></p> <p>– “...Indicators should be developed by the proponent using best practice, Agency guidance, and through engagement with Indigenous groups and the public. Rationale for the indicators chosen should be provided...”</p> <p>■ <b>Section 16.2</b></p> <p>– “With respect to Social Determinants of Health, the Impact Statement must: ...</p> <ul style="list-style-type: none"> <li>• Describe how community and Indigenous knowledge was used in assessing human health effects...”</li> </ul>		<p>Partnership Plan and reflecting public representation listed in the Public Participation Plan), including rationale for how the selection of participants meets the objectives of the study and demonstrates accessibility considerations (e.g., language requirements) and GBA+.</p> <ul style="list-style-type: none"> <li>– Describe the approach the proponent intends to take to encourage or attract participation, including how opportunities to participate will be planned and advertised.</li> <li>– Describe how Indigenous knowledge will be used to inform types of engagement activities and participant selection.</li> <li>– If sample questionnaires, interview questions, or other data collection tools exist, identify them in an appendix to the study plan, and provide clear links to how they relate to physical and cultural heritage.</li> <li>– Identify past public or Indigenous engagement activities that have taken place and are being used to inform this study plan.</li> </ul>	<ul style="list-style-type: none"> <li>■ To attract Indigenous community participants to the Human Health and Community Safety primary data collection program, Community Consultation Coordinators will be leveraged to advertise data collection activities, encourage participation, identify barriers to participation and identify key socio-community knowledge holders. Community Consultation Coordinators will also play a key role in the identification of community-specific identity factors to be considered in the Human Health and Community Safety Assessment.</li> <li>■ Sample questionnaires and interview questions have not yet been prepared.</li> <li>■ For a description of engagement activities undertaken to date, please refer to the separate IS / EA Report Consultation Plan.</li> </ul>	
			<ul style="list-style-type: none"> <li>■ Refer to the following resource when engaging on the Human Health and Community Safety Assessment: Stakeholder Participation Working Group of the 2010 HIA of the Americas Workshop (2012). Guidance and Best Practices for Stakeholder Participation in Health Impact Assessments. Available at: <a href="https://humanimpact.org/wp-content/uploads/2012/03/HIA-Best-Practices-2012.pdf">https://humanimpact.org/wp-content/uploads/2012/03/HIA-Best-Practices-2012.pdf</a></li> </ul>		<ul style="list-style-type: none"> <li>■ This document will be considered in the completion of the assessment and has been listed as a preliminary data source in Appendix A.</li> </ul>	<ul style="list-style-type: none"> <li>■ Appendix A</li> </ul>







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HH-08	<p>■ <b>Section 3.0</b></p> <p>– “Information received from interested persons and groups will be documented with a description of how the information was considered within the Human Health and Community Safety Assessment. An example of how this will be documented is included in Table 1.”</p>	<p>■ <b>Section 6.3</b></p> <p>– “...The Impact Statement must include, at a minimum:...</p> <ul style="list-style-type: none"> <li>the engagement activities undertaken with each Indigenous group, including the date, means and results of engagement...</li> <li>a description of the efforts to discuss and validate with Indigenous groups how the information they provided was applied to the selection of valued components, indicators, effects assessment, mitigation measures and follow-up programs, and conclusions....”</li> </ul> <p>■ <b>Section 9</b></p> <p>– “...The information provided must:</p> <ul style="list-style-type: none"> <li>be sufficient to provide a comprehensive understanding of the current community health status, while respecting the need to protect personal information and standards for the management of Indigenous data (i.e., OCAP);</li> <li>describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;</li> <li>provide disaggregated data and gender statistics...”</li> </ul>	<p>■ The study plan is unclear on the methods or tools for engagement and how ethical guidelines, like OCAP, will be respected.</p> <p>■ The study plan does not provide enough information on how diverse subgroups will be engaged, and specific methods and tools to seek input from these subgroups (e.g., youth, women).</p> <p>■ The example provided in Table 1 of the study plan describing how the proponent intends to record input received from Indigenous groups and the public during engagement activities does not reflect all the information required to be recorded as identified in Section 6.3 of the Guidelines.</p>	<p>■ Provide further information on methods and tools for engagement, and on how ethical guidelines (like the OCAP) will be respected during the engagement with Indigenous groups and the public on human health effects for the Project.</p> <p>■ Provide further information on how diverse subgroups will be engaged, such as specific methods and tools to seek input.</p> <p>■ Update the study plan to ensure that the approach to be taken in recording the information received during engagement activities meets the requirements outlined in Section 6.3 of the Guidelines.</p>	<p>■ Section 7.1.2.1 provides information on the planned primary data collection activities in relation to the social determinants of health including the use of interviews, focus groups and other discussions with community members.</p> <p>■ Section 4.3 provides a commitment to consider gender and other identity factors in engagement activities for the purposes of data collection to support the IS / EA Report.</p> <p>■ The IS / EA Report Consultation Plan is to be referred to for commitments to OCAP.</p> <p>■ The IS / EA Report Consultation Plan should be referred to for a description of how engagement activities will be recorded. Regarding primary data collection activities to support the Human Health and Community Safety Assessment, attempts to engage with targeted individuals and the results of those engagements will be documented in the IS / EA Report.</p>	<p>■ Section 7.1.2.1</p> <p>■ Section 4.3</p>
HH-09	<p>■ <b>Section 3</b></p> <p>– “In addition to engagement data, it is expected Indigenous Knowledge will be integrated into the Human Health and Community Safety Assessment, where applicable. Due to sensitivities regarding these data, it is not expected a table similar to Table 1 will be provided. Instead, Indigenous Knowledge collected through means other than engagement (Indigenous Knowledge program and Socio-economic Primary Data Collection program) will be</p>	<p>■ <b>Section 6.2</b></p> <p>– “...In the Impact Statement, the proponent is required to describe the type of confidential information provided by each Indigenous group without compromising stipulations in the confidentiality agreements and state how that information impacted the project design, baseline data, effects assessment or mitigation measures.</p> <p>– The proponent is required to provide evidence to the Agency in the form of a letter from the Indigenous group that provided confidential information confirming that:</p> <ul style="list-style-type: none"> <li>the Indigenous group that provided confidential information is satisfied with the way the Impact Statement was informed;</li> </ul>	<p>■ The study plan states that data will be protected and privacy of personal information will be respected, but it does not indicate how the primary data collection strategy aligns with the standards for the management of Indigenous data, which are outlined in the principles of Ownership, Control, Access, and Possession (OCAP), as outlined in Section 9 of the Guidelines.</p>	<p>■ Provide further details to indicate how primary data collection for the Project will align with the OCAP principles as required in Section 9 of the Guidelines.</p> <p>■ Provide further details on how input received from Indigenous groups will be tracked, considered, and reported in the Impact Statement as required in Section 6 of the Guidelines.</p>	<p>■ Primary data collection activities will be consistent with OCAP principles as they apply to the protection of personal information.</p>	<p>■ Section 7.1.2.1</p>





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	<p>integrated into the reporting with relevant contextual information provided at a level of detail consistent with the confidentiality requested by participants.”</p> <p>■ <b>Section 4</b>            –“(…) Overall, data collection will be completed in support of the following objectives (…). While these objectives are important, the most consequential objective of the data collection will be to provide protection and respect for privacy and of personal information.”</p>	<ul style="list-style-type: none"> <li>the Indigenous group that provided confidential information is satisfied with the way the issue was solved or addressed…”</li> </ul> <p>■ <b>Section 9</b>            –“…The information provided must:</p> <ul style="list-style-type: none"> <li>be sufficient to provide a comprehensive understanding of the current community health status, while respecting the need to protect personal information and standards for the management of Indigenous data (i.e., OCAP)…”</li> </ul>				
HH-10	■ <b>Section 3, Table 1</b>	<p>■ <b>Section 5.2</b>            – “...The Impact Statement must include, at a minimum:...</p> <ul style="list-style-type: none"> <li>the engagement activities undertaken by the proponent, including the methods used, where and when engagement activities were held, the persons, organizations and diverse groups engaged, and results of engagement...”</li> </ul>	<p>■ The example provided in Table 1 of the study plan for tracking the information that was considered in the Human Health and Community Safety Assessment does not include all information required by Section 5.2 of the Guidelines (e.g., a description of the public engagement activities undertaken by the proponent, dates of engagement activities, etc.).</p>	<p>■ Update the information provided in Table 1 of the study plan to ensure that the method proposed to track information meets the requirements outlined in Section 5.2 of the Guidelines.</p>	<p>■ The study plan includes a commitment to collect disaggregated qualitative data by identity factors (when volunteered) to support the Human Health and Community Safety Assessment. Section 4.3 provides a commitment to consider gender and other identity factors in engagement activities for the purposes of data collection to support the IS / EA Report.</p>	■ Section 4.3
HH-11	<p>■ <b>Section 4.1.1</b>            –“This includes the collection of Indigenous and local knowledge of the socio-economic environment, disaggregated qualitative data by identity factors when volunteered and other information relevant to understanding the current state of human health and safety conditions in the Project area.”</p>	<p>■ <b>Section 5.2</b>            –“...The Impact Statement must include, at a minimum:...</p> <ul style="list-style-type: none"> <li>a description of efforts made by the proponent to engage diverse populations, including groups identified by gender, age or other community relevant factors (e.g., recreational hunters) to support the collection of information needed to complete the GBA+...”</li> </ul> <p>■ <b>Section 6.3</b>            –“...The Impact Statement must include, at a minimum:...</p> <ul style="list-style-type: none"> <li>a description of efforts to engage diverse populations of each Indigenous group in culturally appropriate ways, including groups identified by gender, age or other community relevant factors (e.g., hunters,</li> </ul>	<p>■ The study plan does not provide enough information on how the proponent intends to ensure that data collection will be ethical and confidential, including how the ownership, control, access and possession of data will be managed.</p> <p>■ More information is required to understand how GBA+ will be applied when assessing effects that may affect diverse subgroups differentially.</p> <p>■ The study plan does not demonstrate how the proponent will make efforts to engage diverse populations and gather information sufficient to complete the Gender Based Analysis Plus (GBA+).</p>	<p>■ Provide more detail on how data collection will be ethical and respectful of confidentiality, including how the ownership, control, access and possession of data will be managed.</p> <p>■ Update the study plan to include a description of how diverse populations will be engaged to collect information necessary to support the GBA+.</p> <p>■ Provide details on the approach to assess differential effects that may affect diverse subgroups. This may require research on similar projects or communities using existing data sources and literature if information not volunteered by community members. Consent forms with information on how information will be protected should be provided in an annex.</p>	<p>■ Indigenous Knowledge and data obtained through engagement activities will be utilized in the assessment. Data will be disaggregated based on relevant identity factors including sex and age. Gender will not be considered unless publicly available or volunteered by respondents in the primary data collection program. This information will inform relevant intersectional analysis. Privacy and confidentiality will supersede all data requirements including disaggregation. Information from primary sources will only be reported with the informed consent of subjects.</p> <p>■ Section 4.3 provides a commitment to engage with various sub-groups.</p>	<p>■ Section 2.1</p> <p>■ Section 4.3</p>





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		<p>trappers, and other harvesters) to support the collection of information needed to complete the GBA+;...”</p> <p>■ <b>Section 9</b>            – “...The information provided must:</p> <ul style="list-style-type: none"> <li>• be sufficient to provide a comprehensive understanding of the current community health status, while respecting the need to protect personal information and standards for the management of Indigenous data (i.e., OCAP);</li> <li>• describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;</li> <li>• provide disaggregated data and gender statistics;</li> <li>• conduct intersectional gender analysis to examine differences in the status of diverse subgroups (e.g., women, youth, and elders) and their differential access to resources, opportunities and services; describe any relevant indicators, and how they are reflective of community input...”</li> </ul> <p>■ <b>Section 16</b>            – “...The proponent must describe how community and Indigenous knowledge was used to collect baseline data and assess health effects and disaggregate the source of community or Indigenous knowledge, as well as social, economic, and health data, by representation by sex, age and other community-relevant identity factors to support identification of disproportionate effects through the application of GBA+. In assessing effects to valued components listed below, the analysis should discuss circumstances in a community where diverse subgroups, because of their particular circumstances, could experience adverse effects from the Project more severely than others, or be excluded from potential benefits, including Indigenous peoples or other community relevant subgroups (e.g., women, youth, elders)...”</p>				





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HH-12	<ul style="list-style-type: none"> <li>■ <b>Section 4.1.1</b> <ul style="list-style-type: none"> <li>– “Data collection will focus on the communities most likely to be impacted by the Project including Marten Falls and Aroland First Nations. Based on the nature of the socio-community, primary data will also be collected in the regional service centre of the Municipality of Greenstone. These communities are likely to experience the most Project-related change due to the location of the Project and its resulting access.”</li> </ul> </li> <li>■ <b>Section 5.1.2</b> <ul style="list-style-type: none"> <li>– “The proponent remains open to receiving information from other communities on their activities within the Project Study Area (PSA) and how interlinkages between the Project and those communities may result in human health and community safety effects. To be included in the community health LSA, a community must demonstrate direct community-level socio-economic interest in the Project footprint; from changing access to the Marten Falls community due to the Project; or due to Project effects on the environment that impact the human health and community safety environment.”</li> <li>– “Based on the information provided, the proponent will evaluate the individual communities that warrant inclusion in the local or regional study areas.”</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Section 5</b> <ul style="list-style-type: none"> <li>– “...The Agency expects the proponent to engage with, at a minimum, the members of the public listed in the Public Partnership Plan.”</li> </ul> </li> <li>■ <b>Section 6</b> <ul style="list-style-type: none"> <li>– “...The Agency requires the proponent to engage with, at a minimum, the communities listed in the Indigenous Engagement and Partnership Plan...”</li> </ul> </li> <li>■ <b>Section 7.4</b> <ul style="list-style-type: none"> <li>– “...The spatial and temporal boundaries to be used in the impact assessment are outlined and discussed through the tailoring process, and include comments and input from federal and provincial government departments and agencies, local government, Indigenous groups, the public and other interested parties. The proponent should engage with Indigenous groups when defining spatial and temporal boundaries for valued components, especially for those that are identified by Indigenous groups. The proponent should validate with the Agency the spatial and temporal boundaries for each valued component.”</li> </ul> </li> <li>■ <b>Section 7.4.1</b> <ul style="list-style-type: none"> <li>– “...Spatial boundaries are defined taking into account the appropriate scale and spatial extent of potential effects and impacts of the Project; community knowledge and Indigenous knowledge; current or traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights of Indigenous peoples, including cultural and spiritual practices; and physical, ecological, technical, social, health, economic and cultural considerations...”</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not provide a rationale to justify why other communities with members who are involved in land use activities within the project area would not be considered in the community health local study area (LSA).</li> <li>■ The study plan does not provide enough clarity as to why most of the social determinants of health analysis will focus on communities in the LSA. Other communities in the region may be indirectly impacted by the Project, for example through potential decrease in country food availability. Project-related benefits may also be relevant to other communities in the region.</li> <li>■ The study plan provides no information on how temporal boundaries of the impact assessment will be established for the Project.</li> <li>■ Sections 5 and 6 of the Guidelines provide direction about the Agency’s expectations for meaningful engagement with members of the public, at a minimum those listed in the Public Participation Plan (PPP), and Indigenous groups, at a minimum those listed in the Indigenous and Engagement Partnership Plan (IEPP) during the impact assessment process. The Agency expects the proponent to engage with all Indigenous groups listed in the IEPP and with the members of the public listed in the PPP to gather baseline data and to assess Project’s effects.</li> </ul>	<ul style="list-style-type: none"> <li>■ Update the study plan to provide further details on defining the spatial boundaries of the Project to justify whether other communities, with members who are involved in land use activities within the project area, are or are not considered.</li> <li>■ Update the study plan to define how temporal boundaries of the impact assessment will be established for the Project.</li> <li>■ Demonstrate that all Indigenous groups listed in the IEPP will have an opportunity to comment on the list of criteria and indicators in the study plan and indicate whether the screened out groups have a direct community-level socio-community interest in the project footprint, prior to being screened out of the socio-community Local Study Area. Update the study plan to provide details on the engagement activities with other communities than those currently considered in the community health local study area. As per Section 5 of the Guidelines, the Agency expects the proponent to engage with, at a minimum, the members of the public listed in the Public Partnership Plan. (This is important to confirm the assumptions made prior to finalizing the community health local study area as described in Section 4.1.1 of the study plan.)</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 6.2 has been updated to provide further details on the spatial boundaries of the Human Health and Community Safety Assessment. All communities identified in Table 4-1 will be engaged with to determine their interest and / or concern with respect to potential health and safety effects of the Project. As noted in the Study Plan, the Proponent remains open to receiving information from other communities on their activities and how interlinkages between the Project and those communities may result in Human Health and Community Safety effects. To be included in the Community Health LSA, a community must demonstrate direct community-level health or socio-economic interest in the Project footprint; from changing access to the MFFN community due to the Project, or due to potential direct and indirect Project effects on the environment that impact the Human Health and Community Safety.</li> <li>■ For information regarding the larger engagement program, please refer to the IS / EA Report Consultation Plan.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 6.2</li> </ul>





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	<p>– “Members in other communities who are involved in land use activities within the Project area are being assessed and considered under the Indigenous Knowledge Assessment, and Land and Resource Use Assessment.”</p> <p>■ <b>Table 2:</b></p> <p>– “The communities of Marten Falls First Nation; Aroland First Nation; and Municipality of Greenstone. These communities are likely to have observable changes in health due to construction and/or the increased access to lands and communities associated with the Project. Increased access to services may place additional strain on the regional service centre.”</p> <p>– “However, much of the social determinants of health analysis will focus on communities, particularly those in the local study area.”</p>					
HH-13	<p>■ <b>Section 4.1.2</b></p> <p>– “If the problem formulation step of the Human Health Risk Assessment (HHRA) identifies that a HHRA related to country food consumption is required, a tissue sampling program will be developed. This program will involve working with Indigenous communities to collect appropriate tissue samples from commonly harvested game species. It is anticipated that tissue sampling would focus on chemicals identified as being of concern in the Guidelines (e.g., arsenic,</p>	<p>■ <b>Section 9</b></p> <p>– “... To understand the community and Indigenous context and baseline health profile, the proponent must:...</p> <ul style="list-style-type: none"> <li>• provide baseline contaminant concentrations in drinking water and in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities. For game animals, the proponent is expected to work with local Indigenous groups to gather tissues-samples, as appropriate;</li> <li>• describe the consumption of country foods (traditional foods) outside of the commercial food chain, including food that is trapped, fished, hunted, harvested or grown for consumption, medicinal purposes or has cultural value;</li> </ul>	<p>■ According to the study plan, the scope of tissue sampling will be limited to an investigation of game species and a few contaminants of potential concern (COPCs). No rationale is provided for the exclusion of other types of country food (e.g., vegetation, fish) as required in the Guidelines. The COPCs (i.e., arsenic, chromium, mercury) were listed in the Guidelines as examples, based on their prevalence in certain environments and their toxicological significance to human health, but they should not be considered as an exhaustive list.</p>	<p>■ Update the study plan to provide further information on tissue sampling for all relevant country food types/species (e.g., plants, fish, birds and wildlife) that are identified through Indigenous engagement activities or a dietary/consumption survey.</p> <p>■ Update the study plan to provide further information on COPCs from project-associated emissions, and transport pathways of the COPCs into country foods (e.g., atmospheric deposition). For instance, dust, diesel particulate matter (DPM) and polycyclic aromatic hydrocarbons (PAHs) from construction activities and road traffic could deposit onto soil/vegetation on which country foods grow/occur, or which other country foods (game/higher trophic level species) may consume.</p>	<p>■ See Section 7.1.2.2 for more information regarding tissue sampling. See Section 7.2.1 regarding the problem formulation step that is proposed that will examine potential COPCs of the Project.</p>	<p>■ Section 7.1.2.2</p> <p>■ Section 7.2.1</p>





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	chromium, mercury and methylmercury).”	<ul style="list-style-type: none"> <li>if a Human Health Risk Assessment is required, provide baseline contaminant concentrations in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities; and...”</li> </ul> <p>■ <b>Section 16.1</b>            – “With respect to biophysical determinants of health, the Impact Statement must...describe and quantify the health risk from exposure to COPCs (e.g., arsenic, chromium, mercury) via consumption of country foods and differential risk for vulnerable subgroups...”</p>				
HH-14	<p>■ <b>Section 5.1.2:</b>            – “To be included in the community health LSA, a community must demonstrate direct community-level socio-economic interest in the Project footprint; from changing access to the Marten Falls community due to the Project; or due to Project effects on the environment that impact the human health and community safety environment. Community-level socio-economic impacts can be defined as changes to the indicators (Section 5.2) that can reasonably be expected to potentially exceed a negligible magnitude (Section 6.2).”            – “Detailed community health profiles will be developed for communities listed in the community health LSA. The community health RSA will be profiled in less detail with key interactions and thematic information provided. Statistics collected on the RSAs will focus on larger regional areas such as</p>	<p>■ <b>Section 6</b>            – “...the proponent must provide Indigenous groups with an opportunity to:...”            – comment on the list of valued components and indicators...”</p> <p>■ <b>Section 9</b>            – “...To understand the community and Indigenous context and baseline health profile, the proponent must:            • complete a community health profile that describes the overall health of the community across standard health indicators including any specific community identified health concerns (real or perceived) that may be impacted by the Project...”</p>	<p>■ It is unclear whether Indigenous groups will be provided with the opportunity to comment on the current list of criteria and indicators provided in the human health and community safety study plan prior to the proponent determination that an Indigenous group requires a community health profile that is detailed or less detailed.</p> <p>■ It is unclear why members in other communities who are involved in land use activities within the project area will be assessed and considered under the Indigenous Knowledge Assessment and the Lands and Resource Use Assessment rather than assessed and considered in the human health and community safety study plan.</p>	<p>■ Update the study plan to demonstrate that the Indigenous groups have been provided an opportunity to comment on the list of criteria and indicators in the human health and community safety study plan prior to the determination that the Indigenous groups will require detailed or less detailed community profiles.</p> <p>■ Update the study plan to clarify and cross-reference information collected through the land and resource use and Indigenous knowledge data collection that will be considered in the human health and community safety study.</p> <p>■ Revise the study plan to clarify what human health and community safety assessment will be considered under the Indigenous Knowledge Assessment and the Lands and Resource Use Assessment for those communities who are involved in land use activities within the project area.</p>	<p>■ The list of VCs and indicators have not yet been circulated to Indigenous Communities for review and comment. They are considered to be draft and will be made available to interested communities once the IA / EA has commenced.</p> <p>■ The study plan includes references to the consideration of Indigenous Knowledge in the Human Health and Community Safety Assessment (See Section 5). Table 9-2 outlines which other assessment results will be considered in the assessment of Human Health and Community Safety effects.</p>	<p>■ Section 5            ■ Table 9-2</p>





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	unorganized regional districts. While many Indigenous communities are located within the regional study area, these communities will not be profiled individually given their relation to the Project is predominantly focused on cumulative effects from future developments.” – “Members in other communities who are involved in land use activities within the Project area are being assessed and considered under the Indigenous Knowledge Assessment, and Land and Resource Use Assessment.”					
HH-15	<ul style="list-style-type: none"> <li>Section 5.2, Table 3</li> <li>– “Human Health and Community Safety Criteria and Indicators Criteria: Public safety Indicators: Project-related Accidents; Vehicular Accidents; Violence and Harassment”</li> </ul>	<ul style="list-style-type: none"> <li>Section 16.2</li> <li>– “With respect to Social Determinants of Health, the Impact Statement must:...</li> <li>• describe effects on the safety of women and girls from project activities including worker accommodation, and as a result of new roads in remote areas...”</li> </ul>	<ul style="list-style-type: none"> <li>The study plan only considers violence and harassment between the work force and the community, and does not explicitly discuss how the Project may affect the safety of Indigenous women and girls, particularly the risk of opening a road in general – including issues such as hitchhiking and additional safety risks for Indigenous women and girls.</li> </ul>	<ul style="list-style-type: none"> <li>Revise the study plan to provide more information around the ‘Violence and Harassment’ indicator to describe how it will address the safety risks to Indigenous women and girls.</li> </ul>	<ul style="list-style-type: none"> <li>The Violence and Harassment indicator has been expanded to consider this impact and includes the following statement: “Also to address potential safety risks to Indigenous women from users of the road during the operations period (e.g., human trafficking).”</li> </ul>	<ul style="list-style-type: none"> <li>Table 9-2</li> </ul>
HH-16	<ul style="list-style-type: none"> <li>Section 5.2</li> <li>– “At this time, criteria and indicators have been developed considering engagement undertaken to date with Indigenous communities, the nature of the project, and knowledge of the northern Ontario community health environment. Criteria and indicators may be further refined through future engagement activities and the collection of Indigenous knowledge.”</li> </ul>	<ul style="list-style-type: none"> <li>Section 16</li> <li>– “...Indicators should be developed by the proponent using best practice, Agency guidance, and through engagement with Indigenous groups and the public. Rationale for the indicators chosen should be provided...”</li> <li>– ...In addition to the references listed in sections 7.2 and 9, the following sources offer examples of data tools or data sources that include indicators potentially relevant to reporting on the determinants of health: <ul style="list-style-type: none"> <li>• PHAC, Health Inequalities Data Tool: (<a href="https://healthinfobase.canada.ca/health-inequalities/indicat">https://healthinfobase.canada.ca/health-inequalities/indicat</a>);</li> <li>• Statistics Canada: (<a href="https://www150.statcan.gc.ca/n1/daily-quotidien/160412/dq160412a-eng.htm">https://www150.statcan.gc.ca/n1/daily-quotidien/160412/dq160412a-eng.htm</a>);</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The study plan does not identify best practice approaches for the development of criteria and indicators for the human health impact assessment.</li> <li>The study plan only mentions past and future engagement activities and Indigenous knowledge as the basis for developing criteria and indicators without providing further details.</li> <li>The Guidelines provide resources on health impact assessment (HIA) which includes scoping of determinants of health. A systematic approach using factors such as public interest, availability of data, and potential impact on health would</li> </ul>	<ul style="list-style-type: none"> <li>Provide an explanation for which best practices or other relevant guidance were used to identify, prioritize and select the proposed criteria and indicators.</li> <li>Provide a clear description in the study plan of how all Indigenous groups listed in the IEPP will have opportunities to provide Indigenous knowledge, including the validation of the baseline data collected. This should include a description of the proposed methods for data collection, management of confidentiality, and information storage. This should also include a methodology for tracking information that has been approved by the group, to demonstrate that guidance outlined in Section 6.2 of the Guidelines has been incorporated into this study plan.</li> </ul>	<ul style="list-style-type: none"> <li>Section 9.2 outlines factors that were considered in the selection of the VCs and indicators. It is also noted that the VCs and Indicators are draft and subject to further input from interested persons. Specific comments on the indicators identified or suggestions for other indicators by the Agency is welcome.</li> <li>See previous responses regarding commitment to engage with interested communities, as well as Section 4 of the Study Plan and the IS / EA Report Consultation Plan for more information on engagement.</li> <li>Section 7.2 includes a statement that commits to validating that information</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.2</li> <li>Section 9.2</li> <li>Table 9-2</li> </ul>





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	<p>■ <b>Table 3: Human Health and Community Safety Criteria and Indicators</b></p> <p>– Criteria: Public safety Indicators: Project-related Accidents; Vehicular Accidents; Violence and Harassment</p>	<ul style="list-style-type: none"> <li>• Canadian Institute for Health Information (CIHI): (<a href="http://www.cihi.ca/indicators/epub/tables_e.html#comm_health">http://www.cihi.ca/indicators/epub/tables_e.html#comm_health</a>);</li> <li>• First Nations Information Governance Centre: (<a href="https://fnigc.ca/rhs3report">https://fnigc.ca/rhs3report</a>);</li> <li>• Positive Mental Health Indicators Framework (PHAC): (<a href="https://health-infobase.canada.ca/positive-mental-health/">https://health-infobase.canada.ca/positive-mental-health/</a>); and</li> <li>• Past health impact assessments (<a href="https://www.pewtrusts.org/en/projects/health-impactproject">https://www.pewtrusts.org/en/projects/health-impactproject</a>)...”Section 16.2</li> </ul> <p>– “With respect to Social Determinants of Health, the Impact Statement must... describe effects on the safety of women and girls from project activities including worker accommodation, and as a result of new roads in remote areas;...”</p>	<p>avoid bias and increase transparency in the criteria/indicator selection process. For example, a determinant that has a high potential to negatively impact health and has a high level of public interest/concern would be considered a higher priority than a determinant that has a low potential impact on health and little to no public interest/concern. If there are any high priority determinants that are being excluded from further assessment, a sound rationale should be provided.</p> <p>■ The following is observed from the study plan:</p> <ul style="list-style-type: none"> <li>– Although the rationale provided for the “Project-related Accidents” indicator includes potential injuries to community members, the expression of change is limited to work-related injuries reported at the project site. The assumption that all community-member injuries would be reported at the project site is not justified.</li> <li>– The rationale provided for the “Violence and Harassment” indicator only mentions conflicts with the construction work force, and does not reflect transportation and access that the road may facilitate during operations (e.g., to work, to communities, to services). For instance, the road may be used for hitchhiking, which may introduce additional safety considerations for Indigenous women and girls.</li> <li>– The rationale for the “Vehicular Accidents” indicator does not specify whether the assessment will consider foot traffic along the road.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide a rationale for the proposed expression of change for the “project-related accidents” indicator with respect to injuries to community members.</li> <li>■ Provide further information on whether non-vehicular use of the road (e.g., hitchhiking, walking) will be considered in the assessment, and how this will be considered in the indicators and expressions of change. The proportion of residents who own a vehicle or driver’s license could be an indicator of how the road will be used, disaggregated by GBA+ factors. Provide further information on whether and how the Public Safety indicators will specifically address concerns for the safety of Indigenous women and girls.</li> </ul>	<p>received has been accurately documented.</p> <ul style="list-style-type: none"> <li>■ The Project-related Accidents indicator is focused on construction and operations and maintenance activities. It is distinct from the indicator that will examine Road Use Accidents. More information on this indicator can be found in Table 9-2.</li> <li>■ The Road Use Accidents indicator will consider the potential for accidents to all road users, including pedestrians and hitchhikers. More information on this indicator can be found in Table 9-2.</li> </ul>	







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HH-17	<b>Section 6.2</b> <b>Table 4: Social and Environmental Determinants of Health Magnitude Definitions</b> – Definitions: An effect that [may or may not be/ is small but/ is clearly] discernible and [within/beyond] the human health and community safety variability defined by baseline conditions. The effect is [within/beyond] the capacity of the health system to respond and/or [will not/ will] alter the current health structures. – Rationales: [negligible/low/medium/high] effects [are small and may not be/ are] noticeable. These effects [do not/may or may not/do] represent a change in day-to-day life at a community level and [can/ cannot] be responded to within the current health system resulting in systemic change.	<b>Section 16.2</b> – "...The variation of effects during different project phases and times of year should be described as well as potential project-related effects on the community health profile (e.g., changes to existing communal activities, support networks and cultural/spiritual practices that may contribute to community resilience..." <b>Section 21</b> – "...Proponents must describe the extent to which residual effects are adverse. Where relevant, or where best practice or evidence-based thresholds exist, effects should be described using criteria to quantify adverse effects... – In addition, effects should be characterized using language most appropriate for the effect (for example, impacts on the exercise of Aboriginal and Treaty rights and social effects may be described differently from biophysical effects) ... – The Impact Statement must:... <ul style="list-style-type: none"> <li>characterize residual effects for human health using human health-related criteria most appropriate for the carcinogenic and non-carcinogenic health effects of non-threshold contaminants;...</li> <li>provide the rationale for the choice of criteria used to determine the extent to which the predicted effects are adverse. The information provided must be clear and sufficient to enable the Agency, review panel, technical and regulatory agencies, Indigenous groups, and the public to review the proponent's analysis of effects;..."</li> </ul>	<ul style="list-style-type: none"> <li>In the study plan, the magnitude of residual effects is proposed to be determined partly based on a discernable effect, which is a qualitative criterion.</li> <li>There is no indication on what type of information will be used (e.g., professional judgement, community, national or internationally recognized thresholds) to apply the criterion to each of the indicators proposed in Section 6.2 of the plan.</li> <li>Magnitude is also proposed to be determined based on the capacity of the "health system and structures" without defining what these comprise, nor their scale (e.g., community-based, local, regional). The difference between a medium and high magnitude appears to be solely linked to the capacity of health care services rather than the human health risk itself.</li> </ul>	<ul style="list-style-type: none"> <li>Provide clear definitions for quantitative and qualitative criteria that will be used to measure the expression of change for each indicator in Section 6.2 of the study plan, in order to demonstrate that the requirements of Sections 16.2 and 21 of the Guidelines would be met.</li> <li>Quantitative indicators (preferably comprising evidence-based thresholds) should be used for the assessment of residual effects on biophysical determinants of health (e.g., federal and provincial environmental quality standards and guidelines) and human health risks (e.g., Hazard Quotient and Incremental Lifetime Cancer Risk).</li> <li>Clarify how a discernable effect will be identified and used to determine the magnitude of residual effects. Where possible, include quantitative indicators and evidence-based thresholds / definitions relevant to the proposed indicators in Section 6.2 of the study plan, in order to demonstrate that the requirements of Sections 16.2 and 21 of the Guidelines would be met.</li> <li>Provide a definition of the "health system and structures", including location with respect to potentially affected communities, and links to other health practices or community support services that contribute to resilience.</li> </ul>	<ul style="list-style-type: none"> <li>Please see Section 7.2.1 regarding the proposed approach to problem formulation in regard to environmental determinants of health. Should a HHRA study be determined to be warranted, more specific thresholds can be developed. Social determinants of health effects will be described qualitatively in a manner consistent with the magnitude definitions in Section 9.6. Quantification will be pursued where possible but may not be feasible for social factors related to Human Health and Community Safety. However, the magnitude of effect will be noted with respect to different sub-groups and relevant identity factors, where applicable.</li> </ul>	Section 7.2.1		
						<ul style="list-style-type: none"> <li>Refer to the following resources for best practices on developing assessment criteria: International Finance Corporation. 2009. Introduction to Health Impact Assessment. Available at: <a href="https://www.ifc.org/wps/wcm/connect/e7f68206-7227-4882-81ad-904cd6387bb7/HealthImpact.pdf?MOD=AJPERES&amp;CACHEID=ROOTWORKSPACE-e7f68206-7227-4882-81ad-904cd6387bb7-jqeABQN">https://www.ifc.org/wps/wcm/connect/e7f68206-7227-4882-81ad-904cd6387bb7/HealthImpact.pdf?MOD=AJPERES&amp;CACHEID=ROOTWORKSPACE-e7f68206-7227-4882-81ad-904cd6387bb7-jqeABQN</a>.</li> </ul>	<ul style="list-style-type: none"> <li>This suggested resource will be reviewed in the confirmation of the VCs and indicators, and has been listed as a preliminary data source in Appendix A.</li> </ul>	Table 9-2 Appendix A
						<ul style="list-style-type: none"> <li>Public Health Expertise and Reference Centre. 2014. Social Impact Assessment in the Environmental Sector: health network support guide. Available at: <a href="https://www.inspq.qc.ca/en/publications/1800">https://www.inspq.qc.ca/en/publications/1800</a></li> </ul>	<ul style="list-style-type: none"> <li>This suggested resource will be reviewed in the confirmation of the VCs and indicators, and has been listed as a preliminary data source in Appendix A.</li> </ul>	Table 9-2 Appendix A





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HH-18	<p>■ <b>Section 6.1.1</b></p> <p>– “Construction of future expenditure related to new human health and community safety facilities, services and/or infrastructure due to Project effects.”</p>	<p>■ <b>Section 9</b></p> <p>– “...Examples of social determinants of health that may be relevant to the Project are provided for consideration:...</p> <ul style="list-style-type: none"> <li>• access to health services;...”</li> </ul>	<p>■ The study plan does not include information on access to health services, nor the impact of the Project on existing health services.</p>	<p>■ Provide further information on access to health services as well as potential increase in burden to existing community health centres (i.e., nursing stations), due to project construction activities.</p>	<p>■ As outlined in Table 9-2, the indicator Access to Health Services is included and will also consider demand changes to health services during the construction period.</p>	<p>■ Table 9-2</p>
HH-19	<p>■ <b>Section 6.1.2</b></p> <p>– “Selection of Exposure Scenarios: This task reviews and considers outcomes of study area characterization, exposure pathway and route selection, and COPC identification steps of problem formulation, as well as consideration of applicable regulatory HHRA guidance. The exposure scenarios in a HHRA must reflect the means by which human receptors are most likely to come into contact with chemicals in study area environmental media and/or locally harvested food items, as a function of study area access and use patterns. Outcomes of community engagement and key IA component studies will be used to refine the development of exposure scenarios.”</p> <p>– “In the event that country food ingestion warrants evaluation in a HHRA (if determined by completion of the HHRA problem formulation step), the assessment of country foods would require consideration of a dietary survey that could be administered among the local Indigenous communities to determine which country foods are harvested and consumed, and at what rates,</p>	<p>■ <b>Section 9</b></p> <p>– “...The information provided must...describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;...”</p> <p>– “...To understand the community and Indigenous context and baseline health profile, the proponent must:...</p> <ul style="list-style-type: none"> <li>• describe the consumption of country foods (traditional foods) outside of the commercial food chain, including food that is trapped, fished, hunted, harvested or grown for consumption, medicinal purposes or has cultural value. Specify which species are used, quantities, frequency, harvesting locations, and how the data were collected (e.g., site-specific consumption surveys);...”</li> </ul>	<p>■ The study plan states that a dietary/consumption survey will be considered only if a HHRA is deemed to be warranted rather than as part of the problem formulation step.</p> <p>■ This is despite the statement that “the exposure scenarios in a HHRA must reflect the means by which human receptors are most likely to come into contact with chemicals in study area environmental media and/or locally harvested food items, as a function of study area access and use patterns.”</p> <p>■ Insufficient detail is provided on the proposed Indigenous Engagement and Indigenous Knowledge Program (see HH-07) to confirm whether a dietary/consumption survey component is included, despite the statement in Section 6.1.2 that “Outcomes of community engagement... will be used to refine the development of exposure scenarios”.</p>	<p>■ Provide a characterization of local Indigenous people’s consumption of country foods as part of the baseline assessment, as per Section 9 of the Guidelines.</p> <p>■ Provide a description of how site-specific information on the consumption of country foods will be acquired to establish the baseline conditions and form the HHRA’s problem formulation step. Alternatively, consider making use of surrogate data from reference sites.</p> <p>■ Refer to the following sources to acquire country food consumption data:</p> <ul style="list-style-type: none"> <li>– University of Ottawa, Université de Montréal, and Assembly of First Nations. 2014. First Nations Food, Nutrition &amp; Environment Study, Results from Ontario 2011 – 2012. Available at: <a href="http://www.fnfnes.ca/docs/FNFNES_Ontario_Regional_Report_ENGLISH_2019-10-16.pdf">http://www.fnfnes.ca/docs/FNFNES_Ontario_Regional_Report_ENGLISH_2019-10-16.pdf</a>.</li> <li>– Health Canada. 2018. Guidance for Evaluating Human Health Impacts in Environmental Assessments: Country Foods.</li> <li>– Health Canada. 2019. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment.</li> </ul>	<p>■ As outlined in Table 9-2, the indicators Food Consumption and Food Supply under the Diet VC are included. As part of the primary data collection program, information on the use of country foods will be collected from communities in the LSA and the potential for Project-related impacts will be assessed. These data collection programs will be coordinated with the Indigenous Knowledge Program. See Appendix B of the Aboriginal and Treaty Rights and Interests Study Plan for sample questions related to country food harvesting.</p> <p>■ The data sources references will be considered and are listed as preliminary data sources in Appendix A</p>	<p>■ Table 9-2</p> <p>■ Appendix A</p>





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	frequencies, and quantities. Such a survey could also determine the harvesting locations of country food items, which would inform whether or not the project is likely to influence country food contamination at a given harvesting location."					
HH-20	<p>■ <b>Section 6.1.2</b></p> <p>– "If the problem formulation determines that a HHRA is required, then a HHRA study would be conducted according to current Health Canada guidance documents and recommended approaches. In that event, IAAC would be consulted for input (...) If the problem formulation determines that a HHRA study is not warranted in relation to the project, rationale will be provided."</p> <p>– "Compiling of Issues of Concern: Based on the outcomes of community engagement programs, human health-related issues of concern would be compiled and tabulated. The documented issues would be considered in the subsequent tasks of problem formulation with respect to whether or not and how they could be evaluated using HHRA tools and methods."</p> <p>– "It is possible that a HHRA study may be deemed unnecessary for technical reasons (such as lack of exposure pathways or lack of chemicals of concern in study area media), but still be conducted to enable</p>	<p>■ <b>Section 16.1</b></p> <p>– "With respect to biophysical determinants of health, the Impact Statement must: ...</p> <ul style="list-style-type: none"> <li>• in situations where project related air, water or noise emissions meet local, provincial, territorial or federal guidelines, and yet public concerns were raised regarding human health effects, provide a description of the public concerns and how they were or are to be addressed;..."</li> </ul>	<p>■ The study plan does not present an approach that demonstrate that concerns raised by Indigenous groups and the public regarding human health effects will be recorded and addressed also in situations where project related air, water or noise emissions meet local, provincial, territorial or federal guidelines.</p> <p>■ If a human health risk assessment is not deemed capable of effectively addressing human health related issue(s) raised by public, Indigenous groups or other stakeholders, the proponent should consider additional measures (e.g., ambient monitoring of air, water, country foods).</p> <p>■ Refer to the following sources to support the monitoring of potentially impacted environmental media: as per Health Canada's guidance documents:</p> <ul style="list-style-type: none"> <li>– Section 6.8 of Health Canada's 2016 Guidance for Evaluating Human Health Impacts in Environmental Assessment: AIR QUALITY.</li> <li>– Section 6.1.4 of Health Canada's 2016 Guidance for Evaluating Human Health Impacts in Environmental Assessment: DRINKING AND RECREATIONAL WATER QUALITY.</li> <li>– Section 5.4 of Health Canada's 2018 Guidance for Evaluating Human Health Impacts in Environmental Assessments: COUNTRY FOODS.</li> </ul>	<p>■ Update the study plan to demonstrate that the record of engagement will include descriptions of how issues raised by Indigenous groups and the public regarding the human health risk assessment have been considered in the Impact Statement and how they were addressed throughout the impact assessment, including situations where project related air, water or noise emissions are predicted to meet local, provincial, territorial or federal guidelines.</p>	<p>■ The documentation for the Human Health and Community Safety Assessment will include all issues raised related to this discipline as well as the responses to these issues, including how applicable and relevant issues and concerns were assessed.</p> <p>■ Issues related to air and water quality will be covered by other disciplines, including the Atmospheric Environment Study Plan and Surface Water Study Plan. As noted in Table 9-2, the results from these other assessments will be considered in the Human Health and Community Safety Assessment.</p>	<p>■ IS / EA Report Consultation Plan</p> <p>■ Record of Consultation and Engagement</p> <p>■ Table 9-2</p> <p>■ Atmospheric Environment Study Plan</p> <p>■ Surface Water Study Plans</p>





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	addressing public or other stakeholder concerns raised about human health issues. This would only occur though if HHRA tools and methods are capable of addressing the issue(s) effectively. The HHRA problem formulation step would inventory and list all documented public and other stakeholder concerns that relate to project human health effects, and these concerns would be considered for all problem formulation tasks.”					
HH-21	<p>■ <b>Section 6.1.2</b></p> <p>– “In the event that country food ingestion warrants evaluation in a HHRA (if determined by completion of the HHRA problem formulation step), the assessment of country foods would require consideration of a dietary survey that could be administered among the local Indigenous communities to determine which country foods are harvested and consumed, and at what rates, frequencies, and quantities. Such a survey could also determine the harvesting locations of country food items, which would inform whether or not the project is likely to influence country food contamination at a given harvesting location.”</p>	<p>■ <b>Section 9</b></p> <p>– “...The information provided must:...</p> <ul style="list-style-type: none"> <li>• describe how community and Indigenous knowledge from relevant populations was used in establishing health baseline conditions, including input from diverse subgroups;...</li> </ul> <p>– To understand the community and Indigenous context and baseline health profile, the proponent must:...</p> <ul style="list-style-type: none"> <li>• describe the consumption of country foods (traditional foods) outside of the commercial food chain, including food that is trapped, fished, hunted, harvested or grown for consumption, medicinal purposes or has cultural value. Specify which species are used, quantities, frequency, harvesting locations, and how the data were collected (e.g., site-specific consumption surveys);...”</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan indicates it will consider a dietary/consumption survey only if a human health risk assessment is warranted.</li> <li>■ An explicit list of all country foods consumed by the Indigenous groups should be included as part of the baseline assessment. Indigenous groups must be provided opportunities to identify country foods that are harvested and consumed, and at what rates, frequencies, and quantities prior to, or during, the problem formulation step.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide, as part of the baseline human health assessment, further information about the plan to collect data regarding country foods consumed by each Indigenous group, including the country foods that are harvested and consumed, and consumed at what rates, frequencies, and quantities.</li> <li>■ Refer to the First Nations Food, Nutrition and Environment Study to obtain suggested sources for consumption data, available at <a href="http://www.FNFNES.ca">www.FNFNES.ca</a></li> </ul>	<ul style="list-style-type: none"> <li>■ As outlined in Table 9-2, the indicators Food Consumption and Food Supply under the Diet VC are included. As part of the primary data collection program, information on the use of country foods will be collected from communities in the LSA and the potential for Project-related impacts will be assessed. These data collection programs will be coordinated with the Indigenous Knowledge Program. See Appendix B of the Aboriginal and Treaty Rights and Interests Study Plan for sample questions related to country food harvesting.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9-2</li> </ul>
HH-22	<p>■ <b>Section 6.1.2</b></p> <p>– “A more comprehensive HHRA, if necessary, would also be expected to consider all human receptor age classes (i.e., infant, toddler, child, adolescent, adult) for</p>	<p>■ <b>Section 16.1</b></p> <p>– “With respect to biophysical determinants of health, the Impact Statement must:...</p> <ul style="list-style-type: none"> <li>• provide a detailed rationale/ explanation if a determination is made that an assessment of any COPCs (e.g., arsenic, chromium, mercury) or exposure pathways should be</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not provide enough detail regarding how “human receptor age classes” have been considered.</li> <li>■ It is unclear how the study plan will meet the requirements of Sections 16.1 and 16.2.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide more information on how human receptor age classes will be considered, as per Sections 16.1 and 16.2 of the Guidelines, for the determination of whether a human health risk assessment is required.</li> </ul>	<ul style="list-style-type: none"> <li>■ In the collection of primary data, age will be considered. Targeted engagement with different age groups (e.g., youth and elders) will be undertaken. As noted in Section 9.6, where appropriate, information regarding residual effects will be disaggregated by sex, gender, age</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 9.6</li> </ul>





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	<p>both males and females. Potential exposure pathways that would likely be considered in a more comprehensive HHRA include:</p> <ul style="list-style-type: none"> <li>• soil ingestion/dermal contact</li> <li>• drinking water ingestion</li> <li>• outdoor air and dusts inhalation</li> <li>• country foods ingestion</li> </ul> <p>– In the event that country food ingestion warrants evaluation in a HHRA (if determined by completion of the HHRA problem formulation step), the assessment of country foods would require consideration of a dietary survey that could be administered among the local Indigenous communities to determine which country foods are harvested and consumed, and at what rates, frequencies, and quantities.”</p>	<p>excluded and/or screened out of the assessment and if the proponent decides to deviate from the suggested assessment approaches and methods or determines that such assessment is not warranted;...</p> <ul style="list-style-type: none"> <li>• food security: describe effects to availability, use and consumption of country foods (traditional foods) and health impacts of this effect; and ...”</li> </ul> <p>■ <b>Section 16.2</b>          – “With respect to Social Determinants of Health, the Impact Statement must:...</p> <ul style="list-style-type: none"> <li>• describe and quantify specific thresholds and document if different thresholds were considered for vulnerable populations, including by sex and age; provide rationale and justification if specific thresholds not used;...”</li> </ul>			<p>and other community relevant identity factors to identify disproportionate residual effects for diverse subgroups.</p>	
HH-23	<p>■ <b>Section 6.2, Table 4</b>          – “An effect that may or may not be discernible but is within the human health and community safety variability defined by baseline conditions. The effect is within the capacity of the health system to respond and/or will not alter the current health structures.”          – “An effect that is clearly discernible and beyond the human health and community safety variability defined by baseline conditions. The effect is beyond the capacity of the health system to respond and/or will alter the current economic structures.”</p>	<p>■ <b>Section 16.2</b>          – “...The variation of effects during different project phases and times of year should be described as well as potential project-related effects on the community health profile (e.g., changes to existing communal activities, support networks and cultural/spiritual practices that may contribute to community resilience...”</p> <p>■ <b>Section 21</b>          – “After considering the consequences of technically and economically feasible mitigation measures, the Impact Statement must describe any residual environmental, health, social or economic effects of the Project and whether those effects would occur in the local or regional study area. This includes consideration of both positive and negative effects of the Project and input received from the public, Indigenous groups,</p>	<p>■ It is not clear that the definitions of magnitude follow the guidance provided in the Guidelines. There is no discussion of input from Indigenous groups and other stakeholders in defining magnitude of effect and it is not clear how the level of concern expressed through engaging with the affected Indigenous groups and community members will be taken into consideration.</p> <p>■ The study plan does not explain why health system capacity is an indicator of magnitude and not effect to human health. Health system capacity typically deals with symptomatic people who have in most cases, reached a state of ill health and disease while the goal of an impact</p>	<p>■ Revise the study plan to provide definitions of magnitude that follow the guidance provided in the Guidelines.          ■ Update the study plan to provide clarity on how ‘discernable’ effects will be defined and how the input and level of concern of Indigenous groups and the public will be taken into consideration.          ■ Update the study plan to clarify why the indicator ‘health system capacity’ is proposed as an indicator of magnitude and not of effect to human health.</p>	<p>■ Definitions of magnitude of effect have been edited to be more consistent with the TISG. The reference to “health system capacity” relates to the capacity of the health system to mitigate possible effects. This has been clarified in Table 9-4.</p>	<p>■ Table 9-4</p>





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		<p>lifecycle regulators, jurisdictions, federal authorities and other interested parties. If an Indigenous group identifies that there are residual effects to rights or interests, those effects should be carried through for residual effects analysis. Where appropriate, information regarding residual effects should be disaggregated by sex, gender, age and other community relevant identity factors to identify disproportionate residual effects for diverse subgroups as per the GBA+...</p> <p>– Characterizing effects should be based largely on the level of concern expressed through engaging with the affected Indigenous groups and community members...”</p>	<p>assessment is to avoid adverse effects. Using health system capacity as an indicator of magnitude does not align with this goal.</p>			
HH-24	<p>■ <b>Section 7, Table 5, ID 6:</b>            – ‘Gender will not be considered unless publicly available or volunteered by respondents to the primary program.’</p>	<p>■ <b>Section 6.3</b>            – “...The Impact Statement must include, at a minimum:...            • a description of efforts to engage diverse populations of each Indigenous group in culturally appropriate ways, including groups identified by gender, age or other community relevant factors (e.g., hunters, trappers, and other harvesters) to support the collection of information needed to complete the GBA+;...”</p> <p>■ <b>Section 7.1</b>            – “...The application of GBA+ to baseline conditions for diverse subgroups is necessary to support the GBA+ of effects. GBA+ uses standard social science quantitative and qualitative data collection and analysis methods to describe baseline conditions across diverse subgroups...”</p> <p>■ <b>Section 9</b>            – “...The information provided must:...            • conduct intersectional gender analysis to examine differences in the status of diverse subgroups (e.g., women, youth, and elders) and their differential access to resources, opportunities and services; describe any relevant indicators, and how they are reflective of community input;...”</p>	<p>■ The study plan indicates that gender will not be considered unless publicly available or volunteered by respondents to the primary program, but provides no further information on why GBA+ or its analytical framework will not be considered.</p> <p>■ Section 6.3 of the Guidelines requires the proponent to provide a description of effects to collect and compile information needed for a GBA+ analysis. This may require research on similar projects or communities using existing data sources and literature if information not volunteered by community members. Consent forms with information on how the information will be protected should be provided in an annex.</p> <p>■ The proponent should seek to solicit information necessary to support the GBA+, and if unsuccessful, efforts made should be described in the Impact Statement. Section 6.3 of the Guidelines state that the Impact Statement must include, at a minimum, a description of efforts to engage diverse populations of each Indigenous group in culturally appropriate ways, including groups identified by gender, age or other community relevant factors (e.g., hunters, trappers, and other harvesters) to support the collection of information needed to complete the GBA+.</p> <p>■ Refer to Agency guidance for more information on the GBA+ approach: <a href="https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/gender-based-analysis.html">https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/gender-based-analysis.html</a></p>	<p>■ Provide details on how the proponent plans to assess effects that may affect diverse subgroups to meet the requirements of the Guidelines.</p> <p>■ Describe how the proponent will engage diverse populations to collect information necessary to support the GBA+.</p>	<p>■ Section 4.3 outlines the proposed approach to the consideration of identify and GBA+. If primary data are not available from all communities in the LSA to support the GBA+ analysis, then information from secondary sources would be considered to complete the assessment to the best of our ability. Ideally, sufficient primary data is provided to support the GBA+ analysis can be obtained. If this information is not provided by the communities then an approach to complete the GBA+ assessment without these data will be developed with input from the Agency.</p> <p>■ Noted. See above response.</p>	<p>■ Section 4.3</p> <p>■ Section 4.3</p>





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HH-25	<p>■ <b>Section 7, Table 5, ID 8:</b>            –“Data collection, information sources, study areas and assessment methods have been designed respective of the guidance included here. This will include drawing on other impact assessments (bio-physical and socio-economic), data sources provided by IAAC, and relevant primary and secondary data sources including the socio-economic primary data program and Indigenous knowledge program.”</p>	<p>■ <b>Section 9</b>            –“...In preparing the report on baseline community health profile, the proponent must identify the environmental and social area of influence of the Project. To understand the community and Indigenous context and baseline health profile, the proponent must:</p> <ul style="list-style-type: none"> <li>• provide baseline contaminant concentrations in drinking water and in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities...</li> <li>• describe the consumption of country foods (traditional foods) outside of the commercial food chain, including food that is trapped, fished, hunted, harvested or grown for consumption, medicinal purposes or has cultural value. Specify which species are used, quantities, frequency, harvesting locations, and how the data were collected (e.g., site-specific consumption surveys);</li> <li>• if a Human Health Risk Assessment is required, provide baseline contaminant concentrations in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities; and</li> <li>• describe the status of food security and food sovereignty within the Indigenous groups and local communities.”</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not present a clear approach to understand which country foods (traditional foods) are consumed by Indigenous groups and local communities.</li> <li>■ It is also unclear if the proposed human impact assessment will consider food security and effects to country foods (traditional foods) availability, use and consumption by Indigenous groups and local communities.</li> <li>■ The concordance table in Section 7 indicates that the requirements of the Guidelines are covered in Section 2, 3, 4, 5 and 6 of the study plan, although this information is not presented with a level of detail that allows validation.</li> </ul>	<ul style="list-style-type: none"> <li>■ Update the study plan with the description of the approach proposed to understand which country foods are consumed by Indigenous groups and local communities, as required by Section 9 of the Guidelines. Provide further information on the assessment of food security, availability and use.</li> <li>■ Provide a description of the approach to collect baseline contaminant concentrations in country food tissues.</li> <li>■ Refer to the First Nations Food, Nutrition and Environment Study to access existing study/data sources for baseline consumption of country foods, and food security, available at <a href="http://www.FNFNES.ca">www.FNFNES.ca</a></li> </ul>	<ul style="list-style-type: none"> <li>■ As outlined in Table 9-2, the indicators Food Consumption and Food Supply under the Diet VC are included. As part of the primary data collection program, information on the use of country foods will be collected from communities in the LSA and the potential for Project-related impacts will be assessed. These data collection program will be co-ordinated with the program to collect Indigenous Knowledge. See Appendix B of the Aboriginal &amp; Treaty Rights study plan for sample questions related to country food harvesting. The specific details on the program to collect the information are to be developed.</li> <li>■ Refer to section 7.1.2.2 regarding tissue sampling.</li> <li>■ The referenced study will be reviewed and considered and has been included in the preliminary list of data sources in Appendix A.</li> </ul>	<ul style="list-style-type: none"> <li>■ Table 9-2</li> <li>■ Section 7.1.2.2</li> <li>■ Appendix A</li> </ul>
HH-26	<p>■ <b>Section 7, Table 5, ID 8:</b>            –“Data collection, information sources, study areas and assessment methods have been designed respective of the guidance included here. This will include drawing on other impact assessments (bio-physical and socio-economic), data sources provided by IAAC, and relevant primary and secondary data sources including the socio-economic primary data program and</p>	<p>■ <b>Section 9</b>            –“...To understand the community and Indigenous context and baseline health profile, the proponent must:...</p> <ul style="list-style-type: none"> <li>• provide the approximate number, distance and identity factors of likely human receptors, including any foreseeable future receptors, that may be impacted by changes in air, water, country food quality (e.g., dust deposition on vegetation), and noise levels....</li> <li>• describe drinking water sources which may be effected by the Project...</li> <li>• provide baseline contaminant concentrations in drinking water and in the tissues of country foods (traditional foods)</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not present a clear approach to meet requirements of Section 9 of the Guidelines. There is no specific reference to the checklists requested for completion, which would support the Health Canada verification of the assessment’s main components.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide further clarification in the concordance table to indicate explicitly how the Section 9 requirements of the Guidelines will be addressed in the human health and community safety study plan. Provide further information to indicate whether the checklists from Health Canada guidance documents will be included in the Impact Statement.</li> <li>■ Refer to the following Health Canada guidance document checklists: Air Quality, Noise, Drinking and Recreational Water Quality, Country Foods, and Human Health Risk Assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ The referenced Health Canada guidance documents will be referenced and considered in the assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Appendix A</li> </ul>





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	<p>Indigenous knowledge program.”</p> <ul style="list-style-type: none"> <li>■ <b>Section 7, Table 5, ID 21:</b> – “Completion of a consolidated checklist applicable to the Project may be considered by the proponent, if provided by Health Canada.”</li> </ul>	<p>consumed by Indigenous groups and local communities...</p> <ul style="list-style-type: none"> <li>• describe the consumption of country foods (traditional foods) outside of the commercial food chain...</li> <li>• if a Human Health Risk Assessment is required, provide baseline contaminant concentrations in the tissues of country foods (traditional foods) consumed by Indigenous groups and local communities;...”</li> </ul> <ul style="list-style-type: none"> <li>■ <b>Section 16.2</b> – “...It is requested that the proponent complete the checklists provided in the Health Canada guidance documents so as to assist Health Canada and other participants verify that the main components of the assessment are completed and to identify the locations of this information. Completing the checklists is especially useful when the analyses on a topic are found in multiple sections of the Impact Statement documentation...”</li> </ul>				
HH-27	<ul style="list-style-type: none"> <li>■ <b>Section 7, Table 5, ID 11:</b> – “Assessment of the effects of the Project on human health must consistently take into account real and perceived risk and carry out baseline studies using recognized methodological best practices to determine perceived risk. Real and perceived risk, as identified through engagement, will be considered in the assessment.”</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Section 16</b> – “...The assessment must consistently take into account real and perceived risk and carry out baseline studies using recognized methodological best practices and as reflected in these guidelines, to determine perceived risk...”</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not provide a description of how the perception of risk related to food and water will be considered.</li> <li>■ Baseline study/survey should be conducted using standardized public opinion and risk perception questionnaires to assess risk perceptions within the affected communities.</li> </ul>	<ul style="list-style-type: none"> <li>■ Provide further information on how the Impact Statement will consider the perception of risk related to food and water.</li> </ul>	<ul style="list-style-type: none"> <li>■ When engaging with communities as part of the primary data collection program, individual perceptions of risk regarding the project will be explored.</li> <li>■ The use of surveys and questionnaires will be considered when exploring issues and concerns related to risk perception of the project, including the perceived risk associated with road use.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.1.2.1</li> <li>■ Section 7.1.2.1</li> </ul>
HH-28	<ul style="list-style-type: none"> <li>■ <b>Section 2:</b> – “Health determinants related to social structures and equity factors will primarily be documented in other reports.”</li> <li>■ <b>Section 6.1.1:</b> – “The Social Determinants of Health Assessment will assess Project and cumulative impacts using the same</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Section 10</b> – “...Baseline information must be sufficiently disaggregated and analyzed to understand the differences in norms, roles and relations for diverse subgroups; the different level of power they hold; their differing needs, constraints and opportunities; and the impact of these differences in their lives, including consideration of disproportionate effects to surrounding communities...”</li> </ul>	<ul style="list-style-type: none"> <li>■ The study plan does not provide a description of how data used to assess the social determinants of health will be disaggregated and analyzed to show differences in norms, roles, and relations, needs, effects, etc.</li> <li>■ The study plan indicates that the methodologies and frameworks to assess the social determinants of</li> </ul>	<ul style="list-style-type: none"> <li>■ Update the study plan to provide clarification on the methodology that will be used to assess the possible impact of the proposed project on the social determinants of health. Health Canada supports a detailed human impact assessment, as indicated in the Guidelines, be used in determining whether positive and/or adverse impacts to the determinants of health are expected to result from a project. Appendix 1 of the Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>■ Sections 7.1.2.1 and 7.2 provide an expanded description of the approach to the social determinants of health. References have been added to potential pathways which will be confirmed during the IA / EA process.</li> </ul>	<ul style="list-style-type: none"> <li>■ Section 7.1.2.1</li> <li>■ Section 7.2</li> </ul>







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	<p>methodologies and frameworks as the larger Project Impact Assessment.”</p> <p>–“The Social Determinants of Health Assessment is informed by academic literature, best practices in social impact assessment and previous similar EAs. The methodology to complete the Social Determinants of Health Assessment will include gathering local knowledge and utilising consultation processes to analyze the concerns of interested and affected communities related to the criteria and indicators as per Section 5.2. (...) Data used in the Social Determinants of Health Assessment will be disaggregated (where possible) and analyzed to understand differences in norms, roles, and relations for diverse subgroups; the different level of power their hold; their differing needs, constraints and opportunities, and the effects of these differences in their lives related to social determinants of health criteria and indicators.”</p> <p>■ <b>Section 7, Table 5, ID 12:</b></p> <p>–“The approach proposed is holistic and considers relevant disciplines.”</p> <p>■ <b>Section 7, Table 5, ID 13 and ID 17:</b></p> <p>–“Interactions between effects will be considered as part of the holistic approach.”</p>	<p>■ <b>Section 16</b></p> <p>–“...Interconnections between human health and other valued components and interactions between effects must be described, particularly where proponents suggest a potential impact occurring indirectly as the result of the proposed Project. Given that changes to any given health determinant may result in an impact to one or more health outcomes, it is important to include interactions within and across the higher-level health determinants (i.e., Level 2, pertaining to material circumstances/resources and psychosocial factors, and Level 3, pertaining to structural factors and equity factors) in order to identify the pathways of health effects that are most likely to be affected by project-related changes to the determinant(s) of health... The assessment must illustrate an understanding of linkages and effect pathways, so that when a change in one domain is predicted, there is an understanding of what other effects or consequences may be felt across the other domains. Applying a “determinants of health approach” in the assessment of human health effects will support the identification of these linkages, as well as of disproportionate effects across subgroups...</p> <p>–A detailed health impact assessment inclusive of other reasonably foreseeable future projects would be appropriate to capture potential positive and adverse effects on social factors and economic factors (and where applicable cultural factors) in addition to the biophysical environmental factors. A health impact assessment may be able to assess the positive and negative consequences (i.e., differential) of effects on the environment and human health of those Indigenous groups whose territories are lost or removed along the road alignment...”</p>	<p>health will be similar to the methodology used in the larger, project impact assessment. However, it does not mention which methodologies and frameworks are being referred to, and subsequent sections only refer to academic literature, best practices in social impact assessment, and previous similar EAs. The best practices in HIA proposed in the Guidelines are not mentioned in the study plan. However, there is mention of “best practices in social impact assessment” and “previous similar EAs” (which would have been completed under previous assessment legislation), without explaining how these are equivalent to the recommendations in the Guidelines.</p> <p>■ Specifically, the study plan appears to be focused on collecting data on biophysical and social determinants of health, without providing details on how these will be analyzed holistically in the human health assessment. The plan does not provide a preliminary list of determinants that may be considered. Additionally, no detail is provided on how health determinants documented in other reports (e.g., related to social structures and equity factors) will be incorporated in the health assessment. Given that project-related changes to one or more determinants of health may lead to secondary changes ultimately affecting the immediate health determinants (health-related behaviour and human biology) underlying health outcomes, it is important to include interactions within and across health determinants in order to assess actual health impacts.</p>	<p>includes a number of resources and guidance to support a human impact assessment.</p> <p>■ Provide a preliminary list of determinants of health relevant to the Project. Resources and examples of potentially relevant indicators are provided in the Guidelines.</p> <p>■ Describe how the assessment will identify interactions within and across health determinants and the linkages between effects. Effect pathways (causal models) can be used to outline how the Project could directly and indirectly affect specific health issues. This approach will help prioritize the health effects for further assessment. A matrix with supporting explanation can be a useful way to organize a qualitative analysis and to convey results in a manner that is easy to understand. Describe how data will be disaggregated and analyzed to show differences in norms, roles, and relations, needs, effects, etc.</p>		





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HH-29	<ul style="list-style-type: none"> <li>Section 7, Table 5, ID 18: – “Describe food security effects to country foods and health impact of these effects.”</li> </ul>	<ul style="list-style-type: none"> <li>Section 9 – “...Examples of social determinants of health that may be relevant to the Project are provided for consideration:...               <ul style="list-style-type: none"> <li>food security, access to country foods (traditional foods);...”</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The study plan does not describe the approach proposed to collect baseline data on access to country food, nor the impact of the Project on country food availability and food security.</li> </ul>	<ul style="list-style-type: none"> <li>Update the study plan to provide information on how baseline studies will collect information on access to country foods and on the potential impact of project construction on the availability of country foods (traditional foods) and on food security.</li> </ul>	<ul style="list-style-type: none"> <li>As outlined in Table 9-2, the indicators Food Consumption and Food Supply under the Diet VC are included. As part of the primary data collection program, information on the use of country foods will be collected from communities in the LSA and the potential for Project-related impacts will be assessed. These data collection program will be coordinated with the Indigenous Knowledge Program. See Appendix B of the Aboriginal and Treaty Rights and Interests Study Plan for sample questions related to country food harvesting. The specific details on the program to collect the information are to be developed.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.1.2.1</li> <li>Table 9-2</li> </ul>
HH-30	<ul style="list-style-type: none"> <li>Section 7, Table 5, ID 24: – “Will the baseline studies consider mental health and well-being in Neskantaga and other affected communities?”</li> <li>Section 7, Table 5, ID 25: – “How will Marten Falls demonstrate that the Project will improve mental health and wellbeing in the context of mitigating the ongoing crises? What kinds of evidence will Marten Falls rely on to demonstrate this?”</li> </ul>	<ul style="list-style-type: none"> <li>Section 9 – “...Examples of social determinants of health that may be relevant to the Project are provided for consideration:...               <ul style="list-style-type: none"> <li>community mental health and well being (including feelings of isolation, remoteness, concern for future generations, and other elements that have been raised in the wake of youth suicides in rural and remote FN communities);...”</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The study plan does not consider the issue of mental health as a valued component related to public health and therefore, it remains unclear how changes to mental health will be evaluated.</li> </ul>	<ul style="list-style-type: none"> <li>Update the study plan to provide further information on how baseline studies may consider the mental health and well-being of potentially affected communities, and how the Project may positively or adversely affect mental health and well-being, particularly in the context of the ongoing crises affecting other communities.</li> </ul>	<ul style="list-style-type: none"> <li>An indicator specific to the potential for changes to Mental Health has been added to Table 9.2. Section 7.2 has also been added to specifically reference the consideration of potential changes to mental health as a result of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>Section 7.2</li> <li>Table 9-2</li> </ul>

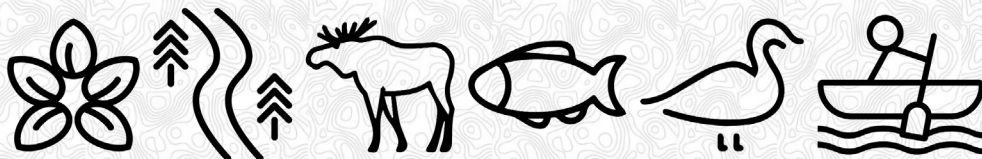




MARTEN FALLS FIRST NATION  
**ALL SEASON COMMUNITY ACCESS ROAD**

*Human Health and Community Safety Study Plan*

# Draft Study Plan Comments – Provincial





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1	■ N/A	■ MECP, Environmental Assessment Branch	■ Please review EAB comments on the Wildlife, Ungulates and Vegetation work plans that may apply to this work plan.		■ Applicable comments and responses have been included in this table.	■ N/A
2	■ Page 9, 2. 5.1.2	■ MECP, Environmental Assessment Branch	<p>■ Page 9 states: “The proponent remains open to receiving information from other communities on their activities within the Project Study Area (PSA) and how interlinkages between the Project and those communities may result in human health and community safety effects. To be included in the community health LSA, a community must demonstrate direct community-level socio-economic interest in the Project footprint; from changing access to the Marten Falls community due to the Project; or due to Project effects on the environment that impact the human health and community safety environment. Community-level socio-economic impacts can be defined as changes to the indicators (Section 5.2) that can reasonably be expected to potentially exceed a negligible magnitude (Section 6.2).”</p> <p>■ This excerpt implies that it is up to Indigenous communities to self-identify and demonstrate as being potentially impacted by the project from a human health perspective in order to be considered in the human health assessment. The proponent is required to identify and consider all potential impacts, direct and indirect, from its project. The proponent should ensure it is capturing these potential effects to all relevant communities. The proponent should also ensure that communities are aware of opportunities to provide input and raise concerns, including for the human health assessment.</p>	<p>■ Please ensure the EA study design will capture potential direct and indirect effects to all relevant Indigenous communities. The proponent should also ensure that communities are aware of opportunities to provide input and raise concerns, including for the human health assessment.</p>	<p>■ Section 6 has been updated regarding the spatial boundaries of the Human Health and Community Safety Assessment. All communities will be engaged with to determine interest and / or concern with respect to potential health and safety effects of the Project. As noted in the Study Plan, the Proponent remains open to receiving information from other communities on their activities and how interlinkages between the Project and those communities may result in Human Health and Community Safety effects. To be included in the Community Health LSA, a community must demonstrate direct community-level health or social-economic interest in the Project footprint; from changing access to the MFFN community due to the Project; or due to potential direct and indirect effects Project effects on the environment that impact the Human Health and Community Safety environment.</p>	■ Section 6
3	■ Page 10, Table 2	■ MECP, Environmental Assessment Branch	<p>■ Table 2 indicates the Project Study Area “encompasses the 100 m wide CAR right-of-way (ROW), temporary construction access roads, work areas, worker camps, and long-term aggregate sources and associated access roads.”</p> <p>■ It is not clear whether this refers to all alternatives or if the proponent intends to narrow the scope to the preferred alternatives for the road and supporting infrastructure.</p>	<p>■ Please clarify if the Project Study Area refers to all alternatives or if the proponent intends to narrow the scope to the preferred alternatives for the road and supporting infrastructure.</p>	<p>■ The Project Development Area refers to all route alternatives plus other project components determined to be required (e.g., pits and quarries).</p>	■ Section 6.2
1	■ General	■ MECP (Senior Regulatory Toxicologist Comments)	<p>■ The document highlights the need for site characterisation, hazard identification, and potential risk identification. The document identifies the need to assess the human health status of the current population which is very small (about &gt; 250 people) sized.</p>	<p>■ Further clarifications needed in this document are listed below.</p>	<p>■ Refer to responses to detailed comments following this comment.</p>	■ N/A





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2	■ Page 6, s. 4.1.2	■ MECP (Senior Regulatory Toxicologist Comments)	■ The document indicates tissue samples of commonly harvested game species will be analyzed.	■ Clarification is required what these species are and why it is limited to game species only?	■ The tissue sampling program, if determined to be warranted, would be focussed on species that are consumed by local communities. The exact species will need to be confirmed.	■ Section 7.1.2.2
3	■ Page 19, s. 6.1.2	■ MECP (Senior Regulatory Toxicologist Comments)	■ COPCs are identified in this document. However, these COPCs require proper justification for their selection.	■ Please provide justification for the COPCs.	■ As outlined in Section 7.2.1, the Problem Formulation Step would confirm the applicable COPCs.	■ Section 7.2.1
4	■ General	■ MECP (Senior Regulatory Toxicologist Comments)	■ For proper exposure assessment, background air, water and soil COPCs concentration is required and how it will be conducted should be included in the document. The methods and plans for sampling, analyzing COPCs should be explained.	■ Please include methods for identifying background concentrations. Please explain methods and plans for sampling and analyzing COPCs.	■ As outlined in Section 7.2.1, the Problem Formulation Step would confirm the applicable COPCs.	■ Section 7.2.1
5	General	■ MECP (Senior Regulatory Toxicologist Comments)	■ The information/literature sources to identify the toxicological benchmarks for these COPCs should be mentioned.	■ Please provide information/literature sources.	■ See Appendix A	■ Appendix A
1	■ Page 2, s. 2 Same comment in Wildlife, Ungulates and Vegetation work plans	■ MECP, Environmental Assessment Branch	■ Key objectives of conducting an EA include the elements mentioned in the work plan and also describing the existing environment, describing potential effects (positive and negative) of the project and alternatives, and consult about the project.	■ Suggest the following revisions to add additional key objectives of the EA process:  <i>The key objectives of conducting an IA / EA are to describe the existing environment, gather sufficient information to predict Project-related effects (positive and negative) of the project and alternatives on the environment, on Ungulates (moose and woodland caribou) and determine measures needed to avoid or minimize adverse Project effects and enhance beneficial Project effects where feasible, and undertake consultation.</i>	■ Made the following revisions to add additional key objectives of the EA process: – The key objectives of conducting an IA / EA are to describe the existing environment, gather sufficient information to predict Project-related effects (positive and negative) of the project and alternatives on the environment and determine measures needed to avoid or minimize adverse Project effects and enhance beneficial Project effects where feasible, and undertake consultation.	■ Section 2
2	■ Page 2, footnote Same comment in Wildlife, Ungulates and Vegetation work plans	■ MECP, Environmental Assessment Branch	■ The footnote is appreciated though requires clarification. Will the study plans be updated to reflect any other comments during the ToR review process or post-ToR, e.g., federal, Indigenous, public?	■ Please clarify if the study plans will be included with the ToR submission. ■ If not included in the ToR submission, please clarify if and when the project team intends to consult broadly on the work plans. The footnote should also be revised to state that the study plans will be updated to reflect the approved ToR if approval is obtained.	■ The Study Plans will not be included with the ToR submission. They have considered public, agency, and Indigenous input received on the Project to date. Government agencies, interested persons, and Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process. Further details have been provided in Section 3 of the Study Plans. ■ The revision regarding the footnote has been incorporated into the updated Study Plan.	■ Section 2





Comment # / Ref #	DRAFT Study Plan Section	Agency / Regulatory Body Comments Received From	Comment / Context	Action Item	Final Response	Study Plan Reference
3	<ul style="list-style-type: none"> <li>Pages 6-7, Figures 3-1 and 3-2</li> <li>Same comment in Wildlife, Ungulates and Vegetation work plans</li> </ul>	<ul style="list-style-type: none"> <li>MECP, Environmental Assessment Branch</li> </ul>	<ul style="list-style-type: none"> <li>Figures 3-1 and 3-2 are missing locations for other project infrastructure – can this be added to the maps?</li> </ul>	<ul style="list-style-type: none"> <li>Please add locations of other project infrastructure and associated study areas to Figures 3-1 and 3-2, or clarify when these locations will be known.</li> </ul>	<ul style="list-style-type: none"> <li>Location for Project components other than the route itself are unknown at this time and will be established during the IA / EA phase of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>Section 6.2</li> </ul>
6	<ul style="list-style-type: none"> <li>Page 30, s. 6.3</li> <li>Same comment in Wildlife, Ungulates and Vegetation work plans</li> </ul>	<ul style="list-style-type: none"> <li>MECP, Environmental Assessment Branch</li> </ul>	<ul style="list-style-type: none"> <li>A few comments on the first paragraph: <ul style="list-style-type: none"> <li>It is stated that project phases include construction and operation. It would be helpful if this section clarifies that the construction phase includes decommissioning of temporary infrastructure, per page 14 of the draft ToR.</li> <li>Residual effects are mentioned but not explained. For clarity, there should be a statement that residual effects (net effects using provincial language) are the effects left over after application of impact management measures, per Ontario's EA Code of Practice.</li> <li>The paragraph states the residual effects will "be described in terms of the magnitude, geographic extent, <b>timing, duration, frequency, social and ecological context</b>, likelihood, and whether effects are reversible or irreversible." These characteristics are not all the same as what was stated in the draft ToR: "direction, magnitude, geographic extent, direction [sic], frequency, reversibility and likelihood" (p. 54-55 of draft ToR). Bolded font added to show differences. The remainder of section 6.3 describes further effects assessment methodology. The work plan and final ToR should align in methodology.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Please add to this section that the construction phase includes decommissioning of temporary infrastructure, using consistent language as the ToR.</li> <li>Please add to this paragraph that 'residual (net) effects are the effects remaining after the application of impact management measures.'</li> <li>Please align the work plan methodology with the final ToR methodology in terms of assessing effects and alternatives, or provide sufficient rationale if methodologies are different. Per Ontario's EA Code of Practice, the evaluation method(s) chosen must be able to produce an assessment that is clear, logical and traceable.</li> </ul>	<ul style="list-style-type: none"> <li>Added the following "Decommissioning of construction works is included in the construction phase."</li> <li>Added the following "Residual effects are the effects remaining after the application of impact management measures."</li> <li>Revised the following "The residual effects will therefore be described in terms of the direction, magnitude, geographic extent, timing, duration, frequency, reversibility (reversible or irreversible), social and ecological context, and likelihood, and whether effects are reversible or irreversible."</li> </ul>	<ul style="list-style-type: none"> <li>Section 6.1</li> <li>Section 9.6.</li> </ul>
7	<ul style="list-style-type: none"> <li>Indigenous knowledge</li> <li>Same comment in Wildlife, Ungulates and Vegetation work plans</li> </ul>	<ul style="list-style-type: none"> <li>MECP, Environmental Assessment Branch</li> </ul>	<ul style="list-style-type: none"> <li>The work plan indicates that the EA will consider Indigenous knowledge to inform the effects assessment. The work plan does not provide a proposed methodology for how the proponent intends to seek Indigenous knowledge, from whom, and how it will be incorporated.</li> </ul>	<ul style="list-style-type: none"> <li>Please provide further details about how Indigenous knowledge will be collected and incorporated. Alternatively it may be helpful to include a reference to the relevant components of the ToR and ToR consultation plan that provide further details.</li> </ul>	<ul style="list-style-type: none"> <li>Consideration of Indigenous Knowledge and the methodology for seeking it is described in Section 5.</li> </ul>	<ul style="list-style-type: none"> <li>Section 5</li> </ul>
8	<ul style="list-style-type: none"> <li>Criteria and indicators table</li> <li>Same comment in Wildlife, Ungulates and Vegetation work plans</li> </ul>	<ul style="list-style-type: none"> <li>MECP, Environmental Assessment Branch</li> </ul>	<ul style="list-style-type: none"> <li>For the tables containing criteria and indicators, some work plans include the three columns Valued Component, Indicators and Rationale for Selection. Other work plans include the columns Indicator, Expression of Change and Rationale for Selection. The table formats of criteria and indicators should be consistent across work plans.</li> <li>There are also differences between the criteria/indicators in the draft work plans vs. the criteria and indicators in the draft ToR</li> </ul>	<ul style="list-style-type: none"> <li>Please review draft work plans to achieve consistent format in how criteria and indicators are presented in the tables.</li> <li>Where there are differences between the criteria/indicator tables in the draft work plans and the draft ToR Appendix A, please ensure the work plans and final ToR align so that the assessment methodology is consistent and to avoid confusion.</li> </ul>	<ul style="list-style-type: none"> <li>This table has been updated in the Study Plan and updates will be coordinated with other disciplines for consistency.</li> </ul>	<ul style="list-style-type: none"> <li>Table 9-1</li> </ul>





# MARTEN FALLS FIRST NATION ALL SEASON COMMUNITY ACCESS ROAD



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