



# WEBEQUIE SUPPLY ROAD FINAL ENVIRONMENTAL ASSESSMENT REPORT / IMPACT STATEMENT

---

January 30, 2026

AtkinsRéalis Ref: 661910

## SECTION 17: Assessment of Effects on Human Health



WEBEQUIE FIRST NATION

AtkinsRéalis



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# 17 Assessment of Effects on Human Health

Human health was identified as one of the valued components (VC) during the VC scoping and selection as part of the Environmental Assessment / Impact Assessment (EA/IA) process. This section describes and assesses the potential effects that the Project may have on the Human Health VC.

Existing conditions (also herein referred to as baseline community health profiles) for the Human Health VC have been established through desktop studies and engagement and consultation activities completed by the Project Team. This includes, but not limited to, background information review, internet research, engagement with Indigenous communities and stakeholders, and expert opinion. The existing conditions are being used as baseline conditions to assess and determine the potential effects of the Project. The assessment of potential effects on the human health is based on assessment results presented for other VCs that are identified as social and physical/environmental determinants of health (see **Section 17.1.4**), as well as the results of the following assessments:

- Country Foods Assessment completed by AtkinsRéalis (Appendix O);
- Human Health Risk Assessment completed by AtkinsRéalis (Appendix P); and
- Health Impact Assessment completed by Intrinsik Corp. (Appendix Q).

The assessment of potential effects for the Human Health VC is presented in the following manner:

- Scope of the Assessment;
- Existing Conditions Summary;
- Potential Effects, Pathways and Indicators;
- Mitigation and Enhancement Measures;
- Characterization of Net Effects;
- Determination of Significance;
- Cumulative Effects;
- Prediction of Confidence in the Assessment;
- Predicted future Condition of the Environment if the Project Does Not Proceed;
- Follow-up and Monitoring Programs; and
- References.

## 17.1 Scope of the Assessment

### 17.1.1 Regulatory and Policy Setting

The Human Health VC is assessed in accordance with the requirements of the *Impact Assessment Act* (IAA), the Ontario *Environmental Assessment Act*, the Tailored Impact Statement Guidelines for the Project (Appendix A-1), the provincial approved EA Terms of Reference (ToR) (Appendix A-2), and EA/IA guidance documents.



Table 17-1 outlines the key regulations, legislation, policies, and frameworks relevant to the assessment of the Human Health VC for construction and operations of the Project.

**Table 17-1: Key Regulation, Legislation, Policy, and Framework Relevant to Human Health**

Regulatory Agency	Regulation, Legislation, Policy, or Framework	Project Relevance
<b>Federal</b>		
Impact Assessment Agency of Canada (IAAC)	<i>Impact Assessment Act</i>	The Project is subject to the federal <i>Impact Assessment Act</i> (refer to Section 1). The Tailored Impact Statement Guidelines (TISG) issued by IAAC (2020) for the Project were used to identify requirements for the assessment of Human Health VC.
Health Canada	Interim Guidance: Health Impact Assessment of Designated Projects under the <i>Impact Assessment Act</i> (Health Canada, 2024)	As noted in Appendix Q, Intrinsic Corp. (Intrinsic) contributed to the initial development of a health impact assessment (HIA) framework for Health Canada to be applied to projects undergoing the Impact Assessment (IA) process. This framework along with direction and guidance from Webequie First Nation has guided the assessment of effects of the Project on human health.
Health Canada	Health Canada's Guidelines: Evaluating the following Human Health Impacts in Environmental Assessment: air quality, noise and water quality.	Health Canada's guidelines include recommended criteria for air quality, noise levels and vibration, and water quality which were included as environmental determinants in the assessment of effects of the Project on human health. These guidelines are described in respective sections of this EAR/IS.
<b>Provincial</b>		
Ministry of the Environment, Conservation and Parks (MECP)	Ontario <i>Environmental Assessment Act</i>	The Project is subject to the Ontario <i>Environmental Assessment Act</i> (refer to Section 1). The Terms of Reference (Webequie First Nation 2020), which was approved by the MECP on October 8, 2021, were used to identify requirements for the assessment of Human Health VC.
MECP	Ontario provincial guidelines on air quality, noise and vibration, and water quality	Ontario has guidelines and/or standards for air quality, noise levels and vibration, and water quality which were included as environmental determinants in the assessment of effects of the Project on human health. These guidelines are described in respective sections of this EAR/IS.
<b>Webequie First Nation</b>		
Webequie First Nation	Webequie Draft Community Based Land-Use Plan (in-progress/early version) (2025)	The Webequie First Nation Draft Community Based Land-Use Plan (in-progress/early version) recommends land-use designations and activities that are permitted or not permitted to address community economic and social development goals and community direction for the protection of air, land, water, species habitat, cultural heritage features and community values. One of the objectives of the plan is to guide both the land use plan and future decision making for land and resource activities to be carried forward in a way that supports the well-being of present and future generations of Webequie people as Webequie First Nation understand that natural resources in the Webequie area hold value for the well-being and advancement of the community.



Regulatory Agency	Regulation, Legislation, Policy, or Framework	Project Relevance
Webequie First Nation	Webequie First Nation On-Reserve Land Use Plan (2019)	The Webequie First Nation On-Reserve Land Use Plan provides information and guidance for community land use and development projects that occur on the reserve. This includes, for example: housing, power, water and sewer, community buildings, roads, camps, the airport, the landfill, the pow wow area, gardens, etc. These on-reserve projects are prioritized based on the goals outlined in the Comprehensive Community Plan to ensure the continuity of the community's traditional way of life and ancestral relationship with the land into the future, in combination with responsible, sustainable and equitable resource development. The plan offers a path for respectful relationships with neighboring communities, government and third parties based on mutual benefit for all people.
Webequie First Nation	Webequie First Nation 2023 Comprehensive Community Plan (2023)	<p>The 2023 Comprehensive Community Plan lays out a roadmap for the Communities future. The planning process is designed and led by the Webequie First Nation community. The community identified the following seven goals for the Comprehensive Community Plan:</p> <ul style="list-style-type: none"> <li>▪ Providing education and training;</li> <li>▪ Protecting cultural vibrancy and traditional life;</li> <li>▪ Improving housing and infrastructure;</li> <li>▪ Protecting environmental quality and respecting relationship with the land;</li> <li>▪ Improving community health and wellness, strengthening family and social conditions;</li> <li>▪ Supporting economic development; and</li> <li>▪ Preserving community leadership and governance.</li> </ul> <p>These goals are the basis for many health determinants described in <b>Section 17.1.4</b>.</p>

## 17.1.2 Consideration of Input from Engagement and Consultation Activities

**Table 17-2** summarizes input related to the Human Health VC received during the engagement and consultation activities for the EA/IA and how inputs are addressed in the EAR/IS. This input includes concerns raised by Indigenous communities and groups, the public, government agencies, and stakeholders and prior to the formal commencement of the federal IA and provincial EA, during the Planning Phase of the IA and ToR phase of the EA. The Project Team considered the comments received on the Draft EAR/IS in finalizing the EAR/IS. Details of responses and how the comments have been addressed are provided in the Record of Engagement and Consultation.

**Table 17-2: Human Health VC – Summary of Inputs Received During Engagement and Consultation**

Comment Theme	How the Comments are Addressed in this EAR/IS	Indigenous Community or Stakeholder
<p>Concerns about consideration of project impacts related to Climate Change, Visual and Human Health in technical studies.</p>	<p>Visual/aesthetics are assessed in Appendix R – Visual Impact Assessment and in Section 18 – Assessment of Effects on Visual Environment. Human health and climate change were added to the list of technical studies. The following sections and appendices of this EAR/IS assess impacts related to climate change and human health:</p> <ul style="list-style-type: none"> <li>▪ Section 9 (Assessment of Effects on Atmospheric Environment);</li> <li>▪ Section 24 (Effects of the Environment on the Project);</li> <li>▪ <b>Section 17</b> (Assessment of Effects on Human Health);</li> <li>▪ Appendix O (Country Foods Assessment Report);</li> <li>▪ Appendix P (Human Health Risk Assessment Report); and</li> <li>▪ Appendix Q (Health Impact Assessment Report).</li> </ul>	<p>MECP</p>
<p>Concerns about selecting the Preliminary Criteria and Indicators for Evaluation of the community health, including changes to relationships, community cohesion, stability, etc.</p>	<p>The criteria and indicators in Section 8.2 (now 8.3.1) / Table 8.1 are intended to provide the reader with examples for the evaluation of alternatives and effects of the Project, with more socio-economic criteria and indicators and presented in Appendix B of the ToR. The criteria and indicators listed in Appendix B of the ToR are a preliminary list based on those identified by the Webequie Project Team from the consultation undertaken with Indigenous communities and groups, the public, government agencies, and stakeholders during the ToR phase. Criteria and indicators have been refined/updated early in the EA/IA process based on engagement and consultation with Webequie First Nation and other First Nations and IKLRU information shared by Indigenous communities. <b>Section 17.1.4</b> presents criteria (or determinants of health) and indicators identified for the health effects assessment.</p>	<p>Ministry of Energy Northern Development and Mines (ENDM, now Ministry of Energy and Mines)</p>
<p>Concerns on why asthma is not considered in common health conditions.</p>	<p>Recognizing that reduction in air quality due to emissions from construction activities can impact physical and mental wellness, especially for those who have chronic health conditions such as asthma, the assessment team identified air quality as an environmental determinant of health for the assessment of health effects due to the Project (refer to <b>Section 17.1.4.2</b>).</p> <p>As noted in the Health Impact Assessment (HIA) report (Appendix Q), the HIA framework is designed to assess potential health impacts of a project on the most sensitive members of the population, such as children, the elderly, and those with compromised or sensitive health conditions (e.g., asthmatics, pregnant women, those with Chronic Obstructive Pulmonary Disease, immunodeficient individuals, etc.).</p>	<p>Webequie First Nation</p>

Comment Theme	How the Comments are Addressed in this EAR/IS	Indigenous Community or Stakeholder
<p>Concerns on using data from community health survey, which was completed by around 40 people. Further engagement is required in terms of gathering data, such as using a translator to encourage more participation in surveys.</p>	<p>During the EA/IA process, additional in-person and virtual engagement activities were conducted in December 2022, May 2023, and May 2024 as part of the HIA for the Project to gather further information and input from Webeque community members. The purpose of these engagement activities was to:</p> <ul style="list-style-type: none"> <li>▪ inform the community about the HIA and its purpose (community meetings);</li> <li>▪ gather their feedback to inform the HIA scope;</li> <li>▪ identify the main health issues in the community;</li> <li>▪ identify existing health conditions in the community;</li> <li>▪ present selected scope to community members (community meetings);</li> <li>▪ gather feedback to finalize scope;</li> <li>▪ request Traditional and community knowledge for the assessment phase of the HIA;</li> <li>▪ Present the Baseline Community Health Profile to the community and verify results from previous engagement activities and survey; and</li> <li>▪ Discuss potential mitigation and enhancement measures with community members.</li> </ul> <p>These in-person and virtual engagement activities involved focus groups consisting of various subgroups, including women, youth, men, land users, 2SLGBTQQIA (sexual diversity of two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex and asexual) individuals, individuals with disabilities and chronic health conditions, elders/seniors. Refer to Table 2-2 in Appendix Q – HIA report for more details of these engagement activities.</p> <p>The Project Team has continued conducting community validation for the community and its knowledge holders to verify the accuracy, completeness and sensitivity of the Indigenous Knowledge that is collected for the Project.</p>	<p>Webeque First Nation</p>
<p>Concerns on inadequacy of infrastructure, and health issues which materialize due to poor design and ventilation.</p>	<p>It is acknowledged that Webeque First Nation's community well-being is a concern, including considering issues such as lack of proper services/facilities for community health and challenges on housing availability and conditions. The potential effects of the Project on housing and infrastructure are considered in Section 14 (Assessment of Effects on the Social Environment), specifically Section 14.3.2 on community well-being and safety in Section 14.3.7 of the EAR/IS. Mitigation measures for impacts on housing and infrastructure are provided in Section 14.4.2 and mitigations related to community well-being and safety are provided in Section 14.4.7.</p>	<p>Webeque First Nation</p>

Comment Theme	How the Comments are Addressed in this EAR/IS	Indigenous Community or Stakeholder
<p>In the Impact Statement the proponent should describe mitigation measures in the event that high levels of contaminants are found in species that are consumed as country foods. For example, consumption advisories could be used to mitigate this issue.</p>	<p><b>Section 17.4</b> outlines mitigation measures to address potential effects on food security and diet which were identified as determinants of health.</p>	<p>IAAC (Human Health Study Plan)</p>
<p>Provide further information on how the Impact Statement will consider other ongoing activities in its determination of cumulative human health effects from the Project.</p>	<p>The Cumulative Effects Study Plan outlined how the EAR/IS would consider other ongoing activities in its determination of cumulative effects from the Project on identified VCs, including Human Health VC. Rationale specific to Human Health VC for consideration of other projects/activities in the cumulative human health effects assessment for the Human Health VC are presented in Section 21 of the EAR/IS.</p>	<p>IAAC (Human Health Study Plan)</p>
<p>Clarify that the Impact Statement will provide further information on the risk estimates for the Project plus baseline scenario, as well as the Project alone scenario, for all Contaminants of Potential Concerns (COPCs) investigated.</p> <p>Confirm that the Impact Statement will, in order to reduce the burden of pollution on the population, provide further information on the use of all available technologies to reduce emissions as low as reasonably achievable and beyond those required to achieve the applicable environmental quality criteria and/or risk thresholds.</p>	<p>The Human Health Study Plan was updated indicating that an Exposure Assessment would include the estimation of exposure point concentrations (EPCs) (i.e., the concentrations receptors will be exposed to) for each of the identified COPCs within each of the study areas (i.e., local, regional, etc.) and project phases (i.e., construction and operations, etc.). Exposure will be based on worst case conditions for each project phase.</p>	<p>IAAC (Human Health Study Plan)</p>
<p>Provide detail to demonstrate how the effects to the safety of women and girls from project activities, including worker accommodation and as a result of new roads in remote areas, will be included in the Impact Statement.</p>	<p>The Human Health Study Plan was updated with detail of how the effects to the safety of women and girls from project activities would be assessed. Safety and security of women and girls have been identified as a determinant of health for the assessment of potential effects of the Project on Human Health VC (refer to <b>Section 17.1.4</b>).</p>	<p>IAAC (Human Health Study Plan)</p>
<p>It should be clearly stated that short term, sub chronic and chronic effects will be considered, since this project may involve activities like heavy digging and transportation of material.</p>	<p>The Human Health Study Plan was updated noting that where appropriate, the Human Health Risk Assessment (HHRA) would consider acute and sub-chronic exposures (where appropriate and on an as needed basis) as well as chronic exposures and associated health risks. The HHRA (Appendix P) noted that as no other Project-related increases in</p>	<p>MECP (Human Health Study Plan)</p>



Comment Theme	How the Comments are Addressed in this EAR/IS	Indigenous Community or Stakeholder
<p>Cumulative effects consideration should also include chemical mixtures which mean chemicals with similar endpoint etc. This consideration should not only be limited to polycyclic aromatic hydrocarbons (PAHs).</p>	<p>contaminant concentrations in other media (i.e., soil, sediment, groundwater, surface water or country foods) have been identified in other VC assessments, human exposures to these other media types have not been quantitatively evaluated in the HHRA. As a result, the HHRA scope includes an acute and chronic air quality HHRA for the construction and operations phase of the Project.</p> <p>HHRA assesses project incremental exposure to airborne contaminants of potential concern, including particulate matter. A range of the available acute and chronic air quality guidelines available from Ontario MECP, the Canadian Council of the Ministers of the Environment (CCME) and the World Health Organization (WHO) were used in the HHRA. Cumulative effects considerations are discussed in Section 21.</p>	
<p>Suggestion that power needs to be given back to the people as this removes unhealthy behaviour (e.g., addiction), creates revenue for people and consequently a healthy community.</p>	<p>Self-determination and governance have been identified as a determinant of health for the assessment of potential effects of the Project on Human Health VC (refer to <b>Section 17.1.4</b>). <b>Section 17.4</b> outlines measures related to self-determination and governance to enhance physical and mental health and wellbeing.</p>	<p>Long Lake #58 First Nation – ATRI Forum</p>
<p>Commented that country foods, such as caribou, fish, moose, geese, blueberries, and raspberries, need to be assessed to understand the impacts to harvesting, hunting, Indigenous peoples' health, and Indigenous peoples' rights. The timing of baseline data collection is important to have an adequate understanding of the impacts to country foods.</p>	<p>Based on the HIA report (Appendix Q) for the proposed WSR, this <b>Section 17</b> of the EAR/IS outlines the assessment of effects of the Project on human health due to potential changes to air quality, noise levels, drinking water quality, soil quality, or country foods (species of fish, vegetation, or wildlife that are harvested as country foods by Indigenous Peoples). The HIA relied on the results of the HHRA (Appendix P). The HHRA and HIA integrated information from the following VCs:</p> <ul style="list-style-type: none"> <li>▪ Geology, Terrain and Soils (Section 6)</li> <li>▪ Surface Water Resources (Section 7)</li> <li>▪ Groundwater Resources (Section 8)</li> <li>▪ Atmospheric Environment (Section 9)</li> <li>▪ Fish and Fish Habitat (Section 10)</li> <li>▪ Vegetation and Wetlands (Section 11)</li> <li>▪ Wildlife and Wildlife Habitat (Section 12)</li> <li>▪ Land and Resource Use (Section 16)</li> <li>▪ Aboriginal and Treaty Rights and Interests (Section 19)</li> </ul> <p>Additionally, the Project Team collected vegetation samples (where available) and fish samples in 2020, while the Webequie First Nation provided mammal and bird samples to the team in 2020 and 2021. Results of the above-listed studies are provided in the Country Foods Assessment report (Appendix O of this EAR/IS).</p>	<p>Eabametoong First Nation Ginoogaming First Nation Kasabonika First Nation Kitchenuhmaykoosib Inninuwug Neskantaga First Nation Weenusk First Nation Webequie First Nation Member of public Health Canada</p>



Comment Theme	How the Comments are Addressed in this EAR/IS	Indigenous Community or Stakeholder
Commented that Section 9 of the Tailored Impact Statement Guidelines should include text on availability of quality food, as well as describe food security and food sovereignty.	Section 3.3.5 of the “Human Health Risk Assessment” report (Appendix P of this EAR/IS) describes that a baseline country foods study was conducted to assess baseline concentrations of potential contaminants in berries, game birds, small and large mammals and fish. A Country Foods Consumption and Use Survey was conducted from December 2022 and January 2023 in the Webequie community, and the results were supplemented with information available from the First Nations Food, Nutrition and Environment Study (FNFNES) community data, as detailed in the Country Foods Assessment report (Chan et al., 2019).	Indigenous Services Canada First Nations and Inuit Health Lands and Economic Development

### 17.1.3 Incorporation of Indigenous Knowledge and Human Health Information

The Project Team collected as much Indigenous Knowledge as possible in relation to the Project in order to inform the human health baseline/existing conditions and the assessment of potential effects on the Human Health VC. To date, the following First Nations have provided Indigenous Knowledge and Land and Resource Use (IKLRU) information to the Project Team:

- Webequie First Nation;
- Marten Falls First Nation;
- Weenusk First Nation;
- Kashechewan First Nation; and
- Fort Albany First Nation.

Determinants of health as described in **Section 17.1.4** reflect IKLRU information shared with the Project Team.

### 17.1.4 Valued Component and Indicators

Valued components, including human health, have been identified in the TISG and by the Project Team and are, in part, based on what Indigenous communities and groups, the public, government agencies, and stakeholders have identified as valuable to them in the EA/IA process to date. Since the proposed WSR is located within the territory of the Webequie First Nation, it is anticipated that the Webequie First Nation community will experience the bulk of the impacts due to the Project and can be considered to be representative of overall worst-case potential health impacts due to the Project. Where available, information on unique health issues facing other potentially affected Indigenous communities was included in the assessment.

#### 17.1.4.1 What ‘Health’ Means to Webequie First Nation

Webequie community members were asked for their definitions of ‘health’ or what ‘health’ meant to them. A common Anishinaabe concept shared with the Intrinsic HIA Team that closely relates to Webequie First Nation’s answer on what health means to them was *Mino bimaadiziwin*, roughly translated as ‘the good life’.

*Mino Bimaadiziwin* is an understanding that all beings are related and is the idea of the unity and dignity of all beings (Rheault, 1999). Those who choose to live *Mino Bimaadiziwin* are living as the Ancestors planned, outlining a way of thinking, acting, understanding, and speaking Anishinaabe (Seven Generations Education Institute, 2009). In order to find this good life, there are traditional Teachings in place that give meaning and structure to being Anishinaabe (Rheault, 1999). These seven teachings are wisdom, love, respect, bravery, honesty, humility, and truth, which represent the blueprints to living a good life in balance and harmony with creation (Stark, 2021).



When asked to define health, Webequie First Nation community members stated that **health means to be healthy mentally and physically, to live ‘Mino Bimaadiziwin’ and that ‘the land is my gold mine’.**

For the assessment of health effects, a determinants of health approach most accurately reflects the multiple and interacting factors that cause health effects (IAAC, 2020). As described in the TISG, a tiered approach to the social determinants of health will be taken focussing on the following areas identified by engaging with Webequie First Nation and IKLRU information shared by First Nations:

- **Structural (or Level 3) determinants of health** include the following structural and equity factors, including racism and colonialism:
  - Colonialism and trauma of residential schools;
  - Racism and social exclusion;
  - Local economic growth;
  - Self-determination and governance; and
  - Worker accommodations (i.e., worker/construction camps).
- **Intermediate (or Level 2) determinants of health** include the following physical environment, education, service access, and social, cultural and economic factors:
  - *Physical environment:* Air quality, noise level and vibration, water quality, light pollution, and housing;
  - Employment and income;
  - Education/access to education;
  - Food security;
  - *Social and cultural well-being:* Social cohesion and cultural continuity, safety of women and girls, and traffic volume and safety;
  - *Access to healthcare and other services:* Access to a family doctor, access to social, mental and family services, access to transportation services, access to emergency response services; and
  - Childhood development.
- **Proximal (or Level 1) determinants of health** include the following health-related behaviours:
  - *Health behaviours:* Mental wellness, substance use, and diet, including availability of traditional foods (also referred to as “country foods” in this EAR/IS).

#### 17.1.4.2 Indicators

"Indicators" are used to assess potential effects to a VC. In general, indicators represent a resource, feature or issue related to a VC that if changed from the existing conditions may demonstrate a positive or negative effect. **Table 17-3** shows the determinants of health and indicators identified for the Human Health VC.



**Table 17-3: Human Health VC – Determinants of Health, Indicators, and Rationale**

Determinants of Health	Indicators	Rationale
<b>Structural / Level 3 Determinants of Health – Structural or systemic factors</b>		
Colonialism and trauma of residential schools	<ul style="list-style-type: none"> <li>▪ Temporary disruption in the traditional practices on the land and impact to cultural identity;</li> <li>▪ Local business and economic development; and</li> <li>▪ Easier access of illicit substances and alcohol into the community.</li> </ul>	The disproportionate burden of negative physical, mental, emotional and spiritual wellness outcomes among the Indigenous Peoples of Canada have been linked to current and historic colonialism, and the traumatic impact of the residential school system. Increased economic opportunities may improve the physical and mental wellbeing of Webequie First Nation by enhancing the community’s right to self-determination and self-governance and improving access to services, particularly mental health services. Easier access of drugs and alcohol into the community could lead to higher rates of substance use and mental health crisis, which could increase the dependency on healthcare systems within the community.
Racism and social exclusion	<ul style="list-style-type: none"> <li>▪ Racism from external workers; and</li> <li>▪ Feeling of isolation and loneliness due to being away from community/ family.</li> </ul>	Racism is currently experienced by members of Webequie First Nation from health care professionals, teachers, and police. Additional experiences with racism may create new and compound existing feelings of isolation and loneliness and lead to mental and physical health difficulties.
Local economic growth	<ul style="list-style-type: none"> <li>▪ Local business and economic development; and</li> <li>▪ Employment opportunities.</li> </ul>	Overall local economic development will have implications to the health and wellbeing of the community as it bolsters not just individual-level wealth, but for the community overall, which in turn can potentially further benefit community members. Local economic growth and development can also boost the ability of the community for self-determination and self-governance.
Self-determination and governance	<ul style="list-style-type: none"> <li>▪ Rights to land and resources; and</li> <li>▪ Right to pursue economic prosperity and independence.</li> </ul>	Being able to pursue their own goals, needs and agenda, and make their own decisions independently is extremely important and valuable for Indigenous communities and promotes positive wellness outcomes.
Worker accommodations (i.e., during project activities, including in construction camps)	<ul style="list-style-type: none"> <li>▪ Safety and security;</li> <li>▪ Availability of illicit substances; and</li> <li>▪ Housing availability.</li> </ul>	The culture of work-camps can be one of hyper-masculinity, sexism, racism towards Indigenous Peoples, and homophobia. This poses a potential risk to the safety and security of the community, especially women, girls and 2SLGBTQQIA individuals, which will in turn affect community health and wellbeing. Having external workers also increases risk that alcohol and illicit drugs will be brought into the community illegally.



Determinants of Health	Indicators	Rationale
<b>Intermediate / Level 2 Determinants of Health – Environmental and community factors</b>		
Air quality	<ul style="list-style-type: none"> <li>Emissions, including greenhouse gases</li> </ul>	Reduction in air quality due to emissions from construction activities, can impact physical and mental wellness, especially for those who have chronic health conditions such as asthma.
Noise levels and vibration	<ul style="list-style-type: none"> <li>Sound level</li> </ul>	Noise from road construction and traffic can influence physical and mental health (e.g., hypertension, ischaemic heart disease, high blood pressure, anger, depression, anxiety, and disturbed sleep). In addition, loud noises during construction activities may change the location and behavioural movement patterns of game that are hunted by the community.
Water quality	<ul style="list-style-type: none"> <li>Change in surface water quality (e.g., habitat, chemistry, and flow rates)</li> </ul>	The health of water is linked to human health through physical, mental and spiritual pathways. Ingestion of contaminated water can have direct negative health outcomes, and ingestion of traditional foods (e.g., fish) from contaminated water bodies can affect physical health but also the spiritual health of Indigenous Peoples who rely on fish as a traditional food source.
Light pollution, including visual effects	<ul style="list-style-type: none"> <li>Ambient light levels; and</li> <li>Qualitative visual changes.</li> </ul>	Indigenous Peoples have an intrinsic connection to the land, water and ecosystem. Changes to known and cherished landscapes and uses of lands can impact cultural and social functions and affect mental wellness (ecological grief).
Housing, including access and quality	<ul style="list-style-type: none"> <li>Housing capacity;</li> <li>Housing quality; and</li> <li>Housing cost (e.g., repair and construction).</li> </ul>	Access to housing that is safe, affordable, and appropriate is a fundamental determinant of health and wellbeing. Being housed appropriately provides not just physical protection, but also fosters social and mental wellness. The effects of overcrowding and poor and unsafe housing conditions on the health and wellbeing of children and youth have been well-documented.
Employment and income	<ul style="list-style-type: none"> <li>Access to employment opportunities and income</li> </ul>	Employment and income determine one's access to education, housing, healthy foods, healthcare and other services, as well as safety and security. Greater employment and income opportunities increase the incidence of favourable health outcomes.
Education	<ul style="list-style-type: none"> <li>Skills and trade skills development</li> </ul>	Education is a primary driver of health and wellbeing, as it has been shown that those with higher education tend to be healthier, often as a result of improved employment and income, and the resulting access to resources and services, including those related to health and healthcare and housing.
Food security, including quality and availability of traditional foods	<ul style="list-style-type: none"> <li>Access to and quality of traditional foods</li> </ul>	Food insecure individuals experience a variety of adverse health outcomes. Heart disease, adult-onset diabetes, high blood pressure, and food allergies are more common in food insecure households. Additionally, food insecurity produces stress and feelings of uncertainty that have health-threatening effects.



Determinants of Health	Indicators	Rationale
Social cohesion and cultural continuity	<ul style="list-style-type: none"> <li>Traditional and cultural teachings and activities</li> </ul>	Increased social cohesion is linked to increased engagement in the community, and lower rates of substance use which in turn are associated with more positive health outcomes. Both social cohesion and cultural continuity is important for transferring traditional and cultural knowledge across generations within Indigenous communities, and provides a connection between the structural and proximal determinants of health.
Safety and security of women and girls	<ul style="list-style-type: none"> <li>Safety of women and girls; and</li> <li>Violence and sexual exploitation of women and girls.</li> </ul>	Indigenous communities, particularly women and girls, are the most vulnerable and at risk of experiencing the negative effects of outside worker camps, such as sexual assault. This has consequences for the wellbeing, both physical and mental, of women and girls, and for the overall community as it erodes the sense of safety and security.
Traffic volume and safety	<ul style="list-style-type: none"> <li>Traffic volume</li> </ul>	There is an association between an increase in traffic density and an increase in fatal accidents. All major projects have associated risks to safety and security, especially during the construction phase when there is a lot of heavy-duty equipment and machinery around.
Access to healthcare services	<ul style="list-style-type: none"> <li>Demand for on-reserve healthcare services</li> </ul>	Access to timely health care services is a social determinant of health as well as a basic human right. Barriers to access to appropriate healthcare services has led to historic health inequities in Indigenous communities.
Access to social, mental health and family services	<ul style="list-style-type: none"> <li>Childcare services;</li> <li>Elder services; and</li> <li>Mental health services.</li> </ul>	Appropriate social and mental health services are important for promoting positive wellness outcomes for individuals, families, and communities. Without access to culturally appropriate social and mental health services, inequities between Indigenous and non-Indigenous health outcomes, such as higher rates of substance use, youth suicide, mental health problems, chronic pain, and interpersonal violence, remain a pressing concern.
Access to transportation services	<ul style="list-style-type: none"> <li>Improved mobility and travel options</li> </ul>	Access to transportation is a precursor to having independence, mobility, access to services and resources, choice and safety and security. All of these factors, individually and combined influence health and wellbeing.
Access to emergency response services	<ul style="list-style-type: none"> <li>Availability of emergency services</li> </ul>	Ambulance, fire truck and police services can save lives in emergencies. Having prompt and urgent access to these emergency response services is essential for positive health outcomes and knowing that these services are available should the need arise is a factor in mental wellness as it promotes feelings of safety and security.
Childhood Development	<ul style="list-style-type: none"> <li>Available services</li> </ul>	There is a direct link between childhood development and the long-term mental and physical health of individuals. Indigenous children's health is dependent on a complex interaction of social determinants of health at the individual, family, community, and societal levels. Currently, there are a lot of observed discrepancies in health and development outcomes between Indigenous and non-Indigenous children.



Determinants of Health	Indicators	Rationale
<b>Proximal / Level 1 Determinants of Health – Individual, behavioural and biological factors</b>		
Mental well-being, including prevalence of depression and anxiety	<ul style="list-style-type: none"> <li>▪ Need for mental health services; and</li> <li>▪ Prevalence of mental health crises and disorders.</li> </ul>	Major projects have the potential to alter the environment, disrupt community dynamics, change economic outcomes, and impact Indigenous rights and interests. All of these things individually and together have impacts to mental wellness as they can impact Indigenous peoples' connection to their land, water, resources, and affect their sense of culture, identity, safety, and wellness. Depending on how well they are planned and the needs within the community that they address, major projects may also provide benefits to the community and improve mental wellness.
Substance use, including alcohol and drugs	<ul style="list-style-type: none"> <li>▪ Rates of substance use (perceived or quantitative)</li> </ul>	Due to their experiences with colonization, ongoing systemic racism and barriers in access to healthcare services, erosion of their culture, and the intergenerational trauma caused by abuse directed towards them during forced attendance in residential schools, Canada's substance use crisis disproportionately affects Indigenous peoples. Substance use in Indigenous peoples can be explicitly linked to contemporary health and social inequities that are a result of the colonial process (including social and cultural disruption, and historical and intergenerational trauma).
Diet, including consumption of traditional foods	<ul style="list-style-type: none"> <li>▪ Choice and availability of traditional and store-bought foods</li> </ul>	Diet is a function of food security, and having a healthy and balanced diet is as much a behavioural trait, as it is dependent on the availability of healthy and fresh food. Diet determines health. For Indigenous peoples the importance of traditional foods is a fundamental aspect of their way of life and intrinsically tied to health. Should the project affect access to traditional foods, it will have an impact on health and wellness.

### 17.1.5 Spatial and Temporal Boundaries

The following assessment boundaries have been defined for the Human Health VC.

#### 17.1.5.1 Spatial Boundaries

Information on physical/environmental determinants of health (i.e., air quality, noise, surface water quality) was based on information gathered in study areas defined for these respective VCs.

The spatial boundaries for social determinants of the Human Health VC include the following:

- **Local Study Area (LSA)** – the area in which the project interactions are anticipated, and potential effects are expected to occur. The LSA used for the Socio-Economic environment which consisted of Population and Demographics, Community Services and Infrastructure, and Local and Regional Economy includes the following eight Indigenous communities:
  - Webequie First Nation;
  - Attawapiskat First Nation;
  - Eabametoong First Nation;
  - Kasabonika Lake First Nation;
  - Marten Falls First Nation;

- Neskantaga First Nation;
  - Nibinamik First Nation; and
  - Weenusk First Nation.
- **Regional Study Area (RSA)** – the area in which cumulative effects could occur from the project. The RSA used for the Socio-Economic environment which consisted of Population and Demographics, Community Services and Infrastructure, and Local and Regional Economy, focuses on the area outside of the local study area and includes the following communities:
    - Kenora District:
      - Kashechewan First Nation;
      - Kitchenuhmaykoosib Inninuwug First Nation;
      - Kingfisher Lake First Nation;
      - Mishkeegogamang First Nation;
      - North Caribou Lake First Nation;
      - Wapekeka First Nation;
      - Wawakapewin First Nation;
      - Wunnumin Lake First Nation;
      - Township of Pickle Lake; and
      - Municipality of Sioux Lookout.
    - Thunder Bay District:
      - Aroland First Nation;
      - Ginoogaming First Nation;
      - Long Lake #58 First Nation;
      - City of Thunder Bay; and
      - Municipality of Greenstone.
    - Cochrane District:
      - Constance Lake First Nation;
      - Fort Albany First Nation; and
      - City of Timmins.

### 17.1.5.2 Temporal Boundaries

Temporal boundaries for the assessment address the potential effects of the Project over relevant timescales. The temporal boundaries for the Project consist of two main phases:

- **Construction Phase:** All activities associated with the initial development and construction of the road and supportive infrastructure from the start of the construction to the start of the operation and maintenance of the Project and is anticipated to be approximately 5 to 6 years in duration.
- **Operations Phase:** All activities associated with operation and maintenance of the road and permanent supportive infrastructure (e.g., operation and maintenance yard, aggregate extraction and processing areas) that will start after the construction activities are complete, including site restoration and decommissioning of temporary infrastructure (e.g., access roads, construction camps, etc.). The Operations Phase of the Project is anticipated to be 75 years based on the expected timeline when major refurbishment of road components (e.g., bridges) is deemed necessary.



The Project is proposed to be operated for an indeterminate period; therefore, future suspension, decommissioning and eventual abandonment is not evaluated in the EA/IA (refer to Project Description, Section 4.4).

## 17.1.6 Identification of Project Interactions with Human Health

The identification of project interactions with human health provides a basis for the subsequent assessment of the potential effects of the Project. As noted in **Section 17.1.4**, a determinants of health approach is used to assess potential effects of the Project on Human Health VC. As several project activities are relevant to the determinants of health outlined in **Section 17.1.4**, **Table 17-4** identifies the potential interactions of determinants of health with construction and operation phases of the Project, rather than identifying interactions with activities in each phase.

**Table 17-4: Human Health VC – Project Interactions with Determinants of Health**

Determinant of Health	Project Phase		Description of Interactions
	Construction	Operations	
<b>Structural / Level 3 Determinants of Health – Structural or Systemic Factors</b>			
Colonialism and trauma of residential schools	✓	✓	<ul style="list-style-type: none"> <li>Project construction may lead to changes in the land that negatively affect community members relationship with the land and may amplify feelings of colonial control and exploitation of land, which may bring up past trauma from displacement and land theft.</li> <li>The Project may provide the community with positive economic growth and development due to the number of employment opportunities available, which may boost access to mental health services to address existing impacts of intergenerational trauma.</li> <li>Project activities may allow for easier entry of illegal drugs and alcohol into the community, which may further exacerbate existing health disparities and addiction issues, many of which are linked to intergenerational trauma rooted in experiences from residential schools.</li> </ul>
Racism and social exclusion	✓	–	<ul style="list-style-type: none"> <li>Community members may experience racism from external workers through employment opportunities which contributes to negative wellness outcomes (i.e., stress, substance use, and mental wellness struggles). Further, these feelings can be a catalyst for family violence.</li> </ul>
Local economic growth	✓	✓	<ul style="list-style-type: none"> <li>The Project may provide opportunities for local business development and the associated local economic growth and employment.</li> </ul>



Determinant of Health	Project Phase		Description of Interactions
	Construction	Operations	
Self-determination and governance	✓	✓	<ul style="list-style-type: none"> <li>Community may feel a sense of empowerment if involved in the planning and decision-making process for the Project.</li> <li>Choosing the Project and using it to achieve their goals as a community, towards economic prosperity, may increase the control the community has on its future.</li> </ul>
Worker accommodations (i.e., during project activities, including in construction camps)	✓	–	<ul style="list-style-type: none"> <li>Project construction may lead to reduced safety and security, especially of Indigenous women and girls, and also Indigenous workers due to experiences of racism in the construction workplace.</li> <li>Project construction may lead to increased availability of illicit substances.</li> <li>Project construction may constrict housing availability if off-reserve community members move back.</li> </ul>
<b>Intermediate / Level 2 Determinants of Health – Environmental and Community Factors</b>			
Air quality (including GHG emissions)	✓	✓	<ul style="list-style-type: none"> <li>Project activities may lead to an increase in air pollutants.</li> </ul>
Noise levels and vibration	✓	✓	<ul style="list-style-type: none"> <li>Project activities may lead to increased noise and vibration levels (e.g., blasting, aggregate extraction, vehicles, and vegetation clearing), impacting wildlife location and number, and enjoyment of the land.</li> </ul>
Surface Water quality	✓	✓	<ul style="list-style-type: none"> <li>Construction of water crossings may lead to degradation of fish habitat.</li> <li>Changes to water bodies may lead to changes in water chemistry (e.g., vegetation clearing, changing water levels, erosion).</li> <li>Emissions from vehicles and spills may lead to changes in water quality.</li> </ul>
Light pollution, including visual effects	✓	✓	<ul style="list-style-type: none"> <li>Project activities may change the amount of ambient light present in the project area, specifically near construction camps (e.g., outdoor lighting, night construction lighting, vehicle headlights).</li> <li>Changes to the visual landscape may occur (e.g., loss of vegetation, construction of temporary structures).</li> </ul>
Housing, including access and quality	✓	✓	<ul style="list-style-type: none"> <li>Construction activities lead to overcrowding (temporary) due to need to house more off-reserve community members engaging in construction-related activities.</li> <li>The Project improve housing access and quality if the WSR allows for more homes to be built/repared and faster.</li> <li>The Project may improve housing affordability if the WSR allows for building materials and labour to be transported to the community in an affordable manner.</li> </ul>



Determinant of Health	Project Phase		Description of Interactions
	Construction	Operations	
Employment and income	✓	✓	<ul style="list-style-type: none"> <li>Project construction may lead to an increase in employment opportunities.</li> <li>The Project may lead to higher incomes if employment increases, and better quality of employment is available.</li> </ul>
Education	✓	–	<ul style="list-style-type: none"> <li>Project construction may provide trade skills development opportunities.</li> </ul>
Food security, including quality and availability of traditional foods	✓	✓	<ul style="list-style-type: none"> <li>Construction activities may impede access to traditional foods.</li> <li>Construction activities may disturb supply and quantity of traditional foods.</li> <li>Having additional income during construction-related employment may increase ability to afford store-bought healthy foods.</li> </ul>
Social cohesion and cultural continuity	✓	–	<ul style="list-style-type: none"> <li>Interactions with outside workers (which may occur despite mitigation measures) could decrease social cohesion and negatively impact health.</li> </ul>
Safety and security of women and girls	✓	✓	<ul style="list-style-type: none"> <li>Project construction may be a safety and security risk for women and girls due to the presence of outside workers, if entry of outsiders cannot be controlled.</li> <li>Project construction may lead to increased incidents of racialized violence against community members due to the presence of outsiders.</li> <li>The Project may lead to increased safety risk, and violence against women and girls, if entry of drugs and illicit substances cannot be adequately controlled.</li> </ul>
Traffic volume and safety	✓	✓	<ul style="list-style-type: none"> <li>It is expected that during the winter road season, there will be increased traffic volume on the winter road bringing in equipment and personnel for the construction phase of the Project. This may cause delays in travel for community members.</li> <li>Should there be high traffic volume on the WSR, it may lead to accidents and injuries as a result of collisions.</li> </ul>
Access to healthcare services	✓	–	<ul style="list-style-type: none"> <li>Project construction may lead to increased demand for health care services locally if currently off-reserve community members return to the community for employment opportunities.</li> </ul>
Access to social, mental health and family services	✓	–	<ul style="list-style-type: none"> <li>Project construction may lead to increased demand for mental health, child-care and Elder care services with off-reserve community members returning to the community for employment opportunities. The degree of service disruption would depend on the number of people who return to the community.</li> </ul>
Access to transportation services	✓	✓	<ul style="list-style-type: none"> <li>Access to currently available modes of transport (air and winter road) may have increased wait times as traffic for construction and industrial activities increases.</li> <li>The WSR will provide safe and direct all season access to the Ring of Fire area, where employment opportunities are expected to become available.</li> </ul>



Determinant of Health	Project Phase		Description of Interactions
	Construction	Operations	
Access to emergency response services	✓	✓	<ul style="list-style-type: none"> <li>Depending on what project-specific emergency planning measures are put in place, project activities may, at times, increase demand for local emergency services, decreasing availability for community emergencies.</li> </ul>
Childhood Development	–	–	<ul style="list-style-type: none"> <li>There is no anticipated potential for change.</li> </ul>
<b>Proximal / Level 1 Determinants of Health – Individual, Behavioural and Biological Factors</b>			
Mental well-being, including prevalence of depression and anxiety	✓	✓	<ul style="list-style-type: none"> <li>Project construction may lead to decreased mental wellness due to construction-related concerns regarding changes in the community, changes in the landscape (ecological grief/solastalgia), safety and security within the community and of individuals, and newcomers in the community</li> <li>The WSR may allow for better connection with other communities and employment opportunities, reduce isolation and improve social wellness and in turn mental wellness</li> </ul>
Substance use, including alcohol and drugs	✓	✓	<ul style="list-style-type: none"> <li>The Project may lead to increase in the availability of banned substances.</li> <li>The Project may lead to increased use of substances within at-risk and other population groups in the community.</li> <li>The Project may increase avenues of trade in illicit substances within community.</li> <li>The Project may lead to increased use and dealing of illegal substances may lead to increase in violence against women, girls and 2SLGBTQQIA individuals, as well as increase in intimate partner violence.</li> </ul>
Diet, including consumption of traditional foods	✓	✓	<ul style="list-style-type: none"> <li>The Project may lead to disturbance in the traditional habitat of harvested species, which could impact ability to harvest and reduce reliance on traditional foods in diet.</li> <li>Depending on whether levels of employment and income increase, there may be an improvement in access to a healthy store-bought foods diet for community members.</li> <li>Increased access to the land via the WSR may improve traditional hunting abilities and improve ability to harvest traditional foods.</li> </ul>

**Notes:**

✓ = Potential interaction

– = Negligible or no interaction



## 17.2 Existing Conditions – Baseline Community Health Profile

This section provides an overview of existing conditions of the Human Health VC. Detailed descriptions of the methods for characterizing existing conditions and interpretations of the results are provided in Appendix Q – Health Impact Assessment Report. The baseline health assessment establishes the current health status of the community of Webequie in order to evaluate whether the current profile of the community reveals vulnerabilities to any of a number of health outcomes, and also to provide a benchmark so that the HIA can characterize the extent of change from current health conditions (Ross et al., 2014).

### 17.2.1 Methods

The baseline community health profile was prepared by identifying and collating data on current health concerns, including health outcomes, within the population or region of interest, with special focus on Webequie. After identifying secondary data sources (i.e., readily available data and information on the health of Webequie First Nation), and other potentially affected communities, data gaps were identified and primary data was requested from Webequie First Nation, and gathered through engagement activities conducted with the community. The community-specific information serves as a reference point from which to conduct the effect evaluations. The baseline community health profile highlights the community's health issues and opportunities, the current population health status, and provides statistics on health-related behaviours.

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

Additional information related to services available to Webequie First Nation and access to those services was also available through the socioeconomic baseline (Appendix L – Socio-Economic Existing Conditions Report). Although dated, some information was also available from previous health and other studies conducted for the Webequie First Nation community (Webequie First Nation, 2014; Webequie First Nation, 2021; Chan et al., 2013). Hence, the baseline health profile was based on collating data and information gained from the community engagement, as well as from identification and analysis of existing health data and information for Webequie First Nation, where available.

### 17.2.2 Results

This section provides summaries of the baseline community health profile and baseline conditions of various population groups within communities that may be disproportionately affected by the Project based on the more detailed Socio-Economic Existing Conditions Report (Appendix L) and the HIA report (Appendix Q).



### **17.2.2.1 Socio-Demographic Profile**

When assessing potential future health impacts, it is important to be aware of the size of a population as well as how that population is changing over time. It is also crucial to recognize and comprehend the diversity within communities since this knowledge may be used to better understand the obstacles that various population groups could encounter both in their daily lives and while trying to access essential services. Webequie First Nation has a negative percent change in population from the years 2016 to 2021. Webequie First Nation has a lower average age of the population compared to Ontario. Webequie's population aged 0 to 14 years is double that of Ontario as a whole, and Webequie has half the population aged 65 years above as compared to Ontario. The population of Webequie First Nation community is 100% First Nation and the most spoken languages include English (60%), Oji-Cree (28%), and Ojibway (12%).

### **17.2.2.2 Education**

Education, income, and employment together contribute to one's socioeconomic status and are integral determinants of health that can determine access to services and contribute to overall health and wellbeing. Individuals from lower socioeconomic groups are more likely to experience health disparities as well as unequal access to resources, educational chances, and employment opportunities. Webequie First Nation has kindergarten to Grade 10 offered in school on the reserve (i.e., Simon Jacob Memorial Education Centre). In spite of the progress that has been made over the past few decades, Indigenous peoples still experience disparity in levels of education than the general population. Community well-being scores from Indigenous and Northern Affairs Canada (INAC) for Indigenous communities in Canada are much lower than for non-Indigenous communities in education, labour force activity, income and housing.

### **17.2.2.3 Income**

During engagement with the HIA Team, several community members identified that higher incomes would increase their quality of life. The money they receive from Ontario Works is not enough to keep up with the cost of inflation and the cost of living in their remote northern community. Many people living in the community are on welfare.

### **17.2.2.4 Employment**

There is a direct connection between household income and employment; having good employment results in having an income, which is linked with access to healthcare and essential health resources, including suitable housing and nutrition. When compared to Ontario, Webequie has lower rates of participation (Ontario: 62.8% versus Webequie: 37.9%), employment (Ontario: 55.1% versus Webequie: 36.8%), and unemployment (Ontario: 12.2% versus Webequie: 5.6%), based on Statistics Canada 2021 Census (Statistics Canada, 2021). The participation rate indicates the share of the working-age population that is working or looking for work. When compared, men and women from Webequie have very similar rates of both participation and employment rate.

### **17.2.2.5 Housing**

Having access to safe and affordable housing is one of the most important determinants of health and can have a cascading impact on other health determinants, and one's physical, mental, and social wellbeing. From the HIA survey as well as in-person interviews, homelessness, lack of housing, overcrowding, as well as access to clean and affordable housing were concerning problems identified within the community.



### **17.2.2.6 Services Provided by Webequie First Nation**

Community services are essential for remote communities because many services that are required by the community can only be accessed outside of the community or are available intermittently. If a community is under-serviced, that can lead to detrimental effects on the health and well-being of community members. The Webequie First Nation offers several different services to support community members which are outlined in the HIA report (Appendix Q).

### **17.2.2.7 Health Status and Resources**

The unequal status of the determinants of health in a community (such as high versus low-income households, having quality versus hazardous housing, stable versus precarious employment, etc.), as well as the related challenges that can arise as a result of this unequal distribution (such as food insecurity, mental illness, reduced access to services, etc.), are the underlying reasons behind disparate health outcomes in various population groups. Underpinning this unequal distribution of the determinants of health is the unequal distribution of money, power and resources at the local, national and global levels (WHO, n.d.). Hence, existing disparity in the determinants of health can, in many instances, be the driving force behind disproportionate health impacts experienced by individuals due to a project. The overall health status and access to resources in Webequie is described in detail in the HIA report (Appendix Q).

### **17.2.2.8 Spiritual and Cultural Well-Being: Practicing Ceremonies**

In addition to the range of health and wellness programs and services identified previously that are available to Webequie First Nation, traditional ceremonies are used for healing and renewal including sweat-lodges, sun dance/sunrise ceremonies, or fasting lodges. These ceremonies are a significant part of the Webequie community values and are often used in times of celebration or to express gratitude in the form of gift-giving.

### **17.2.2.9 Wellness, Food Security and Healthy Habits**

Indigenous peoples who live in remote rural and reserve areas have difficulty accessing both market and traditional foods, which makes them very food insecure. It has been reported that country foods or traditional foods are increasing in importance in the Webequie community due to the extreme prices of fresh fruits and vegetables, resulting in increased reliance on traditional foods at the household level.

Drug use is a major problem in Webequie, especially for youth, and many community members struggle with drug addiction and alcoholism. To help people with their drug addiction, suboxone (buprenorphine/naloxone) has been prescribed to help use other opioids less; however, some Webequie members have become addicted to suboxone as well. Webequie First Nation is lacking an addiction center where more active support could be available for those who need it, as well as their family members.

### **17.2.2.10 Racism and Violence**

Indigenous women and youth are at a higher risk of experiencing gender-based violence due to existing systemic challenges on reserves, as well as social, economic and historic factors. These factors have contributed to different types of traumas that have led to historical violence being passed through generations. Specifically, having witnessed or experienced sexual assault, relocation of Indigenous communities, and suffering that is associated with residential school builds the collective trauma that disproportionately impacts women and youth. Additionally, Indigenous women are more likely to live in poverty which contributes to less stable housing situations on reserve for them which, leads to an increased likelihood to experience abuse. Other factors such as low-income and less education also



contribute to an increased likelihood of experiencing abuse, particularly intimate partner abuse. Further, there are often few services, programs, and opportunities to support this vulnerable population in the Community.

### **17.2.2.11 Transportation**

Understanding a community's transportation needs and modalities is critical when planning new transportation infrastructure. Webequie First Nation is a remote fly-in community that gains access to materials and goods via the Webequie Airport and use of seasonal winter roads. Cars, trucks, or vans are the most utilized mode of transportation and are used by a lower percentage of the population when compared to Ontario, especially for women in Webequie. In Webequie First Nation, men are more likely to utilize vehicular travel when compared to women. After vehicular travel, walking is the next highest mode of transportation used by the Webequie First Nation, where women are more likely to utilize walking as a method of transport compared to men. When compared to Ontario, Webequie does not have any public transit, and not many people travel via bicycles or other modes of transportation.

### **17.2.2.12 Community History**

Webequie First Nation has culturally significant and sensitive sites throughout the traditional land. As outlined in the Community-Based Land Use Plan, water is seen as the most precious element of their livelihood. Therefore, areas with rivers or waterbodies are seen as highly spiritual and there is a responsibility to protect them. Additionally, the area that extends 40 to 50 km in radius around the Webequie community is for traditional and recreational activities such as trapping, fishing, ceremonial activities, gathering/harvesting and hunting of local wildlife species (i.e., moose, caribou, and waterfowl). These wildlife species are a critical part of the diet of the community and hunting them is a significant cultural activity that associates Webequie people to the land.

The residential school legacy is often referenced throughout the community engagement sessions, and drives a substantial proportion of the conversations. It is important to note that the community history is highly influenced by the trauma experienced at residential schools by some community members, and the intergenerational trauma that persists.

Preservation and teaching of the traditional way of life have been a consistent topic of discussion during the community engagement sessions and focus groups, and is of importance to the community.

### **17.2.2.13 Population Groups Who Maybe Disproportionately Impacted – a GBA Plus Summary of Baseline Conditions**

Various population groups within communities may be disproportionately affected by the Project. Women, children, lower income individuals, racialized individuals, Indigenous Peoples, older adults, individuals with disabilities, those with chronic health conditions, and 2SLGBTQQIA individuals are considered to be population groups that can be disproportionately impacted as a result of various project activities, environmental exposures and impacts due to changing socioeconomic conditions. Where information was available, baseline conditions for these population groups are described in subsections below. For Indigenous Peoples, there is an additional consideration that must be made for factors influenced by intergenerational trauma and colonialism when assessing the impacts of project, as these factors further influence groups that may be disproportionately impacted by a project, and are less likely to experience positive effects of major projects (InterGroup, 2024). When some of the identities listed above intersect (for example a female Indigenous older adult), potential impacts can be magnified. As much as possible, the HIA applied this intersectional understanding when evaluating impacts as a result of the Project. Impacts to various population groups who maybe disproportionately impacted because of the Project was



assessed in the HIA and the potential for disproportionate impacts on these groups was carefully considered in assigning criteria to net effects. Disproportionately impacted groups were also considered when identifying mitigation and enhancement measures (**Section 17.4**).

Information from focus groups conducted with some of these population groups re-iterated information gathered from the Community Health Survey and key informant interviews, and also highlighted the main concerns of each group. Of the population groups listed above, little information was available for baseline health conditions for 2SLGBTQQIA individuals in Webequie First Nation. General and Webequie-specific information related to inequitable conditions faced by 2SLGBTQQIA individuals has been provided below.

### **Baseline Conditions for Women in Webequie**

Factors such as being low income, being a single parent, experiencing addictions and mental health challenges, living in unstable housing, and lack of education disproportionately increases the vulnerability of Indigenous women (InterGroup, 2024). Due to the integral importance of women in a community, and the unique vulnerability women face, it is important to fully characterize the challenges women face to assess overall community health.

During the focus groups with women in Webequie First Nation, the importance of education in the community was emphasized (Intrinsik, 2024). The women reiterated that a lack of infrastructure limits the education of the youth. Currently, the high school is located in a portable, with access to an internet high school within the past few years for the community. There was concern expressed about there being limited learning due to a lack of options and a limited number of classes and subjects. Further, there is a lack of attendance for both elementary school and high school which is concerning to the women involved in the focus group (Intrinsik, 2024). With respect to services, such as education, the women's focus group indicated that racism is evident everywhere, even in the community, and that service providers and professionals (i.e., teachers, doctors, nurses, police) exhibit racism toward members of the community (Intrinsik, 2024). During the in-person focus group, the women provided examples of racism felt by the community members by others when outside of the community. The first example was of a man who left the community seeking further education that was unavailable within the community, and who didn't make it home following an incident with the police in Winnipeg. The women provided this tragic incident in reference to both racism and the need for more educational opportunities in the community (Intrinsik, 2024; CTV News, 2023). Further, the women referenced youth who leave their communities to seek further education in places such as Thunder Bay and who then go missing (Intrinsik, 2024).

The women were concerned about the loss of language by the youth in the community. The women noted that the youth are interested in learning the language but need more opportunities for knowledge transfer. The women noted that from kindergarten to high school there are immersion classes, with the children distracted by cell phones, social media, and internet. It was highlighted that some lost their language during residential schooling (6 to 7 years old) and had to re-learn the language when they returned to the community. The women re-iterated that everyone is affected by residential school intergenerational trauma, with no after care provided and the importance that some children never came back. The women brought the conversation back around to wanting to teach the youth survival skills. They want to teach them what is on the island and how to survive (Intrinsik, 2024).

Women land users are concerned about the land. They believe the helicopters are distracting the geese. Further, there is concern about the fish quality and want to know if the surface water has been affected. The women land users noted that the number of fish has been consistent, but there has been lumps on the fish caught. The women say they fish on the river that flows from Musselwhite mine. The women



noted that the medicinal plants and herbs are changing every year, and that the winter road closed in March this year. The women noted that garbage had been left on the land by the mining companies and that construction materials were not being taken care of properly. Further, the women noted that there is an increase in cancer rates in the community (Intrinsik, 2024).

During the women's focus group, one of the main concerns raised by women in Webequie is related to the ongoing suboxone program and that appropriate drug rehabilitation services or centres are unavailable to Webequie community members. Individuals are reluctant to quit using drugs abruptly, and need help easing into the transition and to fully wean off. The women do not think the suboxone program is working appropriately to address this need as individuals can be suboxone-dependent for 10 years or more.

Women, in particular, and families with only one parent are experiencing the effects of drug use and addiction more acutely in the community. Follow-up care crew are available, but reinforcements to this program are needed to address community needs. The women mentioned that additional infrastructure is needed in the community so that more services can be provided within the community, as Webequie members can experience racism from the hospital staff in Thunder Bay, which makes them feel unwanted and unwelcome to be there. Also, as community members have to fly out to get to the hospital in Thunder Bay to access health care services, they have difficulty at times getting on a flight back to Webequie, and feel trapped in the hospital after doctor's visits. Women in the community also mentioned that lack of timely access to healthcare, for example, the dentist visits around twice yearly, is an ongoing concern for them (also see Section 5.6.4 in the HIA report – Appendix Q).

The women also expressed some interest in the jobs that may be created with the Webequie Supply Road, however access to reliable childcare would be necessary for the women to take advantage of any jobs opportunities that were created (Intrinsik, 2024).

The women noted that the cost of living has increased (at the time of the focus group, December 2022, one avocado cost \$5.09; one head of cauliflower cost \$8.99; a 12-pack case of bottled water cost \$22.79, etc.), especially since the COVID-19 pandemic, and there has been no offset in the form of increased welfare or other forms of financial support for community members. The focus group in 2024 did mention that some food items are subsidized (i.e., dairy, milk), but that prices are still high (i.e., small box Kellogg's cereal cost \$12.19, a brick of cream cheese cost \$9.19, frozen French fries cost \$18.79, a 6-pack of toilet paper cost \$10.89, and one package of bacon cost \$8.99). Prices in the Northern Store (the only grocery store in the community that has healthy foods available) have always been high due to the isolated nature of the community and the cost of transporting goods in. Further, following the stocking by the winter road, the food prices go up when goods are flown in (Intrinsik, 2024) but the women mentioned that the pandemic had made prices of fruits, vegetables and other healthy foods more unaffordable. This is especially true for families with single mothers. The school's breakfast program has been cut and only snacks are now provided by Indigenous Services Canada. It was conveyed to the project team that women in Webequie keenly support having an affordable daycare and a care home for older adults in the community. Having access to safe and sufficient housing and healthy and affordable foods is also a major concern in Webequie, and was echoed during the women's focus group.

During the focus group and other interviews (key informant interviews, Intrinsik, 2023), women also expressed concerns related to safety and security, and that a women's shelter is needed in the community. Safety and security concerns for women would be an important consideration if the Webequie Supply Road is built (Intrinsik, 2024). The overall importance of community safety and security and community togetherness was also emphasized during the women's focus group, and re-iterated in 2024.



## Baseline Conditions for Men

One of the primary concerns raised by men in Webequie who participated in a focus group with the HIA Team was related to the availability and access to traditional foods, particularly as at least 50-75% of some of their diets consist of traditional country foods. Some of the men participating in the focus group were also land users, and were able to provide their perspective. Concerns were also raised regarding their capacity to hunt and use the land. In the past years/decades, there have been less geese and moose available for hunting. In the 2024 focus group, the men also noted that the population of Sturgeon is decreasing and that there are invasive species (i.e., pelican, turkey vulture) entering their land. They noted that there are now parasites on the moose and that the population of snakes and toads is declining (Intrinsik, 2024). The land users in the focus group also pointed out that they've had to travel farther distances than they previously did to hunt – sometimes even 45 km away from the community – to find moose. In the 2024 focus group, the men noted that the mating season of the wildlife is changing (Intrinsik, 2024). Additionally, they have noticed that goose berries and some medicinal plants are far more uncommon now than in previous years, possibly due to climate change and changing water levels. Further, the men noted that now there are only blueberries, whereas 30 years ago there were more berries available (Intrinsik, 2024).

The men noted the rising incidence of allergies to fish as a concern. They spoke to the changing preferences and allergies among community members. They noted that some are having allergic reactions to wild game, or do not like the smell of beaver. Further, the men noted that the fish are changing in colour (i.e., the fish have blue on them) and that lumps are seen on the fish (Intrinsik, 2024). The men are concerned about the fish and would like the quality and quantity of the fish monitored. They are concerned about the population and discussed a tagging system like what is used for moose. The men were concerned about what happened in Deer Lake happening in Webequie. The men also noted that there is a change in the taste of black ducks, muskrats, and otters. They noted it could be climate change or a shift in personal preference, but spoke to not preferring to eat those game animals anymore. The men were concerned with the change in their traditional diet, and linked this to the rate of diabetes rising (Intrinsik, 2024). Further, the men noted that there is an increase in the number of youth experiencing autism and ADHD, and noted there are no services for helping those youth. They would like to speak directly with the principal to find a solution to support children struggling with a disability (Intrinsik, 2024).

During the focus group, the men noted that access to services providing education on Type 2 diabetes is important. The men noted that there needs to be more supports in place to manage the high cost of food for those with diabetes, as purchasing healthy food is challenging with the high cost of living (Intrinsik, 2024).

The men, and especially the land users among them, noted the frequency with which they've seen helicopters flying above the Ring of Fire area, which can scare away game that they are hunting. Even though the Chief and Council have requested that corporations refrain from flying over or through their lands during the hunting seasons, the number of helicopters has increased dramatically in the previous few years. Residents of the community still see and hear helicopters throughout the hunting seasons (spring for geese and fall for moose hunting) despite this request. Men as well as land users expressed concerns that the Webequie Supply Road Project would make hunting more challenging because of the noise and traffic on the proposed road when asked about the possible effects on traditional foods. They also believe that the local airline movement is disrupting the surrounding natural environment, similar to the effects of helicopters in the area. However, the rising costs of transportation, food and airfare is a further concern brought up by the men and land users. To reduce costs, they hope to set up their own greenhouse(s) where they can grow vegetables within the community.



Another primary issue raised by the focus group is the lack of or decline in traditional knowledge transfer to the youth that has been observed since the internet became available and further exacerbated since the availability of Starlink. Men expressed concern for the youth who do not possess traditional knowledge, stating that they may go hungry in the future because of it. The men noted that the youth are taken out on the land less now as they are in school during the week. An example provided was that the youth don't understand the different bird calls, and what those bird calls mean. Additional teachings are necessary to pass down knowledge to the younger generations and ensure knowledge surrounding the language, hunting, harvesting, snow-shoe making, etc., is not lost. It was noted that the language is being lost with each passing generation (Intrinsik, 2024). The men participating in the 2024 focus group would like to see more integration of traditional learning and western education, with this learning integrated into the schools. The men noted that the parents are responsible for the children's education, but that they needed to be supported so that they can succeed (Intrinsik, 2024). They also mentioned the rise in suicide rates and mental health issues they have observed among young people in Webequie. The group thought that the youth may re-establish a connection to the land by spending more time on the land and less time on forms of technology and video games, which could boost their physical and mental health.

The effects of climate change are being felt directly by the community, and especially land users, who are observing changes to the river system, experiencing more frequent and intense floods, and earlier melting of snow. The men noted that the weather is less extreme than previous, the weather does not get as extremely hot, nor as extremely cold as it used to (Intrinsik, 2024). Since the winter road is heavily dependent on the weather, it has been forced to close earlier and earlier each year due to the instability of the ice. In 2023, the winter road was closed on April 8<sup>th</sup>. In previous years, winter roads were safe to travel on until May. During the focus group in May 2024, the men noted that the winter road closed on March 31, and was only open for 2.5 to 3 months (Intrinsik, 2024). The snow and ice have been melting earlier each year due to climate change, and the winter roads have been considerably more unpredictable and dangerous. Permafrost in the area is also being impacted by climate change and is leading to changing landscapes. The land users in the group reported fewer sightings of many animal species, as well as their numbers over the last few decades, including moose, beavers, and geese.

The focus group also discussed a spill that took place at Musselwhite Mine a few years ago. Since the mine is connected to Webequie's water shed, some members of the group believed that the spill has harmed the water quality and aquatic life in the area. The mine upriver has impacts on all the communities along the water shed from the tailings ponds, the floods, and especially the health of the water and aquatic life. When ice fishing, several people in the focus group mentioned that they have noticed that the wall-eye fish have lumps. They are also concerned about the impact of the water quality on aquatic life as they've witnessed teenagers and young children develop rashes, eczema, and allergies to certain types of fresh fish, which were not previously common in the community.

Men were also concerned about rising drug overuse and mental health issues in Webequie. During the focus group in 2024, the men further re-iterated that the suboxone program was being used by approximately 130 people, though they didn't know the exact number and referred the Intrinsik employees to the clinic for updated numbers (Intrinsik, 2024). Although drugs and alcohol could become more easily accessible once the Webequie Supply Road is operational, the focus group members believed that the Webequie Supply Road could create a safer environment if more employment opportunities were available for the community, which was a sentiment reiterated during the May 2024 focus group (Intrinsik, 2024). In the 2024 focus group (Intrinsik), the men noted that a security checkpoint may help to keep things like drugs and alcohol from entering the community. Increased employment would also generate more income for those in the community and the community itself.



Focus group participants also expressed their desire for a care home in Webequie for older adults and those who need advanced care, along with a dedicated nurse, as opposed to flying to Thunder Bay to receive that type of care.

The men see both pros and cons to the Webequie Supply Road. They are concerned about dealing with corporations, and that more corporations will want to enter the community to try to make a profit. They are also concerned about safety and security in the community if the road is built. They are hopeful that the road will decrease the price of gas, which the men noted they rely on more now to go out on the land than they historically did (Intrinsik, 2024). The men hope to see better infrastructure, and more businesses and economic growth.

During the focus group, benefits from being on the land were emphasized. Men spoke about how important the land is and what being on the land means to them. Many people in Webequie are still coping with the trauma they experienced in the past due to colonization, residential schools and systemic racism, which is still ongoing. The men stated that they needed to work on and forgive themselves in order to heal and find Mino Bimaadiziwin, or 'the good life'. By returning to their roots and establishing a connection with the land, they can discover that. One individual in the group said: "The land is my gold mine."

### **Baseline Conditions for Youth**

Indigenous youth face unique challenges related to geographic isolation and lack of infrastructure that have led to significantly higher rates of suicide than non-Indigenous people. There are physical, historic and financial barriers to governments providing assistance to remote communities that have led to the promotion of feelings of oppression, perpetuation of residential school trauma, discrimination, loss of culture and language that has influenced the well-being of Indigenous youth in particular (InterGroup, 2024).

During the focus group with Webequie youth, it was noted that health is important to everyone in the community including the youth residing in the community. Webequie youth expressed that to them 'health' includes activities (i.e., video games), community (i.e., friendships), and access to food (i.e., KFC).

Key informant interviews were also conducted with youth workers in the community, who are associated with the Community Aboriginal Recreational Activator (CARA) program and the Choose Life Program. Key-person interviews indicated that over time, as technology has grown and spread throughout the community youth are less and less likely to use their free time to play outside in the bush or on boats. Prior to the internet, children's free time was primarily spent outdoors and within the community playing games and socializing. Now there are concerns related to youth in Webequie not being active enough, and being more willing to live a sedentary lifestyle that revolves around technology. The common use of video games, mobile devices and social media amongst youth is resulting in difficulties convincing them to engage in alternative activities that take place outside the house and on the land. The COVID-19 pandemic has further exacerbated these problems.

Webequie youth in the community have expressed interest in extracurricular activities such as camping, baseball, and volleyball, but there is not enough social capacity (i.e., teachers and youth workers) to support such activities. It has been suggested that incentives, such as gift cards or gaming consoles, could be used to further encourage participation.

Key informant interviews with representatives from the women's shelter is needed in the community and Choose Life Programs indicated that there is a lack of sufficient infrastructure in the community to hold youth programs. The power grid that supports the community does not have the capacity to support any



additional large buildings, and the buildings it currently supports are limited in their operation (i.e., cannot plug in multiple appliances). There are not enough locations available to support the additional desired extracurricular activities or programs for youth, as the only available gymnasium has very limited availability for activities that are not school related (i.e., it is often busy). To add to that, even if there is available gym time, it is also difficult to secure adult supervision to oversee youth activities.

The mental health of youth in the community has been deteriorating, which is being linked to smoking, drug use, and high cost of living. There is now increased access to drugs and alcohol for youth in Webequie, which is a concern expressed by several community members.

Key informant interviews with the youth workers identified that being able to afford and have access to healthy foods is a challenge in the community due to high prices within grocery stores and the high cost to ship food to the community. Traditional activities and foods are popular with Webequie youth. During the focus group, the youth expressed interest in participating in traditional activities such as hunting, fishing, and sacred ceremonies, in addition to enjoying traditional foods such as goose and moose meats. Although the youth are interested in participating in traditional activities, some of them didn't believe that there are sufficient opportunities for transfer traditional knowledge from Elders and Knowledge Keepers and land users to themselves. Some were also keen to learn how to speak and communicate freely in their traditional language.

The focus group participants indicated that impacts from the Webequie Supply Road to youth in community could include an increased motivation to attend school, obtain training, and seek employment. Alternatively, it was expressed that there are no local jobs and as such there is no motivation to gain training as there are no jobs to seek out post training. It was also noted that community members do not want to leave Webequie and feel that they should not have to leave the community to obtain a better quality of life.

### **Baseline Conditions for Individuals with Disabilities and Chronic Health Conditions**

To understand ongoing health concerns and current health conditions for individuals with disabilities in the community, the HIA Team conducted interview(s) with personnel in the Home Community Care Program. During the interview, it was shared that there are individuals in Webequie who need 24/7 care, and often times, individuals returning from treatment in the hospital in Thunder Bay need additional attention. However, there are not enough staff working in the Home Community Care Program to meet the needs of the community. As such, the individual's family assumes responsibility for their care (as much as possible), and currently, there are no facilities in Webequie to provide ongoing 24/7 care to individuals who need it. There is also currently a limited availability of respite care for caregivers. Individuals with arthritis also have mobility problems and Home Community Care Program staff provide support as possible.

If an individual needs the use of a wheelchair or a 4-wheel walker, they must request the Webequie housing department to provide the necessary lumber for the construction of ramps. Requirements for individuals with disabilities include the construction of facilities suitable to house visiting physiotherapists, increased availability of healthcare resources and personnel who can be brought into the community and housed temporarily, and increasing staff in the Home Community Care Program, as sometimes current staff are unable to attend to all those in need.

There are also insufficient financial resources available for acquiring hearing aids or similar devices for those who need them. Dentures are provided once and renewed every 5-10 years. If hospital beds are needed in the community, the cost of bringing one in is prohibitively high as access to these resources is severely constrained, and transportation by plane incurs significant expenses.



There is a small number of individuals, mainly older adults, in the community who have permanent disabilities. There are also a handful of adolescents who have special needs. Support systems are not available for students with special needs, and it is uncertain whether the school or teachers offer such programs. Mental health support for those with disabilities is very limited in the community, or completely absent. The counsellor who visits the community does so on a monthly basis, which is insufficient time to interact with everyone. As such, many individuals seek counselling outside of their community but encounter numerous difficulties when venturing into the urban environment. Staff from the Home Community Care Program are also called upon to accompany individuals who need assistance to their healthcare appointments, whether in Thunder Bay or Sioux Lookout. Families have to send older adults and other individuals who need round-the-clock care to long term care centers out of the community (i.e., mainly Thunder Bay), and it costs their families in Webequie a lot to visit them. Moreover, concerns expressed by other community members and also in the women's and men's focus groups were echoed by the Home Community Care Program staff, that care homes in Thunder Bay were unsuitable and difficult for Webequie members due to the racism they experienced.

At the time of the key-personnel interview (May, 2023), four additional individuals had received training to become personal support workers and did not have any prior experience in this field. Nurses stationed at the nursing station offer assistance to the Home Community Care Program, but there is limited help and resources available.

For community members who are undergoing dialysis and are unable to care for themselves, the Home Community Care Program cannot provide assistance, and it is up to their family to provide support and assistance. These community members needing dialysis have to store the dialysis equipment and all related treatment materials in their own homes and independently manage their proper storage.

Food security is a pressing issue in the community, as it often necessitates assistance to individuals facing financial constraints through the Band due to high food costs in the community (Northern Store). The band frequently utilizes an account with the Northern Store to get groceries. According to personnel at the Home Community Care Program, Webequie should consider an alternative community grocery store (i.e., alternative to the Northern Store), as the prices in the Northern Store are three times more than in other communities. However, it was acknowledged that the cost of shipping to the community is substantial when placing an order for the community.

To add to ongoing health concerns in the community, the COVID-19 pandemic instilled a greater inclination among individuals to remain in their homes, driven by fear and resulting in feelings of depression and loneliness, making them seek reasons to avoid venturing outside.

Overall, staff from the Home Community Care Program would like to provide in-home visits for those experiencing disabilities or impairments in the future by expanding the program and by enhance the scope of services offered. The Home Community Care Program staff also believe that the Webequie Supply Road, if built, would improve quality of and access to health care services for community members.

### **Baseline Conditions for 2SLGBTQIA Individuals**

From interview(s) with the community, it was expressed that 2SLGBTQIA (two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex and asexual) individuals often have a difficult time settling into the community due to religious views and beliefs currently held by members of the community, and as a result, the 2SLGBTQIA community in Webequie experiences a greater degree of stress on a daily basis (key informant interviews, Intrinsik, 2023). Interviews with individuals who identify as 2SLGBTQIA, indicated that these individuals experience disproportionate impacts due to pre-existing



health issues (key informant interviews, Intrinsic, 2023). The stress coupled with a lack of programming (supports and services) leads to lower self-esteem, higher rates of anxiety, higher rates of depression, and a greater degree of suicidal ideations (key informant interviews, Intrinsic, 2023). Community members expressed that individuals from some population groups would be more susceptible to seasonal depression during the winter months and Christmas season, when loneliness can be at an all-time high (key informant interviews, Intrinsic, 2023). Many members of the 2SLGBTQQIA community in Webequie also experience bullying which further negatively impacts their mental health (key informant interviews, Intrinsic, 2023). There is also a stigma around AIDS and HIV within 2SLGBTQQIA communities which can lead to lower self-esteem and decreased overall health when they don't have programs available and feel isolated (key informant interviews, Intrinsic, 2023). Discussions surrounding sexually transmitted infections and safe sex are discouraged and often seen as taboo due to the religious beliefs that are held within the community (key informant interviews, Intrinsic, 2023). Additional healthcare resources are needed for the 2SLGBTQQIA community in Webequie. The 2SLGBTQQIA community has been put into one box to include everyone and does not account for each person's sexual orientation or gender identity (key informant interviews, Intrinsic, 2023). In order for 2SLGBTQQIA to become accepted and more comfortable within the community, a suggestion was to create talking circles that would be safe spaces for those who identify as 2SLGBTQQIA to share and build connections (key informant interviews, Intrinsic, 2023). These talking circles or safe spaces could also serve to build awareness of the 2SLGBTQQIA community in Webequie. If the goal is to make everyone feel safe in Webequie, then everyone needs to feel safe, not just select groups or individuals (key informant interviews, Intrinsic, 2023).

## 17.3 Identification of Potential Effects, Pathways and Indicators

### 17.3.1 Assessment Approach

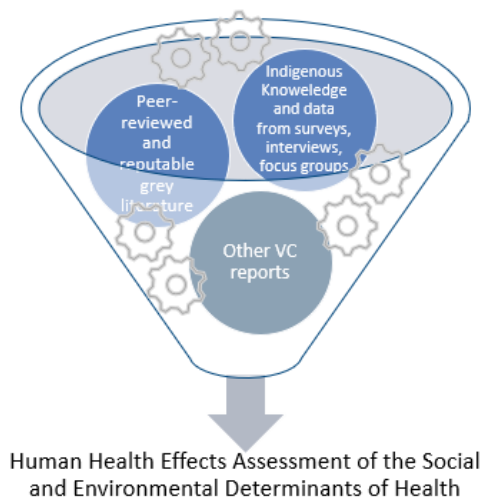
The assessment of effects of the Project on Human Health VC is conducted using the methodology as outlined in Section 5 (Environmental Assessment / Impact Assessment Approach and Methods). A GBA Plus (GBA+) approach was taken within each of the steps of the effects assessment methodology to ensure that the health assessment considers impacts to different population sub-groups within Webequie First Nation. As described in Section 2.3 of Appendix Q (Health Impact Assessment Report), the Health Impact Assessment (HIA) framework was designed to assess potential health impacts due to a project on the most sensitive members of the population, such as children, the elderly, and those with compromised or sensitive health conditions (e.g., asthmatics, pregnant women, those with Chronic Obstructive Pulmonary Disease, immunodeficient individuals, etc.). Many of these sensitive members of the population would also be considered in a GBA+, as being potentially disproportionately impacted due to project-related activities. Hence, through these approaches, and in combination with a GBA+, the HIA provides a broad evaluation of potential health benefits and impacts arising from the Project for potentially affected Indigenous communities and other stakeholders.

The assessment of health effects starts from the higher-level determinants of health, (i.e., the Structural / Level 3 determinants of health), then the intermediate and finally the proximal determinants of health. The effects assessment includes the considerations listed below for each of the determinants of health scoped into the assessment. This approach to assessing health is based on available Indigenous Knowledge, as provided by Webequie First Nation, and the best available scientific evidence regarding health effects.



- **Health Context and Linkages:** Scientific literature and the reputable grey literature were used to identify health linkages (or effect pathways) and make the Project-specific connection to health. This assessment of effects will not include a full literature review, which is a comprehensive undertaking, but refers to the relevant peer-reviewed and reputable grey literatures.
- **Existing Conditions:** The current conditions in the LSA for the determinant of health were assessed. This information was based on information shared by Webequie during engagement and the existing conditions reports for the human health, social, economic, cultural, and other relevant VCs.
- **Effects Assessment:** This section provides an assessment of potential positive and negative health effects related to each phase of the Project. This report relies on information shared by Webequie during engagement, other VC reports, and primary data as source material to develop the effects assessment. How this information has been incorporated is illustrated in **Figure 17.1**.
  - Negative health impacts are those impacts identified as being harmful to health and wellbeing.
  - Positive health impacts are those deemed beneficial to health and wellbeing.
- **Mitigation / Enhancement Measures:** Mitigation measures have been recommended with the aim of preventing, minimizing, monitoring or compensating for the potential negative health impacts of the Project. Enhancement measures are those that aim to spread the benefits of potential positive health impacts more broadly across the community using a GBA+ approach.
- **Net Effects:** The potential negative human health impacts of the Project despite implementation of all proposed mitigation strategies are referred to as net effects. As it is not possible to predict net effects on human health with certainty (e.g., different population groups are affected differently) a range of characterizations has been applied (see **Section 17.5.2**).

**Figure 17.1: Contributing sources to the development of the human health effect assessment of the social and environmental determinants of health.**



**Table 17-5** and the following subsections summarize the potential effect pathways and effect indicators for the Human Health VC. Section 6 of Appendix Q (Health Impact Assessment Report) provides detailed discussion of determinants of health relevant to the WSR, their interconnections, and pathways through which social, economic, and cultural impacts can lead to changes in physical and mental health and wellbeing their potential effects.

**Table 17-5: Summary of Potential Effects, Pathways and Indicators for Human Health VC**

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
<b>Structural / Level 3 Determinants of Health – Structural or systemic factors</b>				
Colonialism and trauma of residential schools	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ Access to employment opportunities from the Project may improve the physical and mental well-being of Webequie First Nation through enhanced self-determination and self-governance, and better access to services, including mental health services to address the impacts of intergenerational trauma.</li> <li>▪ The Project may temporarily disrupt access to traditional lands and ways of life due to various construction-related activities, leading, temporarily, to a loss of identity and amplification of feelings of colonial control.</li> <li>▪ Even though it is expected that construction camps will be ‘dry’ (i.e., no alcohol or illegal drugs can be brought in) the Project may allow for easier access to illicit drugs and alcohol illegally brought in by external construction workers, exacerbating existing addiction issues (many of which are related to colonization, intergenerational trauma, and the residential school legacy).</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ The proposed WSR may provide a link to employment opportunities in the Ring of Fire area, enhancing the self-determination and self-governance of the community and resulting in improved health outcomes.</li> <li>▪ The proposed WSR may allow for easier access of illicit drugs and alcohol from outsiders. This could lead to higher rates of substance use and mental health crisis, which could increase the dependency on healthcare systems within the community.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Temporary disruption in the traditional practices on the land and impact to cultural identity;</li> <li>▪ Local business and economic development; and</li> <li>▪ Easier access of illicit substances and alcohol into the community.</li> </ul>	Indirect
Racism and social exclusion	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ While living in construction camps with non-community members, it is possible that members of Webequie First Nation may experience racism from external workers who join the construction workforce. Members of the community who experience this may develop negative health outcomes. Those that experience racism while working in construction camps can be a catalyst for family violence against women, children and elders when they return home.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ There are not expected to be any impacts to Webequie First Nation related to racism and discrimination during the operations phase of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Racism from external workers; and</li> <li>▪ Feeling of isolation and loneliness due to being away from community/family.</li> </ul>	Indirect
Local economic growth	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ The overall economy of Webequie First Nation is expected to be positively affected by the Project’s construction phase, though not to a large extent. Even so, this will increase the likelihood of positive health outcomes through potentially improved social and economic conditions, especially for those who are able to find jobs.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ Webequie First Nation will have access to the Ring of Fire area after the completion of the WSR. The community hopes that this will significantly increase access to economic opportunities, specifically surrounding the Ring of Fire area, and improve health outcomes associated with increased employment, income and availability of services.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Local business and economic development; and</li> <li>▪ Employment opportunities.</li> </ul>	Indirect
Self-determination and governance	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ For the community to fulfil its right to self-determination, it is imperative that the community be involved in the planning and decision-making process for the Project throughout its construction phase. If the community feels it is not involved as much as it should be, they could experience a loss of control, and a decrease in self-identity which could lead to negative mental wellness outcomes.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ Building the WSR would be a positive step towards Webequie First Nation increasing their self-determination and self-governance. This has the potential to improve health outcomes in the community.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rights to land and resources; and</li> <li>▪ Right to pursue economic prosperity and independence.</li> </ul>	Indirect

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
Worker accommodations (i.e., during project activities, including in construction camps)	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Webequie First Nation, and other First Nations, have expressed sensitivity and concern related to temporary construction camps where workers are brought temporarily to the area to support construction. The implementation of work camps may disproportionately affect the feelings of safety and security of Indigenous communities, especially women and girls, and also 2SLGBTQIA individuals in the community, and potentially expose them to disproportionate levels of sexual violence, abuse, and sexually transmitted infections. Further, anti-Indigenous racism, if present in the construction camps, may lead to negative stereotyping of the Indigenous workforce and cause negative mental wellness outcomes.</li> <li>Webequie community members who are participating in construction activities may experience negative impacts including being isolated from friends and family, stressful work environments, and a lack of connection which can lead to negative wellness outcomes.</li> <li>Even though it is expected that construction camps will be 'dry' (i.e., no alcohol or illegal drugs can be brought in) the Project may allow for easier access to illicit drugs and alcohol illegally brought in by external construction workers, leading to increased substance use among workers and in the community. Substance use may exacerbate violent activity, including sexual violence.</li> <li>Housing services are already under pressure and may experience a slight burden if off-reserve community members (it is not known how many) wish to stay in the community to participate in construction-related activities. However, if temporary accommodations are provided in the community, this may limit and adverse impacts.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>There is not expected to be any construction camps/worker accommodation during the operations phase and therefore there is no anticipated health impact to Webequie First Nation.</li> </ul>	<ul style="list-style-type: none"> <li>Safety and security;</li> <li>Availability of illicit substances; and</li> <li>Housing availability.</li> </ul>	Indirect
<b>Intermediate / Level 2 Determinants of Health – Environmental and community factors</b>				
Air quality (including GHG emissions)	Construction and Operations	<p><b>Construction Phase</b></p> <p><i>Air Quality</i></p> <ul style="list-style-type: none"> <li>According to the Human Health Risk Assessment (Appendix P) for the construction phase, all contaminants of potential concern, except for carcinogenic risks associated with estimated chronic exposures to hexavalent chromium in baseline total suspended particulates, have risk levels below the Health Canada and Ontario MECP negligible risk levels. Additionally, the results of the Air Quality Impact Assessment (Appendix G) for the construction phase are conservative and have likely overpredicted Project related emissions. Furthermore, the predicted exceedances are localized spatially to areas proximate to the road centreline and are not predicted at existing residences and institutional buildings in the Webequie area, where people are present most frequently (Appendix G).</li> </ul> <p><i>GHG Emissions</i></p> <ul style="list-style-type: none"> <li>According to the assessment of GHG emissions (Appendix H), WSR's emission sources, while remaining small for fossil-fuel combustion activities, cannot be seen as negligible when compared to the Canadian total. The Project will not have an impact on global GHG emissions. As such, the impact to health is not considered appreciable.</li> </ul> <p><b>Operations Phase</b></p> <p><i>Air Quality</i></p> <ul style="list-style-type: none"> <li>The main pathway during operations that will result in a change in air quality is the use of vehicles on the WSR once constructed and use of vehicles, machinery, and equipment for road maintenance. The potential for unacceptable risks associated with PM<sub>10</sub> is considered to be low to negligible, and will further decrease once asphalt or chip-seal surfacing is in place. Hence there is low potential for adverse health effects.</li> </ul> <p><i>GHG Emissions</i></p> <ul style="list-style-type: none"> <li>Since the WSR is an infrastructure project intended to provide access to the Webequie community and future nearby mining exploration and proposed future mining sites, it will not have an impact on global GHG emissions.</li> <li>The existence of the WSR may hasten the opening of mines in the area whose ore might be substituted for foreign ore in Ontario or Canada's smelters. Because of this specific circumstance, Canada's greenhouse gas inventory would be improved by reducing foreign transportation emissions. Overall, it is difficult to predict the level of GHG emissions at this time, and thus the health effects.</li> </ul>	<ul style="list-style-type: none"> <li>Emissions, including greenhouse gases</li> </ul>	Direct and indirect

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
Noise levels and vibration	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>The project area is naturally quiet, with any noise caused by the development could potentially cause distress to both humans and animals, leading to disruption of quiet in the area. There are concerns from community members that the noise might scare away animals, impacting the ability of community members to hunt and access them as a food source. The project construction activities that involve blasting and use of vehicles, machinery and equipment will increase noise. Blasting is expected to occur infrequently. As such, noise impacts during construction are expected to be temporary, and cause limited and temporary health effects.</li> <li>Noise emissions from equipment (e.g., crusher/screener, stackers, and front-end loaders) are continuous in worst-case simulations, and exceed the NPC-300 guideline limits by a maximum of 4 dB. These predicted exceedances are considered to be minor and insignificant, and are not expected to impact health outcomes.</li> <li>Noise from general construction activities (e.g., vegetation clearing and overburden removal, subgrade compaction, the addition and compaction of base course and final courses of aggregate) are predicted to exceed the Mitigation Noise Level Threshold at several culturally sensitive areas. It is possible this disturbance may temporarily impact the mental wellness of some community members, especially Elders and those who frequent culturally relevant locations.</li> <li>Construction activity will also cause vibration impacts as construction continues along the WSR route. Mitigation measures listed below will be put in place, and as such negative impacts are unlikely.</li> <li>Noise pollution is not just an environmental issue but also affects cultural practices like hunting if high noise levels end up displacing wildlife. Community members prefer to harvest in areas where it is quiet. Temporary increase in noise levels in harvesting areas may increase physical disturbance and impact harvesting activities, and in turn may have temporary adverse impacts to health.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>The maximum predicted sound level based on the predicted operational sound levels is 44 dBA which is equal to the measured baseline ambient sound level within the community/settlement of Webequie. Therefore, there are no anticipated impacts to health with normal operational noise.</li> <li>The changes in sound levels anticipated for some of the culturally sensitive places are anticipated to surpass the 5 dB threshold specified in the MECP/MTO Joint Noise Protocol. It is anticipated that the overall operations phase sound levels will be below or equal to 45 dBA, which is deemed suitable for a quiet rural environment. Based on Health Canada's Guidelines, the operational noise impacts are not expected to result in long-term community annoyance, and therefore not anticipated to result in negative health outcomes.</li> <li>The operations phase is not associated with any substantial sources of underwater noise or vibration. Therefore, it is unlikely that the operations phase will have any vibration impacts and in turn, no anticipated impacts to health.</li> </ul>	<ul style="list-style-type: none"> <li>Sound level</li> </ul>	Direct and indirect
Surface water quality	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>There could be a change in surface water quantity as a result of changes to the surface water drainage patterns and flows. This could influence the availability of traditional foods, leading to some negative health outcomes.</li> <li>Surface water quality can be affected by alterations to drainage pattern and flows in addition to potential spills or releases of chemicals and pollutants. Changes in water quality can lead to negative physical and mental health outcomes.</li> <li>Sediment quality in waterbodies can be affected by erosion of stockpiles and the road from changes to drainage pattern and flows in addition to potential spills or releases of chemicals and pollutants. Changes in sediment quality can have cascading impacts to aquatic ecosystem and result in negative health outcomes due to changes in cultural and traditional food practices.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Local hydraulics including local shear stress, erosion, water levels, and sedimentation may occur around constructed waterbody crossings. Surface water quality can be affected by alterations to drainage pattern and flows, addition of potential spills, releases of chemicals and pollutants, and addition of sediment from dewatering, road maintenance, and vegetation control. Changes in surface water quality will have the same negative health effect as noted in the construction phase.</li> <li>Changes to sediment quality may occur due to erosion of stockpiles, changes to drainage and flow, the deposition of airborne particulate matter (i.e., dust), and potential spills of chemicals/pollutants. Negative health effects would be the same as those noted in the construction phase.</li> </ul>	<ul style="list-style-type: none"> <li>Change in surface water quality (e.g., habitat, chemistry, and flow rates)</li> </ul>	Direct and indirect
Light pollution, including visual effects	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Project activities during the construction phase included vegetation clearing and grubbing, the construction of support infrastructure such as camps or aggregate sources areas, the construction of structures at waterbody crossings, and the decommissioning and restoration of temporary supportive infrastructure. The visual effects associated with supportive infrastructure components will be confined to 1 km from Project Footprint and 500 m from the footprint of temporary or permanent supportive infrastructure, and will be limited in extent due to the height and density of the coniferous woodland dominated landscape. Changes to the visual landscape may cause a sense of loss or ecological grief to some community members when the road is being built. This may have some potential negative mental health impacts for these individuals.</li> </ul>	<ul style="list-style-type: none"> <li>Ambient light levels; and</li> <li>Qualitative visual changes.</li> </ul>	Direct

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
		<p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>The potential effects from project activities consist of a change to visual landscape in terms of the visibility (visual prominence) of the Project, and the scenic quality or viewer sensitivity and magnitude/distance. A change in the landscape cause feelings of ecological grief in some individuals, leading to some mental health impacts. Only those that are located within the defined viewsheds associated with each of the proposed crossings of Winisk Lake, the Winiskisis Channel and the Muketei River will be subject to a change in the visual environment. Potential for health effects is predicted to be limited.</li> <li>The WSR is not proposed to be illuminated, except at the east and west terminus and at supportive structures, so the WSR will not be visible from any receptors during the night. Therefore, potential health effects are predicted to be negligible.</li> </ul>		
Housing, including access and quality	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>If community members who live off-reserve choose to come stay in Webequie First Nation to participate in constructions jobs, it is possible that there may be additional strain on Webequie First Nation's already burdened housing situation. However, it is proposed in the Community Readiness Plan (Appendix N) that there may be temporary accommodations built in the Webequie community during the construction phase, which will ease any burdens that could be placed on the Webequie community's housing and infrastructure by off-reserve members seeking employment. As such, this impact, and its resulting health effects are uncertain at this time and will depend on how many off-reserve members return to participate in employment, and what temporary accommodations are built within the community to safely house them.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Once operational, the WSR may be able to reduce costs related to the transportation of supplies and materials for housing and therefore boost housing availability. However, it should be noted that for the WSR to allow for cheaper entry of housing-related goods and/or services, a connection to the provincial highway system that connect Webequie to other communities and municipalities would need to happen, and would require the construction of the Northern Road Link Project and the Marten Falls Community Access Road Project, both of which are also going through a coordinated federal-provincial EA/IA process. But one construction camp is expected to be converted to community housing to house any off-reserve members, medical staff, educators, and any other Project operations related staff. It is expected that some strain on housing can be relieved, with some potential for limited positive health impacts, especially if visiting health care staff can be more easily housed.</li> </ul>	<ul style="list-style-type: none"> <li>Housing capacity;</li> <li>Housing quality; and</li> <li>Housing cost (e.g., repair and construction).</li> </ul>	Indirect
Employment and income	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Webequie First Nation members may have better jobs and economic prospects as a result of the Project. During each year of construction, Webequie First Nation is estimated to fill approximately 10 direct employment positions which will be located on-site. Webequie First Nation is not forecasted to capture any of the direct off-site work attributed to the Project. Since employment positions will become available for Webequie First Nation, it can be expected that those individual household incomes will be positively affected in the community, resulting in positive health outcomes for those households.</li> <li>Due to the expected schedule of shifts, Webequie members who worked for the Project during the construction phase might not have as much time to spend harvesting on the land. Since traditional activities can give people a feeling of identity and worth, this poses issues to the well-being of those employed as well as problems for those who are more prone to rely on the traditional economy, such as Elders who may rely on the sharing economy.</li> <li>Although those without proper education will have the opportunity to be trained to develop the new skills that would be required for work on the Project. It might be difficult for Webequie members, especially women and young people, to gain this education and training as stated above as additional education and training for women is already a challenge. Therefore, a significant portion of the labour requirements for the Project may be met by labour force from the RSA.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>The same types of opportunities and health outcomes that exist during the construction phase (economic development related to operations, maintenance workforce training, and youth employment) will exist during the operations phase, but to a much lesser extent (only 3 direct jobs and 1 induced job).</li> <li>During the operations phase, it is expected that Webequie members will be able to get jobs in the Ring of Fire area once mining development starts. However, it is not known when this will be, and how many and what kind of jobs will be available. For those who get jobs, their families will benefit, and the same considerations related to inequitable distribution of positive impacts also applies here.</li> </ul>	<ul style="list-style-type: none"> <li>Access to employment opportunities and income</li> </ul>	Direct and indirect
Education	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Education and training attainment opportunities may improve as a result of the Project. The Project is anticipated to have a positive effect to incentivize education and training attainment required for Project employment opportunities. The positive health outcomes associated with improved employment opportunities would be anticipated. However, it is possible that diverse sub-populations, such as women, youth, and individuals living with disabilities may not be able to benefit equally from the WSR as compared to the men due to being at a disadvantage to get adequate training to benefit from a potential increase in employment opportunities associated with the Project. These vulnerable populations may not experience the positive health outcomes associated with improved employment opportunities.</li> <li>As there is currently a lack of skills/trades experience related to potential Project-related employment, community members have expressed concerns that Webequie youth will not be in a position to benefit from the Project's employment opportunities and associated positive health outcomes. However, the Project could cause a small negative health effect to cultural and traditional activities for youth if they get more involved in project employment and related activities and have decreased interest in learning traditional land-based skills.</li> </ul>	<ul style="list-style-type: none"> <li>Skills and trade skills development</li> </ul>	Indirect

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
		<p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>There are very few jobs available during the operations phase compared to the construction phase. As such it is not anticipated that there will be any major effects on health due to the operations phase of the Project.</li> </ul>		
Food security, including quality and availability of traditional foods	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Community members are concerned over the impact of the WSR to their traplines, use of the land to harvest traditional foods, and the potential impact to their mental and physical health if the way they harvest food is influenced by the WSR.</li> <li>Community members will have increased access to the land as more territory will be able to be reached by car, ATV, or snowmobile. More community members may be able to access hunting, gathering, and fishing grounds thus increasing access to traditional food sources for dietary needs, thereby improving health outcomes associated with eating more traditional foods.</li> <li>Similarly, community members are concerned that construction noise will scare away animals, impacting their ability to hunt and rely on traditional food sources. However, the noise-effect due to road and supportive infrastructure construction is expected to be locally isolated to the construction area, and reversible. Therefore, the impact to health is expected to be minimal.</li> <li>Community members are concerned that due to changes in wildlife behaviour, and the absence of hunters to participate in construction activities, that there will be a negative influence on the transfer of knowledge to youth related to hunting and traditional harvesting. These effects will be temporary and last during the construction phase and have limited adverse mental health impacts.</li> <li>The effects of contamination on traditional food sources by construction or operations and maintenance emissions is an important factor when assessing the overall impact to food security. The results of the HHRA indicate that increases in project-related contaminants in country foods items are not expected to be appreciable; therefore, increases in exposures and resulting risks for human receptors consuming country foods items from the project area are not anticipated (Appendix P).</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Increased income in some households who have jobs in the Ring of Fire area will increase disposable income for buying healthy store-bought foods and increase their overall food security. Those who cannot obtain jobs will not benefit equally.</li> <li>It is not expected that the impacts due to operations-related noise will be significant. These impacts may be temporary and limited, and may affect limited areas used by the community. As such, the resulting impact to harvesting practices and traditional food security are uncertain but probably limited. The potential for health impacts is also uncertain and probably limited.</li> </ul>	<ul style="list-style-type: none"> <li>Access to and quality of traditional foods</li> </ul>	Indirect
Social cohesion and cultural continuity	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Negative interactions between the construction workforce and the Webequie community population may still occur despite best efforts to limit them. Depending on the extent and nature of the interactions between the construction workforce and members of Webequie First Nation, community cohesion may decrease. Should these negative interactions occur, this has the potential to have negative impacts on mental wellness.</li> <li>Community members have concerns about the loss of traditional culture in Webequie First Nation. Reduction in cultural practices and their continuation may impact the mental health of some community members, especially Elders.</li> </ul> <p><b>Operation Phase</b></p> <ul style="list-style-type: none"> <li>There are not expected to be any impacts to social cohesion and cultural continuity during the operations phase.</li> </ul>	<ul style="list-style-type: none"> <li>Traditional and cultural teachings and activities</li> </ul>	Indirect
Safety and security of women and girls	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Construction camps will be used for the Project. The majority of the construction-related workforce may be from outside the LSA and RSA, and as such, majority of construction workers may be non-Indigenous. Despite planned measures to keep the construction workforce out of the community, interactions may still occur directly during employment, or indirectly over the 5 to 6 year construction timeline of the Project. Increased exposure increases the risk to safety, especially for Indigenous women, girls and 2SLGBTQQIA individuals, and has potential major impacts to their wellbeing.</li> <li>Women and girls with low income, low educational attainment, and those living with addictions may be particularly vulnerable to gender-based violence and sexual exploitation, which results in negative health outcomes.</li> </ul> <p><b>Operation Phase</b></p> <ul style="list-style-type: none"> <li>Due to the direct link to future mining activities in the Ring of Fire area, there is potential for increased risk to the safety of women, girls and 2SLGBTQQIA individuals due to entry of outsiders during the operations phase.</li> </ul>	<ul style="list-style-type: none"> <li>Safety of women and girls; and</li> <li>Violence and sexual exploitation of women and girls.</li> </ul>	Direct and indirect
Traffic volume and safety	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>It is expected that during the winter road season, there will be increased traffic volume on the winter road bringing in equipment and personnel for the construction phase of the Project. This may increase wait and travel times for accessing goods and services away from the community, but the impacts to health will be limited.</li> </ul>	<ul style="list-style-type: none"> <li>Traffic volume</li> </ul>	Direct

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
		<p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Once the WSR is operational, it is not known what the average traffic on the road will be. Hence, it is not possible to currently predict the potential direct effect to health.</li> <li>Should there be high traffic volume on the WSR, it may lead to accidents and injuries as a result of collisions. There are negative health effects associated with increased traffic, however, the level of effect will depend on how much traffic increases.</li> </ul>		
Access to healthcare services	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>The WSR is likely to result in non-local workers coming to the area as well as some members returning to Webequie First Nation. This could lead to higher demand for already limited healthcare services due to injuries or accidents from construction activities. Competition for healthcare services also places more financial, emotional, and other burden on families, especially members of vulnerable populations. However, the Project is expected to have its own first aid station to address immediate and minor health issues. As such, the strain on health care services in the community may be limited.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Some off-reserve community members may wish to return to Webequie First Nation; however, it cannot be predicted how big this number would be. If a large number of off-reserve community members want to move back in, it could create a higher demand for healthcare services, impacting existing service levels and associated health outcomes.</li> <li>During the operations phase there will be a significantly lower workforce required for the Project. The number of workers is too small to put an additional strain on availability of services.</li> </ul>	<ul style="list-style-type: none"> <li>Demand for on-reserve healthcare services</li> </ul>	Indirect
Access to social, mental health and family services	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>During the construction phase, the Project is likely to result in non-local workers coming to the area as well as some off-reserve members returning to Webequie First Nation to take advantage of employment opportunities. This could create a higher demand for mental health and social services, especially given the already limited services available in the community. However, the scope of the increased demand cannot be anticipated. As such, this may be a potential adverse impact on health, if there is too much pressure on existing mental and social health services.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Some off-reserve community members may wish to return to Webequie First Nation to participate in new employment opportunities should they become available; however, it cannot be predicted how many off-reserve members would return. As it is not possible to determine how many off-reserve community members would return to the community, it is not possible to predict whether a potential adverse health impact would occur.</li> </ul>	<ul style="list-style-type: none"> <li>Childcare services;</li> <li>Elder services; and</li> <li>Mental health services.</li> </ul>	Indirect
Access to transportation services	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Available modes of transport may become more in demand due to the need to bring in supplies and personnel during the construction phase. This may make access to existing transportation options more difficult and make it harder for community members to seek care or other services off-reserve. The increased wait times may have an adverse impact on health.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Community members indicate that one of the barriers to accessing services outside of the community was due to being unable to arrange transportation due to the cost or availability. Transportation delays can result in delayed healthcare service, including the possibility of loss of life. The WSR would provide access to community members to the Ring of Fire area, which is not connected to the provincial highway network, nor does it have good and services available close to it. Therefore, community members can anticipate that the road would be useful in providing year-round, more reliable passenger travel and delivery of good and services to mining explorers and operators in the McFaulds Lake area.</li> </ul>	<ul style="list-style-type: none"> <li>Improved mobility and travel options</li> </ul>	Indirect
Access to emergency response services	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Construction activities from the WSR may increase demand for emergency response services. This would result in a higher burden on these services, negatively impacting the physical mental well-being of members of Webequie First Nation. However, it is expected that construction camps will have first-aid stations and occupational health and safety staff to address minor injuries and illness. More serious incidents are expected to be rare and use emergency helicopter evacuation measures. As such, if there are no additional strains on the limited existing emergency response services in the community, there are expected to be no adverse health effects.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>The operations phase of the WSR may increase demand for emergency services mainly related to vehicle accidents, and possibly impaired driving. These incidents would increase the need for emergency response services and put a higher burden on these services, having some limited negative impact on the mental well-being of members of Webequie First Nation.</li> </ul>	<ul style="list-style-type: none"> <li>Availability of emergency services</li> </ul>	Direct and indirect
Childhood Development	Not applicable	<p><b>Construction Phase</b> – There are no anticipated effects.</p> <p><b>Operations Phase</b> – There are no anticipated effects.</p>	<ul style="list-style-type: none"> <li>Available services</li> </ul>	Not applicable

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
<b>Proximal / Level 1 Determinants of Health – Individual, behavioural and biological factors</b>				
Mental well-being, including prevalence of depression and anxiety	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ Construction and related activities that make major changes to a cherished landscape and ecosystem may lead to solastalgia or ecological grief. Elders and community members who feel a deep connection to their traditional lands and waters may experience ecological grief. However, for those who look forward to the Project providing them with a link to the outside world and employment opportunities, they might feel hopeful during construction and look forward to using the WSR.</li> <li>▪ Presence of construction camps and external construction workers, who are historically primarily men, may induce fears for safety and security within some community members and affect their mental wellness, particularly for women, girls and 2SLGBTQQIA individuals. The feeling of vulnerability has the potential to diminish the sense of safety and security, which are crucial for mental health and overall well-being.</li> <li>▪ Noise from construction activities may disturb some community members leading to feelings of irritability and a decline in mental wellness. Community members who are close enough to be affected by construction-related noise may experience increased annoyance and irritability, but this may be short-term.</li> <li>▪ During the construction phase, employment that some members may get may change their interactions with the community. While in construction camps, community members may experience feelings of loneliness and isolation, and experience racism and discrimination. The workers could develop negative mental health outcomes, as may their families who are without them during shifts.</li> <li>▪ It is important to protect cultural sites for future access and use by the community members to maintain their spiritual and mental wellbeing.</li> <li>▪ The construction phase would also be tied to jobs and better income which may improve positive effects on mental health in the community. However, these potential positive health benefits would only be to those members of the community who benefit from the employment opportunities.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ The WSR will only improve access to goods, services, and reduce feelings of isolation of community members once it connected to the provincial highway network via the Marten Falls Community Access Road and the Northern Road Link, both of which are going through the Impact Assessment process. Hence, it is not possible to say at this whether the positive health benefits expected from the potential increased and easy access to the provincial highway network will happen.</li> <li>▪ The WSR maybe a means through which non-community members and transient workers working in the Ring of Fire area may enter the community. Concerns have been expressed by community members regarding the safety of youth, women, and girls, which could lead to negative mental and physical wellness outcomes. Due to wealth disparities between high-income transient workers and community members, an increase in the prevalence and availability of alcohol, drugs, and sex to service the high-income population is a concern as those with mental health challenges are vulnerable to addiction behaviours.</li> <li>▪ Webequie community members, particularly youth, may have more employment opportunities which could positively increase mental health and related outcomes. However, employment opportunities may increase their exposure to racism and discrimination negatively impacting health and well-being and leading to negative health outcomes.</li> <li>▪ For workers employed in the Ring of Fire area, particularly youth, long shifts in employment can increase stress and lead to negative mental health outcomes due to decreased time for traditional, spiritual, and cultural practices.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Need for mental health services; and</li> <li>▪ Prevalence of mental health crises and disorders.</li> </ul>	Indirect
Substance use, including alcohol and drugs	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ Heightened exposure to outsiders, external influences, as well as additional health and safety risks may lead to greater and easier access to illegal drugs and alcohol and result in negative health impacts to the community. These concerns were expressed by many community members over the course of engagement (Intrinsik. 2023b).</li> <li>▪ Members of the community who are employed during the construction phase and who must leave the community for employment may have increased access to alcohol and illicit drugs in the workcamps. This could lead to new or increased use of these substances to cope with feelings of loneliness, isolation, and mental uncertainty due to increased exposure to difficult situations or oppressive atmospheres. This could lead to the negative health outcomes associated with alcohol and drug overuse.</li> <li>▪ Women and girls could indirectly experience a disproportionate increase in physical and sexual violence due to increased access to drugs and alcohol for family members and/or partners.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ Community members who travel to the Ring of Fire area, or external workers who travel from the Ring of Fire area can bring in illegal drugs and alcohol, which could increase how much of these harmful substances is available in the community, and thereby potentially increase their use and addiction and mental health issues. This has negative impact to the health of not just users, but the community as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rates of substance use (perceived or quantitative)</li> </ul>	Direct and indirect

Determinant of Health	Project Phase	Pathways and Potential Health Effects	Effect Indicators	Nature of Interaction and Effect (Direct or Indirect)
Diet, including consumption of traditional foods	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ How store-bought food enters the community will not change during this phase. Therefore, the costs and availability of market food items are expected to be consistent.</li> <li>▪ It is possible that workers who leave the community to participate in construction activities will no longer have the time to participate in traditional hunting activities. Therefore, there will be less available traditional foods in the community for choice of nutrition consumption. This may have some potential negative mental and physical wellness effects. Those who rely more heavily on traditional food sources, such as older adults, will be disproportionately affected by a temporary reduction in traditional food choices and change in diet.</li> <li>▪ It is possible that the noise disturbance from construction operations may cause some limited disruptions to the habitat of wildlife used as traditional food sources, temporarily disrupting the availability of traditional food items. The uncertainty around the availability of a traditional food source may change the dietary patterns of community members temporarily, and if sustained over several seasons, may begin to infringe upon food security, and in turn diet. This could lead to potential negative health impacts.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ Community members will have increased access to the land as more territory will be able to be reached by car, ATV, or snowmobile. More community members may be able to access hunting, gathering, and fishing grounds thus increasing access to traditional food sources for dietary needs, thereby improving health outcomes associated with eating more traditional foods.</li> <li>▪ It is possible that non-members of Webequie First Nation would be able to use the road to access new hunting locations, and this may impact land animal, fish, and plant populations negatively. Hopefully, Provincial regulations will ensure stable populations of wild game for Webequie First Nation community members wanting to practice traditional food gathering techniques. An expected neutral effect to wellness is anticipated if regulations are adhered to.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Choice and availability of traditional and store-bought foods</li> </ul>	Indirect

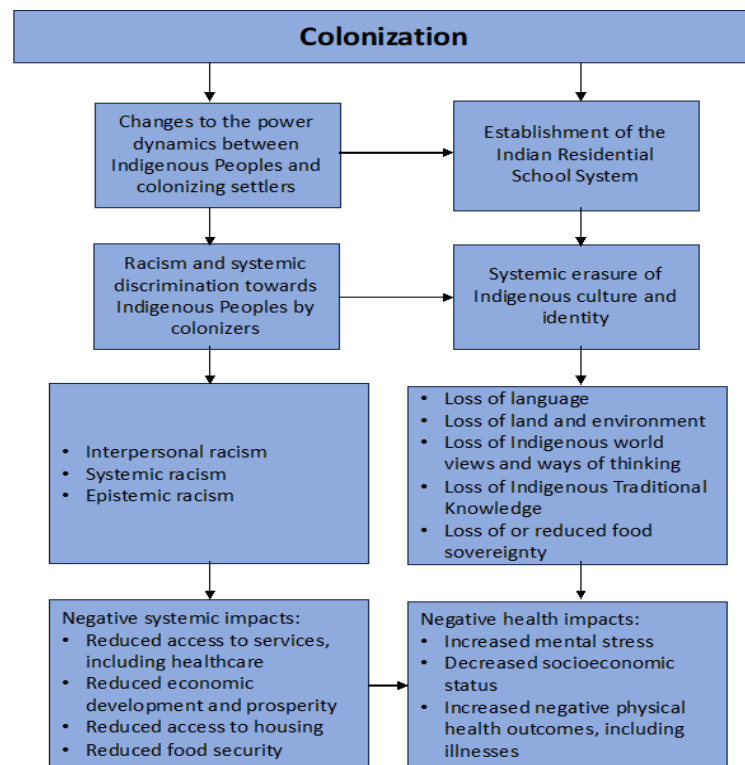
## 17.3.2 Structural / Level 3 Determinants of Health

Structural (or Level 3) determinants of health include the following structural and equity factors, including racism and colonialism:

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

### 17.3.2.1 Colonization and Trauma from Residential Schools

From interviews with Webequie First Nation, community members expressed concern for Indigenous youth who are born into a society of systemic racism, discrimination, cultural genocide, and trauma from residential schools (Intrinsik, 2023b). Many community members are dealing with trauma from being born into or enduring a broken system where they lost their cultural lands and their way of life was disrupted (Intrinsik, 2023b). Elders have expressed the need to work through intergenerational trauma that is stuck in the body by performing spiritual ceremonies, stating that trauma can affect both mental and physical health (Intrinsik, 2023b).



### The Systemic Impacts to Indigenous Peoples due to Colonization

Indigenous women and children have been subject to many historical and socio-economic factors which have contributed to different types of traumas. This can include having witnessed or experienced sexual assault, the relocation of Indigenous communities and being forced into new settlements, and suffering

associated with residential schools (InterGroup, 2024). The collective trauma held by Indigenous peoples in Canada has led to net historical violence being passed on to new generations (InterGroup, 2024). Indigenous women and youth are at a higher risk of experiencing gender-based violence given the existing systemic challenges on reserves, where there are often few services, programs, and opportunities to support them (InterGroup, 2024). Knowledge holders expressed concern for women and their ability and willingness to seek social support and services in the community due to social stigmas because of the shame taught by residential schools (SNC-Lavalin, 2022a). The traumas brought on by the residential school system remain within the community and continue to negatively impact the mental health and substance use addictions challenges of Webequie members (InterGroup, 2024).

## **Construction Phase**

The Project may temporarily disrupt access to traditional lands and ways of life during the construction phase by temporarily disrupting hunting, fishing, and ceremonial practices potentially leading to dislocation and a temporary loss of identity. This may amplify feelings of colonial control and exploitation of land, which may bring up past trauma from displacement and land theft. These indirect impacts may be temporary and last only as long as construction activities disturb land meant for traditional hunting, fishing and ceremonial practices.

Even though it is expected that construction camps will be 'dry' (i.e., no alcohol or illegal drugs can be brought in) (refer to Section 4), construction of the WSR may also allow for easier entry of illegal drugs and alcohol into the community through outside construction workers (Intrinsik, 2023b; SNC-Lavalin 2022a; SNC-Lavalin 2022b). This may further temporarily exacerbate existing addiction issues, many of which are linked to intergenerational trauma rooted in experiences from residential schools. This could then temporarily lead to higher rates of substance use and mental health issues, which could increase dependency on healthcare system within the community.

## **Operations Phase**

The Project may provide a link to employment opportunities in the Ring of Fire area and promote positive economic growth and development due to the number of employment opportunities available. The Project itself is only projected to provide four jobs during the operations phase (Section 15). Should there be increased jobs due to the link with the Ring of Fire area, it will improve the physical and mental wellbeing of Webequie First Nation by enhancing the community's right to self-determination and self-governance (i.e., determine its own path by overcoming systemic marginalization due to pre-existing colonial policies), economic growth and access to services, including mental health services to address the intergenerational trauma in the community. During interviews and focus group discussions, community members indicated that they believed the WSR would help address the impacts of colonization and the intergenerational trauma in the community (Intrinsik, 2023a; Intrinsik, 2023b).

The WSR may also allow for easier entry of illegal drugs and alcohol into the community (Intrinsik, 2023b; SNC-Lavalin 2022a; SNC-Lavalin 2022b). During the operations phase this may be due to outsiders who enter the community through the WSR, and also through community members who can easily access other areas (i.e., in the Ring of Fire area) through the WSR. This may further exacerbate existing addiction issues, many of which are linked to intergenerational trauma rooted in experiences from residential schools. This could lead to higher rates of substance use and mental health issues, which could increase the dependency on the healthcare system within the community.



### 17.3.2.2 Racism and Social Exclusion

Indigenous Peoples have experienced racism, discrimination, oppression, and assimilation since contact with European colonizers. European colonizers imposed Western laws, social hierarchy, economic dominance, and power distributions that have influenced Indigenous health and wellness across generations (Reading and Wien, 2009). Racism and social exclusion permeate every intermediate, proximal, and distal social determinant of health through the creation and implementation of policies that create barriers, and enforce inequities for Indigenous people's access, use, and relation to social, economic, political, and health care services.



Racist treatment toward Indigenous peoples results in a lack of trust in the system, which perpetuates a cycle of lack of access, lack of treatment, poorer health and wellness outcomes, and a disproportionate burden of disease and ill-health among Indigenous people (NCCA, 2014).

Community members expressed that they experience racism from professionals such as teachers, doctors, nurses, or police (Intrinsik, 2023a, 2023b). Approximately 44% of respondents to the health survey in Webequie identified that racism and/or other forms of discrimination in health care presented a barrier to accessing health services they needed (Intrinsik, 2023a; results should be interpreted cautiously due to low sample size). They have said they also experience racism when seeking education outside of the community, and in extreme cases, this ends in violence (Intrinsik, 2023b, 2024).

#### Construction Phase

Community members working in construction jobs may have to live in construction camps with non-community members, and it is possible that these members may experience feelings of loneliness and isolation, and experience racism from external workers who join the construction workforce. Due to this negative treatment, members of the community may develop negative health outcomes (i.e., stress, substance use, and mental wellness struggles). Further, there could be negative effects to the workers' family as they are without a family member during shifts, and when the worker returns there could be feelings of isolation and resentment. Experience suggests that Indigenous men employed by major resource projects can face racism and discrimination from other employees which can be a catalyst for family violence against women, children and elders when they return home (Gibson et al., 2017; InterGroup, 2024).

#### Operations Phase

It is anticipated that there will be no impacts to Webequie First Nation related to racism and discrimination during the operations phase of the WSR. It is not known how many outsiders would have access to Webequie First Nation during the operations phase, and as such it cannot be anticipated what, if any, impacts there would be during the operations phase.

### 17.3.2.3 Local Economic Growth

The economic health of Indigenous communities has important effects on the health of its residents. Just as cities and towns with more economic resources are able to enhance the health of their citizens by investing in and improving these services, as well as the infrastructure, Indigenous communities who experience economic prosperity, can improve services and housing for community members. Hence, activities or developments that increase economic growth can also positively impact the health of the local community. Transportation projects, such as the Webequie Supply Road, can play a role in economic development, which can in turn have positive social and health impacts.





*“[C]ommunity ownership and the acknowledgment of the importance of long-term profitability and growth of businesses created, not as an end but as the means to an end... [some of which] included the creation of employment with characteristics that ‘fit’ the interest, capabilities, and preferred lifestyles of community members; control of traditional lands and activities on these lands; and the creation of wealth to fund education, health and wellness, housing, and other social programs.”*  
(Anderson et al, 2006).

## Construction Phase

The overall economy in the LSA and RSA will be positively affected by the increased spending during the Project’s construction phase. During the construction phase, there will be a total effect on GDP of \$41,141,235, approximately 44% of which is attributed to the first year of construction. Approximately 93% of the effects on Webequie First Nation’s GDP is due to the direct project activities and expenses (Section 15). Direct, indirect, and induced effects on local business activities and labour opportunities locally will occur during the construction phase of the Project, because of increased local Project employment and expenditures. Household spending could then increase as business, employment, and household income are positively influenced by the new economic and employment activities from the construction phase (Section 15).

Increased workforce participation and further development of existing and new businesses to participate in the supply chain could increase Webequie First Nation’s capture of these effects to the overall economy. Approximately 50 direct on-site employment positions are expected to be filled by Webequie First Nation over the construction period (Section 15).

Positive economic growth in the Webequie community will promote better jobs and availability of services, which in turn has the potential to increase socioeconomic status and improve health and wellbeing in the community, especially for those who benefit from jobs. During this phase it will be important to identify ways in which diverse population groups in the community benefit equally, so some are not left behind. Women, youth, individuals with disabilities may not benefit as much as men, if measures are not put in place before construction starts.

## Operations Phase

Due to the remoteness of Webequie, transporting goods to the community is significantly more costly than areas further south in more urban areas contributing to the high cost of living associated with remote fly-in communities. Based on responses received from the socio-economic survey, it was found that community members are hopeful that the WSR will bring improvements to the economy, including better food and gas prices (Section 15). Community members also hope that employment and business opportunities will increase leading to improvement in the cost of living, and community involvement because of WSR (Section 15).

The direct major downstream impact of having a new transportation system, such as a road, is the improvement in accessibility and mobility effects. Webequie First Nation will have access to the Ring of Fire area after the completion of the WSR (Section 15). It is expected that this will significantly increase access to economic opportunities, specifically surrounding the Ring of Fire area (Section 15).

Both the construction and operation phases of the Project will result in Webequie’s overall economy being positively affected. This is mostly related to direct project activities. Community members are hopeful that the cost of living (e.g., gas prices, grocery costs) will decrease because of the Project (Section 15).

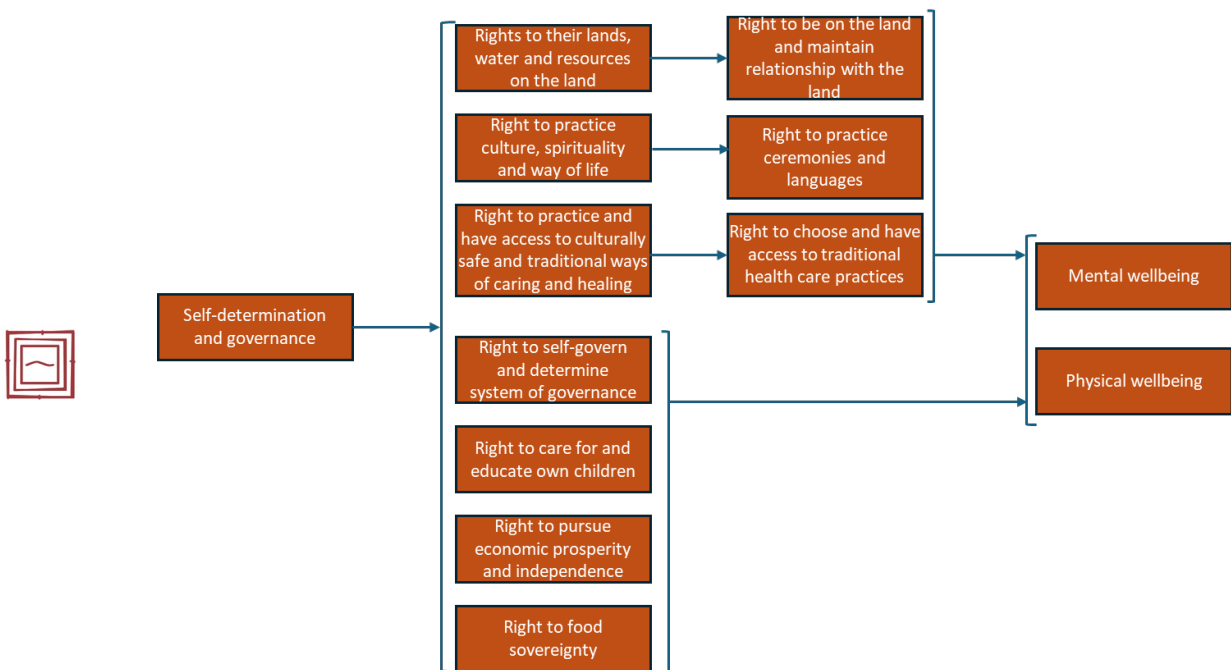


The other LSA communities will also be positively affected by the construction and operation phases of the Project by increasing economic development activities in the area including business development, access to services, advisory services, and employment counselling (Section 15). The RSA's overall economy will also be positively affected by the Project in a similar manner.

As discussed in "Construction Phase" above, positive economic growth in the Webequie community will promote better jobs and availability of services, which in turn has the potential to increase socioeconomic status and improve health and wellbeing in the community, especially for those who benefit from jobs. It will be important to identify ways in which all community sub-groups, including women, youth and those with disabilities benefit just as much.

### 17.3.2.4 Self-Determination and Governance

Self-governance in First Nation's communities is an important factor for the health and well-being of community members (Halseth and Murdock, 2020). Culturally relevant governance structures increase feelings of empowerment, and confirmation of identity which is associated with positive physical and mental health outcomes (Halseth and Murdock, 2020).



**Key Interactions Between Self Determination and Governance, Indigenous Rights, and Mental and Physical Well-Being.**

The introduction of colonial ideologies into Indigenous societies resulted in the purposeful exclusion of women from community decision making, consultations, and negotiations (Bond and Quinlan, 2018; Allan and Smylie, 2015). Prior to contact with settlers, Indigenous communities had a complex structure of self-governance that recognized women's participation and contribution in governance and stewardship. The purposeful exclusion of women during engagement between communities, government, and industry on matters that concern individuals, families, and community members contributes to the social suppression of women, and perpetuates ideas related to colonial patriarchy, and gender inequalities (Bond and Quinlan, 2018).

Providing Indigenous peoples with funding for only mainstream health organizations to provide services to First Nations peoples perpetuates a lack of capacity for First Nations to address health services themselves, and therefore, prevents communities from breaking cycles based on colonial enforcement of Western biases non-traditional healing methods (Halseth and Murdock, 2020; Assembly of First Nations, 2017). The lack of funding support for all members of the community (i.e., “status” and “non-status” individuals) restricts access to health services for all (Assembly of First Nations, 2017). Lack of Indigenous-controlled, culturally appropriate funding for health care services for all community members leads to a lack of care, and therefore an increase in negative health outcomes for residents (Lavoie, 2008). Further, this disparity in classification, based on colonial laws, creates additional barriers to “non-status” individuals living on-reserve when accessing mainstream provincial health services (i.e., lack of private transportation to services, geographic isolation, and travel restrictions due to winter weather conditions, etc.), which leads to a lack of health care accessed, and contributes to the disproportionate burden of ill-health for Indigenous peoples compared to non-Indigenous people. To promote more positive health outcomes among Indigenous populations, governance structures that are focused on, and supported in, providing culturally appropriate social, recreational, and health services for all community members tend to promote more social cohesion, and therefore higher rates of physical and mental wellness, among community members (Assembly of First Nations, 2017; Marchildon et al, 2021).

### **Construction Phase**

It is recognized that community exercising its Indigenous rights and sovereignty leads to positive health outcomes for the community.

As the proponent for the Project, for the Webequie community to fulfil its right to self-determination, it is imperative that the community be involved in the planning and decision-making process for the Project throughout its construction phase. If conditions occur in which the community feels that control has been taken away from them, it may impact their identity as an independent Nation that has the right to govern itself. During community engagement, it was reinforced that members of the community would like to be involved throughout the project decision making process. It was emphasized by a member of the community that clarity with the decision-making process is very important (Intrinsik, 2024).

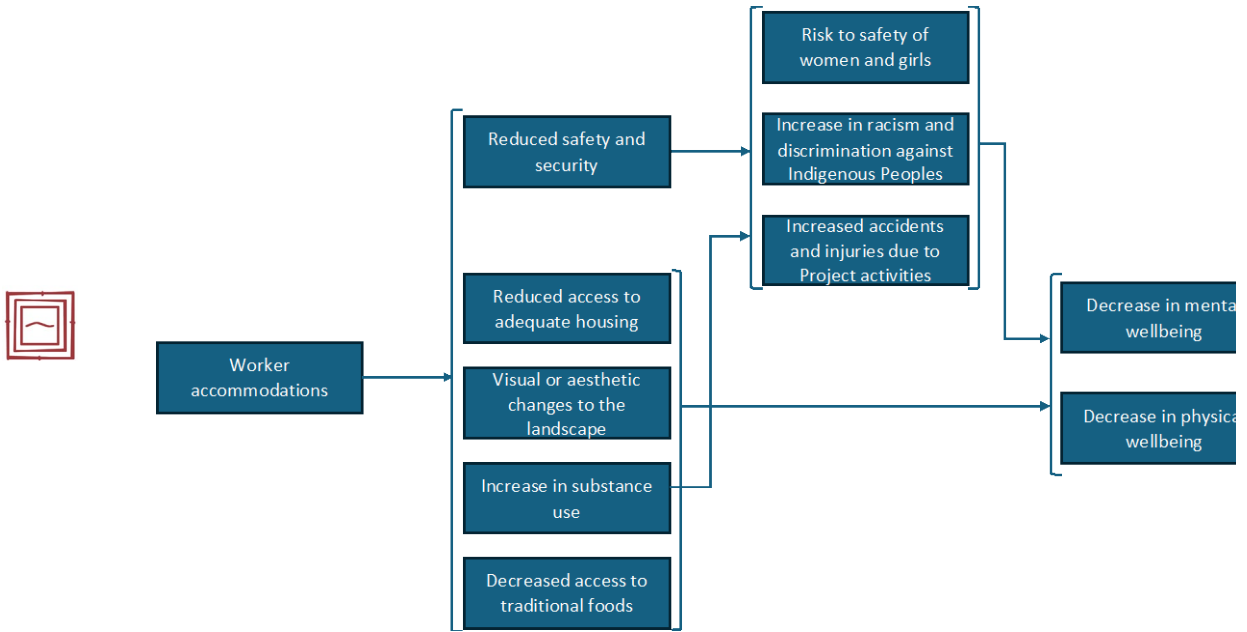
### **Operations Phase**

As the proponent for the Project, Webequie First Nation demonstrates the community’s need for the Project. Building the WSR would be a positive step towards Webequie First Nation increasing their self-determination and self-governance, resulting in positive physical and mental health outcomes.

#### **17.3.2.5 Worker Accommodations**

Large-scale projects can have a major impact on Indigenous communities. In addition to bringing in economic opportunities (i.e., increased employment, increased income, increased education and training opportunities, increased access to social and health services, increased business opportunities), large-scale projects require an influx of outside personnel to work in the region, either temporarily or for longer durations, and these personnel are often housed in work-camps that can significantly influence the health and wellbeing of surrounding host communities. Work-camps house mobile workers who stay at the camp for their shifts and often leave after the work is complete.





**Linkages Between Worker Accommodations and Other Determinants of Health**

### Construction Phase

These workers can offer an economic boost to nearby communities as they spend a portion of their income on goods and services, but they can also increase the burden of drugs, alcohol, violence, and sexual violence in remote communities (Goldenberg et al., 2008).

Webequie First Nation, and other First Nations, have expressed sensitivity and concern related to temporary construction camps where workers are brought temporarily to the area to support construction (refer to Section 4). The implementation of work camps may disproportionately affect the feelings of safety and security of Indigenous communities, especially women, girls and 2SLGBTQQIA individuals, who may be exposed to disproportionate levels of sexual violence, abuse, and sexually transmitted infections (Section 14). This can be from an increase in the consumption of drugs and alcohol, or because women, girls and children can be targeted for trafficking, sexual coercion, or unwanted sexual advances (Gibson et al., 2017; Gibson and Klinck, 2005). Overall, anti-Indigenous racism, if present in the construction camps, may lead to negative stereotyping of the Indigenous workforce and cause them harm. This may cause negative mental wellness outcomes and feelings of social isolation. Webequie community members who are participating in construction activities may experience negative impacts from being isolated from friends and family, stressful work environments, and a lack of connection which can lead to increased substance misuse (Section 14). Additionally, chronic conditions, injuries, and illnesses may emerge in construction camps and can negatively impact the community by overwhelming the existing healthcare services (Section 14). The Project may allow for easier access to illicit drugs and alcohol illegally brought in by external construction workers, exacerbating physical and sexual violence, and other existing addiction issues (refer to **Section 17.3.4.2**).

Off-reserve community members who participate in construction-related activities may wish to stay in the community, which may over-burden the housing capacity and demand for services in Webequie. These services are already experiencing pressure, and additional pressure would increase pre-existing housing concerns. However, it is not known how many off-reserve members may move to the community. In addition, it is proposed in the Community Readiness Plan (Appendix N) that there may be temporary

accommodations in the Webequie community during the construction phase, which will ease any burdens that could be placed on the Webequie community's housing and infrastructure. As such, this impact, and its resulting health effects are unlikely.

### **Operations Phase**

The construction camps will be decommissioned upon completion of construction as they will not be required for operation of the Project (refer to Section 4). As such, there is not expected to be any worker accommodation during the operations phase and therefore there is no impact to Webequie First Nation.

## **17.3.3 Intermediate / Level 2 Determinants of Health**

Intermediate (or Level 2) determinants of health include the following physical environment, education, service access and social, cultural and economic factors:

- Physical environment: Air quality, noise level and vibration, water quality, light pollution, and housing;
- Employment and income;
- Education/access to education;
- Food security;
- Social and cultural well-being: Social cohesion and cultural continuity, safety of women and girls, and traffic volume and safety;
- Access to healthcare and other services: Access to a family doctor, access to social, mental and family services, access to transportation services, access to emergency response services; and
- Childhood development.

### **17.3.3.1 Air Quality and GHG Emissions**

Air quality is intrinsically linked to human health. Impacts to air quality, particularly related to the emission of oxides of nitrogen (NO<sub>x</sub>), particulate matter (PM) (especially PM<sub>2.5</sub>), carbon monoxide (CO), dioxins, and sulphur dioxide (SO<sub>2</sub>) are a concern to human health. Transportation projects and policies can also have impacts on climate change, whether it be related to creating heat islands or rising temperatures due to greenhouse gas emissions from vehicles (Zhang et al., 2013; Gago et al., 2013; Estrada et al., 2017). Change in air quality is a major direct determinant of health and has the potential to impact human health including via release of greenhouse gases (GHGs) that are considered to contribute to climate change.

#### **Air Quality – Construction Phase**

Air emission sources associated with the Project are mainly from the combustion of diesel fuel or gasoline from land mobile equipment, heavy-duty trucks and light-duty vehicles during the construction and operation phases of the Project (Section 9). Community members are concerned that the proposed roads will result in more pollution in and around their traditional territory. Specifically, they are concerned about water contamination, noise pollution, managing industrial dust, littering, polluting nearby waterways and the groundwater with chemicals, oil, and/or dust (Section 9). Community members are concerned that increased dust from the Project during both construction and operation could make it harder to breathe (Section 9). Community members are concerned about keeping the water, fish, plants and wildlife safe from dust. Some members pointed out that dust may negatively impact sturgeon because they are sensitive to changes in their environment or habitat (Section 9; Intrinsik, 2023b). For the construction phase, results from the Human Health Risk Assessment (Appendix P) indicated that all contaminants of potential concern, except for carcinogenic risks associated with estimated chronic exposures to



hexavalent chromium in baseline total suspended particulates (TSP), had estimated risks for the baseline scenario which were less than the Health Canada and Ontario MECP negligible risk levels. Additionally, the results of the Air Quality Impact Assessment (Appendix G) for the construction phase are conservative and have likely overpredicted Project related emissions. Furthermore, the predicted exceedances are localized spatially to areas proximate to the road centreline and are not predicted at existing residences and institutional buildings in the Webequie area, where people are present most frequently.

As per the Human Health Risk Assessment (Appendix P), in the absence of speciated chromium concentrations in soil, the baseline TSP hexavalent chromium concentration was predicted using highly conservative assumptions. Overall, all estimated exposures and risks associated with exposures to hexavalent chromium are considered to be highly conservative and unlikely to represent actual exposures. It is therefore recommended that soil samples be collected from the LSA and submitted for analysis of chromium speciation, with the results used to revisit the conclusions of the Human Health Risk Assessment for this chemical.

### **Air Quality – Operations Phase**

For the operations phase, estimated risks for the baseline scenario were less than the Health Canada and Ontario MECP negligible risk levels except for carcinogenic risks associated with estimated chronic exposures to hexavalent chromium in baseline TSP (Appendix P). Additionally, when cumulative risks are considered, risks associated with PM<sub>10</sub> marginally exceeded the negligible risk level for acute risks at culturally sensitive area CHL25 at 60 m from the road centre line and future residential plot RFP42 at 55 m from the road centre line.

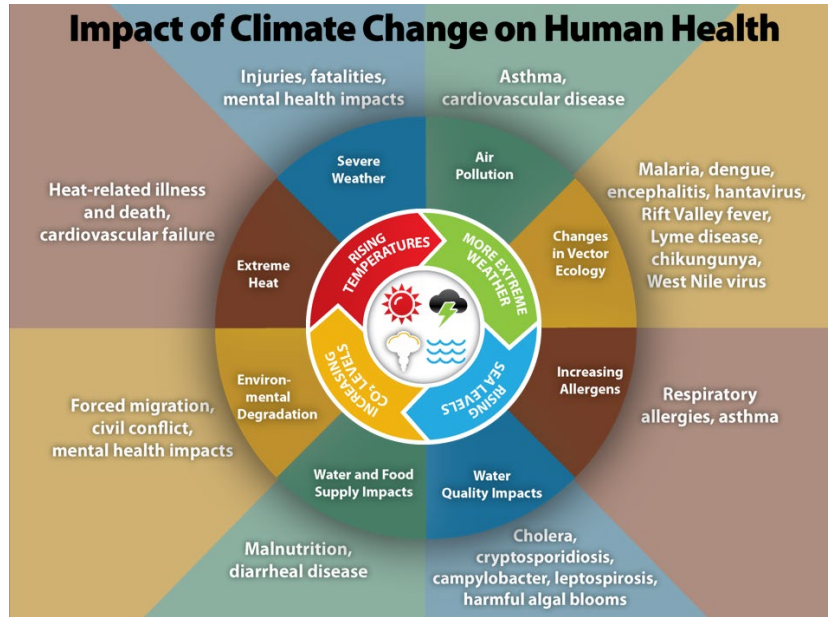
Given the conservatism in the air dispersion modelling conducted for the proposed WSR (Appendix G – Air Quality Impact Assessment Report), the potential for unacceptable risks associated with PM<sub>10</sub> is considered to be low to negligible, and will further decrease once asphalt or chip-seal surfacing is in place.

### **GHG Emissions**

GHGs are a group of gases that trap heat in the Earth's atmosphere, leading to increasing temperatures and various changes in climate and weather patterns; collectively this effect is known as climate change (EPA, 2024). Greenhouse gases include CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and fluorinated gases, such as hydrofluorocarbons and perfluorocarbons. Different GHGs have varying impacts on climate, and are emitted both due to human activities, as well as natural processes. The two most common GHGs, CO<sub>2</sub> and CH<sub>4</sub> are emitted in the greatest quantities due to human activities. Emissions of CO<sub>2</sub> are largely byproducts of fossil fuel combustion or oxidation of fixed carbon due to land use changes (US EPA, n.d.). Methane emissions result from off-gassing associated with agricultural practices, the decomposition of organic materials within landfills, fugitive emissions from oil & gas production, as well as other sources.

Through climate change, GHGs have the potential to impact human health in a variety of ways, including air pollution, diseases carried by vectors, food insecurity, increasing temperatures, increased extreme weather events, aeroallergens, mental health and stress-related disorders and other health impacts (CDC, 2024). Increasing GHG emissions is a global issue that is affected by several factors. Overall climate change can impact both the social and environmental determinants of health (WHO, 2018a).





Source: CDC, 2024.

GHG emissions from construction and operations of the Project were predicted to be relatively small compared to provincial and national emissions (Appendix H – Greenhouse Gas Emissions Report). The impact of GHG emissions from the Project to health is not considered appreciable.

### 17.3.3.2 Noise Levels and Vibration

According to the World Health Organization, evidence from epidemiological studies on the association between exposure to road traffic and aircraft noise and hypertension (also known as high blood pressure) and ischaemic heart disease (also called coronary artery disease which is chest pain or discomfort caused by reduced blood flow to the heart muscle) has increased (WHO, 2011). Road traffic noise has been shown to increase the risk of ischaemic heart disease, including myocardial infarction which is commonly known as a heart attack (WHO, 2011). Both road traffic noise and aircraft noise increase the risk of high blood pressure. High levels of noise during night lead to disturbed sleep, which can result in several adverse health impacts (WHO, 2009).

In addition, using available evidence, a hypothetical exposure–response relationship between noise level ( $L_{DN}$ ) and risk of cognitive impairment in children was formulated (WHO, 2011). It was found that all of the noise-exposed children were cognitively affected at noise levels as high as 95 dBA  $L_{DN}$ , and no children were affected at a relatively low level, such as 50 dBA  $L_{DN}$  (WHO, 2011). As such, according to WHO, the recommended night noise guideline is 40 dB  $L_{night}$ , outside with an interim target of 55 dB  $L_{night}$ , outside (WHO, 2009). Sound levels from 40 to 65 dBA are considered to be in the faint to moderate range (Section 9 – Assessment of Effects on Atmospheric Environment).

One of the major effects of exposure to environmental noise is annoyance. Noise-related annoyance, typically described as a feeling of displeasure evoked by a noise, has been extensively linked to a variety of common noise sources such as rail, road, and air traffic (Berglund et al., 1999; Laszlo et al., 2012; WHO, 2011). Although annoyance is considered to be the least severe potential impact of community noise exposure (WHO, 2011), it has been hypothesized that sufficiently high levels of noise-related annoyance could lead to negative emotional responses (e.g., anger, disappointment, depression, or anxiety) and psychosocial symptoms (e.g., tiredness, stomach discomfort and stress) (Fields et al., 2001;

WHO, 2011; Öhrström, 2004; Öhrström et al., 2006). Therefore, regulations exist in many jurisdictions around the world to limit community noise exposure from stationary sources (e.g., factories) as well as road, rail, and air traffic in order to curtail community levels of annoyance and more severe impacts of community noise exposure. It is important to emphasize that the existence of these regulations/guidelines has not eliminated community noise annoyance and noise related annoyance remains prevalent in many areas.

Those most sensitive to noise include older adults, children, those who have existing health conditions that can be exacerbated by loud noise, pregnant women, hunters, etc.

The project area is naturally quiet, dominated by sounds from wildlife, with minimal external land use. The area includes remote regions like the Winisk River Provincial Park and other wildlife areas, therefore, any noise caused by the development could potentially cause distress to both humans and animals, leading to disruption of quiet in the area (Section 9). There are concerns from community members that the noise might scare away animals, impacting the ability of community members to hunt and access them as a food source (Section 9).

Information from noise sensitive locations were used to characterize the existing conditions and to assess potential effects of noise and vibration from the Project. The project construction and operation activities that involve blasting and use of vehicle, machinery and equipment will increase noise (Section 9). Blasting of rocks with explosives is required to create desired road profiles and to extract rocks and granular for construction and maintenance/operations of the WSR (Section 9). Based on the relatively low volumes of rock needed for the Project, blasting of rock requiring the use of explosives during construction and operation activities is expected to occur on an infrequent basis when aggregate and/or rock materials are required for construction and maintenance activities (Section 9).

### **Construction Phase**

For the purpose of processing and extracting rock and aggregate, the blasting of rock is anticipated to be restricted to a single location along the preferred route (Appendix J – Noise and Vibration Impact Assessment Report). The blasting contractor will ensure criteria is met from the overpressure sound levels of blasting rock.

Construction of the WSR will require aggregates, obtained from two aggregate extraction sites ARA-2 and ARA-4. Although the aggregate extraction locations' equipment has not yet been chosen, one primary crusher with an associated screener, six stackers, three front-end loaders, the movement of material through conveyors, and the movement of heavy trucks throughout the aggregate extraction sites carrying material were selected as the assumed sources of noise (Appendix J). The crusher/screener, stackers, and front-end loaders, and noise emissions were all expected to run continuously in worst-case simulations. The projected noise levels at Construction Camp 2A, located near ARA-2, are projected to exceed the NPC-300 guideline limits by a maximum of 4 dB (Appendix J). These predicted exceedances are considered to be minor and insignificant given that workers would be in the field during the day. In a suburban or semi-rural area, the overall sound levels would not be considered excessive and would meet the NPC-300 guideline limits of 50 dBA (Appendix J). Therefore, noise mitigation measures are not required.

As the construction of the roadway progresses, noise from general construction activities such as vegetation clearing and overburden removal, subgrade compaction, the addition and compaction of base course and final courses of aggregate, and in certain places, bridge and water crossing construction will occur. At several culturally sensitive areas, the highest predicted noise levels exceed the Mitigation Noise Level threshold of 47 dBA (L<sub>DN</sub>) (Appendix J). The locations found within 150 m of the roadway or 300 m of a waterbody crossing are the most affected noise-sensitive areas.



For the current permanent residences within Webequie, no exceedances are anticipated. For about one week, noise-sensitive receptors may be affected due to the noise impacts from roadway construction (Appendix J). This is based on approximately 100 m/day rate of construction. Therefore, noise mitigation measures are not required. Due to bridge construction, noise impacts are anticipated to slightly exceed the threshold of 47 dBA at Construction Camp 1A (CHL-7 and C05) (Appendix J). As no permanent residences will be affected, mitigation measures are not warranted. Construction activity will also cause vibration impacts as construction continues along the WSR route. It is expected that noise impacts will be mitigated by proposed mitigation measures outlined in **Section 17.4**, and as such negative impacts to health are unlikely.

Noise from construction activities may affect cultural practices like hunting, if high noise levels end up displacing wildlife. Community members prefer to harvest in areas where it is quiet. Increased noise in harvesting areas may increase physical disturbance and impact harvesting activities.

### **Operations Phase**

The changes in sound levels for some of the culturally sensitive places are predicted to surpass the 5 dB threshold specified in the MECP/MTO Joint Noise Protocol, based on the anticipated operational sound levels. It is anticipated that the overall operations phase sound levels will be below or equal to 45 dBA, which is deemed suitable for a quiet rural environment (Appendix J – Noise and Vibration Impact Assessment Report). Based on Health Canada’s Guidelines, the operational noise impacts are not expected to result in long-term community annoyance.

The Project’s operations phase (i.e., the roadway in use) is not associated with any substantial sources of underwater noise or vibration (Appendix J). Therefore, it is unlikely that the operations phase of the Project will have any vibration impacts. Infrequent blasting at aggregate extraction site ARA-4 may be required to maintain stockpiles of rock for road maintenance and repairs; however, this would not be considered a routine activity associated with the operations phase (Appendix J). Therefore, it is unlikely that the operations phase will have any significant noise and vibration impacts and in turn, no anticipated impacts to health.

### **17.3.3.3 Surface Water Quality**

Indigenous Peoples have a special relationship with the land and water and this connection is based on practices and traditions since time immemorial. Indigenous peoples believe that everything taken from the Earth should be used to its fullest capacity and with the awareness of how much is taken and how much is going to be available for future generations. The Traditional Knowledge that First Nations pass down to generations is vital in maintaining their sustainable practices. Indigenous communities have historically thrived in subsistence activities, such as, hunting, fishing and harvesting. Traditional foods consumed include moose, deer, beaver and bear, and plants, such as, wild rice and berries, and their cultural and ritual practices are also heavily reliant on use of water. This implies that the availability of clean, unpolluted water is vital in carrying out traditional activities, including cultural and ceremonial practices.

Surface water quality can affect the health of aquatic organisms, such as fish, and subsequently may affect the people who consume these fish. To the general population, the concentrations of contaminants that are present in fish are not a health concern. However, vulnerable groups such as pregnant women, nursing mothers, the elderly and children are at comparably higher health risks from eating contaminated fish. In addition, populations that consume fish frequently or in large quantities, such as First Nation communities, are also considered to be at greater health risks from eating contaminated sites. A number of regulatory agencies recommend that vulnerable populations should pay special attention to the amount and type of fish they consume (MECP, 2024; US EPA, n.d.).



Recreational use of surface water bodies for activities such as swimming and fishing, has a direct health benefit, as well as indirect benefits via the social nature of the activities (WHO, 2006). Contamination of nearby downstream surface water bodies would not only impact a community's ability to use the surface water body for recreational purposes, but also adversely impact fish populations in the surface water, and if ingested by people would impact health.

Recreational water uses can provide many health benefits and improve overall well-being. Swimming, for example, is acknowledged as one of the most beneficial forms of exercising and also a rehabilitation therapy. However, poor surface water quality, for recreational, leisure and traditional water uses, can lead to potentially unsafe conditions that can pose various risks to human health. People can be exposed to health risks that are linked to chemical and physical hazards, and microbial activity. Chemical hazards can include contaminants that are inputted into the watershed through discharged water or other forms of contamination, such as petroleum products. Recreational and leisure water uses may pose health risks if there is poor water quality.

Physical hazard of poor water quality can be due to increased suspended solids in the water, where individuals that are in danger of drowning may not be clearly seen by others due to murky waters. Additionally, swimming or accidentally swallowing water that is contaminated by harmful algal blooms can cause health risks including rashes, stomach or liver illnesses, respiratory problems, and potentially cause neurological affects (CDC, n.d.). Water that is contaminated with pathogenic viruses and bacteria, like *Escherichia coli*, pose a risk for infection, particularly if there are many nutrients available in the water body which can increase the number of microbes (WHO, 2006).

### **Construction Phase**

There could be a change in surface water quantity as a result from changes to the surface water drainage patterns and flows during construction and throughout operations. During construction, dewatering of surface water at waterbodies and groundwater dewatering is likely to occur (Section 7 – Assessment of Effects on Surface Water Resources). This may result in reduced streamflow or water levels in nearby waterbodies. Runoff rates and volumes, infiltration rates, and overland flow paths may also be affected by alterations to land cover from construction, result in decreased infiltration and increased streamflow or water levels. Discharge rates and flow paths may be altered by construction of culverts and bridges at waterbody crossings (Section 7).

Surface water quality can be affected by alterations to drainage pattern and flows in addition to potential spills or releases of chemicals and pollutants (Section 7). Extra sediment may be introduced from dewatering activities or road maintenance activities such as winter snow clearing or vegetation control. Temporary increases to chemical constituents and exceedances of water quality guidelines in nearby waterbodies may occur from short-term discharges of construction water, wastewater, or wash water. Accidental spills or leaks may also occur from construction activities which would reduce the quality of surface water. Airborne particulate matter (e.g., dust) generated by construction activities has the potential to settle directly onto the water surface or be transported by the wind into nearby waterbodies (Section 7).

The sediment quality in waterbodies can be affected by erosion of stockpiles and the road from changes to drainage pattern and flows in addition to potential spills or releases of chemicals and pollutants. Accidental spills or leaks may also occur from construction activities which would reduce the quality of sediment.



Hence, although the full impact of construction-related activities on surface water quantity and quality cannot at present be quantified and risk to human health estimated, it can be predicted that should surface water quantity and quality be negatively affected, this will have negative impacts to health and wellbeing. Webequie First Nation uses the water around the community to harvest fish, for ceremonial and recreational purposes. Impacts to surface water in areas of often use by community members will have mental and physical health impacts. However, at this time, given construction has not started, it is hard to predict the level of the impact.

### **Operations Phase**

During the operations phase, surface water quality can be affected by alterations to drainage pattern and flows in addition to potential spills or releases of chemicals and pollutants (Section 7 – Assessment of Effects on Surface Water Resources). Extra sediment may be introduced from road maintenance activities such as winter snow clearing or vegetation control.

The sediment quality in waterbodies can be affected by erosion of stockpiles and the road from changes to drainage pattern and flows in addition to potential spills or releases of chemicals and pollutants (Section 7). Airborne particulate matter (e.g., dust) generated by road maintenance activities has the potential to settle directly onto the water surface or be transported by the wind into nearby waterbodies which may lead to a reduction in sediment quality (Section 7). Given the magnitude of this effect is known, it is not possible to predict the potential health effect at this time. However, changes in surface water quality will have the same negative health effects as noted in the construction phase above.

#### **17.3.3.4 Light Pollution and Visual Impact**

Artificial light can influence the human body in both negative and positive ways. Artificial light can improve mood, lower fatigue, and reduce eyestrain. Conversely, artificial light can negatively influence the human body (e.g., disrupting circadian rhythms, causing hormone imbalances, sleep disorders, increased rates of mental disorders, and an increased risk of some cancers and other ailments), animals (e.g., through disorientation, avian collisions with buildings, changes to reproductive capacity and feeding patterns, and habitat destruction), plants (e.g., influence on photosynthesis), increase energy cost, and reduce the clarity of viewing the night sky (Bashiri and Hassan, 2014; Nadybal et al., 2020).

Although there is a lack of literature available on the effect of light pollution on Indigenous communities in Canada specifically, it is known that large developments can influence the amount of light pollution in a region, and lead to insufficient sleep, and a decrease in self-reported mental and physical health (Boslett et al., 2021). As Northern Indigenous communities are often situated in rural settings with relatively lower levels of light pollution compared to more urban areas, they may be disproportionately impacted by the light pollution introduced by large scale developments in their territory.

Indigenous communities rely on wild food sources for nutritional, cultural, spiritual, and economic reasons (Batal et al., 2021). In addition to the physiological and psychological influences that light pollution has on human beings, effects to traditional food sources (plant and animal) may occur. Wildlife is known to change circadian rhythms and reproductive trends following exposure to artificial light, which can change the foraging, mating, and hatching behaviour of prey and predators, disrupting ecological rhythms (Faid et al., 2019) and potentially influencing traditional food availability.

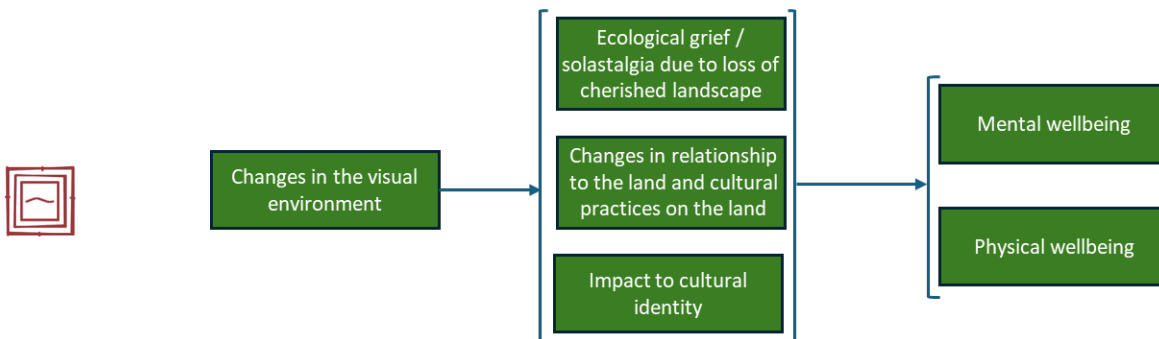
Plants are also influenced by light pollution. For example, trees in a 13-year dataset across the United Kingdom were shown to bud up to 7.5 days earlier in brighter areas than in areas with less lighting (Ffrench-Constant et al., 2016). Although research in Canadian plant species is limited, the potentially early emergence of food sources due to increased light pollution could change the timing of availability of



food for herbivores (Ffrench-Constant et al., 2016) and therefore influence traditional food gathering practices. This change in food-source timing could have downstream effects on traditional food source populations. This can change the success of traditional hunting rhythms, or predator-prey populations which will in turn affect traditional food security.

Canadian Indigenous communities have cultural traditions and oral histories linked to the night sky (Harris et al., 2010). Without clear access to a darkened sky, due to an increase in light pollution (Faid et al., 2019), access to their traditional knowledge may be lost. Although little research is available on the cultural influence of light pollution on the Indigenous peoples in Canada, in Australia light pollution has impeded cultural interconnectedness between the night sky and the Aboriginal Australian peoples (Noon and De Napoli, 2022).

Access and connection to the land is important to protect and enhance Indigenous mental well-being and build a strong sense of identity and self-worth, strong interpersonal relationships, and strong cultural beliefs (Middleton, 2022; Salerno et al., 2021). Major visual changes in the landscape and the use of the land itself can have drastic effects to the cultural and spiritual way of life for Indigenous peoples (Government of Canada, 2023a), and in turn to health and wellbeing.



**Factors That Influence Mental and Physical Well-Being When Changes Are Made to the Visual Environment**

### Construction Phase

Project activities during the construction phase included vegetation clearing and grubbing, the construction of support infrastructure such as camps or aggregate sources areas, the construction of structures at waterbody crossings, and the decommissioning and restoration of temporary supportive infrastructure (Appendix R – Visual Impact Assessment Report).

Visual effects are not anticipated to extend beyond 1 km from project footprint and 500 m from the footprint of temporary or permanent supportive Infrastructure (i.e., the LSA for the Visual Assessment) as the landscape in the vicinity of the project study areas is dominated by coniferous woodland (Appendix R).

The visual effects associated with supportive infrastructure components (i.e., construction camps, aggregate source areas, construction access roads, and maintenance and storage facility) will be confined to the LSA for the Visual Assessment and will be limited in extent due to the height and density of the coniferous woodland dominated landscape (Appendix R). The Winisk Lake Crossing was determined to have the highest potential to affect a change in the quality of the visual landscape based on the scenic quality of the existing landscape, the length of the proposed crossing structure, and the extent of the viewsheds from which the crossing structure will be visible (Appendix R).

Changes to the visual landscape (e.g., removal of trees for the road and right of way, or construction of water crossing on previous wide-open areas) may cause a sense of loss or ecological grief to some community members when the road is being built. This may have some potential negative mental health impacts for these individuals.

### **Operations Phase**

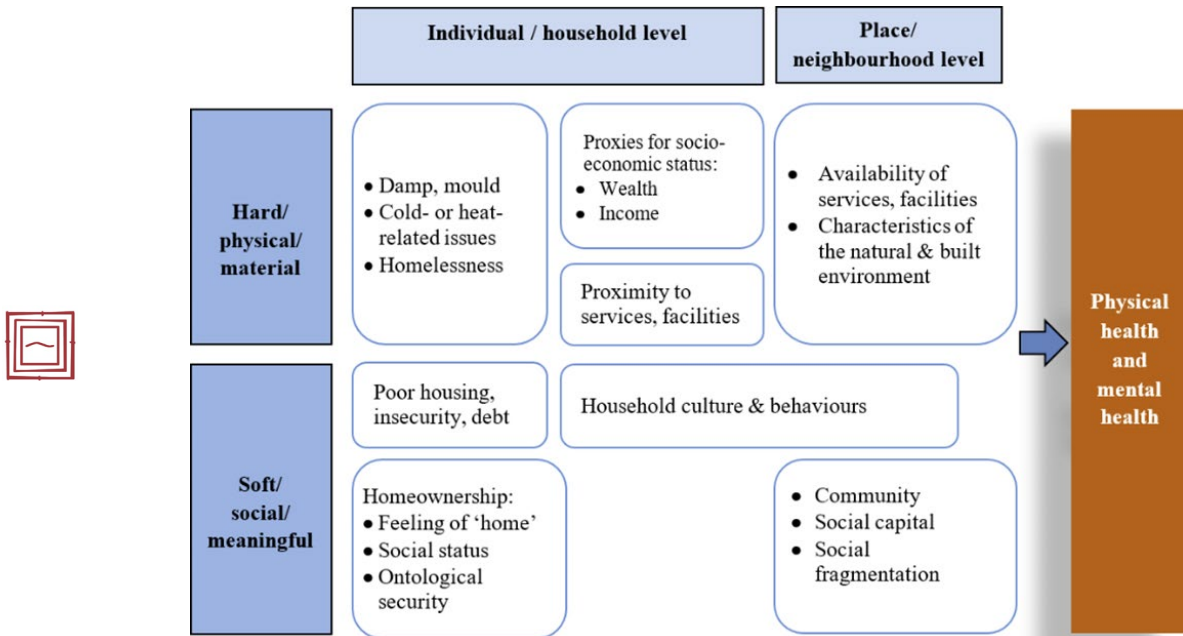
Project activities during the operations phase included the operation, maintenance and repair of road and waterbody crossing structures. The potential effects from these project activities consisted of a change to visual landscape in terms of the visibility (visual prominence) of the Project, and the scenic quality or viewer sensitivity and magnitude/distance. This change in the landscape and their cherished visual environment can cause feelings of ecological grief in some individuals, leading to some mental health impacts.

It is not anticipated that the WSR will be illuminated along its entire length. However, for safety and security, lighting may be required at certain locations such as the east and west terminus points of the road and at supportive infrastructure sites, such as construction camps, rest and maintenance areas, aggregate/rock sites and Maintenance and Storage Facility (Appendix R – Visual Impact Assessment Report). In addition, visibility of the project components, including supportive infrastructure for the Project’s operations would be partially or fully obstructed by surrounding vegetation with the existing height and density of the coniferous woodland. Therefore, potential lighting effects of the Project are predicted to be negligible (Appendix R). Moreover, over time, it is expected that for these areas where the road is visible, community members will get used to the change in scenery. It is not expected that there is any potential for adverse health effects.

#### **17.3.3.5 Housing**

All individuals should have access to appropriate housing according to the Universal Declaration of Human Rights (United Nations, n.d.). Shelter is recognized as a basic prerequisite for health by the Ottawa Charter for Health Promotion (WHO, 1986). Housing insecurity such as lack of access, lack of appropriate housing, and overcrowding can lead to implications of individuals’ health (Raphael, 2016) (e.g., increased risk of tuberculosis, preterm labor, infant mortality, respiratory tract infections, etc.) (Clark et al., 2002; Shapiro et al., 2021; Kovesi et al., 2022). Physical aspects of housing are related to material and quality of housing, which can be dependent on one’s socioeconomic status. Physical location of housing also determines access to services and facilities (Shaw, 2004; Nguyen et al., 2022). Housing has more social and psychological impacts, including determining one’s social status, sense of community and security, as well as social capital and cohesion (Shaw, 2004; Nguyen et al., 2022).





**Ways In Which Housing Can Impact Health**

(Sources: Shaw et al., 2004; Nguyen et al., 2022)

Indigenous people in Canada are over-represented among the visibly homeless in rural and urban locations. Additionally, there is a non-visible component to housing need and insecurity in Indigenous communities. Specifically, overcrowding of housing, and temporary housing at family or friends due to a lack of permanent shelter (Christensen, 2016).

The current state of homelessness and housing insecurity in Indigenous communities can be framed in a colonial context (i.e., intergenerational trauma stemming from the residential school legacy, loss of a sense of belonging, implementation of government managed housing programs, displacement of people from their ancestral lands, etc.) as well as specific health and social needs of Indigenous peoples (i.e., cultural based material, spiritual, relational, and emotional factors that build a home) (Christensen, 2016). To address the disproportionate access to safe and appropriate housing for Indigenous peoples, an approach that focuses on Indigenous culture, traditional homemaking practices, and that is led by Indigenous communities, policymakers and practitioners is needed (Christensen, 2016).

Children and youth spend more time in the home and are more likely to experience the negative health impacts of housing insecurity (San Francisco Department of Public Health, 2019).

For remote communities, there is also the added burden of the cost and logistics associated with affording and delivering needed materials during the short winter road season (Lyeo et al., 2024). Once the materials are on-site, skilled tradespeople are also needed to assemble the homes, which can add to the logistical and monetary barriers to building and repairing housing (Lyeo et al., 2024).

Overcrowding has also been shown to exacerbate family violence (Makinde et al., 2016) and has a direct negative impact on the physical and emotional health of children, and all familial dimensions of health, particularly women's health (Daoud et al., 2013). Indigenous women, who are often forced to live in overcrowded housing due to a lack of appropriate housing, are particularly susceptible to intimate partner violence (Daoud et al., 2013; Ontario Native Women's Association, 2018). For instance, the rates of female victims of family violence in Canada are highest in the Northwest Territories, Nunavut, and Yukon, where households are 'highly crowded' (Public Safety Canada, 2020).



Due to a number of factors including poor housing, lack of fire hydrants, lack of fire-fighting equipment, and a lack of fire alarms, Indigenous peoples are regarded to be more susceptible to fire-related deaths (McMahon and Cribb, 2024). As stated by the Minister of Indigenous Services, many First Nation lives are being lost to fires due to a lack of building and fire codes, poor housing conditions, and overcrowding (McMahon and Cribb, 2024).

Poor housing conditions in Webequie First Nation have had an adverse effect on community members' physical and mental health; for example, young people who share rooms with multiple generations and do not experience enough privacy, overcrowded housing with too many individuals living with them, lack of housing experienced by single mothers, etc. (Section 14; Intrinsik, 2023a; 2023b; 2024). Members expressed the opinion that because young people are trying to escape the conditions of their overcrowded houses, substance misuse and other undesirable behaviours, such as vandalism, are worsened by overcrowding (SNC-Lavalin, 2022a).

Housing shortages and affordability are also critical issues in the other LSA communities. The high costs associated with transporting building materials to remote areas are exacerbating the substandard living conditions and lack of essential services that many of these communities face (Section 14).

### **Construction Phase**

If community members who live off-reserve choose to come stay in Webequie First Nation during the construction phase to participate in construction jobs, it is possible that there may be additional strain on Webequie First Nation's already burdened housing situation, with potential for stress and anxiety in the community related to housing shortage. However, it is proposed in the Community Readiness Plan (Appendix 12) that there may be temporary accommodations built in the Webequie community during the construction phase, which will ease any burdens that could be placed on the Webequie community's housing and infrastructure by off-reserve members seeking employment. As such, this impact, and its resulting health effects are uncertain at this time and will depend on how many off-reserve members return to participate in employment, and what temporary accommodations are built within the community to safely house them.

Due to Webequie's shortage of short-term lodging, any new guests connected to the Project may put further strain on the community's housing (Section 14). Overcrowding can disproportionately impact vulnerable populations who are susceptible to change, including those currently without housing (single parents, women, etc.) and young people (InterGroup, 2024). Overcrowding could contribute to social issues and health concerns, which could be further stressed by the Project (Section 14; Intrinsik, 2023b). Hence, all new guests who are not community members should be housed in the construction camps for the Project. This will limit additional burden on an already stretched housing system and limit health impacts.

### **Operations Phase**

Once operational, the Webequie Supply Road may be able to reduce costs related to the transportation of supplies and materials for housing and therefore boost housing availability. Many Webequie members have conveyed optimism regarding the Project's capacity to enhance the quality of homes within their community (SNC-Lavalin, 2022a; 2022b).

However, it should be noted that for the WSR to allow for cheaper entry of goods and/or services related to building of new housing and repairing existing housing, a connection to the provincial highway system that connects Webequie to other communities and municipalities would need to happen. However, connecting the WSR to the rest of the province also requires the construction of the Northern Road Link



Project and the Marten Falls Community Access Road Project, both of which are also going through the federal Impact Assessment process. Therefore, it cannot be determined at this time if the Project's operations phase will have an effect on housing, apart from the one construction camp which is expected to be converted to community housing to house any off-reserve members, medical staff, educators, and any other Project operations related staff. However, even with the one construction camp converted into housing, it is expected that some strain on housing can be relieved, with some potential for limited positive health impacts, especially if visiting health care staff can stay more easily.

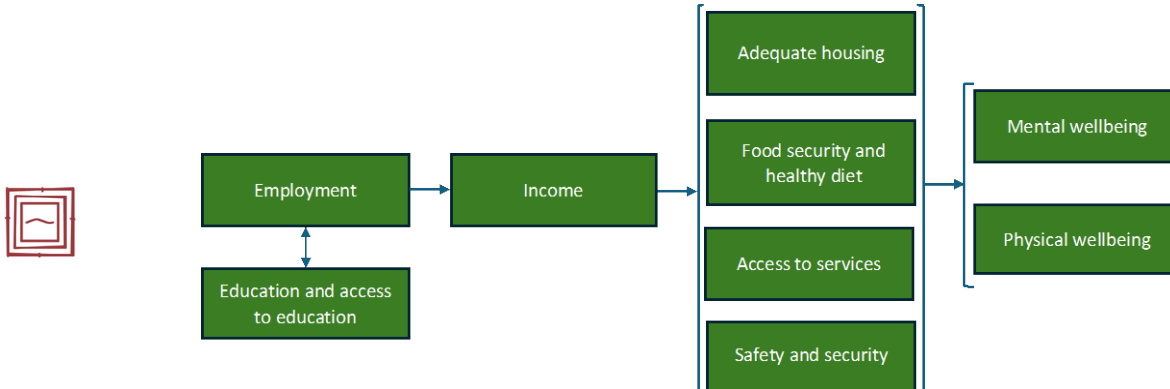
### 17.3.3.6 Employment and Income

Income and social status are closely connected and often combined into the term 'socio-economic status'. Socio-economic status is a long-established risk factor for population health (Winkleby et al., 1992). A systematic review about the influence of social determinants on the health and well-being of Indigenous peoples in Alberta revealed a strong association between unemployment and health inequity, leading to an increased risk of cardiovascular diseases, mental health issues, and harmful lifestyles characterized by alcohol and substance misuse, poor dietary habits, physical inactivity, and domestic violence (Kolahdooz et al., 2015). Unemployment and low-income status are also linked to obesity, and childhood development and behaviour (National Collaborating Centre for Aboriginal Health, 2017b). For example, children raised in low-income situations are less likely to be academically successful due, in part, to lack of nutritious food. This inequity leads to disadvantages later in life (e.g., impeded physical abilities, cognition, and health outcomes), thus perpetuating a cycle of unemployment and low-income status across generations. In Indigenous communities, negative health outcomes are exacerbated by a lack of access to basic goods, services, and medical support thus creating a culture of inequity (Kim, 2019). In Ontario, 53.1% of First Nations members on reserve obtain an employment income, with the average income being \$33,240. This is lower than the average income for all of Ontario (\$55,500) (Statistics Canada, 2023). In Ontario, men on reserve earn on average less than women (\$30,280 and \$36,080 for men and women respectively) (Statistics Canada, 2022).

In remote Indigenous communities, a lack of infrastructure and resource development opportunities contributes to economic insecurity and marginalization which influences health outcomes associated with socio-economic determinants of health (Reading and Wien, 2009). For example, lack of new employment opportunities in the community results in decreased individual and household income, and increased rates of poverty-associated negative wellness outcomes (i.e., mental health, chronic diseases, substance use, etc.). Further, a lack of qualified persons (i.e., health care and education professionals, tradespeople, etc.) within the community decreases the access of community members to services that would influence social determinants of health within the community (i.e., childcare, education, mental wellness services, substance use services, health care service, etc.) and increase the overall wellness of the people in the community (Reading and Wien, 2009).

In general, higher income and social status are associated with better health status, whereas lower income and social status are linked to the opposite. There is abundant research that connects specific health outcomes with income and social status, including birth weight and infant mortality; self-rated health; adult mortality; chronic and acute infectious diseases; mental well-being; social pathologies; and health service utilization (Yen and Syme, 1999; McIntosh et al., 2009; Mikkonen and Raphael, 2010).





**Employment Affects Other Determinants of Health and Can Lead to Physical and Mental Health Outcomes**

**Construction Phase**

Webequie First Nation members may have better jobs and economic prospects as a result of the Project. During each year of construction, Webequie First Nation is estimated to fill approximately 10 direct employment positions which will be located on-site (Section 15). Webequie First Nation is not forecasted to capture any of the direct off-site work attributed to the Project.

Since employment positions will become available for Webequie First Nation, it can be expected that those individual household incomes will be positively affected in the community (Section 15). Employment income generated by the Project for Webequie First Nation has been estimated based on Full-Time Equivalent (FTE) salaries and labour requirements. It is estimated that direct on-site jobs will bring between \$1.8M to \$2M into the community each year (Section 15).

For those who gain employment, it is expected that their income and socioeconomic condition will improve, allowing for better access to healthy foods and other services. This has the potential for positive health impacts. It should be noted, however, that not everyone may benefit equally. For example, women who have childcare and home care responsibilities, youth, older adults, those with disabilities, those without necessary skills and training, may not benefit as much. If left unaddressed, this may lead to increasing inequities within the community and feelings of resentment and reduced social cohesion. Employment and income are major predictors of health and social wellbeing, and it is recommended that the Community Readiness Plan (Appendix N) consider equitable uptake of employment opportunities, as much as possible.

Due to the nature of the indirect work requirements and with the lack of supply chain connections to Webequie First Nation, it is unlikely that Webequie First Nation will capture any indirect employment related to the Project. Workers from the RSA, specifically the Thunder Bay District, are likely to fill the indirect labour positions (Section 15).

During the Project's construction period, shifts are expected to be restricted to 14 days on and 7 days off (InterGroup, 2024). Because of this, Webequie members who worked for the Project during the construction phase might not have as much time to spend harvesting on the land. Since traditional activities can give people a feeling of identity and worth, this poses issues to the well-being of those employed as well as problems for those who are more prone to rely on the traditional economy, such as Elders who may rely on the sharing economy (InterGroup, 2024). Local hiring and training of labour, especially for members of Indigenous communities, will be prioritized for the Project (Section 15).



However, women, young people, and 2SLGBTQQIA individuals, in particular, encounter additional obstacles when attempting to take advantage of these opportunities. Education, training, and/or experience will be necessary to take advantage of the Project's direct and indirect employment opportunities. It might be difficult for Webequie members, especially women and young people, to gain this education and training as stated above as additional education and training for women is already a challenge. Community members may face challenges securing employment as only a limited supply of labourers have attained a post-secondary certificate, diploma, or degree and only a limited number have the required areas of study (Section 15). Although those without proper education will have the opportunity to be trained to develop the new skills that would be required for work on the Project, a significant portion of the labour requirements for the Project may be met by labour force from the RSA (Section 15).

Despite these challenges, community members are hopeful that potential development in the area from the Project might help improve opportunities in education and employment for younger members, as the high cost of living can disproportionately affect vulnerable populations including those who are low-income, youth, Elders, women, and individuals living with disabilities (Section 15). The potential for positive health effects may be limited to those members of the community who can get the jobs.

### **Operations Phase**

The same types of opportunities that exist during the construction phase (economic development related to operations, maintenance workforce training, and youth employment) will exist during the operations phase, but to a lesser extent.

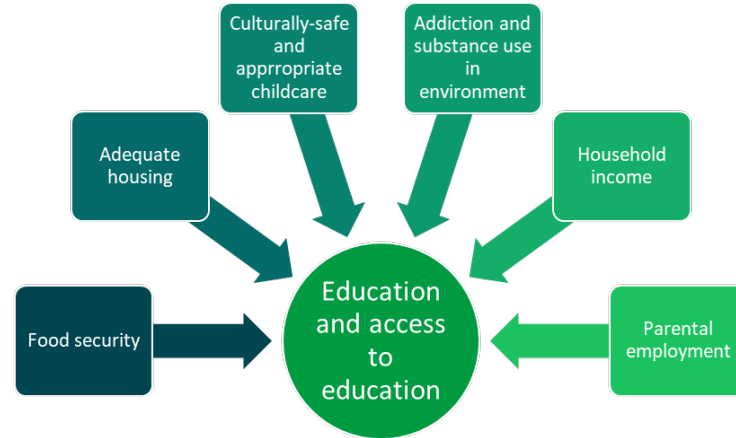
During the operations phase, the total labour income attributed to the Webequie First Nation workforce for the Project is approximately \$302,505 (Section 15). Approximately 85% of this is attributed to the labour income received from direct on-site employment.

It is expected that Webequie members will be able to get jobs in the Ring of Fire area once mining development starts. However, it is not known when this will be, and how many and what kind of jobs will be available. For those who get jobs, their families will benefit, and the same considerations related to inequitable distribution of positive impacts also applies here.

### **17.3.3.7 Education / Access to Education**

Education is used as a predictor of health outcomes, though the factors that influence educational attainment and health are complex and interwoven (Korpál and Wong, 2015; Raghupathi and Raghupathi, 2020). Education has been shown to positively correlate with longer life expectancies, healthier behaviors, and better overall health, as well as lower morbidity from acute and chronic disease (Korpál & Wong, 2015). Those with a higher education have a better chance of improving their socio-economic status which is a long-established risk factor for population health (Winkleby et al., 1992).





### The Social Determinants of Health That Impact Educational Attainment in Youth

Indigenous peoples are less likely to achieve a certificate, diploma, or degree (National Collaborating Centre for Aboriginal Health, 2017a). Possible obstacles to the attainment of high levels of high school and post-secondary certificates, degrees, and diplomas among the Indigenous population in Ontario are lack of access, geographic isolation, limited opportunities, and systemic discrimination and intergenerational trauma due to the imposition of residential schools (National Collaborating Centre for Aboriginal Health, 2017a). Several social determinants of health affect a students' educational attainment, for example, food security, adequate housing, appropriate childcare, addiction and substance use in their environment, household income and employment (National Collaborating Centre for Aboriginal Health, 2017a). In turn, education and access to education has impacts to health and wellbeing, as it is a factor that can determine employment and income, which are necessary for accessing appropriate housing, food security and a healthy diet, and access to services. The difference in educational attainment in the populations has both direct and indirect effects on health outcomes of individuals, families, and communities (i.e., lower life expectancies, higher rates of chronic health conditions, etc.) (Bethune et al., 2019).

Further, the legacy of colonialism, racism, and government policies have influenced the social climate surrounding the pursuit of education among Indigenous peoples (Milne, 2017; Rocchetta, 2019). The Indigenous experience with education has been heavily influenced by historic experiences with the residential school system. The residential school system focussed on the need to assimilate and “civilize” Indigenous children, who were forcibly removed from their families and communities to attend schools run by the Government of Canada and the church in locations that were often far away from home communities (Government of Canada, 2017; National Centre for Truth and Reconciliation, n.d.a). Children experienced the loss of culture, language, and family. They faced harsh punishments, loneliness, and sexual and physical abuse (Government of Canada, 2017; National Centre for Truth and Reconciliation, n.d.a). The intergenerational influence of these traumatic experiences has influenced subsequent generations relationship with mental health, and substance use (Government of Canada, 2017; National Centre for Truth and Reconciliation, n.d.a).

### Construction Phase

Education and training attainment opportunities may improve as a result of the Project. The Project is anticipated to have a positive effect to incentivize education and training attainment required for Project employment opportunities (Section 14). Education, training, and/or experience will be required to take advantage of the direct and indirect employment opportunities related to the Project. It is possible that diverse sub-populations, such as women, youth, 2SLGBTQQIA individuals, and individuals living with disabilities may not be able to benefit equally from the WSR as compared to the men due to being at a



disadvantage to get adequate training to benefit from a potential increase in employment opportunities associated with the Project (InterGroup, 2024).

As there is currently a lack of skills/trades experience related to potential Project-related employment, community members have expressed concerns that Webequie youth will not be in a position to benefit from the Project's employment opportunities (Intrinsik, 2023b; Appendix L – Socio-Economic Existing Conditions Report), as existing education focus in youth in the community suggests youth in the community may not have skills that align with positions required for the Project (i.e., trades, equipment operators, health, and natural and applied sciences). Community members stated that they wanted to teach youth heavy machinery operation and trades so that they may take advantage of employment opportunities resulting from the Project (InterGroup, 2024). However, the Project could cause a small negative effect if youth get more involved in Project employment and related activities and have decreased interest in learning traditional land-based skills (Section 14).

There is currently no childcare program available in Webequie. The pressure to fulfill caregiver roles at home may be creating additional barriers for Indigenous women to pursue education and training. The lack of childcare in the community along with familial responsibilities creates further inequities in accessing education for women. As a result, women may also not have skills that align with positions required for the Project based on responses to the Webequie First Nation Socio-Economic Survey (InterGroup, 2024). Therefore, women are less likely to benefit from the Project in terms of employment opportunities.

## Operations Phase

There are very few jobs available during the operations phase compared to the construction phase. As such it is not anticipated that there will be any major indirect effects on health due to the operations phase of Project.

### 17.3.3.8 Food Security

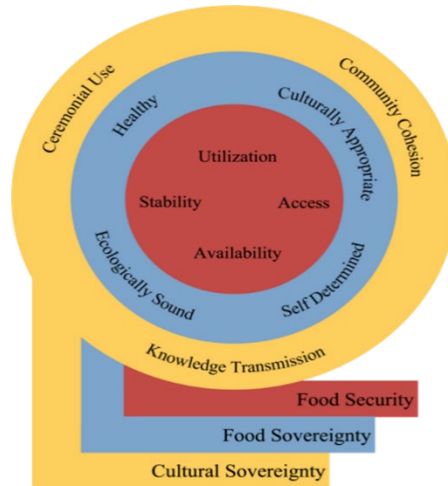
Food security is one of the 12 social determinants of Indigenous health identified by the First Nations Health Council (First Nations Health Council 2023) and is intrinsically related to overall physical and mental health. Reduced food security can have profound effects on a community or individual's well-being and health (i.e., increased malnutrition and obesity rates in adults and adolescents). Additionally, food insecurity is related to several negative health outcomes, including poorer physical and mental health, and higher rates of various chronic conditions such as depression, diabetes and heart disease (Che and Chen, 2001; Fuller-Thomson & Nimigon, 2008; Galesloot et al., 2012; Gucciardi et al., 2009; McLeod and Veall, 2006; Muirhead et al., 2009; Vozoris and Tarasuk, 2003; Willows et al., 2011).

Indigenous leaders are concerned about the disruptions to traditional Indigenous food systems and the disregard for environmental sustainability due to colonial agriculture practices and regulations (Snook et al., 2020; Cameron et al., 2021). Indigenous food security in Canada is threatened by limited access to traditional foods and climate change impacts (Rosol et al., 2016; Kenny et al., 2018). Indigenous health depends on both, food security and food sovereignty (Assembly of First Nations, 2017; Loppie & Wien, 2022). Food security is defined as "*access to sufficient, safe and nutritious food that meets their dietary needs and food preferences*" and "*access to land and water and allows individuals to retain cultural knowledge and be culturally intact*" (Food and Agricultural Organization, 1996; Settee et al., 2020). The United Nations Declaration of the Rights of Indigenous Peoples defines Indigenous food sovereignty as "*the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods and their right to define their own food and agriculture systems.*" (Asia Pacific Forum, United Nations, 2013; The Nyéléni 2007 International Steering Committee, 2007). Indigenous



peoples in Canada have much greater food insecurity rates than settler populations, due to colonization and systematic racism (Snook et al., 2020; Food Secure Canada, n.d.; Malli et al., 2023). Colonial practices have impeded subsistence pursuits like hunting, leading to sedentary lives and the consumption of processed market goods (Assembly of First Nations, 2007).

Cultural sovereignty can be connected back to Indigenous peoples right to self-determination and governance (**Section 17.3.2.4**), showing that the determinants of health are inter-related and intrinsically connected, and how impacts to higher-level structural determinants of health can have far-reaching consequences to health and wellbeing for communities.



**A Conceptual Framework for How Food Security, Food Sovereignty, and Cultural Sovereignty Are Interrelated**

(Source: Doran, 2024)

First Nations communities may rely heavily on accessing traditional food systems (e.g., fishing, hunting, gathering and harvesting). Hence, impacts to the natural environment can have major impacts on their food security by impacting the quantity and quality of food sources (Batal et al., 2021).

Fish is an important part of diet for many individuals, including First Nations communities, as it is a source of high-quality protein with Omega-3 fatty acids and other nutrients that have been shown to provide many health benefits (Parian and Mullin, 2016). However, fish may contain contaminants which may be harmful to human health, and the concentration of these contaminants in aquatic organisms is dependent on another social determinant of health, i.e., water quality, in the area of harvest. Areas with poor water quality are at elevated risk of food insecurity as fish harvested in contaminated water may pose a health risk to those who consume it, especially in large quantities. Some of the classes of aquatic contaminant that are particularly concerning to consumers include heavy metals (i.e., mercury, selenium, arsenic, cadmium, chromium), volatile organic chemicals, PCBs, synthetic industrial organic chemicals, pesticides and insecticides and their metabolites, disinfection byproducts, flame retardants, natural and synthetic estrogenic and androgenic hormones, and pharmaceuticals (MECP, 2024). To the general population, the concentrations of contaminants that are present in fish, and other aquatic food sources, are not a health concern. However, vulnerable groups such as pregnant women, nursing mothers, the elderly and children are at comparably higher health risks from eating contaminated fish. In addition, populations that consume fish frequently or in large quantities, such as First Nation communities, are also considered to be at greater health risks from eating contaminated fish. Regulatory agencies recommend that vulnerable populations should pay special attention to the amount and type of fish they consume (MECP, 2024);



US EPA, n.d.) as they may be exposed to a disproportionately high amount of contaminated fish than those who do not consume large amounts of fish as a diet staple.

Indigenous women play an essential role in the transmission of cultural teachings and Traditional Knowledge to future generations, particularly in the preparation of traditional foods (Native Women's Association of Canada (NWAC), n.d.). NWAC has conducted numerous surveys that demonstrate that Indigenous women, girls, Two-Spirit, transgender, and gender-diverse peoples encounter obstacles in accessing healthy food options, which in turn impede their ability to access Traditional Knowledge on food harvesting (NWAC, n.d.). In addition, continued knowledge transfer to future generations requires the involvement of youth, and strong relationships between Indigenous Knowledge providers, i.e., Elders, and those who learn, i.e., the youth.

### **Construction Phase**

During in-person interviews, community members expressed concern over what would happen to their trap lines due to construction and related activities of the WSR (Intrinsik, 2023b). They are worried if trap lines are interrupted, this will affect one of the ways they use the land to harvest and consume traditional foods, which will impact their health. Community members also expressed concerns that the construction noise might scare away animals, impacting the ability of community members to hunt (Intrinsik, 2023b). Noise pollution is not just an environmental issue but also affects cultural practices like hunting by displacing wildlife. The noise created by Project construction may result in changed behaviour of traditionally harvested animals, that may go further into the bush to escape the noise and be unavailable in certain areas close to the construction for the duration of the construction phase. This may limit access to traditional food hunting grounds, putting strain on traditional food sources, and potentially have an adverse impact on health. However, the noise effects due to road construction are expected to be locally isolated to the road construction area, and reversible (refer to Section 9 and Section 14).

Due to changing locations of wildlife because of construction-related impacts, transfer of knowledge to youth related to hunting and locations of wildlife traditionally harvested by the community may be negatively affected. Although these effects will be temporary and last during the construction phase, they may impede the future ability of youth to improve their food security through harvesting of traditional foods, and impact cultural continuity in the community, and have temporary and limited adverse mental health impacts. Also, if community members participate in the employment offered during the construction phase of the WSR can make it harder for them to attend family or community events or regularly participate in traditional activities, including hunting, that tend to bring Indigenous Peoples closer to their culture and communities and promote cultural continuity.

The effects of contamination on traditional food sources (i.e., plants, fish, large game, fur bearers, and water) by construction or operations and maintenance emissions is an important factor when assessing the overall impact to food security.

### **Operations Phase**

When the winter road is open, people often travel 3-5 times a season to pick up food. When the WSR is operational, members are hopeful that they can travel more often to buy food as they will not be restricted by the winter road season (Intrinsik, 2023b). However, this may only be true if the other road projects (i.e., Marten Falls Community Access Road and the Northern Road Link) are also built at the same time which would allow Webequie First Nation members access to the provincial highway network. Since this assessment focuses on the effects of the WSR alone, the impacts due to other road projects and mining activities that may happen in the future is not evaluated here. However, increased income in some households who have jobs in the Ring of Fire area will increase disposable income for buying healthy



store-bought foods and increase their overall food security. Those who cannot obtain jobs will not benefit equally.

Community members who participated in focus groups also expressed concern that once the road is built there will be more disturbances to the land and nature which may impact the migration of animals and in turn, the availability of traditional foods and the related health impacts (Intrinsik, 2023b). This is important as some members said 50-75% of their diet was made up of traditional foods, although this percentage can vary between individuals and families (Intrinsik, 2023b). However, it is not expected that the impacts due to operations-related noise will be significant; these impacts may be temporary and limited, and may affect limited areas used by the community. As such, the resulting impact to harvesting practices and traditional food security are uncertain but probably limited. The potential for health impact is also uncertain and probably limited.

Community members will have increased access to the land as more territory will be able to be reached by car, ATV, or snowmobile. More community members may be able to access hunting, gathering, and fishing grounds thus increasing access to traditional food sources for dietary needs, thereby improving health outcomes associated with eating more traditional foods.

### 17.3.3.9 Social Cohesion and Cultural Continuity

Social cohesion refers to “the extent of connectedness and solidarity among groups in society” and is related to a sense of belonging in a community and relationships among community members (Manca, 2014). Social cohesion is an important indicator of health, as a lack of social support and increased social isolation has been shown to lead to poor physical and mental health (Stansfeld et al., 2006).



Speaking traditional languages and practicing traditional cultural activities help maintain cultural continuity. As such, an important focus for the Webequie community is intergenerational knowledge transfer of culture and language. Webequie is working to take youth and families out on the land regularly to learn traditional skills, cultural teachings, and the language which can improve their mental, physical, emotional, and spiritual health. Community-focused curriculum based on language and culture has been developed by the Webequie Education Authority.

In general, transportation networks connect people and communities and can increase social cohesion. However, poorly functioning transport corridors can have downsides. Social cohesion and cultural continuity are important for transferring traditional and cultural knowledge across generations within the Indigenous community, and provides a connection between distal and proximal determinants of health (Auger, 2016). A strong sense of cultural continuity and social cohesion has been shown to be an important factor in protecting against some negative health outcomes (Oster et al., 2014). It has been shown that rates of suicide (an outcome linked to proximal social determinants of health) among Indigenous youth in British Columbia is correlated to social cohesion and cultural continuity (Chandler and Lalonde, 1998; Reading and Wien, 2009). Further, cultural continuity has been found to be a protective factor for the health outcome of type 2 diabetes. First Nations communities in Alberta that have more cultural continuity have a significantly lower prevalence of diabetes after adjusting for socio-economic factors (Oster et al., 2014).

Increased social cohesion (measured as identity, traditions, and spirituality) among Indigenous youth can increase engagement at school and in the community, and lower rates of substance use which are also linked to more positive health outcomes as both of these social determinants of health are associated with more positive health outcomes (Snowshoe et al, 2015; Auger, 2016). Research suggests that the preservation or promotion of cultural continuity could increase mental health, as well as other factors such



as community empowerment and social cohesion. There are a multitude of factors that contribute to social cohesion, including: (a) Land claims, (b) self-government, (c) education services, (d) police and fire services, (e) health services, (f) cultural facilities, (g) women in band councils, (h) community control over child welfare services, and (i) knowledge of aboriginal languages. These factors are linked to Indigenous health, and they can better protect communities, and therefore the health of their members, when they are integrated into communities and culturally appropriate health services (Kielland and Simeone, 2014).

### **Construction Phase**

Negative interactions between the construction workforce and the Webequie community population may still occur despite best efforts to keep them separate. As a result, community cohesion may decrease during the construction phase of the WSR depending on the extent and nature of the interactions between the construction workforce and members of Webequie First Nation and any conflicts that may arise (Section 14; InterGroup, 2024). Should these negative interactions occur, this has the potential to have negative impacts on mental wellness.

In a community survey, 94 out of 152 respondents from Webequie First Nation indicated that they have concerns about the loss of traditional culture in Webequie First Nation (Section 15). The main concerns included the loss of traditional land use activities, traditional teachings, traditional language, and traditional values, during the construction phase, due to decrease in community members' ability to participate in traditional economic activities such as hunting, trapping, and fishing (Section 15). Reduction in cultural practices and their continuation may impact the mental health of some community members, especially Elders.

### **Operations Phase**

Since only the effects of the WSR are being considered in isolation (i.e., without including the potential for the Marten Falls Community Access Road, the Northern Road Link and resource development in the Ring of Fire area), there are not expected to be any impacts to social cohesion and cultural continuity during operations.

#### **17.3.3.10 Safety of Women and Girls**

Perception of physical and emotional safety is a necessity for healing physical or emotional trauma (Hobbs and Rice, 2018). The safety and security within their communities, especially for women and girls, is a major concern for Indigenous peoples. Indigenous women and girls are 12 times more likely to be missing or murdered than any other women in Canada (National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019). Women face a high rate of domestic and family violence, are more likely to be a victim of sexual trafficked and are sexually assaulted three-times more often than non-Indigenous women (National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019). Indigenous women are more likely to be killed by acquaintances and are seven times more likely to be the target of serial killers than non-Indigenous women (National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019).

Several factors contribute to the disproportionately high rates of violence for Indigenous women, including racism, systemic discrimination, economic and social inequities, problem use of alcohol and drugs, poor housing conditions, intergenerational trauma resulting from force attendance at residential school, and the impacts of colonialism on traditional ways of life (Assembly of First Nations, 2021). Due to their increased vulnerability, between 2001 to 2014, the rate of murdered Indigenous women was up to 12 times higher than non-Indigenous women in Canada (Government of Canada, 2017). Of the total solved homicide cases of Indigenous women between 1980 and 2014, 53% were committed by a family member, 26% by



an acquaintance, and 8% by a stranger (Government of Canada, 2017). Further, 17% of homicides of Indigenous women occurred on a street, a road, or a highway, which is much higher than the 1% of homicides committed for the same location with non-Indigenous women (Government of Canada, 2017).

Indigenous women are more likely to be targets of human trafficking, due to generations of racialized violence against Indigenous peoples, especially women, and socio-economic conditions that make them more vulnerable. In 2014, although Indigenous women represented 4% of the population of Canada, about 50% of human trafficking victims were Indigenous women (National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019). Of those accused of human trafficking, 83% were male (Karam, 2016). As the culture of work camps can be hyper-masculine, and lead to situations of violence (Gibson et al., 2017; Gibson and Klinck, 2005), such projects should be undertaken with special considerations provided for protecting local communities, particularly women and girls.

Temporary construction camps are known to hold severe implications for host communities, particularly vulnerable groups in Indigenous communities (i.e., women, girls, youth, and individuals living with addiction challenges). Impacts are known to stem from increased access to and use of drug and alcohol (i.e., brought in by external construction workers), racism, and gender-based violence (InterGroup, 2024). As seen in other big projects, the majority of industrial project workers are young males from outside the region who work for extended periods of time in challenging conditions and away from their homes (Native Women's Association of Canada, 2020). The mass influx of primarily male workers who work on project sites and have high levels of disposable income has been associated with an increase in sex work among Indigenous women (Joly and Westman, 2017), as well as higher rates of teen pregnancies and sexually transmitted infections among Indigenous girls in nearby communities (Buell, 2006; Native Women's Association of Canada, 2020). The fly-in-fly-out model, disconnection from local communities, substance misuse, combined with racism and sexism towards Indigenous women, creates an atmosphere sometimes referred to as "rigger culture", and contributes to the increased rate of sexual violence in proximity to work camps (Native Women's Association of Canada, 2020).

A recent study by Liard Aboriginal Women's Society (2021) found that a high percentage of women have reported harassment, discrimination, assault, and abuse at camps in Yukon and northern B.C. Hypermasculinity, ineffective prevention strategies, lack of trust in grievance reporting, and denial of the existence of these issues perpetuate an unsafe environment for women (Liard Aboriginal Women's Society., 2021). These experiences highlight the importance of assessing issues that may unfold due to the proposed project, especially in the context of limited community infrastructure and health services.



Women from Webequie First Nation who participated in focus groups have expressed concern for the safety of women and girls due to the Project, especially as there is no women's shelter in the community. When asked if there is existing violence against women in the community, members who participated in interviews and focus groups only provided affirmation and no additional information.

## Construction Phase

There are temporary construction camps proposed for the construction phase of the Project at various locations along the right-of-way and/or near other project components (refer to Section 4). This will support crews that will be constructing the road and bring people who are not from the area to the region for work. As per the Economic Effects Assessment (Section 15), majority of the construction-related workforce may be from outside the LSA and RSA, and as such, majority of construction workers may be non-Indigenous. Although Webequie First Nation plans to restrict entry of construction workers into the Webequie First Nation community, the method of enforcement, and its effectiveness, is currently



unknown. Although the closest construction camp to the Webequie community settlement area is expected to be approximately 5 km to the south and east of the community (refer to Section 4), the interaction of construction workers with community members cannot be ruled out, especially as it is expected that over an assumed 5 to 6 year construction period, about 179 construction workers will be hired from other than Webequie First Nation (Section 15). Webequie members, including women, will be able to get some of the construction jobs and come into contact with outside construction workers, increasing risk to their safety.

### **Operations Phase**

As the impacts of just the WSR are being considered in this assessment are no anticipated direct effects.

Similarly to the construction phase, due to the direct link to future mining activities in the Ring of Fire area, there is potential for increased risk to the safety of women, girls and 2SLGBTQQIA individuals due to entry of outsiders during the operations phase.

#### **17.3.3.11 Traffic Volume and Safety**

High volumes of vehicular traffic and the resulting congestion on roadways can have negative impacts on traffic safety (Retallack and Ostendorf, 2019). In a literature review conducted by Retallack and Ostendorf (2019), it was reported that increased traffic density was related to increased fatal accidents. Excessive traffic congestion increases levels of stress and anxiety among commuters (WHO, 2000; TPH, 2006). It also reduces the amount of discretionary time available to commuters for physical activity, family time and socializing. These in turn have significant mental health impacts (reviewed in Cohen et al., 2014). Using multi-level statistical models, two studies investigated the relationship between perceived traffic stress and objective measures of the transportation environment and how they impacted general health outcomes and depressive symptoms (Gee and Takeuchi, 2004; Song et al., 2007). The studies found that traffic stress was self-reported, and focused on the severity of annoyance by traffic, auto maintenance, and traffic crashes.

### **Construction Phase**

It is expected that during the winter road season, there will be increased traffic volume on the winter road bringing in equipment and personnel for the construction phase of the Project. This may increase wait and travel times for accessing goods and services away from the community, but the impacts to health will be limited.

### **Operations Phase**

Once the WSR is in operations, it is predicted that traffic will average less than 500 vehicles per day on the road. However, it is not possible to currently predict the traffic volume with certainty and hence the potential direct effect to health. Should there be high traffic volume on the WSR, it may lead to accidents and injuries as a result of collisions. There are negative health effects associated with increased traffic, however, the level of effect will depend on how much traffic increases.

#### **17.3.3.12 Access to Healthcare Services**

Access to healthcare services is a strong determinant of health among all Canadians (Health Council of Canada, 2005; Public Health Agency of Canada, 2010). Health services and programs are important for treating both physical and mental illness. Primary health care services, such as physician and hospital care, are generally provided by provincial and territorial health authorities (Raphael, 2016). Equitable access to mental health services is further complicated by the multiple authorities involved in the delivery



of health services (Raphael, 2016). Coordination problems have occurred and created service gaps in terms of healthcare. Additional challenges can arise for those living off reserve or outside their traditional territories. Furthermore, those living further north or in more isolated areas face additional obstacles such as delivery cost, lack of appropriate infrastructure, shortages of health care providers and limited services available (Raphael, 2016). Part of these obstacles come from the more difficult work environments such as long working hours, smaller staff, lack of opportunity for the rest of the family (Peiris et al., 2008).

At times, jurisdictional challenges and confusion over services offered can cause First Nations peoples to hesitate when accessing care. Further, experiences with discrimination and racism within the primary health care system, which is often based on colonial ways of approaching healing, prevents some First Nations peoples from accessing health care services (Davy et al., 2016). Access to health care also includes shortages or lack of medical professionals to provide that care, and in a culturally safe manner. There is a general lack of access for Indigenous peoples to appropriate and culturally relevant care for mental well-being, which is a contributor to the health inequities that exist between Indigenous and non-Indigenous Canadians (Raphael et al., 2020).



Interviews with health care staff at the nursing station shared that Webequie does not have a hospital and that they need better access to doctors and nurses. The need for improved healthcare infrastructure was also emphasized by community members during in-person engagement sessions through focus groups and key person interviews. Additionally, traditional healers are currently not adequately recognized as healthcare service providers; however, many community members listed availability of healing ceremonies as a gap in the healthcare options in the community. Community members also mentioned that less use of traditional healing would slowly reduce the knowledge of traditional healers over time.

### Construction Phase

The WSR is likely to result in non-local workers coming to the area as well as some members returning to Webequie First Nation. This could create a higher demand for community services, especially the already limited healthcare services due to injuries or accidents from construction activities (Section 14). Competition for healthcare services also places more financial, emotional, and other burden on families (Section 14). Vulnerable populations like older adults may experience these effects disproportionately. However, the Project is expected to have its own first aid station to address immediate and minor health issues. As such, the strain on health care services in the community may be limited, and the impact on health in the community may be negligible.

### Operations Phase

Once the WSR is in operations, some off-reserve community members may wish to return to Webequie First Nation; however, it cannot be predicted how big this number would be. Should there be a large number of off-reserve community members wanting to move back in, without additional health care services being put in place, this could create a higher demand for healthcare services (Section 14). However, since it cannot be predicted how many community members will want to move back to the community, this effect cannot be predicted with any amount of certainty.

During the operations phase there will be a significantly lower workforce required for the Project (refer to Section 15). The number of workers is too small to put an additional strain on availability of services.



### 17.3.3.13 Access to Social, Mental Health and Family Services

Lack of access to culturally relevant social, mental health, and family services for Indigenous peoples is a contributor to the reported health inequities that exist between Indigenous and non-Indigenous Canadians (Raphael et al., 2020). Barriers to social, mental health and family services in northern, rural and remote regions include delivery cost, lack of appropriate infrastructure, shortages of health care providers and limited-service availability (Raphael, 2016). These barriers are in part due to difficult work environments, lack of personnel, and lack of continuing education. There is also a lack of financial resources to fund services outside of basic health care (i.e., mental and social health services). This leads to further travel times for individuals accessing these services and can lead to increased stress.

First Nations children are three times more likely to be investigated by child and family services than white children in Canada and are twice as likely to be placed outside the home (Quinn et al., 2022). In Manitoba, one in three (36%) of First Nations infants had an open Child and Family Services file between 1998 and 2019, which is four times higher than the rate for non-First Nations infants and about 9% of First Nations infants experienced placement in Child and Family Services custody, which is nearly seven times higher than for non-First Nations infants (Kenny et al., 2024; Winnipeg Sun, 2024). The higher rate of investigation and out-of-home placement for First Nations youth is attributed, in part, to other social determinants of health including family income, education, childcare availability, racism, the residential school legacy, and colonialism (represented by political policies of oppression, marginalization, and destruction of First Nations culture) (Quinn et al., 2022). Placement outside of the home by mainstream child welfare agencies can lead to a loss of cultural identity, knowledge, and language, and the loss of a sense of belonging to the community. These losses can lead to negative health outcomes for children and families including decreased mental wellness, increased substance use, and acute social and psychological problems relating to fitting into society (Moody and Onysko, 2007).

Appropriate social and mental health services are important for promoting positive wellness outcomes for individuals, families, and communities. Appropriate services include those that incorporate culturally relevant healing practices within the safety of the community structure to address the specific health needs of Indigenous peoples. Without access to culturally appropriate social and mental health services, inequities between Indigenous and non-Indigenous health outcomes, such as higher rates of substance use, youth suicide, mental health problems, chronic pain, and interpersonal violence, remain a pressing concern. Social and mental services that are accessible off-reserve are often delivered by mainstream health authorities in a non-culturally relevant manner. However, these systems may not be appropriate in addressing the specific healing needs of Indigenous peoples, and out-of community resources create more barriers to access for those living in remote communities (i.e., cost, travel, isolation, etc.) (Smye et al., 2023). Further, when removed from the community, individuals often experience a loss of the social determinants of health of cultural continuity and social cohesion which can compound negative social and mental health outcomes and leave Indigenous peoples more vulnerable to negative influence from systemic factors that influence health including racism, oppression, discrimination, and the effects of historical trauma (Auger, 2016).





During interviews with mental health counsellors in the community, Webequie community members identified a need for more female mental health counsellors. They identified differences between girls' and boys' mental health issues, some of which are that girls are more likely to self-harm themselves. The mental health counsellors have also seen more health disorders now compared to a few years back such as borderline personality disorder. When it comes to youth in the community, many families are separated so children will grow up without fathers or other relationships which has a big effect on youth. The mental health counsellors believe that some of the systemic issues are from the residential school trauma passed down through generations, which are still unresolved (Intrinsik, 2023b).

To support healing and healthier outcomes for individuals and communities, it has been proposed that culturally relevant social, mental health, and family services that are based in communities and are part of a system of self-governance will result in better health outcomes for individuals, families, and the community (Moody and Onysko, 2007).

### **Construction Phase**

During the construction phase, the Project is likely to result in non-local workers coming to the area as well as some off-reserve members returning to Webequie First Nation to take advantage of employment opportunities. This could create a higher demand for mental health and social services, especially given the already limited services available in the community (Section 14). Since the majority of community services are already operating at full capacity, the increase in demand from the influx of workers will put further strain on these services (Section 14). However, the construction camps that are to be built along the WSR area are anticipated to provide workers with the necessary health care services, making the impact on mental and social health services in Webequie dependent on how many off-reserve members of the community participate in the construction workforce. In addition, current on-reserve Webequie members who participate in construction jobs may find that their need for mental and social health services has increased. However, the scope of the increased demand cannot be anticipated. As such, this may be a potential adverse impact on health, if there is too much pressure on existing mental and social health services.

### **Operations Phase**

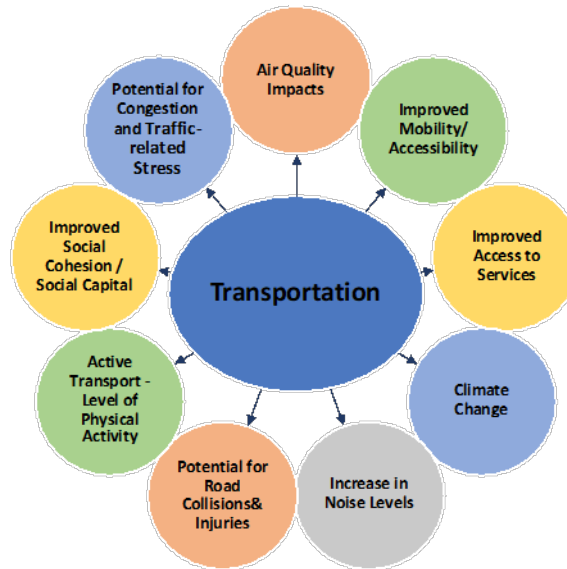
Once the WSR is in operations, some off-reserve community members may wish to return to Webequie First Nation to participate in new employment opportunities in the Ring of Fire area, should they become available; however, it cannot be predicted how many off-reserve members would return. Should there be a large number of off-reserve community members wanting to move back in, without additional mental and social care services being put in place, this could create a higher demand for community services, especially given the already limited community services currently available. As it is not possible to determine how many off-reserve community members would return to the community, it is not possible to predict whether a potential adverse health impact would occur, should there be delays in accessing mental and social health services.

#### **17.3.3.14 Access to Transportation Services**

Access to transportation services play an important role for accessibility and mobility for individuals and communities. The level of accessibility and mobility for individuals and communities has the potential to impact several other determinants of health, such as access to health services, education, access to food, etc. Transportation has enormous positive health impacts, but motorized modes of transport can also have potential negative health impacts, mainly due to impacts to air quality and increased traffic



congestion. As such, transportation planning plays a crucial role in influencing health behaviours, especially those related to levels of physical activity, and provides a way to access goods and services that improve the quality life and improve wellbeing in communities. This, in turn, can impact health outcomes and rates of morbidity and mortality.



**Some of the Potential Positive and Negative Human Health Implications of Transportation**

Barriers to transportation have been identified in literature as a cause of rescheduled and missed health care appointments which may result in an overall poorer management of chronic illnesses (Solomon et al., 2020; Starbird et al., 2019; Syed et al., 2013; Thomas et al., 2017). A review by Suntai et al. (2020) highlighted the lack of public transportation, lack of special needs and wheelchair accessible vehicles, high costs of transportation services, poor weather conditions, remoteness to services, and lack of reliable drivers as transportation barriers for older adults living in rural areas seeking palliative care.

A systematic review completed by Davy et al. (2016) identified that a main factor preventing Indigenous peoples in reaching health care services was transport (Bennett, 1998; Campbell et al., 2015, as cited in Davy et al. (2016), especially if the health care services were outside of the people’s communities. As distance and/or a lack of transport to health care facilities are highlighted as barriers to access of health care services, results of the systematic review note that Indigenous health care services may address this issue by providing transportation to healthcare facilities (Davy et al., 2016). The level of transportation infrastructure can impact the various modes and types of transportation available for individuals and the community (e.g., public transportation, private vehicle, ride-share, etc.). Various forms of healthcare transportation assistance have been noted in literature, including but not limiting to vouchers for taxis, bus tickets, van services, parking vouchers, ridesharing services (Solomon et al., 2020).

Although transportation and appointment keeping has a clear relationship, other interventions to improve health outcomes for individuals with chronic health conditions, by reducing social and economic barriers (e.g., food insecurity, housing), could improve the effectiveness of transportation assistance (Solomon et al., 2020).



## Construction Phase

Available modes of transport, i.e., airplane or via the winter road, may become more in demand due to the need to bring in supplies and personnel during the construction phase. This may make access to existing transportation options more difficult and make it harder for community members to seek care or other services off-reserve. The increased wait times may have an adverse impact on health, especially if there is increased delay in accessing non-emergency health care and mental health services.

## Operations Phase

From the Community Health Survey, respondents indicated that one of the barriers to accessing services outside of the community was due to being unable to arrange transportation due to the cost or availability (Intrinsik, 2023a). Transportation delays can result in delayed healthcare service, including the possibility of loss of life (InterGroup, 2024). Members of Webequie First Nation are hopeful that the WSR will reduce the cost of transportation, and have positive health outcomes if they are able to use the WSR to access goods and services in other areas of the province, for example, Geraldton, Thunder Bay, etc. The WSR will also be helpful in bringing in health care and other services personnel to the community (Intrinsik, 2023a). However, all this may only be true if the other road projects (i.e., Marten Falls Community Access Road and the Northern Road Link) are also built at the same time which would allow access to the provincial highway network.

Currently, once built, the WSR would provide access to community members to the Ring of Fire area, which is not connected to the provincial highway network, nor does it have goods and services available close to it. However, even to access the Ring of Fire area via the WSR to access employment opportunities, community members will need access to vehicles and have driver licenses to travel via the road. Older adults may find it difficult to drive for long distances or be unable to drive independently and need the assistance of family and/or friends to access the WSR.

Considering just the WSR Project, during its operations phase, the road would be useful in providing year-round, more reliable passenger travel and delivery of good and services to mining explorers and operators in the Ring of Fire area (refer to Section 3).

### 17.3.3.15 Access to Emergency Response Services

A lack of reliable and accessible emergency response services has significant negative health and wellness impacts, to both physical and mental health. Not having access to ambulatory care, police services or fire services in times of emergency is a threat to physical health, and sometimes life. Not having access to these critical services can also be stressful and lead to negative mental health impacts, including anxiety. For pregnant women not having access to reliable, quick and safe emergency response services can make their pregnancy challenging and stressful and have negative health impacts.

As previously mentioned, access to healthcare services (including emergency services) in northern more rural regions of Canada remain an issue due to cost of delivery, lack of appropriate infrastructure, shortages of health care providers and limited services available (Raphael, 2016). These emergency services are often far away, and in northern areas of Canada sometimes only accessible by air. Weather conditions also play a role in the accessibility of these services when individuals have to travel. Travel not only costs time, but is a financial burden as well. Although these services may be available, due to other circumstances they may not be easily accessible.





Webequie First Nation has indicated that related fire services are essentially nonexistent, apart from pumps at the water treatment plant. Existing fire hydrants and fire hall within the reserve are noted as not functioning and not operating. There is a volunteer fire department within the reserve which focuses on the preventions of fires and the administration of the Ontario Fire Code.

## Construction Phase

Construction activities from the WSR may increase demand for emergency response services (Section 14). During the construction phase, there is an increased risk in accidents and injuries, an increased risk in conflicts and crime, an increased potential for fires, and increased potential for sexual assault due to increased interactions with workers. This would result in an increased need for emergency response services and a higher burden on these services, negatively impacting the physical mental well-being of members of Webequie First Nation. However, it is expected that construction camps will have first-aid stations and occupational health and safety staff to address minor injuries and illness. Although more serious incidents will require transporting workers to the nearest hospital, the Project anticipates these incidents to be rare occurrences due to multiple safety measures. In these situations, helicopters that are used for Project construction work are expected to also be readily available to transport individuals to larger health facilities for medical treatment. As such, if there are no additional strains on the limited existing emergency response services in the community, there are expected to be no adverse health effects.

## Operations Phase

Similar to the construction phase, the operations phase of the WSR may increase demand for emergency services mainly related to vehicle accidents (Section 14). Community members also expressed concerns related to road safety and impaired driving (Section 14). These incidents would increase the need for emergency response services and put a higher burden on these services, negatively impacting the mental well-being of members of Webequie First Nation.

### 17.3.3.16 Childhood Development

The early years of a child's life are often the most important for growth and development (Ministry of Health and Social Services and the Minister of Education, Culture and Employment, 2021). There is systemic inequity in the wellness of Indigenous children compared to non-Indigenous children in Canada (Halseth and Greenwood, 2019; Greenwood and de Leeuw, 2012). For example, in Indigenous children there are:

- Higher rates of infant mortality (Smylie et al., 2010),
- Higher rates of youth suicide (Kirmayer et al., 2007),
- Increased exposure to environmental contaminants (Office of the Provincial Health Officer, 2009),
- Higher rates of obesity among the Indigenous preschool population (Public Health Agency of Canada & Canadian Institute for Health Information, 2011),
- Higher rate of dental caries, a higher rate of childhood illnesses including ear infections and respiratory infections (Office of the Provincial Health Officer, 2009),
- Lower rate of access to a doctor (Statistics Canada, 2023),
- Poorer prenatal health care affecting birth rate and child mental and physical health outcomes (Smylie et al., 2014), and
- Higher rates of family and child abuse (Fallon et al., 2013).



The observed discrepancies in health and development outcomes between Indigenous and non-Indigenous children stems from a legacy of European colonization of Indigenous peoples and their territories, and formation of a social and political system rooted in racism and discrimination against Indigenous peoples.



The community has expressed concerns regarding dental services and care for both infants and mothers, as current services have failed to meet established guidelines (SNC-Lavalin, 2023). Additionally, the Health Director has expressed that existing programs dedicated to ensuring children’s safety and well-being (e.g., Jordan’s Principal and provincial early years programs) within the community may not fully meet the communities’ needs and desires.

There is a direct link between childhood development and the long-term mental and physical health of individuals (Likhar et al., 2022). Indigenous children’s health is dependent on a complex interaction of social determinants of health at the individual, family, community, and societal levels (Greenwood and de Leeuw, 2012). These determinants of health fall within the broader categories of family size and composition, and socio-economic inequities in employment, income, and education, culture and language, family and community well-being, environmental health, and early learning and childcare (Halseth and Greenwood, 2019). For example, their parents’ life circumstances, such as their access to healthy foods, their socioeconomic circumstances, their access to healthcare and social services, and their levels and sources of stress, shape the lives of young children. This, in turn, can determine the quality and quantity of food the children consume and the extent of stressful experiences they face, affecting their development with long-term health consequences (i.e., impacting their Level 1/proximal determinants of health).

To address this inequity, investment in high quality and culturally linked childhood development and care programs is imperative (Greenwood, 2005). By investing in childhood development in a holistic and culturally appropriate manner, socioeconomic inequities would be influenced, and this could have cascading positive impacts both to childhood development and to the community (Halseth and Greenwood, 2019).

Project activities are not anticipated to affect childhood development. Webequie First Nation has a program for families called the ‘Healthy Babies Healthy Children’ program, which provides comprehensive parenting support and fosters healthy child development (Appendix L – Socio-Economic Existing Conditions Report). The Healthy Babies Healthy Children program caters to children aged 6 and under and provides a variety of supports and resources, including providing a handbook, “Baby’s Best Chance”, which outlines the stages of pregnancy and parenting. The program includes trained professionals who conduct home visits before and after birth and assist with early childhood development and offer support to mothers (Appendix L).

### 17.3.4 Proximal / Level 1 Determinants of Health

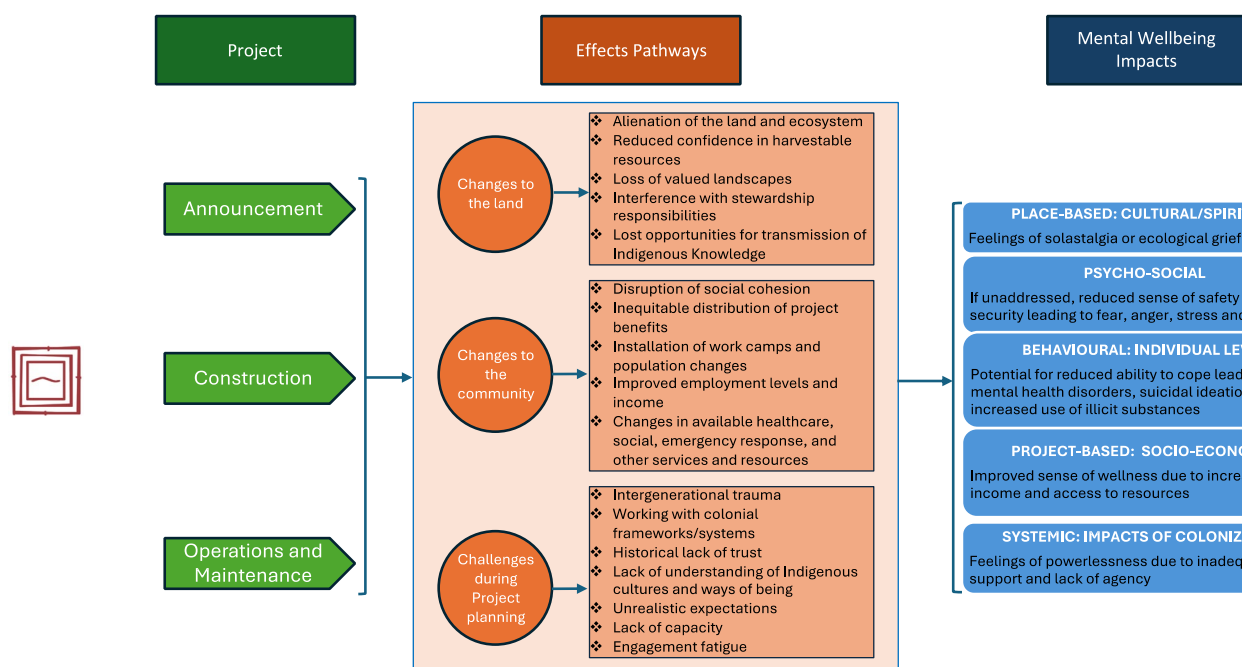
Mental wellness, substance use, and diet, including availability of traditional foods are considered Proximal (or Level 1) determinants of health identified for the assessment of project effects on Human Health VC.



### 17.3.4.1 Mental Wellness

Mental wellness is influenced by a complex interaction of interpersonal factors, social influences, and economic conditions, together known as the social determinants of mental health (Nelson and Wilson, 2017). Overall mental wellness and health status of First Nation individuals and communities is dependent on a complex interaction of social and economic factors. These factors include political context, community infrastructure, community resources, systemic dispossession of land, weakening of social institutions and racial discrimination (Kielland and Simeone, 2014). Risk factors, such as childhood and intergenerational trauma, poverty, unemployment, housing, and food security can influence the risk of developing mental health challenges (Boksa et al., 2015). The history of colonialism, and resulting intergenerational trauma, has influenced the psychological well-being of Indigenous communities (Boksa et al., 2015; Nelson and Wilson, 2017). Kielland and Simeone (2014) discuss in detail the mental health challenges experienced by First Nations and Inuit communities and the relation of mental well-being to overall health. Briefly, dispossession of land, weakening of social and political systems, and racial discrimination have led to an epidemic of poor mental health outcomes among First Nation and Inuit communities (Kielland and Simeone, 2014). Poor mental wellness and health outcomes include increased psychological distress, an elevated rate of psychological disorders.

When developing large-scale Projects, such as the WSR, it is important to consider the current state of mental wellness services, and the predicted outcomes to those services during and after completion of the Project. Many major projects will contribute to increased mental health burdens (i.e., stress, fear, anxiety, post-traumatic stress disorder, anger, solastalgia, loss of self-esteem, loss of agency, and depression), and this combined impact could lead to negative mental wellness related behaviours (e.g., substance use, suicide, and violence) (Salerno et al., 2021).



### Some Effects Pathways and Impacts of Major Projects on Mental Well-being

(Source: Salerno et al., 2021)

Mental wellness influences overall health outcomes. Increased mental health burdens have been linked to some of the wellness challenges currently facing First Nations communities including higher rates of illicit and prescription drug use compared to non-Indigenous populations (Fischer and Argento, 2012), childhood abuse and neglect, alcohol use and misuse, and the tragically high suicide rate in First Nations communities, which is double the national average for First Nations communities (Kielland and Simeone, 2014; Boksa et al., 2015). Poor health outcomes stemming from mental wellness varies greatly from community to community. The variation is accredited to the culture of individual communities, with factors involving self-governance, such as involvement in land claims, band control of education, health services, cultural facilities and police and fire services leading to better wellness outcomes (Boksa et al., 2015; Chandler and Lalonde, 1998). The integration of traditional healing practices with mainstream mental health services, alongside the dissection of colonial influences and biases, is needed to holistically address mental wellness and health outcomes among First Nation peoples (Nelson and Wilson, 2017).

### **Construction Phase**

Construction and related activities that make major changes to a cherished landscape and ecosystem may lead to solastalgia or ecological grief (Salerno et al., 2021). Not all members of the community may feel this, and even members who look forward to the Project may experience solastalgia if there are changes to specific popular landscapes. Elders and community members who feel a deep connection to their traditional lands and waters may experience ecological grief. However, for those who look forward to the Project providing them with a link to the outside world and employment opportunities, they might feel hopeful during construction and look forward to using the WSR.

Presence of construction camps and external construction workers, who are historically primarily men, may induce fears for safety and security within some community members and affect their mental wellness. Since Webequie First Nation is an isolated community, members may not be used to seeing groups of strangers within and outside the community, as would happen during the construction phase. Situation of worker camps close by has been associated with an increased risk to the safety of Indigenous women and girls.

Although Webequie First Nation has decided that external construction workers will not be allowed into the community settlement areas in order to reduce safety and security risks, especially to women, girls, and 2SLGBTQIA individuals in the community, the restriction on their entry is only as good as the enforcement of the measure to keep them out. No mitigation measure can be expected to be 100% effective, especially if some external workers find their way in illegally. Hence, some community members who may have heightened perception of safety may experience negative effects on their mental wellness, resulting in a feeling of perpetual vigilance and worry. The feeling of vulnerability has the potential to diminish the sense of safety and security, which are crucial for mental health and overall well-being. Women and girls are at heightened safety risk due to the presence of construction camps, and they and their families may experience diminished mental wellness.

In addition, noise from construction activities may disturb some community members leading to feelings of irritability and a decline in mental wellness (Hahad et al., 2024). Community members who are close enough to be affected by construction-related noise may experience increased annoyance and irritability, but this may be short-term. According to the noise assessment, the potential for noise impacts above acceptable thresholds is limited (refer to Section 9), and therefore the health impacts may be limited and temporary.



During the construction phase, employment that some members may get may change their interactions with the community (i.e., frequency of trips to Webequie First Nation on off-time). While living in construction camps with non-community members, it is possible that members of Webequie First Nation may experience feelings of loneliness and isolation, and experience racism and discrimination. Due to this negative treatment, members of the community may develop negative mental health outcomes (i.e., stress, substance use, and mental wellness struggles). Furthermore, there could be negative effects to the workers' entire family as they are without a family member during shifts.

Cultural sites are important because they hold deep, spiritual significance for Webequie First Nation members. As such, it is important to protect these for future access and use by the membership to maintain their spiritual and mental wellbeing.

The construction phase would also be tied to jobs and better income. Several of the mental health issues raised by Webequie First Nation related to poverty, income, jobs and housing may be alleviated during the construction phase due to improved income and may have some positive effects on mental health in the community. However, these potential positive health benefits would only be to those members of the community who benefit from the employment opportunities.

### **Operations Phase**

Results from the Community Health Survey indicated that 44% of participants think the WSR will impact their mental well-being, while 26% of participants do not think the WR will impact their mental well-being, and 22% of participants were unsure if their mental well-being would be impacted by the WSR (Intrinsik, 2023a; due to low response rate, results should be interpreted with caution).

However, the WSR will only improve access to goods, services, and reduce feelings of isolation of community members once it connected to the provincial highway network via the Marten Falls Community Access Road and the Northern Road Link, both of which are projects currently also going through the Impact Assessment process. Hence, it is not possible to say at this time whether the positive health benefits expected from the potential increased and easy access to the provincial highway network will happen.

The WSR may be a means through which non-community members and transient workers working in the Ring of Fire area may enter the community. Although Webequie First Nation plans to limit entry of external individuals, concerns have been expressed by community members regarding the safety of youth, women, and girls, which could lead to negative mental wellness (i.e., anxiety, stress). Women and girls may experience an increased risk of violent outcomes from increased risk due to unwelcome visitors to the community and may experience heightened experiences of fear and stress for their safety. Women and girls with addiction issues are more vulnerable to non-local offers of drugs and alcohol in exchange for sex. This could lead to increased negative mental health and increased problem use of drugs and alcohol. Members of the 2SLGBTQQIA community may experience increased levels of fear due to outsider access to the community and fear of violent acts, which may diminish their mental wellbeing. Gender-based violence among the 2SLGBTQQIA community from non-local workers is a concern as violence towards members of this community may increase addiction behaviours (i.e., alcohol and drug dependency) and negatively impact the mental health of this vulnerable community. Due to wealth disparities between high-income transient workers and community members, an increase in the prevalence and availability of alcohol, drugs, and sex to service the high-income population is a concern as those with mental health challenges are vulnerable to addiction behaviours.

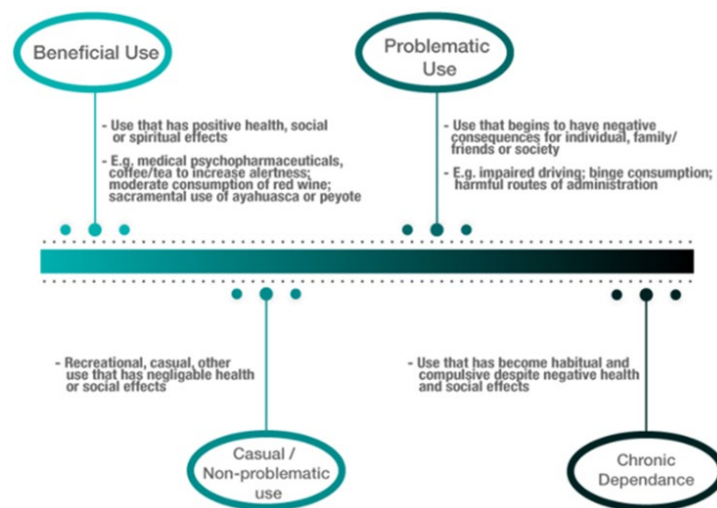


Webequie community members, particularly youth, may have more employment opportunities which could positively increase mental health and related outcomes (i.e., increased financial means to increase affordability of healthy foods, housing and services). However, employment outside the community (i.e., the Ring of Fire) could also increase exposure to racism and discrimination in the workplace, negatively impacting health and well-being and leading to negative health outcomes (i.e., domestic violence). Increased domestic violence would disproportionately impact women, children, and Elders. For workers employed in the Ring of Fire area, long shifts in employment can increase stress and lead to negative mental health outcomes due to decreased time for traditional, spiritual, and cultural practices. Youth need the resiliency offered by land-based practices, and removing their connections to the land while working in the Ring of Fire area, or having a traditional knowledge teacher working in the Ring of Fire area, decreases their opportunities to access the land and would therefore decrease their mental wellness.

### 17.3.4.2 Substance Use

The Canadian Mental Health Association presents substance use on a spectrum, where spiritual and cultural uses is beneficial to the community (CMHA, n.d.). For example, tobacco is considered a sacred plant by many Indigenous peoples, where it is used for ceremonial, medicinal and spiritual purposes (Reading and Halseth, 2013). However, the overuse of these substances and the use of illicit and not-culturally linked substances, can become problematic and may lead to negative consequences, such as crime, violence, overdose (Mamakwa et al., 2017), and potential chronic dependence (CMHA, n.d.).

Due to their experiences with colonization, ongoing systemic racism and barriers in access to healthcare services, erosion of their culture, and the intergenerational trauma caused by abuse directed towards them during forced attendance in residential schools, Canada’s substance use crisis disproportionately affects Indigenous peoples (Lavalley et al., 2018; Jardine et al., 2021; Chiefs of Ontario and Ontario Drug Policy Research Network, 2021), who are statistically more likely to have poorer health than non-Indigenous people in Canada (Urbanoski, 2017). Negative health outcomes resulting from substance use are more prevalent due to the systemic disadvantages caused by colonialization (Urbanoski, 2017). Indigenous communities in Canada have identified alcohol and substance misuse as a serious concern, with 74% of First Nations respondents to a 2003 survey, rating alcohol and illegal drugs as their biggest health concern (INAC, 2003; as cited in Jiwa et al., 2008).



### Spectrum of Substance Use

(Source: CMHA, n.d.; adapted from Health Officers Council of British Columbia, 2005)



The use of illicit drugs, non-traditional tobacco consumption, and alcohol dependency are symptoms of and contributors to poor mental and physical health outcomes (Reading and Halseth, 2013). Social and individual risk factors are associated with substance use in First Nation populations (Reading and Halseth, 2013). Factors that influence substance use among First Nations people include housing quality and availability, poverty, educational status, employment status, social networks, health care access, early life experiences, intergenerational trauma, loss of cultural identity, and physical activity levels (Reading and Halseth, 2013). These factors all work together in a complex manner that result in First Nations peoples being disproportionately influenced to use illicit substances (Reading and Halseth, 2013).

Drug use (illicit drugs, misuse of prescription drugs, etc.), also may have negative consequences such as injuries, fatalities, etc. In a study by the Chiefs of Ontario and the Ontario Drug Policy Research Network, which looked at trends and patterns in opioid prescribing and opioid-related poisoning among First Nations people in Ontario, it was seen that, for all age groups, First Nations individuals experienced a higher rate of hospital visits for opioid-related poisoning than non-First Nations individuals, and the rate for males was higher than that for females (Chiefs of Ontario and Ontario Drug Policy Research Network, 2021). Individuals between the ages of 25 and 44 experienced much higher rates of hospital visits for opioid-related poisoning compared to other age groups, and this difference was more pronounced among First Nations people (Chiefs of Ontario and Ontario Drug Policy Research Network, 2021).

High levels of alcohol consumption are also linked to various chronic diseases, cognitive effects, injuries, and fatalities (NIAAA, 2003; as cited in Reading and Halseth, 2013). Alcohol, specifically problem drinking<sup>1</sup>, has been identified as a major problem in Indigenous communities (FNIAH, n.d.; as cited in Reading and Halseth, 2013).

Substance misuse is a complex issue, with a multitude of contributing factors dictating the frequency and severity of the crisis in individual communities. It was estimated in 2012 by the Nishnawbe Aski Nation that 36% of the population in the Sioux Lookout region of Northwestern Ontario were opioid dependent (NAN, 2012; as reported by Mamakwa et al., 2017). Programs to treat those with substance use and misuse dependency include urban treatment centres, and community-based initiatives that focus on prevention, harm reduction, treatment, and aftercare (Jiwa et al. 2008; Mamakwa et al., 2017). Overall, there are strong links between illicit substance and alcohol use and the other social determinants of health. These links influence the initiation, severity, and propagation of illicit substance and alcohol use, as well as influence an individual's ability to access appropriate care options if they wish to do so, as outlined in **Section 17.3.3.13**.

### **Construction Phase**

Heightened exposure to outsiders, external influences, as well as additional health and safety risks may lead to greater and easier access to illegal drugs and alcohol and result in negative health impacts to the community. These concerns were expressed by many community members over the course of engagement (Intrinsik, 2023b).

Members of the community who are employed during the construction phase and who must leave the community for employment may have increased access to alcohol and illicit drugs in the workcamps, which may be brought in illegally, even though the camps will be 'dry' (i.e., no alcohol or illegal drugs can be brought in). This could lead to new or increased use of these substances to cope with feelings of

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<sup>1</sup> Consuming more than two (2) standard drinks per occasion is associated with an increased risk of harm to self and others, including injuries and violence (Canadian Centre on Substance Use and Addiction, 2023).



loneliness, isolation, and mental uncertainty due to increased exposure to difficult situations or oppressive atmospheres. This could lead to the negative health outcomes associated with alcohol and drug overuse.

Women and girls could indirectly experience a disproportionate increase in physical and sexual violence due to increased access to drugs and alcohol for family members and/or partners.

### Operations Phase

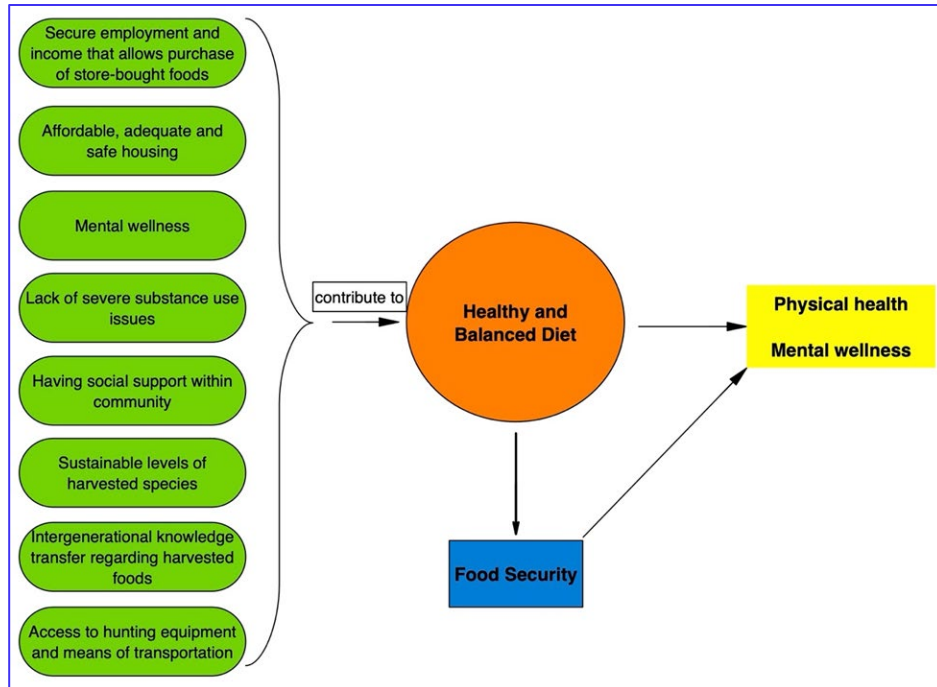
Once operational, the WSR will connect Webequie First Nation to the Ring of Fire area, where community members expect to work in jobs related to resource development. Community members who travel to the Ring of Fire area, or external workers who travel from the Ring of Fire area can bring in illegal drugs and alcohol, which could increase how much of these harmful substances is available in the community, and thereby potentially increase their use and addiction and mental health issues. This has negative impact to the health of not just users, but the community as a whole. Currently, alcohol and drugs are prohibited in the community, and the community controls what comes in and out of the community at the airport by searching bags. However, with the operation of the WSR, it could be much easier to smuggle drugs and alcohol into the community (Intrinsik, 2024).

### 17.3.4.3 Diet

Although inter-related, there is a distinct difference between diet and food security in terms of the options available to an individual over what foods are consumed. Diet fundamentally refers to the individual food choices that a person can make when accessing food options. These choices are limited by individual factors (i.e., personal taste, ability to access a traditional knowledge source to learn traditional hunting practices, ability to access the land at will to hunt and gather traditional foods, and availability of preferred nutritious market food items). Food security is beyond the control of the individual and refers to the reliable access of individuals to a predictable, affordable source of nutritious food at regular intervals (e.g., factors such as climate change impacting traditional food populations, or shipping costs making food options restricted and prohibitively expensive). Indigenous peoples' right to govern their food systems and safeguard Traditional Knowledge is dependent upon their ability to practice individual and communal food sovereignty. **Section 17.3.3.8** identifies the difference between traditional food security and food sovereignty of Indigenous peoples more comprehensively.

A variety of social, economic and cultural factors play a role in whether an individual has access to a healthy and balanced diet, which ultimately is a personal behavioural decision. Having access to healthy and balanced diets is especially important for children and youth as it has a significant influence on their growth and development. For individuals from lower socioeconomic families, individuals with disabilities, and for older adults, partaking in a healthy and balanced diet becomes especially challenging due to inability to afford store-bought foods or have access to them, and also due to difficulty in harvesting traditional foods themselves (especially for those with disabilities and older adults). In such cases, having strong community support and sharing of foods, traditional and store-bought, can make a difference. Mental wellness and lack of substance use issues can also be factors that contribute to a healthy diet.





### Some Factors That Contribute to a Healthy and Balanced Diet in Indigenous Communities

In turn, the harvesting of traditional foods can also enhance mental wellness by fostering a sense of purpose, physical activity, and connection to nature (Ahmed et al., 2021). Traditional foods are vital for Indigenous peoples, as they support nutrient-rich, cultural, spiritual, and environmental well-being. First Nations people traditionally accessed traditional and country foods harvested from wild game, plants, and fish, as well as domesticated plants such as corn, beans and squash. They are a component of ceremonies, gatherings, and the transfer of knowledge through generations, and are abundant in omega-3 fatty acids, protein, and antioxidants (FNHA, n.d). These food sources still make up a portion of the Indigenous diet (Council of Canadian Academies, 2014). However, due to the devastation caused by European colonial policies and practices that interrupted and removed traditional food procurement knowledge, as well as factors such as climate change altering traditional food availability, processed market foods have become a more prevalent component of the diets of Indigenous peoples (Willows et al., 2019). The health of the environment is intrinsically linked to the availability and quality of traditional foods, and environmental disruptions, such as climate change and major projects, can result in food insecurity. Food insecurity as a determinant of health is discussed in **Section 17.3.3.8**.

In Ontario, First Nations adults indicate that about 43% of their diet is from traditional food sources, and 56% is from ultra-processed foods (Willows et al., 2019). Shipping fresh produce and nutrient dense market food to remote First Nations communities, that are mainly fly-in-fly-out communities, is both expensive and logistically challenging. Therefore, available market foods tend to be calorie-dense, nutrient poor, ultra processed products (Monteiro et al., 2017). The lack of access of First Nations people to affordable and healthy market foods reduces the quality of individual diets, and poor health outcomes associated nutrition-related chronic diseases are prevalent (i.e., lower life expectancy, type 2 diabetes, obesity, cardiovascular disease, etc.) (Willows et al., 2019; McNally and Martin., 2017).

## Construction Phase

During the construction phase, food items will still be brought in by plane, or by the winter road. Therefore, it is unlikely that the diet of community members will change during this phase as costs and availability of market food items are expected to be consistent.

Indirectly, it is possible that workers who leave the community to participate in construction activities will no longer have the time to participate in traditional hunting activities. Therefore, there will be less available traditional foods in the community for consumption. Although these workers may maintain food security, the choices of food items they have access to will change, with market foods being more readily accessible than traditional food items. The lack of time to access the land to hunt for traditional food may have some potential negative mental wellness effects (i.e., disconnection from land and cultural identity). If loss of traditional foods persists, there could be an outcome associated with food insecurity, including lowering overall health and resulting in health outcomes associated with a nutrient poor diet (i.e., lower life expectancy, type 2 diabetes, obesity, cardiovascular disease) (Willows et al., 2019; McNally and Martin, 2017). Those who rely more heavily on traditional food sources, such as older adults (Intrinsik, 2023b; 2024), will be disproportionately affected by a temporary reduction in traditional food choices and change in diet.

During the construction phase, it is possible that the noise disturbance from construction operations may cause limited and temporary disruptions to the habitat of wildlife used as traditional food sources. This means that traditional hunting grounds may be disrupted temporarily if they overlap with the planned route of the road. This effect is considered to be temporary in nature and localized to within the range of sound travelling near the construction area (Appendix J – Noise and Vibration Impact Assessment Report). The uncertainty around the availability of a traditional food source may change the dietary patterns of community members temporarily, and if sustained over several seasons, may begin to infringe upon food security, and in turn diet. This could lead to temporary potential negative health impacts.

It is possible that the loss of habitat experienced by traditional food source animals may be temporarily impacted (Intrinsik, 2023b). It is likely that habitat loss on land will not be substantial, and that the range of traditional food source land animals will recover quickly and adapt to the existence of the road in their territory.

## Operations Phase

During the operations phase, community members will have increased access to the land as more territory will be able to be reached by car, ATV, or snowmobile. The road may increase the number of hunting locations available to community members that were previously inaccessible due to transportation limitations. More community members may be able to use the WSR to access hunting, gathering, and fishing grounds that were previously inaccessible, thus increasing the level of consistent access to traditional food sources for dietary needs. Increased access to the land may improve access to traditional food benefits, thereby improving health outcomes associated with eating more traditional foods.

It is also possible that non-members of Webequie First Nation would be able to use the WSR to access new hunting locations, and this may impact land animal, fish, and plant populations negatively. The Ontario Ministry of Natural Resources would monitor and issue licenses for large game, such as moose, through the provincial hunting lottery system, and fish catches would be limited in size by conservation laws. It is expected that these provincial regulations will ensure stable populations of wild game for Webequie First Nation community members wanting to practice traditional food gathering techniques. An expected neutral effect to wellness is anticipated if regulations are adhered to.



# 17.4 Mitigation and Enhancement Measures

Webequie First Nation has contributed to a Community Readiness Plan (Appendix N) that describes various mitigation and enhancement measures related to the Project and its activities. The Community Readiness Plan is a high level, dynamic plan that will require further engagement with the proponent and stakeholders to be finalized. Mitigation measures described in the Community Readiness Plan are in consideration of the community strategies developed by Webequie First Nation and reflect the values and principles of the community. The community plans a Community Readiness Working Group, formed of community members, members from other impacted First Nations, Indigenous community organizations, provincial and federal representatives, and the Project's contractors (Appendix N). The Community Readiness Working Group, to be led by Webequie First Nation, is proposed as a body that will oversee the further development and implementation of the Community Readiness Plan. The Community Readiness Plan should be considered the main source of community-recommended mitigation and enhancement measures. In this health effects assessment, these measures, as relevant, are re-iterated from a human health standpoint and summarized in **Table 17-6** as related to identified determinants of health.

**Table 17-6** also includes key mitigation measures outlined in Sections 7.4 and 9.4 to address potential effects on surface water quality and air quality. Further measures for these environmental determinants of health will be provided in the Construction Environmental Management Plan (CEMP) and the Operation Environmental Management Plan (OEMP) that will be developed for the Project. Refer to Section 4.6 for details of the proposed framework for the development of the CEMP and the OEMP.



Indigenous community members will have an active role in developing and implementing environmental management plans.

**Table 17-6: Summary of Potential Effects, Mitigation Measures and Predicted Net Effects for Human Health VC**

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
<b>Structural / Level 3 Determinants of Health – Structural or systemic factors</b>					
Colonialism and trauma of residential schools	<ul style="list-style-type: none"> <li>Temporary disruption in the traditional practices on the land and impact to cultural identity;</li> <li>Local business and economic development; and</li> <li>Easier access of illicit substances and alcohol into the community.</li> </ul>	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Employment opportunities enhancing self-determination and self-governance, and better access to services, including mental health services to address the impacts of intergenerational trauma.</li> <li>Temporary disruption of access to traditional lands and ways of life leading, temporarily, to a loss of identity and amplification of feelings of colonial control.</li> <li>Easier access of illicit drugs and alcohol from outsiders leading to higher rates of substance use and mental health crisis.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Access to the Ring of Fire area increases employment opportunities enhancing the self-determination and self-governance of the community and resulting in improved health outcomes.</li> <li>Easier access of illicit drugs and alcohol from outsiders leading to higher rates of substance use and mental health crisis.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consult with community members throughout the construction phase to provide regular updates regarding construction activities that may impact traditional activities on the land, so community members are prepared for the changes. The contractor will aim to avoid impacts to traditional land activities as much as possible. The proponent will develop and implement cultural training programs (e.g., Indigenous Awareness Training). The overall aim will be for the contractor to learn about cultural protocols and avoid actions that could exacerbate trauma, such as disrupting sacred lands or cultural sites.</li> <li>M: Webequie First Nation and the contractor will aim to limit outsiders working on construction on the Project from entering the community to the extent possible. This may limit the amount of illegal drugs and alcohol from entering the community, and limit impacts to mental health.</li> <li>M: Webequie First Nation will work with the province to increase access to trauma-informed mental health services and traditional healing practices for community members such as counselling, support groups, and healing circles.</li> <li>E: Webequie First Nation will work with the contractor to help ensure that the Project creates employment opportunities for community members, including Investing in training programs to build community capacity.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will aim to limit outsiders from entering the community through the WSR to the extent possible. This may limit the amount of illegal drugs and alcohol from entering the community, and limit impacts to mental health.</li> <li>E: Webequie First Nation will aim to help ensure that the employment and economic growth opportunities from the Project creates sustainable employment and positive growth in income for most community members. This will help most members of the community access the services they need to address the trauma and mental health issues due to residential schools and colonization.</li> </ul>	<p><b>Construction</b></p> <p>It is possible that despite implementation of mitigation and enhancement measures there may still be some small and temporary net effects due to limitation of traditional land activities and predicted increases in mental health issues due to increased substance use during both construction and operation.</p> <p><b>Operations</b></p> <p>The Project may provide a link to employment opportunities in the Ring of Fire area resulting in economic opportunities that may improve access to mental health services in the community and net positive effects to mental health and wellness and go some way to address intergenerational trauma from residential schools.</p>
Racism and social exclusion	<ul style="list-style-type: none"> <li>Racism from external workers; and</li> <li>Feeling of isolation and loneliness due to being away from community/family.</li> </ul>	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Racism from external workers may contribute to negative health outcomes, which can be a catalyst for family violence.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: The contractor will be advised to work with Webequie First Nation to promote respectful relationships between Webequie First Nation members and construction workers by implementing regular mandatory in-person cultural and Indigenous awareness training to increase awareness and knowledge of Indigenous history and culture among workers and on raising awareness for the safety of Indigenous women and girls.</li> <li>M: The contractor will establish and enforce zero-tolerance policies on racism and violence in the workplace, which can help to provide a safer, more understanding work environment for Indigenous employees and encourage the potential Indigenous employees.</li> </ul>	<p><b>Construction</b></p> <p>There is a risk that community may still be exposed to racism and discrimination from outside workers despite mitigation measures, increasing risk to their safety and security with potential for some adverse net health impacts.</p>
Local economic growth	<ul style="list-style-type: none"> <li>Local business and economic development; and</li> <li>Employment opportunities.</li> </ul>	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Business development opportunities increase the likelihood of positive health outcomes through potentially improved social and economic conditions.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>E: Webequie First Nation will consider the ways in which the construction phase of the Project may boost local business development, financial independence for the First Nation, development of business relationships with surrounding Indigenous and non-Indigenous communities, and employment opportunities for community members.</li> <li>E: Prior to construction, it is suggested Webequie First Nation develop a Businesses Development Plan to: <ul style="list-style-type: none"> <li>Outline an inventory of local and/or Indigenous-owned companies that can be used throughout the construction phase.</li> </ul> </li> </ul>	<p><b>Construction</b></p> <p>No adverse net effects to health are predicted. If the Project boosts income, there will be a positive net effect to health.</p> <p><b>Operations</b></p> <p>No adverse net effects to health are predicted. If businesses can benefit from reduced travel time and expenses to Ring of Fire area, it will lead to increased disposable income and higher spending on goods and</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
			<p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Access to the Ring of Fire area increase access to economic opportunities and improve health outcomes associated with increased employment, income and availability of services.</li> </ul>	<ul style="list-style-type: none"> <li>Identify specific Project services that would be targeted to local and/or Indigenous-owned businesses.</li> <li>Establish procurement policies for the recruitment, development, and retention of underrepresented groups of Webequie First Nation, other LSA communities and the RSA.</li> <li>Set procurement targets (e.g., total contract value, employment of specific groups like women, youth and individuals with disabilities) for the participation of local and/or Indigenous businesses in Project construction. Additional support for underrepresented groups, such as women, youth and individuals with disabilities, could be provided through opportunities such as job shadowing, mentorship programs, and paid internships.</li> <li>Specify how contracts should be released by the Project management to maximize Project participation by local and/or Indigenous owned businesses. This may include providing information on advanced notice of procurement opportunities (e.g., public announcements, advertisements) and establishing clear requirements and equitable certification processes for local and Indigenous businesses.</li> <li>Webequie First Nation will consider that local economic growth benefits all sub-groups within the community, including women, youth and those with disabilities.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Implement same enhancement measures outlined for Construction Phase above.</li> </ul>	services, which will have positive net effects to health and wellbeing.
Self-determination and governance	<ul style="list-style-type: none"> <li>Rights to land and resources; and</li> <li>Right to pursue economic prosperity and independence.</li> </ul>	Construction and Operations	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Community may feel a sense of empowerment if involved in the planning and decision-making process for the Project.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Building the WSR would be a positive step towards Webequie First Nation increasing their self-determination and self-governance. This has the potential to improve health outcomes in the community.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>E: To enhance physical and mental health and wellbeing, Webequie First Nation should have a decision-making role throughout the planning and development of the WSR.</li> <li>E: The community will be provided with regular information and messaging regarding planning for the Project, including challenges faced, and how they are being addressed. This will allow the community to participate in the Project throughout.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>E: As was conveyed during in-person consultations, Webequie First Nation will consider how best the Project can benefit all sub-groups within the community in the long-term, with commitment to social programming in the community.</li> </ul>	<p><b>Construction Phase</b></p> <p>No adverse net effects to health are predicted. Positive net effects are predicted should the Project be approved and the community, as the Proponent exercises its rights to self-determination and builds the Projects as per its vision.</p> <p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted. Positive net effects to health are predicted should the Webequie Supply Road provide a connection to the Ring of Fire area, and improve economic growth, jobs and economic, social and health programming in the community.</p>
Worker accommodations (i.e., during project activities, including in construction camps)	<ul style="list-style-type: none"> <li>Safety and security;</li> <li>Availability of illicit substances; and</li> <li>Housing availability.</li> </ul>	Construction	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>Temporary construction camps leading to feelings of reduced safety and security of Indigenous communities, especially women and girls, and also 2SLGBTQQIA individuals in the community, and also Indigenous workers due to experiences of racism in the construction workplace.</li> <li>Indigenous workers may feel being isolated from friends and family, stressful work environments, and a lack of connection which can lead to negative wellness outcomes.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Locations of the construction camps should be chosen that minimize interactions with high traffic areas and areas that are often used for traditional activities.</li> <li>M: It is advised that non-Indigenous workers should not be allowed into Webequie First Nation during the construction phase, except by permission. Protocols should be put in place to regulate entry of members from other Indigenous communities. This may limit negative impacts to the safety and security of Webequie First Nation. However, the extent of mitigation of the impact will depend on how effectively non-members of the community are kept out.</li> <li>M: The contractor will be advised to work with Webequie First Nation to promote respectful relationships between Webequie First Nation members and construction workers by implementing mandatory in-person cultural and Indigenous awareness training to increase awareness and knowledge of Indigenous history and culture among workers and on raising awareness for the safety of Indigenous women and girls.</li> </ul>	<p><b>Construction Phase</b></p> <p>Even with limitations in place to not allow outsiders to enter the community, except those with permission, enforcement may not be 100% effective. This means that individuals who are not members of Webequie First Nation may gain entry into the community, which may have lingering safety and security impacts in Webequie First Nation, particularly to specific subgroups, including women, girls and individuals who identify as 2SLGBTQQIA. As such, there is potential for limited negative net effects to health and wellbeing. Enforcement of the 'dry' status may be limited, and substances may still be brought into the camps, and as such the community, by external workers. Substance use may exacerbate violent activity, including sexual violence. Therefore, designating a camp as 'dry' does not necessarily mitigate this issue and there may be limited negative net effects.</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
			<ul style="list-style-type: none"> <li>Increased availability of illicit substances.</li> <li>Increased burden on housing services if off-reserve community members wish to stay in the community to participate in construction-related activities.</li> </ul>	<ul style="list-style-type: none"> <li>M: The contractor will work with Webequie First Nation to provide a safe and productive work environment by establishing and enforcing clear guidelines on substance use that includes the prohibition of drugs and alcohol in construction camps during the construction phase.</li> <li>E: To mitigate potential impacts on housing within the community from off-reserve members participating in construction jobs, the community can consider adding additional temporary housing within the reserve to house off-reserve members during the construction phase.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>E: Any additional housing that is added in the community during the construction phase can be potentially converted to more permanent housing. One of the construction camps is expected to be converted to temporary housing to house medical staff, teachers, and support personnel, who want to stay in the community.</li> </ul>	<p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted.</p>
<b>Intermediate / Level 2 Determinants of Health – Environmental and community factors</b>					
Air quality (including GHG emissions)	<ul style="list-style-type: none"> <li>Emissions, including greenhouse gases</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Increase in air pollutants can have negative health effects.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: To minimize dust pollution, it is recommended that the contractor use tarps to prevent dust from spreading, or spray the roads with a water-based solution to suppress dust, especially in dry areas such as haul/access roads or temporary soil and aggregate stockpiles. The use of dust suppression systems at quarries, truck speed limitations, vehicle and heavy equipment movement limitations to designated areas, minimizing idling and so forth.</li> <li>M: The contractor should endeavour to use of environmentally certified equipment (e.g., Tier 4 engines) as much as possible.</li> <li>M: the contractor should develop and implement an Air Quality and Dust Control Management Plan to manage and reduce air contaminant emissions during construction phase. The Air Quality and Dust Control Management Plan will integrate a monitoring procedure for dustfall effects and measures to control or limit usage of vehicle or equipment that are the main emission source of particulates.</li> <li>M: Minimize the combustion of living biomass which will reduce GHG emissions by using the biomass for other purposes such as the production of roundwood and timber that would be used in Webequie for construction projects or woodchips used as mulch for landscaping, erosion control, etc.</li> <li>M: Refer to Section 9.4 for additional mitigation measures to eliminate or reduce the potential effects of air contaminants and GHG emissions from project activities.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: During operations, while it is not feasible to have a direct control on emissions from vehicle engines, it is possible to work on dust emissions from the road surface. Considering that part of the road will not be fully surfaced with asphalt or chip seal from the start, the maintenance crew will operate a truck that will spray water over the gravel-surface road from May to November, or when needed.</li> <li>M: An Air Quality and Dust Control Management Plan will be developed and implemented to manage and reduce air contaminant emissions during operations phase. The Air Quality and Dust Control Management Plan will also include a procedure for documenting compliance with applicable standards and required conditions as stipulated in permits, approvals, licenses and/or authorizations.</li> <li>M: Refer to Section 9.4 for additional mitigation measures to eliminate or reduce the potential effects of air contaminants and GHG emissions from project activities.</li> </ul>	<p><b>Construction Phase</b></p> <p>Even with the application of mitigation measures, potential exceedances of Ontario Ambient Air Quality Criteria for total suspended particulates, PM<sub>10</sub>, and PM<sub>2.5</sub> and Canadian Ambient Air Quality Standards for NO<sub>2</sub> remain a possibility at some culturally sensitive areas. This indicates that there may be potential for negative net health effects.</p> <p><b>Operations Phase</b></p> <p>There may be limited potential for negative net health effects due to the operation of the WSR alone.</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
Noise levels and vibration	<ul style="list-style-type: none"> <li>Sound level</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Increased noise and vibration levels may impact wildlife location and number affecting the ability of community members to hunt and access them as a food source, and enjoyment of the land.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: To address the potential noise effects from blasting, it is proposed that a Construction Blasting Management Plan for the Project will be prepared by applicable contractor(s) prior to initiation of blasting activities. The plan will include a requirement for controlling peak overpressure sound levels to meet the blasting noise guidelines and criteria.</li> <li>M: Concerns of noise pollution has caused Webequie community members to recommend that there be more regulations around noise in the region. An example is maintaining equipment to limit noise emissions.</li> <li>M: The contractor should aim to limit construction to the daytime period, where possible, especially near residences. Noise complaints, if arise during the project construction and operations, will be investigated and addressed.</li> <li>M: Refer to Section 9.4 for additional mitigation measures to eliminate or reduce the potential effects of noise and vibration from project activities.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Implement same mitigation measures for blasting activities outlined for Construction Phase above.</li> </ul>	<p><b>Construction Phase</b></p> <p>There are some predicted adverse and temporary net effects to health during construction.</p> <p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted.</p>
Surface water quality	<ul style="list-style-type: none"> <li>Change in surface water quality (e.g., habitat, chemistry, and flow rates)</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Construction of water crossings and operation and maintenance activities may lead to degradation of aquatic habitat resulting in negative health outcomes due to changes in cultural and traditional food practices.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Dewatering, water takings, and discharges will be regulated by MECP permits (i.e., a permit to take water will be required for the Project) and industry best management practices will be used to minimize dewatering/pumping volumes.</li> <li>M: Restore disturbed areas from vegetation clearing and grubbing to minimize effects on runoff rates.</li> <li>M: Erosion and sediment control measures taken into consideration when constructing waterbody crossing structures along with implementing water quality monitoring.</li> <li>M: Reduce construction during times that would most affect fish and fish habitat (e.g., breeding seasons).</li> <li>M: Proper handling and storage of petroleum and other hazardous materials as well as emergency response plans to mitigate accidental spills and leaks.</li> <li>M: A Construction Blasting Management Plan for the Project will be prepared.</li> <li>M: A Construction Waste Management Plan will be developed to minimize the amount of waste to be generated.</li> <li>M: Refer to Section 7.4 for additional mitigation measures to eliminate or reduce the potential effects of project activities on surface water quality.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: An ongoing follow-up monitoring program (post-construction) will be implemented during the operations phase of the Project.</li> <li>M: Water will be used to control the dispersion of dust to nearby waterbodies.</li> <li>M: Refer to Section 7.4 for additional mitigation measures to eliminate or reduce the potential effects of project activities on surface water quality.</li> </ul>	<p>Adverse net effects to health are anticipated in the construction and operations phases, should there be sufficient impacts to surface water quantity and quality that it impacts community practices and use of the water.</p>
Light pollution, including visual effects	<ul style="list-style-type: none"> <li>Ambient light levels; and</li> <li>Qualitative visual changes.</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>A change in the visual landscape may cause feelings of ecological grief in some individuals, leading to some mental health impacts.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Inform community members of upcoming construction activities and where they will be focused so members are prepared to see construction equipment and changes in specific areas.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>As per the Visual Impact Assessment (Appendix R), mitigation measures for effects to visual environment will be incorporated into the project design and will be implemented to minimize negative effects. Mitigation measures considered in the potential effects analysis for visual environment included the following, and are re-iterated from the human health standpoint to limit impacts to mental health as a result of change to the visual environment:</li> </ul>	<p>No adverse net effects to health are predicted.</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
				<ul style="list-style-type: none"> <li>▫ Avoiding new Project footprint disturbances to the extent practicable, with particular consideration at the three waterbody crossing sites.</li> <li>▫ Minimizing the extent of vegetation clearing at the three waterbody crossings, and other crossings, that are considered navigable waterbodies will be limited to minimize visual impacts and where necessary meet safety standards.</li> <li>▫ Maximizing efforts to retain existing vegetation and landforms, to the extent practicable, to provide screening of activities and project components.</li> <li>▫ Reducing the extent of disturbed area within the road right-of-way. Disturbed areas will be restored and seeded to allow for natural revegetation and its management to support the safe operations of the road.</li> </ul>	
Housing, including access and quality	<ul style="list-style-type: none"> <li>▪ Housing capacity;</li> <li>▪ Housing quality; and</li> <li>▪ Housing cost (e.g., repair and construction).</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>▪ Increased burden on housing services if off-reserve community members wish to stay in the community to participate in construction-related activities.</li> <li>▪ Improvement to housing access and quality if the WSR allows for more homes to be built/repared.</li> <li>▪ Improvement in housing affordability if the WSR allows for building materials and labour to be transported to the community in an affordable manner.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ M: All workers, except individuals from Webequie First Nation, should be housed in the designated construction camps.</li> <li>▪ M: During the construction phase, the construction camp structures will be designed to ensure all required services are available to the workers at the camp itself, with neutral to minimal disturbance/impact to the existing community infrastructure of Webequie First Nation.</li> <li>▪ E: For off-reserve members of Webequie First Nation working on the construction of the WSR, additional temporary housing within the community that can be converted into longer-term housing should be considered to avoid overcrowding in existing homes.</li> <li>▪ E: The population groups who are already disproportionately affected by poor and crowded housing conditions, i.e., single mothers, older adults, women and single individuals, should be prioritized in the allocation of housing.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>▪ E: The Webequie First Nation Community Readiness Plan will include plans and measures for enhancing housing stock to address housing capacity issues. Given the importance of housing as a vital determinant of health, these measures are also recommended from a human health standpoint.</li> <li>▪ E: Off-reserve community members and medical staff and personnel should be prioritized for residence in the one construction camp expected to be converted into housing for community needs.</li> </ul>	<p><b>Construction Phase</b></p> <p>No adverse net effects to health are predicted.</p> <p><b>Operations Phase</b></p> <p>Potential positive effects to health are predicted from enhancement measures adding new housing to increase housing availability during the operations phase. In addition, converting one construction camp into housing for the community and visiting staff has the potential for positive net effects to health and wellbeing.</p>
Employment and income	<ul style="list-style-type: none"> <li>▪ Access to employment opportunities and income</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>▪ Increase in employment opportunities leading to higher incomes.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>▪ M: Webequie First Nation will consider working with the province to invest in training programs to build local capacity. Webequie First Nation will also work with the contractor to consider providing childcare services so women can participate in training and education to take advantage of employment opportunities resulting from the construction phase, as well as helping to ensure that workers from the community are offered fair wages, safe working conditions, job security, and address inequalities in labour practices.</li> <li>▪ M: Webequie First Nation will work with the contractor to help ensure additional support for underrepresented groups such as youth, through opportunities such as job shadowing, mentorship programs, and paid internships.</li> <li>▪ E: Creation and implementation of workplace policies and programs, including a diversity and inclusion strategy, zero-tolerance policies for racism and workplace violence, codes of conduct, workplace safety programs and cultural training programs (e.g., Indigenous Awareness Training), as a means to retain employees through positive work experience.</li> <li>▪ E: The contractor should consider providing disability supports (e.g., access to wheelchair and access ramps, hearing aids, etc.) to allow community members with disabilities to participate in the workforce as much as possible, potentially in desk-jobs or low intensity jobs.</li> </ul>	<p><b>Construction Phase</b></p> <p>Potential positive net health effects are predicted due to employment opportunities available during construction with the potential to increase incomes. The scope of the positive effects, i.e., whether various sub-groups within the community (i.e., women, youth, individuals with disabilities) benefit, will depend on how well the mitigation and enhancement measures listed above are implemented.</p> <p>New labour and business opportunities (direct, indirect, and induced) will lead to increased participation and employment in the labour market, increased employment, and increased labour income</p> <p><b>Operations Phase</b></p> <p>Increase in employment and income once the WSR is in operations will depend on factors outside of the Project itself. As such, no major net effects to health as a result of the Project are predicted. The operation of the WSR will increase employment opportunities and therefore</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
				<ul style="list-style-type: none"> <li>E: Webequie First Nation will consider a plan that would shape the Project as a source of sustainable employment opportunities for community members. Investing in training programs to build local capacity. Ensuring that workers from the community are offered fair wages, safe working conditions, job security, to address inequalities in labor practices.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>E: Safe, reliable, and accessible care options for children, older persons, and those with disabilities will help those who have care duties access and use the road to access employment opportunities.</li> <li>E: Creation and implementation of workplace policies and programs, including a diversity and inclusion strategy, zero-tolerance policies for racism and workplace violence, codes of conduct, workplace safety programs and cultural training programs (e.g., Indigenous Awareness Training), as a means to retain employees through positive work experience, should be implemented in all projects in the Ring of Fire area.</li> </ul>	increase employment income, leading to positive net health effects.
Education / Access to Education	<ul style="list-style-type: none"> <li>Skills and trade skills development</li> </ul>	Construction	<ul style="list-style-type: none"> <li>Increased opportunities for trade skills development.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>E: Webequie First Nation will work with the contractor to help ensure that educational and specialized skills training opportunities in construction will be provided to community members ahead of the construction phase, so they are prepared with necessary skills. The Community Readiness Plan will include enhancement measures for Education, Training and Traditional Learning Programming and Facility Space to identify and plan for education and training needs.</li> <li>E: Funding and educational programs will need to be available for members of the community to financially and practically access education and skills training required to participate in construction work. Webequie First Nation is encouraged to explore options for funding together with the contractor and the province. Training may also be available through local educational service providers or through apprenticeships with construction companies or experienced members of the community. The community can also consider specialized programs for community members who have learning disabilities.</li> <li>E: Educational attainment levels for women in Webequie is lower than for men. To realize any health benefit from increased education/training in construction, some community members, and especially women, will need to be provided with child-care so they may attend training and get work.</li> </ul>	<p><b>Construction Phase</b></p> <p>Positive net effect on education and training attainment will lead potential positive net health effects.</p> <p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted.</p>
Food security, including quality and availability of traditional foods	<ul style="list-style-type: none"> <li>Access to and quality of traditional foods</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Construction activities may impede access to and disturb supply and quantity of traditional foods.</li> <li>Additional income from construction-related employment may increase ability to afford store-bought healthy foods.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: As there is potential for food insecurity arising from disturbance of land and habitat of traditional food sources due to construction-related activities, traditional hunting areas should be clearly identified by the contractor, and the impact to these areas from the Project should be kept minimal to avoid loss of habitat, and loss of animal traffic due to noise. This will maintain access to traditional foods, and related health benefits.</li> <li>M: Construction and any ground disturbing activity should be avoided by the contractor during critical windows of habitat movement, mating or spawning to help avoid lasting damage to specific species. If this is not possible, appropriate permits should be obtained to reduce the impact to wildlife.</li> <li>M: It is advised that Webequie First Nation be involved in all land use planning activities to manage any new developments that may arise due to the Project to secure the integrity of their traditional hunting, fishing, and trapping grounds to help to ensure current and future generations maintain traditional food security, and the health benefits associated with the consumption of traditional foods.</li> <li>M: It is possible that construction workers who are not members of Webequie First Nation will access the traditional lands of the community to hunt for recreation and sport. This use of the land by non-members should be prohibited or strictly regulated by Webequie First Nation during the construction period to maintain self-sustaining populations of traditional food</li> </ul>	<p><b>Construction Phase</b></p> <p>There may be a temporary loss of traditional food security in the community due to construction activities and their impact to wildlife and harvesting practices. As a result, there may be some temporary adverse net effects to health and wellbeing.</p> <p>Additional income from employment may result in increased affordability of non-traditional store-bought foods, and thereby increase food security that way, and improve health and wellbeing. However, these potential positive health benefits would be mainly for those who obtain construction-related jobs.</p> <p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted.</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
				<p>sources and therefore maintain the resulting health benefits associated with traditional food security.</p> <ul style="list-style-type: none"> <li>E: Webequie First Nation can include in their Community Readiness Plan the need for continuing to provide youth and interested members of the community with knowledge related to harvesting traditional foods. This will help with the passing of traditional knowledge to the next generation, spark joy associated with traditional methods and allow the next generation to experience the health benefits associated with traditional food harvesting and consumption.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: The use of traditional lands by non-members will be discouraged or limited by Webequie First Nation. Hunters who are not from the community should follow all provincial regulations, and poaching should be monitored through standard enforcement procedures to help to ensure all regulations are followed.</li> <li>E: Community members suggest that Webequie First Nation should continue to provide youth and interested members of community with knowledge related to harvesting traditional foods.</li> </ul>	
Social cohesion and cultural continuity	<ul style="list-style-type: none"> <li>Traditional and cultural teachings and activities</li> </ul>	Construction	<ul style="list-style-type: none"> <li>Interactions with outside workers could decrease social cohesion and negatively impact health.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: The contractor is encouraged to develop policies that support flexibility in work schedule and/or opportunities for leave for Indigenous employees in order to support important cultural practices, such as harvesting, which may allow them to continue to participate in the traditional economy and harvesting.</li> <li>M: From the cultural enrichment plan of the Community Readiness Plan, enhancement measures for Webequie First Nation to consider could include continuing to hold camping and canoe trips, holding cultural and recreational activities, creating on the land retreats and a healing centre, creating a cultural centre, and development of new powwow grounds.</li> <li>M: The contractor will be advised to work with Webequie First Nation to promote respectful relationships between Webequie First Nation members and construction workers by implementing regular mandatory in-person cultural and Indigenous awareness training in order to increase awareness and knowledge of Indigenous history and culture among workers and on raising awareness for the safety of Indigenous women and girls.</li> </ul>	No adverse net effects to health are predicted.
Safety and security of women and girls	<ul style="list-style-type: none"> <li>Safety of women and girls; and</li> <li>Violence and sexual exploitation of women and girls.</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Increased risks to safety and security for women and girls due to the presence of outside workers.</li> <li>Increased incidents of racialized violence against community members due to the presence of outsiders.</li> <li>Increased availability of illicit substances may lead to increased safety risk, and violence against women and girls.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: The contractor will be advised to work with Webequie First Nation to create and implement mandatory training programs focused on the safety of Indigenous women, girls and 2SLGBTQQIA individuals.</li> <li>M: Webequie First Nation should consider establishing a group made of community members to function as Community Liaison Officers as part of the project workforce during the construction phase, to bridge the gap between the community's needs and Project's requirements and effects (see Community Readiness Plan – Appendix N).</li> <li>M: The contractor will be advised to work with Webequie First Nation to develop a grievance mechanism for community concerns and issues at the construction camps, inclusive of issues regarding racism, sexism, gender-based violence, and other issues.</li> <li>M: Webequie First Nation will consider developing a Safety and Security Plan for Vulnerable Community Members with the purpose of providing enhanced safety and security for women, children, youth and vulnerable people in the Webequie community, including 2SLGBTQQIA and under-housed people, to address any new hazards and safety concerns related to the Project.</li> </ul>	<p><b>Construction Phase</b></p> <p>Even though Webequie aims to limit entry of outsiders into the community, it is not known how effective enforcement measures to keep out outsiders may be. Hence, there is potential for adverse net effects to health. Specifically, there is a risk to the safety and security of Indigenous women and girls, and safety concerns related to increased amount of alcohol and illicit substances entering the community illegally.</p> <p><b>Operations Phase</b></p> <p>There is a risk to the safety and security of women and girls.</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
				<ul style="list-style-type: none"> <li>M: It is recommended that Webequie First Nation work with government bodies on implementation of Ontario's strategy in response to the National Inquiry into Missing and Murdered Indigenous Women and Girls recommendations.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: It is recommended that Webequie First Nation advocate for creating and implementing training programs focused on the history and culture of Indigenous peoples, and the safety of Indigenous peoples, especially women, girls and 2SLGBTQQIA people for all projects being undertaken in the Ring of Fire area.</li> </ul>	
Traffic volume and safety	<ul style="list-style-type: none"> <li>Traffic volume</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Increased traffic volume on the winter road bringing in equipment and personnel for the construction phase of the Project causing delays in travel for community members.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: The contractor will be advised to develop a Construction Traffic Management Plan together with Webequie First Nation, to provide guidance on how project-related traffic is managed in and around the project construction site, including use of the winter road during construction of the Project.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>Key mitigation measures proposed to address potential hazards of traffic during the operations phase include: <ul style="list-style-type: none"> <li>Develop a plan to enforce road safety;</li> <li>Consider road patrols and inspections;</li> <li>Consider partnerships for driver education and licensing;</li> <li>Consider roadside safety options; and</li> <li>Consider maintenance/turnaround/rest areas.</li> </ul> </li> </ul>	<p><b>Construction Phase</b></p> <p>No adverse net effects are predicted with the implementation of proposed mitigation measures.</p> <p><b>Operations Phase</b></p> <p>There are possible safety and security risks due to accidents and injuries because of speeding or driving under the influence during the operations phase. However, these magnitude, likelihood and significance of these adverse effects are hard to predict.</p>
Access to healthcare services	<ul style="list-style-type: none"> <li>Demand for on-reserve healthcare services</li> </ul>	Construction	<ul style="list-style-type: none"> <li>Increased demand for health care services locally if currently off-reserve community members return to the community for employment opportunities.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consider working with the province to improve health care services (including counselling services, and substance use-support programs) within the community before construction activities begin.</li> <li>M: Construction work will have safety management plans and workers will be required to adhere to these protocols and associated trainings for safe work. This reduces the potential for work-related incidents, such as injuries or fires.</li> <li>M: Construction camps are expected to have first-aid stations and occupational health and safety staff to address minor injuries and illness.</li> <li>M: Health and safety plans will be developed for all parts of the project activities.</li> </ul>	<p><b>Construction Phase</b></p> <p>If construction workers are able to use first-aid stations at or near the camps, there are no adverse net effects to health predicted during the construction phase from increased demand and pressure on availability of healthcare services.</p> <p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted.</p>
Access to social, mental health and family services	<ul style="list-style-type: none"> <li>Childcare services;</li> <li>Elder services; and</li> <li>Mental health services.</li> </ul>	Construction	<ul style="list-style-type: none"> <li>Increased demand for mental health, child-care and Elder care services with off-reserve community members returning to the community for employment opportunities.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consider working with the province to improve mental health care services within the community before construction activities begin to ensure the community's already limited health care services will not be burdened.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consider working with the province to improve mental health care services within the community to help ensure the community's already limited health care services will not be burdened.</li> </ul>	No adverse net effects to health are predicted.

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
Access to transportation services	<ul style="list-style-type: none"> <li>Improved mobility and travel options</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Access to currently available modes of transport (air and winter road) may have increased wait times as traffic for construction and industrial activities increases.</li> <li>The WSR will provide safe and direct all-season access to the Ring of Fire area, where employment opportunities are expected to become available.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation may want to consider how community members needing to travel to and from the community, via air travel or the winter road, to access services and for other reasons, are still able to do so freely and not impeded by the higher demand placed on air travel and by winter road to bring in construction-related equipment and personnel.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>E: For those travelling to the Ring of Fire area to access employment and opportunities via the WSR, Webequie First Nation may want to consider arranging community transportation services to assist those who are elderly, have a disability, and those who do not have access to a vehicle to access the mining areas and take advantage of opportunities. This will increase the potential positive impacts to health.</li> </ul>	<p><b>Construction Phase</b></p> <p>Net adverse health effects are predicted during the construction phase if community members experience long delays in accessing services and goods because air travel and the winter road, when available, is too busy.</p> <p><b>Operations Phase</b></p> <p>No adverse net effects to health are predicted.</p>
Access to emergency response services	<ul style="list-style-type: none"> <li>Availability of emergency services</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Increase demand for local emergency services resulting in decreased availability for community emergencies.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation should seek external funding for a fire station and fire truck to put out fires and protect community members.</li> <li>M: Additional emergency response services for drug-related medical concerns and overdoses should be considered by the community.</li> <li>M: Construction camps are to include a first aid station, and occupational health and safety staff to address minor injuries and illness. Major emergencies will use helicopter transport and will not burden the health care system of the community.</li> <li>M: Construction work will have safety management plans and workers will be required to adhere to these protocols for safe work.</li> <li>M: Workers will be expected to remain within the camp at all times and will rarely enter the Webequie community, reducing the use of protective services within the Webequie community.</li> <li>M: Camps will also have security staff to patrol the camp for hazards/threats and protect workers.</li> <li>M: All safety incidents related to the Project will be reported within 24 hours and records of these incidents will be archived.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: As part of the Community Readiness Plan, a community well-being monitoring and adaptive management plan will monitor road safety as well as the capacity of the emergency and protective services.</li> <li>M: Road safety plan will include measures to mitigate adverse effects.</li> <li>E: Implementing road signs, raising public awareness about road safety, and providing education and awareness on road safety is also considered as an enhancement measure.</li> </ul>	No adverse net effects to health are predicted.
Childhood Development	<ul style="list-style-type: none"> <li>Available services</li> </ul>	Not applicable	<ul style="list-style-type: none"> <li>There are no anticipated effects.</li> </ul>	<ul style="list-style-type: none"> <li>E: As per the Community Readiness Plan, an initiative will be developed to implement a dedicated childcare and youth services drop-in centre in the Webequie community that will provide support to family members that require childcare to participate in education and training programs and employment opportunities related to the Project. In addition, a drop-in centre will also focus on services available to youth, such as services under Jordan's Principle, and people with disabilities.</li> </ul>	No adverse net effects to health are predicted.

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
<b>Proximal / Level 1 Determinants of Health – Individual, behavioural and biological factors</b>					
Mental well-being, including prevalence of depression and anxiety	<ul style="list-style-type: none"> <li>Need for mental health services; and</li> <li>Prevalence of mental health crises and disorders.</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Decreased mental wellness due to changes in the community, changes in the landscape (ecological grief/solastalgia), safety and security within the community and of individuals, and newcomers in the community.</li> <li>The WSR may allow for better connection with other communities and employment opportunities, reduce isolation and improve social wellness and in turn mental wellness.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consider working with the province to obtain additional mental health supports and counselling for Webequie First Nation community to help with challenges community members anticipate facing regarding project activities and concerns.</li> <li>M: Contact should be limited between the work camps and the community to reduce the stress and concern felt due to the threat of violence or concern for personal safety, especially by women and girls.</li> <li>M: The contractor will be advised to work with Webequie First Nation and aim to offer mandatory annual Indigenous cultural sensitivity training to workers to promote positive work relationships between Indigenous and non-Indigenous employees, and limit risk to the safety of women, girls and 2SLGBTQQIA individuals.</li> <li>M: The contractor should aim to understand Webequie cultural practices and respect cultural practices by allowing time and flexibility for workers to participate in cultural ceremonies, traditions or community events when possible as Elders believe these traditional practices promote positive mental well-being.</li> <li>M: To address feelings of ecological grief due to changes to the landscape, it is suggested that Webequie continue to keep community members (especially Elders) comprised of ongoing construction activities, so they are not surprised by sudden changes. Also ask the contractor to stage construction equipment and work camps away from sight lines to minimize visual disturbance to the landscape.</li> <li>E: The contractor should work with Webequie First Nation to understand environmental stewardship practiced by Webequie and incorporate these principles into construction practices whenever possible.</li> </ul> <p><b>Operations Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consider implementing inspection areas to not only limit access to community to outsiders, but also to discourage illegal entry of illicit substances and alcohol into the community. This will reduce safety and security risks, and improve mental wellness when members feel safe in the community.</li> <li>M: Webequie First Nation may wish to consider working with the province to obtain additional mental health supports and counselling for community to help with challenges community members anticipate facing regarding project activities and concerns.</li> </ul>	<p><b>Construction Phase</b></p> <p>Net adverse health effects are predicted due to:</p> <ul style="list-style-type: none"> <li>- Despite mitigation / enhancement measures, historic deficiencies in mental health services in Webequie prevents them from having the capacity to support any mental wellness challenges arising from the Project.</li> <li>- The presence of construction camp workers may still pose safety and security risk and impact the mental health and wellness of community members, particularly women, girls, and those who identify as 2SLGBTQQIA.</li> </ul> <p><b>Operations Phase</b></p> <p>Despite the implementation of recommended inspection areas, it can be anticipated that drugs and alcohol will make its way into the community due to the increased accessibility, resulting in negative net effects to mental wellness.</p>
Substance use, including alcohol and drugs	<ul style="list-style-type: none"> <li>Rates of substance use (perceived or quantitative)</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Increased use and dealing of illegal substances may lead to increase in violence against women, girls and 2SLGBTQQIA individuals, as well as increase in domestic violence.</li> </ul>	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>M: Webequie First Nation will consider increasing substance use support services in the community before construction begins, as well as provide enhanced messaging and programming around the harms of substance use.</li> <li>M: It is advised that workers who are not members of Webequie First Nation not be allowed into Webequie First Nation during the construction phase. This may limit opportunities for illicit drugs and/or alcohol to be transported into the community by outsiders.</li> <li>M: The contractor should work with Webequie First Nation to provide a safe and productive work environment by establishing and enforcing clear guidelines on substance use that includes the prohibition of drugs and alcohol in construction camps during the construction phase.</li> <li>M: The contractor will be advised to provide education and training for workers on the effects of substance use and importance of maintaining a drug-free work environment.</li> </ul>	<p><b>Construction Phase</b></p> <p>Even though the Webequie First Nation construction camps will all be 'dry' camps (no alcohol in the camps), it can be anticipated that drugs and alcohol will make its way into the camps illegally and thereby the community, due to increased accessibility, increasing use of illegal substances. In turn, this will have negative net effects on the health of workers and those in the community.</p> <p><b>Operations Phase</b></p> <p>Similar to construction phase, it can be anticipated that drugs and alcohol will make its way into the community illegally despite previously recommended inspection areas, due to the increased accessibility. This has potential for negative net effects to health.</p>

Determinant of Health	Indicators	Project Phase	Potential Effect	Mitigation (M) and Enhancement (E) Measures	Predicted Net Effect
				<b>Operations Phase</b> <ul style="list-style-type: none"> <li>M: Webequie First Nation consider implementing inspection areas to not only limit access to community to outsiders, but also to discourage illegal entry of illicit substances and alcohol into the community.</li> <li>M: Webequie First Nation will consider stepping up programs to educate younger generations about the effects of alcohol and drug use.</li> </ul>	
Diet, including consumption of traditional foods	<ul style="list-style-type: none"> <li>Choice and availability of traditional and store-bought foods</li> </ul>	Construction and Operations	<ul style="list-style-type: none"> <li>Disturbance in the traditional habitat of harvested species, which could impact ability to harvest and reduce reliance on traditional foods in diet.</li> <li>Increased employment and income leading to an improvement in access to a healthy store-bought foods diet for community members.</li> <li>Increased access to the land via the WSR may improve traditional hunting abilities and improve ability to harvest traditional foods.</li> </ul>	<b>Construction Phase</b> <ul style="list-style-type: none"> <li>M: Webequie First Nation will work with contractor(s) to ensure that disturbances to the local environment are made in a way that minimizes disturbance to natural habitats and focuses on the long-term stability of wild game and traditional plant populations during construction including minimizing noise pollution, especially during key mating periods.</li> </ul> <b>Operations Phase</b> <ul style="list-style-type: none"> <li>M: Members of the community who hunt may want to notice and maintain records of changes in patterns of behaviour among game animals and growth patterns of traditional plants as a result of the WSR.</li> <li>M: Webequie First Nation is encouraged to work with the Ontario Ministry of Natural Resources to monitor and issue licenses for large game, such as moose, through the provincial hunting lottery system, and regulate fish catches by conservation laws.</li> </ul>	No adverse net effects to health are predicted.

# 17.5 Characterization of Net Effects

Net effects are defined as the effects of the Project that remain after application of proposed mitigation measures. The effects assessment follows the general process described in Section 5 – Environmental Assessment / Impact Assessment Approach. **Table 17-7** presents definitions for net effects criteria, developed with specific reference to the Human Health VC. Net effects have been described using criteria to quantify or qualify adverse and positive effects, considering any important contextual factors. To note, human health impacts are influenced by a number of factors, including social, economic, environmental quality, cultural and traditional. The interconnected and dynamic nature of this influence makes it difficult to accurately predict ‘reversibility’ of human health impacts, especially those related to the social determinants of health. Where appropriate, a GBA Plus has been applied to net effects to identify disproportionate net effects for diverse subgroups.

**Table 17-7: Criteria for Characterization of Predicted Net Effects on Human Health VC**

Characterization Criteria	Description	Quantitative Measure or Definition of Qualitative Categories
Direction	Direction relates to the value of the effect in relation to the existing conditions	<p><b>Positive</b> – Net gain or benefit; effect is desirable</p> <p><b>Neutral</b> – No change compared with baseline conditions and trends</p> <p><b>Negative</b> – Net loss or adverse effect; effect is undesirable</p>
Magnitude	Magnitude is the amount of change in measurable parameters or the determinant of health relative to existing conditions (see <b>Table 17-7</b> ).	<p><b>Negligible</b> – No measurable change</p> <p><b>Low</b> – The net effect may be measurable but represents a small change relative to existing conditions</p> <p><b>Moderate</b> – The net effect will be measurable but represents a moderate change relative to existing conditions</p> <p><b>High</b> – The net effect will be measurable to a high degree relative to existing conditions</p>
Geographic Extent	Geographic extent refers to the spatial area over which a net effect is expected to occur or can be detected within the Project Footprint, Local Study Area and Regional Study Area	<p><b>Project Footprint</b> – The net effect is confined to the Project Footprint</p> <p><b>Local Study Area</b> – The net effect is confined to the Local Study Area</p> <p><b>Regional Study Area</b> – The net effect extends beyond the Local Study Area boundary, but is confined within the Regional Study Area</p>
Timing	Timing criteria indicate the timing (e.g., dates or seasons) importance of the net effect	<p><b>Not time sensitive</b> – The net effect is not sensitive to the timing of a project phase and/or specific project activity.</p> <p><b>Time sensitive</b> – The net effect is sensitive to the timing of a project phase and/or specific project activity.</p>
Duration	Duration is the period of time required until the measurable indicators or the determinant of health returns to its existing (baseline) condition, or the net effect can no longer be measured or otherwise perceived	<p><b>Short-term</b> – The net effect is restricted to no more than the duration of the construction phase (approximately 5 years)</p> <p><b>Medium-term</b> – The net effect extends through the Operations Phase of the Project (75-year life cycle)</p> <p><b>Long-term</b> – The net effect extends beyond the Operations Phase (greater than 75 years)</p> <p><b>Permanent</b> – Recovery to baseline conditions unlikely</p>

Characterization Criteria	Description	Quantitative Measure or Definition of Qualitative Categories
Frequency	Frequency refers to the rate of occurrence of an effect over the duration of the Project or in a specific phase	<b>Infrequent</b> – The net effect is expected to occur rarely <b>Frequent</b> – The net effect is expected to occur intermittently <b>Continuous</b> – The net effect is expected to occur continually
Context	Context considers sensitivity and resilience of the determinant of health to project-related change	<b>High resilience</b> – The determinant of health has high resilience or ability to adapt to changes in the measurement indicator and low sensitivity to changes caused by the Project <b>Moderate resilience</b> – The determinant of health has a moderate resilience or ability to adapt to changes in the measurement indicator and has moderate sensitivity to potential changes caused by the Project <b>Low resilience</b> – The determinant of health has low resilience or ability to adapt to changes in the measurement indicator and is sensitivity to potential changes caused by the Project
Input from Indigenous peoples	Views of the Indigenous communities and groups in assigning the criteria to be used and in characterizing the effects	Inputs received during engagement and consultation, and participation in the EA/IA process, in assigning the criteria to be used and in characterizing the effects.
Likelihood of Occurrence	Likelihood of occurrence is a measure of the likelihood that an activity will result in an effect	<b>Unlikely</b> – The net effect is not likely to occur <b>Possible</b> – The net effect may occur, but is not likely <b>Probable</b> – The net effect is likely to occur <b>Certain</b> – The net effect will occur

**Table 17-8: Definition of Magnitude Ratings for Predicted Net Effects on Human Health VC**

Magnitude Level	Definition	Rationale
Negligible	An effect that may or may not be discernible but is within the historical variability as defined by baseline conditions. The effect is within the capacity of the community to respond and/or will not alter the current community conditions.	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.
Low	An effect that is small but discernable and within historical variability as defined by baseline conditions. The effect is within the capacity of the community to respond and/or will not alter the current community conditions.	Low effects are noticeable to community members. These effects do not represent a change in day-to-day life at a community-level.
Moderate	An effect that is clearly discernable and beyond the historical variability as defined by baseline conditions. The effect is within the capacity of the community to respond and/or will not alter the current community conditions.	Moderate effects are noticeable to community members. These effects may or may not represent a change to day-to-day life but can be adjusted to. They are within the current capacity of the community to adapt to.
High	An effect that is clearly discernable and beyond the historical variability as defined by baseline conditions. The effect is beyond the capacity of the community to respond and/or will alter the current community conditions.	High effects are noticeable to community members. These effects represent a change to day-to-day life. In the case of adverse effects, these changes cannot be adapted to resulting in a large degree of change.



## 17.5.1 Potential Effect Pathways Not Carried Through for Further Assessment

The proposed mitigation measures outlined in **Table 17-6** are expected to reduce potential adverse effects of the Project on the Human Health VC. The determinants of health with anticipated effects that are considered to be nonexistent or minimal due to the implementation of proposed measures are not carried through for further assessment. These determinants of health include:

- Racism and social exclusion (during the Project's operations phase);
- Worker accommodations (during the Project's operations phase);
- Noise level and vibration (during the Project's operations phase);
- Light pollution, including visual impact;
- Housing (during the Project's construction phase);
- Education / access to education (during the Project's operations phase);
- Social cohesion and cultural continuity (during the Project's operations phase);
- Access to healthcare services;
- Access to social, mental health and family services;
- Access to transportation services (during the Project's operations phase);
- Access to emergency response services;
- Childhood development; and
- Diet, including access to traditional country foods.

Potential effects that remain following the implementation of mitigation measures are carried forward for further assessment (**Section 17.5.2**).

## 17.5.2 Predicted Net Effects

Net effects are defined as the effects of the Project that remain after application of proposed mitigation measures. As noted in **Table 17-6**, net effects on the Human Health VC are predicted for the following determinants of health:

- **Structural / Level 3 Determinants of Health**
  - Colonization and trauma from residential schools – *adverse effects*;
  - Racism and social exclusion (during the Project's construction phase) – *adverse effects*;
  - Local economic growth – *positive effects*;
  - Self-determination and governance – *positive effects*;
  - Worker accommodations (during the Project's construction phase) – *adverse effects*.
- **Intermediate / Level 2 Determinants of Health**
  - Air quality and GHG emissions – *adverse effects*;
  - Noise level and vibration (during the Project's construction phase) – *adverse effects*;
  - Surface water quality – *adverse effects*;
  - Housing (during the Project's operations phase) – *positive effects*;
  - Employment and income – *positive effects*;



- Education / access to education (during the Project's construction phase) – *positive effects*;
  - Food security – *adverse effects (construction phase) and positive effects (operations phase)*;
  - Social cohesion and cultural continuity (during the Project's construction phase) – *adverse effects*;
  - Safety and security of women and girls – *adverse effects*;
  - Traffic volume and safety – *adverse effects*;
  - Access to transportation services (during the Project's construction phase) – *adverse effects*.
- **Proximal / Level 1 Determinants of Health**
    - Mental wellness – *adverse effects*; and
    - Substance use – *adverse effects*.

The following subsections provide description and characterization of the predicted net effects based on criteria defined in **Table 17-7** and **Table 17-8**. The determination of whether a net effect is considered significant is described in **Section 17.6**.

### **17.5.2.1 Structural / Level 3 Determinants of Health**

#### ***Colonization and Trauma from Residential Schools***

##### **Construction Phase**

While the mitigation and enhancement measures are intended to address the worsening of intergenerational trauma in the community due to the Project, it is possible that there may still be temporary adverse net effects with low magnitude due to limitation of traditional land activities and increase in mental health issues due to increased substance use. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, of continuous frequency, having low resilience in health context, and possible to occur.

##### **Operations Phase**

The availability of jobs and economic opportunities may improve access to mental health services in the community and net positive effects to mental health and wellness and go some way to address intergenerational trauma from residential schools. While the mitigation and enhancement measures are intended to address the worsening of intergenerational trauma in the community due to the Project, it is possible that there may still be adverse net effects with low magnitude due to increase in mental health issues due to increased substance use. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be long-term in duration, of continuous frequency, having low resilience in health context, and possible to occur.

#### ***Racism and Social Exclusion***

##### **Construction Phase**

While the mitigation measures are intended to address racism and social exclusion, there may still be some small adverse net effects despite these efforts. Some of these effects stem from the complexity and long-standing nature of the issues being addressed. There is a risk that community members may still be exposed to racism and discrimination from outside workers, increasing risk to their safety and security



and impact their health. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, of continuous frequency, having low resilience in health context, and likely to occur (probable).

### **Operations Phase**

No net effects to health are predicted.

### ***Local Economic Growth***

#### **Construction Phase**

No adverse net effects to health are predicted.

Based on the Economic Effects Assessment (Section 15), the construction phase of the Project will stimulate the economic activities in the region, and especially within the Webequie First Nation and other LSA communities via material procurement, labour and employment, services contracting and similar which in turn will increase GDP levels. If this boosts income, there will be a positive net effect to health. The net effect's magnitude is predicted to be low for traditional Indigenous economy and medium to high for GDP, cost of living, household spending, and economic development. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive with respect to the Project's construction phase, short-term in duration, having intermittent frequency, and certain to occur. For health context, this health determinant has moderate resilience in the LSA and high resilience in the RSA.

#### **Operations Phase**

No adverse net effects to health are predicted.

Based on the Economic Effects Assessment (Section 15), during the operations phase, by improving connectivity and reducing transportation costs, the WSR will boost GDP through enhanced economic activity and productivity. Businesses can benefit from reduced travel time and expenses to the Ring of Fire area, leading to increased disposable income and higher spending on goods and services, which will have positive net effects to health and wellbeing. Additionally, the WSR can attract businesses and investors, fostering economic development and creating new job opportunities (refer to Section 15). Improved road access can also make land more accessible for development, increasing its value and potential for new residential, commercial, and industrial projects (refer to Section 15), and boost community wellbeing. The net effect's magnitude is predicted to be low for traditional Indigenous economy and medium to high for GDP, cost of living, and economic development. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not time sensitive with respect to the Project's operations phase, to be permanent in duration, having frequent occurrences (frequency), and certain to occur. For health context, this health determinant has moderate resilience in the LSA and high resilience in the RSA.

### ***Self-determination and Governance***

#### **Construction Phase**

Positive net effects are predicted should the Project be approved and the Webequie First Nation exercises its rights to self-determination and builds the Project as per its vision. The net effect's magnitude is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First



Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be long-term in duration, of continuous frequency, having low resilience in health context, and possible to occur.

### **Operations Phase**

There can be expected to be positive net effects to health should the WSR provide a connection to the Ring of Fire area, and improve economic growth, jobs and economic, social and health programming in the community. The net effect's magnitude is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be long-term in duration, of continuous frequency, having low resilience in health context, and possible to occur.

### **Worker Accommodations**

#### **Construction Phase**

Even with limitations in place to not allow outsiders to enter the community, except those with permission, enforcement may not be 100% effective. This means that individuals who are not members of Webequie First Nation will gain entry into the community, which may have lingering safety and security impacts in Webequie First Nation, particularly to specific sub-groups, including women, girls and individuals who identify as 2SLGBTQIA.

Enforcement of the 'dry' status may be limited, and substances may still be brought into the camps, and as such the community, by external workers. Substance use may exacerbate violent activity, including sexual violence. Therefore, designating a camp as 'dry' does not necessarily mitigate this issue. The magnitude of the predicted net effect is expected to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive with respect to the Project's construction phase, short-term in duration, of infrequent or frequent occurrences (frequency), with low resilience in health context, and possible or likely (probable) to occur.

### **Operations Phase**

No adverse net effects to health are predicted.

## **17.5.2.2 Intermediate / Level 2 Determinants of Health**

### ***Air Quality and GHG Emissions***

#### **Construction Phase**

The net effects on air quality during the construction phase are adverse, as the project construction results in a predicted increase of ambient concentrations compared to existing conditions (refer to Section 9). As such, there is potential for temporary limited adverse net effects to health. The magnitude of the net effects is predicted to be moderate to high for air quality and low for GHG emissions. The net effects' geographic extent is anticipated to be the LSA and beyond RSA defined for air quality and GHG emissions respectively in Section 9. The net effects are considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, with frequency being infrequent (air quality) and continuous (GHG emissions), having moderate resilience in health context, and likely to occur (probable).



## **Operations Phase**

As noted in Section 9, even with the application of mitigation measures, exceedances of Ontario Ambient Air Quality Criteria for TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> and Canadian Ambient Air Quality Standards for NO<sub>2</sub> remain a possibility at some culturally sensitive areas. There is some potential for negative net effects to health. The magnitude of the net effects is predicted to be moderate to high for air quality and low for GHG emissions. The net effects' geographic extent is anticipated to be the LSA and beyond RSA defined for air quality and GHG emissions respectively in Section 9. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be medium-term in duration, with frequency being frequent (air quality) and continuous (GHG emissions), having moderate resilience in health context, and likely to occur (probable).

## **Noise Level and Vibration**

### **Construction Phase**

Results of the noise impact modelling conducted for aggregate extraction activities indicated that predicted sound levels are expected to minorly exceed NPC-300 guideline limits at Construction Camp 2A located near ARA-2 (refer to Section 9). Given workers will be in the field during the daytime, the exceedances are minor (by a maximum of 4 dBA). Therefore, the magnitude of the effect is considered to be low.

The noise impact modelling conducted for the construction of the proposed roadway and bridges indicated that the highest predicted sound levels at the culturally sensitive areas CHL-5, CHL-7, CHL-17, CHL-25, and Construction Camp 1A site C05 are between 48 and 57 dBA, exceeding the MNL threshold of 47 dBA (L<sub>DN</sub>). Therefore, the magnitude of the effect is considered to be low to moderate. The net effect's geographic extent is anticipated to be the LSA defined for noise and vibration in Section 9. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, with frequency being infrequent, having moderate resilience in health context, and likely to occur (probable).

### **Operations Phase**

As noted in Section 9, the noise impact modelling conducted to predict noise generated from the operations of the WSR indicated that changes in sound levels are expected to be negligible for the existing residences within the Webequie community and less than the 5 dB change threshold outlined in the Joint Protocol and MTO Noise Guide. For the culturally sensitive areas, the maximum sound level is predicted to be 46 dBA. The maximum change is predicted to be 14 dB which is above the MTO Joint Protocol/Noise Guide threshold. Overall, operations phase sound levels are predicted to be less than or equal to 45 dBA which is considered appropriate for a quiet rural environment. With respect to Health Canada Guidelines, changes in sound levels resulting from the proposed Project are expected to be negligible for all Noise Sensitive Areas and less than the 6.5% threshold, and the magnitude of the effect is considered to be low. As such, there are no net effects to health predicted.

## **Surface Water Quality**

### **Construction Phase**

Despite mitigation /enhancement measures, changes in surface water quantity, changes in surface water quality, and changes in sediment quality may occur (refer to Section 7). Adverse net effects to health are anticipated in the construction phase, should there be sufficient impacts to surface water quantity and quality that it impacts community practices and use of the water. The magnitude of the net effects is



predicted to be low. The net effects' geographic extent is anticipated to be the LSA and RSA defined for Surface Water Resources VC in Section 7. Timing importance of the net effects depending on whether construction activities will occur during restricted activity timing windows as specified by MNR and DFO, such that potential effects to aquatic habitat/resources may occur. The net effect is considered to be short-term in duration, with frequency being frequent, infrequent, or continuous, having high resilience in health context, and possible or likely to occur (probable).

### **Operations Phase**

Despite mitigation /enhancement measures, changes in surface water quantity, changes in surface water quality, and changes in sediment quality may occur (refer to Section 7). Adverse net effects to health are anticipated in the operations phase, should there be sufficient impacts to surface water quantity and quality that it impacts community practices and use of the water. The magnitude of the net effects is predicted to be low. The net effects' geographic extent is anticipated to be the LSA and RSA defined for Surface Water Resources VC in Section 7. Timing importance of the net effects depending on whether construction activities will occur during restricted activity timing windows as specified by MNR and DFO, such that potential effects to aquatic habitat/resources may occur. The net effect is considered to be medium-term to long-term in duration, with frequency being frequent or continuous, having high resilience in health context, and likely (probable) or certain to occur.

### ***Housing***

#### **Construction Phase**

No adverse net effects to health are predicted.

#### **Operations Phase**

Potential positive effects to health are predicted from enhancement measures adding new housing to increase housing availability during the operations phase (refer to Section 14). In addition, converting one construction camp into housing for the community and visiting staff has the potential for positive net effects to health and wellbeing. The magnitude of the net effects is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive with respect to the Project's construction phase, medium-term in duration, with frequency being frequent, having low resilience in health context, and possible to occur.

### ***Employment and Income***

#### **Construction Phase**

Potential positive net health effects are predicted as a result of employment opportunities available during construction with the potential to increase incomes. The scope of the positive effects, i.e., whether various sub-groups within the community (i.e., women, youth, individuals with disabilities) benefit, will depend on how well the mitigation and enhancement measures listed above are implemented.

New labour and business opportunities (direct, indirect, and induced) will lead to increased participation and employment in the labour market, increased employment, and increased labour income (Section 15). The magnitude of net effects to health as a result of the Project are predicted to be low to moderate for employment opportunities and moderate to high for employment income. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive with respect to the Project's construction



phase, short-term in duration, having frequent occurrences (frequency), and certain to occur. For health context, this health determinant has low resilience in the LSA and high resilience in the RSA.

### **Operations Phase**

The operation of the WSR will increase employment opportunities and therefore increase employment income (Section 15). Increase in employment and income once the WSR is operational will also depend on factors outside of the Project itself. As such, the magnitude of net effects to health because of the Project are predicted to be low for employment opportunities and low to moderate for employment income. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not time sensitive with respect to the Project's operations phase, to be permanent in duration, having frequent occurrences (frequency), and certain to occur. For health context, this health determinant has low resilience in the LSA and high resilience in the RSA.

### ***Education / Access to Education***

#### **Construction Phase**

Positive net effect on education and training attainment (Section 14) will lead to potential positive net health effects. The net effect's magnitude is predicted to be moderate. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not time sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, having continuous frequency, having low resilience in health context, and likely to occur (probable).

#### **Operations Phase**

There are no net effects predicted.

### ***Food Security***

#### **Construction Phase**

There may be a temporary loss of traditional food security in the community due to construction activities and their impact to wildlife and harvesting practices. As a result, there may be some temporary adverse net effects to health and wellbeing. The net effect's magnitude is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation and other LSA communities. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, of continuous frequency, having low resilience in health context, and likely to occur (probable).

Additional income from employment may could result in increased affordability of non-traditional store-bought foods, and thereby increase food security that way, and improve health and wellbeing. However, these potential positive health benefits would be mainly for those who obtain construction-related jobs.

#### **Operations Phase**

Although there may be some outsiders who would now be able to hunt in the traditional lands of Webequie First Nation, with the mitigation measures, it is not expected that this will have net effects. However, should there be increased employment, and hence increased income, during the operations phase, it would allow community members to afford store-bought foods. Community members may also



have increased access to lands for hunting purposes. The net effect's magnitude is predicted to be negligible to low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be medium-term in duration, having frequent occurrences (frequency), having low resilience within the LSA and high resilience within the RSA for health context, and with a likelihood of occurrence being probable to certain.

### ***Social Cohesion and Cultural Continuity***

#### **Construction Phase**

With mitigation measures in place, the net effects to health due to decreased community cohesion are predicted to be limited. The net effect's magnitude is predicted to be negligible to low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is time sensitive with respect to the Project's construction phase should there be interactions between the construction workforce and members of Webequie First Nation and any conflicts that may arise. The net effects are predicted to be short-term in duration, having frequent occurrences (frequency), having low resilience in health context, and with a likelihood of occurrence being possible to probable.

#### **Operations Phase**

There are no net effects predicted.

### ***Safety and Security of Women and Girls***

#### **Construction Phase**

There is a risk to the safety and security of community members due to violence, racism, discrimination and criminal activity from external workers, either at the construction camps, or during interactions with outsiders in other areas. Even though Webequie aims to limit entry of outsiders into the community, it is not known how effective enforcement measures to keep out outsiders may be. Hence, there is potential for adverse net effects to health.

There is a specific risk to the safety and security of Indigenous women and girls due to concerns of sexual violence and sex trafficking that may be perpetrated by external workers. Hence, there is potential for adverse net effects to health.

There is heightened risk for increased amounts of alcohol and illicit substances entering the community illegally via the external workers even though the worker camps have been designated as 'dry' camps. Hence, there is potential for adverse net effects to health. The net effect's magnitude is predicted to be moderate. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, of continuous frequency, having low resilience in health context, and likely to occur (probable).

#### **Operations Phase**

There is a specific risk to the safety and security of Indigenous women and girls due to concerns of sexual violence and sex trafficking that may be perpetrated by outsiders who may gain entry into the community via the WSR, despite measures to restrict entry. Hence, there is potential for adverse net effects to health. The net effect's magnitude is predicted to be moderate. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and



the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be medium-term in duration, of continuous frequency, having low resilience in health context, and likely to occur (probable).

### ***Traffic Volume and Safety***

#### **Construction Phase**

With mitigation measures in place, the net effects to health related to traffic volume and safety during the construction phase are predicted to have low magnitude. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive to work and other traffic activities during the Project's construction phase, to be short-term in duration, with frequency being frequent, having low resilience in health context, and likely to occur (probable).

#### **Operations Phase**

There are possible safety and security risks due to accidents and injuries because of speeding or driving under the influence during the operations phase. However, these magnitude, likelihood and significance of these adverse effects are hard to predict. Should the net effects be likely to occur (probable), the net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive to work and other traffic activities during the Project's operations phase, to be medium-term in duration, with frequency being frequent, and having low resilience in health context.

### ***Access to Transportation Services***

#### **Construction Phase**

There may be some negative net health effects during the construction phase if community members experience long delays in accessing services and goods because air travel and the winter road, when available, is too busy. The net effect's magnitude is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, with frequency being frequent, having low resilience in health context, and possible to occur.

#### **Operations Phase**

There are no net effects predicted.

## **17.5.2.3 Proximal / Level 1 Determinants of Health**

### ***Mental Wellness***

#### **Construction Phase**

Despite limiting contact between the work camps and the community, the presence of construction camp workers may still pose safety and security risk and impact the mental health and wellness of community members. Even with mitigations in place to not allow outsiders to enter the community, enforcement may not be 100% effective and this may have some safety and security impacts in Webequie First Nation, especially to specific sub-groups, including women, girls and individuals who identify as 2SLGBTQQIA,



during the construction phase. The magnitude of the net effect is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be short-term in duration, of continuous frequency, having low resilience in health context, and possible to occur.

### **Operations Phase**

Despite the implementation of recommended inspection areas, it can be anticipated that drugs and alcohol will make its way into the community due to the increased accessibility, resulting in increased negative impacts to mental wellness. The magnitude of the net effect is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not sensitive to the timing of a project phase and/or specific project activity, to be long-term in duration, of continuous frequency, having low resilience in health context, and possible to occur.

### **Substance Use**

#### **Construction Phase**

Even though the Webequie First Nation construction camps will all be 'dry' camps (no alcohol in the camps), it can be anticipated that drugs and alcohol will make its way into the camps and thereby the community, due to increased accessibility, increasing use of illegal substances. In turn, this will have negative net effects on the health of workers and those in the community. The magnitude of the net effect is predicted to be moderate. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered to be time sensitive with respect to the Project's construction phase, to be short-term in duration, of continuous frequency, having low resilience in health context, and likely to occur (probable).

#### **Operations Phase**

Similar to construction phase, it can be anticipated that drugs and alcohol will make its way into the community despite previously recommended inspection areas, due to the increased accessibility. This has potential for some negative net effects to health. The magnitude of the net effect is predicted to be low. The net effect's geographic extent is anticipated to be Webequie First Nation, with negligible effects in other LSA communities and the RSA. The net effect is considered not time sensitive with respect to the Project 's operations phase, to be medium-term in duration, of continuous frequency, having low resilience in health context, and likely to occur (probable).



### 17.5.3 Summary

**Table 17-9** provides a summary of the characterization of net effects, the significance evaluation of the predicted residual effects, as well as level of confidence in the assessment of effects on health determinants for Human Health VC. **Section 17.6** provides information on the significance evaluation approach. **Section 17.8** discusses predicted confidence in the assessment.

**Table 17-9: Summary of Predicted Net Effects, Significance Evaluation, and Level of Confidence in the Assessment of Effects on Human Health VC**

Determinant of Health with Predicted Net Effect	Project Phase	Net Effects Characterization									
		Direction	Magnitude	Geographic Extent	Timing	Duration	Frequency	Context	Likelihood of Occurrence	Determination of Significance	Level of Confidence
<b>Structural / Level 3 Determinants of Health</b>											
Colonization and trauma from residential schools	Construction	Negative	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Short Term	Continuous	Low resilience	Possible	Not significant	Low
	Operations	Negative	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Long Term	Continuous	Low resilience	Possible	Not significant	Low
Racism and social exclusion	Construction	Negative (risk to the safety and security of community members due to violence, racism, discrimination and criminal activity from external workers)	Moderate	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Short Term	Continuous	Low resilience	Probable	Significant	Low
Local economic growth	Construction	Positive (Traditional Indigenous Economy)	Low (ability to participate in traditional Indigenous economy); Medium to High (GDP, cost of living, household spending, and economic development)	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive	Short-term	Frequently	Moderate resilience within LSA, and high resilience within the RSA	Certain	Significant	Medium
	Operations	Positive (Traditional Indigenous Economy)	Low (ability to participate in traditional Indigenous economy); Medium to High (GDP, cost of living, and economic development)	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Permanent	Frequently	Moderate resilience within LSA, and high resilience within the RSA	Certain	Significant	Medium
Self-determination and governance	Construction	Neutral / potentially positive	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Long-term	Continuous	Low resilience	Possible	Not significant	Low
	Operations	Neutral / potentially positive	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Long-term	Continuous	Low resilience	Possible	Not significant	Low
Worker accommodations	Construction	Negative	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive	Short-term	Infrequent / Frequent	Low resilience	Possible / Probable	Not significant	Medium

Determinant of Health with Predicted Net Effect	Project Phase	Net Effects Characterization									
		Direction	Magnitude	Geographic Extent	Timing	Duration	Frequency	Context	Likelihood of Occurrence	Determination of Significance	Level of Confidence
<b>Intermediate / Level 2 Determinants of Health</b>											
Air quality and GHG emissions	Construction	Negative	Moderate to High (Air Quality) Low (GHG emissions)	LSA (Air Quality) Beyond RSA (GHG emissions)	Not time sensitive	Short-term	Infrequent (Air Quality) Continuous (GHG emissions)	Moderate resilience	Certain	Significant (Air quality) Not significant (GHG emissions)	Medium
	Operations	Negative	Moderate to High (Air Quality) Low (GHG emissions)	LSA (Air Quality) Beyond RSA (GHG emissions)	Not time sensitive	Medium-term	Frequent (Air Quality) Continuous (GHG emissions)	Moderate resilience	Certain	Significant (Air quality) Not significant (GHG emissions)	Medium
Noise level and vibration	Construction	Negative (aggregate extraction operations; construction of the proposed roadway and waterbody crossings; changes to harvesting practices)	Low to moderate	LSA	Not time sensitive	Short-term	Infrequent	Moderate resilience	Probable	Not significant	Medium
Surface water quality	Construction	Negative	Low	LSA, RSA	Within / Outside Restricted Activity Timing Window	Short-term	Frequent / Infrequent / Continuous	High resilience	Possible / Probable	Not significant	Medium
	Operations	Negative	Low	LSA, RSA	Within / Outside Restricted Activity Timing Window	Medium-term / Long-term	Frequent / Continuous	High resilience	Probable / Certain	Not significant	Medium
Housing	Operations	Positive (in terms of availability of housing)	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive	Medium -term	Frequent	Low resilience	Possible	Not significant	Low
Employment and income	Construction	Positive	Low to Moderate (employment opportunities); and Moderate to High (employment income).	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive	Short-term	Frequent	Low resilience within the LSA, and high resilience within the RSA	Certain	Significant	Medium
	Operations	Positive	Low (employment opportunities); Low to Moderate (employment income)	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Permanent	Frequent	Low resilience within the LSA, and high resilience within the RSA	Certain	Significant (employment income)	Medium
Education/access to education	Construction	Positive (in terms of education and training attainment)	Moderate	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Short-term	Continuous	Low resilience	Probable	Significant	Medium

Determinant of Health with Predicted Net Effect	Project Phase	Net Effects Characterization									
		Direction	Magnitude	Geographic Extent	Timing	Duration	Frequency	Context	Likelihood of Occurrence	Determination of Significance	Level of Confidence
Food security	Construction	Negative (traditional territories affected, temporary loss of traditional foods); Positive (additional income to afford non-traditional food)	Low	Webequie First Nation, LSA	Time sensitive	Short-term	Continuous	Low resilience	Probable	Not significant	Low
	Operations	Neutral to positive	Negligible to low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Medium-term	Frequent	Low resilience within the LSA, and high resilience within the RSA	Probable to certain	Significant	Medium
Social cohesion and cultural continuity	Construction	Neutral to negative (in terms of community cohesion)	Negligible to low	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive	Short-term	Frequent	Low resilience	Possible to probable	Not significant	Medium
Safety and security of women and girls	Construction	Negative	Moderate	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Short-term	Continuous	Low resilience	Probable	Significant	Medium
	Operations	Negative	Moderate	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Medium-term	Continuous	Low resilience	Probable	Significant	Medium
Traffic volume and safety	Construction	Negative (in terms of traffic safety)	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive to work activities	Short-term	Frequent	Low resilience	Probable	Not significant	Medium
	Operations	Negative (in terms of traffic safety)	Dependent on traffic volume	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive to work activities	Medium-term	Frequent	Low resilience	Probable	Not significant (will depend on traffic volume)	Low
Access to transportation services	Construction	Negative (in terms of availability of community services)	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Short-term	Infrequent	Low resilience	Possible	Not significant	Medium
<b>Proximal / Level 1 Determinants of Health</b>											
Mental wellness	Construction	Negative	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Short-term	Continuous	Low resilience	Possible	Not significant	Medium
	Operations	Negative	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Long-term	Continuous	Low resilience	Possible	Not significant	Medium
Substance use	Construction	Negative (drugs and alcohol entering the community)	Moderate	Webequie First Nation (Negligible in other LSA communities and RSA)	Time sensitive	Short-term	Continuous	Low resilience	Probable	Significant	Medium
	Operations	Negative (drugs and alcohol entering the community)	Low	Webequie First Nation (Negligible in other LSA communities and RSA)	Not time sensitive	Medium-term	Continuous	Low resilience	Probable	Not significant	Medium

Note: Refer to Table 17-7 and Table 17-8 for definitions of categories for net effect characterization

## 17.6 Determination of Significance

The assessment of the significance of net effects of the Project is informed by the interaction between the significance factors, with magnitude and duration being the most important factors. Consideration is also given to comments and concerns raised by Webequie First Nation, other Indigenous communities and regulatory agencies during engagement and consultation.

Using the HIA-specific characterization of net effects (**Section 17.5**), an effect was considered as 'significant' when all of the following criteria were met and represented a management concern:

- Health Context: Pressure on existing health conditions;
- Magnitude: Moderate-to-High; and
- Duration: Medium- to Long-Term.

Implementation of proven mitigation measures is expected to avoid or reduce the magnitude and duration of net effects on human health. The determination of significance for the assessment of effects on the social and environmental determinants of health is presented in **Table 17-9**.

## 17.7 Cumulative Effects

In addition to assessing the net environmental effects of the Project, the assessment for Human Health VC also evaluates and assesses the significance of net effects from the Project that overlap temporally and spatially with effects from other past, present and reasonably foreseeable developments (RFDs) and activities (i.e., cumulative effects).

For a valued component that has identified net effects where the magnitude was determined to be higher than negligible, it is necessary to determine if the effects from the Project interact both temporally and spatially with the effects from one or more past, present RFDs or activities, since the combined effects may differ in nature or extent from the effects of individual Project activities. Where information is available, the cumulative effects assessment estimates or predicts the contribution of effects from the Project and other human activities on the criteria, in the context of changes to the natural, health, social or economic environments.

For this Human Health VC assessment, the net effects in **Section 17.5** that are characterized as having a likelihood of occurrence of "probable" or "certain" and a magnitude higher than "negligible" or "low" have been carried forward to the cumulative effects assessment. Net effects with this characterization are most likely to interact with other RFD and activities. Additionally, key health effects that have been identified by the community as key concerns during engagement (i.e., worker accommodations, food security, and substance use) have been retained for the assessment of cumulative effects as they were considered to be most likely to interact with other reasonably foreseeable developments and activities. Therefore, where the human health effects assessment characterized as having no net effects, only positive net effects, negligible net effects or likelihood of occurrence as "unlikely" or "possible" and magnitude of occurrence of "negligible" or "low" and have not been specifically identified as a specific concern by Webequie First Nation, are not carried forward to the cumulative effects assessment.



The cumulative effects assessment for the Project is completed at the regional scale (i.e., VC specific RSA). The cumulative effects assessment for each VC is primarily qualitative and describes how the interacting effects of human activities and natural factors are predicted to affect indicators for each VC. The assessment is presented as a reasoned narrative describing the outcomes of cumulative effects for each VC.

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

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

Results of the cumulative effects assessment for the Human Health VC with consideration of RFDs and activities are presented in Section 21.

## 17.8 Prediction Confidence in the Assessment

The information and data available to make strong conclusions about how the Project can affect health by changing the determinants of health is not always available. Hence, there is uncertainty in the conclusions and determinations made of potential positive and negative health effects. A conservative approach was used in assessing potential effects where there is uncertainty. The assumptions made in this assessment include:

1. The closest construction / worker camp to Webequie First Nation is preliminarily located approximately 5 km south of the Webequie settlement site.
2. Although details of an approved safety and security enforcement strategy are still being worked out, it has been proposed by Webequie First Nation that for safety and security considerations, construction workers / other workers (non-Indigenous) will not be allowed into Webequie First Nation. However:
  - a. It is assumed that Webequie First Nation may not be completely successful in keeping out outside workers / individuals.
  - b. Construction workers / other workers are not expected to be allowed into either of the communities unless they use the appropriate channels to get permission to enter the communities.
3. Should off-reserve Webequie First Nation members decide to participate in construction activities / jobs, they will be provided housing in the community to the extent available, and the overflow will stay in the construction / worker camps.
4. Although it is expected that the construction/worker camps will be 'dry camps' (i.e., no alcohol or illicit substances/drugs will be permitted in the camps), it is assumed that some amount of alcohol and drugs will make its way into the camp, and therefore find a way into the Webequie First Nation community. It is assumed that these amounts will be small and will depend on how strictly the 'dry camp' policy will be enforced.



5. Although sample size in the human health survey was small (i.e., 27 respondents), the survey results have still been used as evidence; however, due to the low response rate, the results must be interpreted with caution. Moreover, the Project Team have confidence in the results of the survey as gathered information has been validated by the Project Team by presenting the data to community members at community meetings and during focus groups.
6. The HIA evaluates the impacts on health due to the Project alone. Once operational, the proposed WSR is expected to provide all-season access from Webequie First Nation to the Ring of Fire area, the site of much-expected resource development and employment opportunities. However, during engagement, Webequie community members often mentioned that they expected the Webequie Supply Road to improve access to goods, services, and reduce feelings of isolation of community members. In trying to convey these expectations from community members, the effects assessment tried to clarify that Webequie Supply Road can only provide this access to goods and services once it is connected to the provincial highway network via the Marten Falls Community Access Road and the Northern Road Link, both of which are projects currently also going through the Impact Assessment process.

In addition, and since the HIA relied heavily on the socio-economic assessment, the following assumptions in the socio-economic environment were also considered:

- **Workforce composition:** it is assumed that job positions for the Project will first be filled using the available labour within Webequie First Nation, followed by the other LSA communities, and lastly the RSA communities (refer to **Section 17.1.5.1**);
- **Availability of Labour:** it is assumed that the unemployed labour market is proportionally equal to the employed labour market in terms of industry involvement;
- **Labour Skill Requirements:** it is assumed that the project-related jobs within specific labour categories are unskilled labour positions and require limited training or qualifications;
- **Operations On-Site Labour:** it is assumed that during the operations phase, the on-site project labour demand will be met by Webequie First Nation with any additional available jobs' gaps being filled by LSA workers;
- **Housing and Accommodations:** it is assumed that the temporary work-camps will fully meet the housing requirements for the additional temporary worker population created through the project employment.

Furthermore, a number of key informational gaps exist with respect to the Human Health VC that contribute to the uncertainty of effects prediction. These include:

- Low response rate to the human health survey:
  - There were 27 respondents to the human health survey.
- Statistics Canada Census of Population:
  - For privacy reasons, the Census of Population does not always publish full data sets to protect the identities of respondents;
  - Undercounting within Indigenous communities is a common complaint of the Census; and
  - Other errors likely to occur within the Census of are coverage errors, non-response errors, response errors, processing errors, and sampling errors.
- Skills and qualification of labour force:
  - Detailed data for occupation of employment, employment ratios, and other labour force related indicators were not available for all communities; and



- Due to the availability and level of detail of the data available, it is not possible to describe the current level of skills, training, and qualifications of the labour force.
- Duration of Project Operations Phase:
  - Due to the extended timeline of the Project, the certainty of the potential effects becomes difficult to measure;
  - The long-term changes within the local and regional communities are difficult to predict and could affect mitigation strategies; and
  - Other future projects could have effects on the study area communities and the evaluated VCs.

As a result, some effects are difficult to predict with certainty. The likelihood of occurrence and the level of confidence in the assessment of effects on the social and environmental determinants of health are presented in **Table 17-9**.

## 17.9 Predicted Future Condition of the Environment if the Project Does Not Proceed

Should the Project not proceed, the conditions within the project study areas related to the Human Health VC will likely continue on the current trajectory.

## 17.10 Follow-up and Monitoring

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

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



The Project invites Indigenous community members to participate in developing and implementing monitoring programs to assess the effectiveness of proposed mitigation measures and potential adverse effects of the Project. Where effects are considered unacceptable and/or based on concerns raised by Indigenous community members or other stakeholders, further mitigation options will be considered by the road operator in consultation with Indigenous communities and stakeholders.

The purposes of the follow-up and monitoring programs are to:

- Ensure the Project construction contributes to the economic empowerment of the Webequie First Nation by creating job opportunities and supporting local businesses, as this will have positive health impacts on the community.



- Maintain transparency in the execution of the Project and ensure accountability in how the economic benefits are distributed in Webequie First Nation. Particular attention is called to helping to ensure equitable distribution of economic benefits in the community, so all population sub-groups benefit.
- Implement a dynamic monitoring approach that can adapt to feedback and changing circumstances, allowing for continuous improvement of the Project's health impact on the Webequie community.
- Collect community input into how the Project is contributing to health outcomes within the Webequie community through improvement of access to services and other measures.

### **17.10.1 Approach to the Monitoring Plan for Human Health**

A number of the monitoring and surveillance activities identified below that are proposed to identify and manage potential negative health impacts to community members could be conducted through means of community-led data gathering exercises that follow the rules of OCAP (the principles of ownership, control, access, and possession). One such method could be the use of a Community Health and Wellbeing Survey that is distributed in the community on a regular basis. During construction phase, this survey would need to be conducted more regularly, i.e., every 3 – 6 months. All of the effects identified in Section 17.10.2 for which monitoring is recommended could be included as questions that community members respond to in these surveys. To ensure increased uptake of surveys, community leadership should identify these surveys as one of the keyways in which community members can indicate how changes are happening within the community. Directly engaging with the community liaisons, Elders and community leadership to report concerns is another key method of tracking health impacts in the community.

Once the surveys are completed, the community leadership can share select, anonymized and relevant information with the contractor to raise concerns and push for actions to mitigate impacts.

### **17.10.2 Recommended Human Health Monitoring Components**

The recommended human health monitoring program could include the following components:

#### **Colonization and Trauma from Residential Schools**

- Monitoring and implementation of consultation during the construction phase between Webequie First Nation and the contractor regarding construction activities that may impact traditional activities on the land.

#### **Racism and Social Exclusion**

- Monitoring of implementation of mandated in-person cultural and Indigenous awareness training for construction workers and all operations personnel.
- Monitoring and documentation of community members' reports of incidents related to racism and social exclusion and set up a transparent way in which the proponent can address these incidents and take action.



## **Local Economic Growth**

- Monitoring of procurement targets (e.g., total contract value) for the participation of local and/or Indigenous businesses in Project construction. Procurement policies for the recruitment, development, and retention of underrepresented groups of Webequie First Nation, other communities in the LSA and RSA of the Project may include setting Mandatory Minimum Indigenous Requirements to hit targets for employment of specific groups like women, youth and individuals with disabilities.

## **Self-Determination and Governance**

- No applicable follow-up or monitoring programs required.

## **Worker Accommodations (i.e., worker/construction camps)**

- Monitoring of the implementation of the in-person cultural and Indigenous awareness training for all construction workers.
- Monitoring and enforcing of guidelines on substance use that includes the prohibition of drugs and alcohol in construction camps during the construction phase.
- Monitor and document community members' reports of incidents of workplace harassment and way in which the contractor can address these incidents and take action.
- Monitor commitments of proponent to set up a surveillance method to identify and monitor harassment of women and 2SLGBTQQIA individuals and identify protocols to address these infractions.

## **Air Quality (including GHG Emissions)**

- Document compliance with proponent's Air Quality and Dust Control Management Plan once established that will include a monitoring procedure for dustfall effects and measures to control or limit usage of vehicle or equipment that are the main emission source of particulates.

## **Noise Levels and Vibration**

- Monitor and document community members' report of construction-related noise and any adverse effects to harvesting areas for big and small game and birds.

## **Surface Water Quality**

- An ongoing follow-up monitoring program (post-construction) will be implemented during the operations phase of the Project.

## **Light Pollution, including Visual Impact**

- No applicable follow-up or monitoring programs required.

## **Employment and Income**

- Monitor the implementation of workplace policies and programs, such as a diversity and inclusion strategy, zero-tolerance policies for racism and workplace violence, codes of conduct, workplace safety programs and cultural training programs (e.g., Indigenous Awareness Training).



## **Education / Access to Education**

- Monitoring status and results of recommended surveys every 6 months or annually how community members have gained education and skills and in which areas is beneficial to the community. In addition, identifying which trades/skills are in high demand and in which training is needed will allow the community to better prepare for taking advantage of opportunities in ongoing work on the project.

## **Food Security**

- Monitoring and reporting if harvesting of traditional foods is impacted during the construction and operation of the Project. During construction, surveying with the community of Webequie is recommended every 3 – 6 months on changes they've noticed in the difficulty in harvesting big and small game. Including opportunities for project activities to be adjusted to minimize disturbing traditional land use.

## **Social Cohesion and Cultural Continuity**

- Monitor the implementation of workplace policies and programs, such as a diversity and inclusion strategy, zero-tolerance policies for racism and workplace violence, codes of conduct, workplace safety programs and cultural training programs (e.g., Indigenous Awareness Training).

## **Safety of Women and Girls**

- Monitoring the implementation of workplace policies and programs focused on the safety of Indigenous women, girls and 2SLGBTQQIA individuals (covering issues like sexual harassment and sex trafficking) for all Project employees.
- Appointed Community Liaison Officers are to follow-up on community concerns and issues at the construction camps, inclusive of issues regarding racism, sexism, gender-based violence, and other issues in a culturally appropriate and safe manner.

## **Traffic Volume and Safety**

- Monitoring the status and outcomes from the Construction Traffic Management Plan that is to be developed with the contractor and Webequie First Nation.
- Following up during the detail design phase of the Project to ensure compliance with the MTO Roadside Design Manual and adequate roadside safety elements are included.

## **Access to Healthcare Services (family doctor or specialist care provider)**

- Monitoring the need and uptake of healthcare services prior to construction activities and increase availability of specific healthcare services as needed. This is a key step in ensuring increased resiliency of the community to withstand impacts of the project.
- Following up to ensure safety management plans and health and safety plans are in place for workers.

## **Access to Social, Mental Health and Family Services**

- Monitor mental health and wellness of the community over time by using indicators such as demand for mental health services, new reported incidence of mental health issues, incidence, both new and ongoing of substance use issues, etc.:



- Should indicators show negative change, a mental health management plan may be developed and implemented to provide community members, and those who are most affected, with adequate mental health supports, including the use of traditional healing practices.

### **Access to Transportation Services**

- No applicable follow-up or monitoring programs required.

### **Access to Emergency Response Services**

- Following up to ensure safety management plans and health and safety plans are in place for workers.
- Monitoring to ensure workers remain within the construction camp at all times.
- Monitoring the safety incidents reported at the camps.
- As part of the Community Readiness Plan, a community well-being monitoring and adaptive management plan will monitor road safety as well as the capacity of the emergency and protective services.

### **Childhood Development**

- No applicable follow-up or monitoring programs required.

### **Mental Wellness**

- Monitoring any concerns or issues related to contact between the outside workers and community members in the work camps in order to reduce the stress and concern felt due to the threat of violence or concern for personal safety, especially by women and girls.
- Annual monitoring of the Indigenous cultural sensitivity training to workers to promote positive work relationships between Indigenous and non-Indigenous employees.
- Monitoring the need for and uptake of mental health and wellness services offered in the community, including traditional healing practices.

### **Substance Use**

- Monitoring and enforcing of guidelines on substance use that includes the prohibition of drugs and alcohol in construction camps during the construction phase.
- During the operation phase, continue to track and monitor the potential for movement of large quantities of alcohol and illegal drugs into the community (i.e., trafficking) by outsiders and engage appropriate law enforcement to raise alarm about the issue.

### **Diet, Including Access to Traditional Country Foods**

- Monitoring changes in patterns of behaviour among game animals and growth patterns of traditional plants as a result of the WSR.

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



## 17.11 References

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**AtkinsRéalis**

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

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