KINROSS Great Bear

Great Bear Gold Project
Impact Statement

Section 12: Predicted Changes to Indigenous Peoples – Asubpeeschoseewagong Netum Anishinabek

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Acronyms and Abbreviations

%	Percent
%HA	Percent Highly Annoyed
2SLGBTQQIA+	Two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, and asexual communities, along with other sexual and gender identities represented by the + symbol
2SLGBTQIA plus	Two-Spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, and asexual plus
AEX	Advanced Exploration
ALCM	Additional Lung Cancer Mortality
ALIA	Anishinaabe-Led Impact Assessment
ANA	Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation)
CCHS	Canadian Community Health Survey
CHER	Cultural Heritage Evaluation Report
CHR	Cultural Heritage Resource
CHVI	cultural heritage value or interest
cm	Centimetre
CO	Carbon Monoxide
COVID-19	Coronavirus Disease 2019
CSI	Crime Severity Index
CSIN	Community Services and Infrastructure
CSWB	Community Safety and Well-Being
CULRTP	Current use of lands and resources for traditional purposes
CWB	Community Well-Being
DDSAB	Data from district social services administration boards
DPM	Diesel Particulate Matter
EAP	Employee Assistance Program
EPC	Exposure Point Concentration
ERA	Ecological Risk Assessment
FNFNES	First Nations Food, Nutrition and Environment Study
fVC	Valued component under federal jurisdiction (federal valued component)
GBA Plus	Gender-Based Analysis Plus
Great Bear Resources	Great Bear Resources Ltd.
ha	Hectares
HHERA	Human Health and Ecological Risk Assessment

HHRA	Human Health Risk Assessment
HIA	Health Impact Assessment
HIV	Human Immunodeficiency Virus
HQ	Hazard Quotient
HR	Human Resources
IAA	*Impact Assessment Act*
IAAC	Impact Assessment Agency of Canada
ILCR	Incremental Lifetime Cancer Risk
KDSB	Kenora District Services Board
LAeq-1hr	A-weighted equivalent sound level
LIM-AT	Low-Income Measure After Tax
LSA	Local Study Area
LSFN	Lac Seul First Nation
MNO	Métis Nation of Ontario
MPOI	Maximum Point of Impingement
MMIWG	Missing and Murdered Indigenous Women and Girls
MMIWG2S+	Missing and Murdered Indigenous Women and Girls, Two-Spirit, Transgender, and Gender-Diverse+ peoples
N/A	Not Applicable
NCCIH	National Collaborating Centre for Indigenous Health
NO_2	Nitrogen dioxide
NOS	National Occupancy Standard
NWHU	Northwestern Health Unit
NWOMC	Northwestern Ontario Métis Community
OHA	*Ontario Heritage Act*
PA	Project Area
PAH	Polycyclic Aromatic Hydrocarbon
PHAC	Public Health Agency of Canada
PIT	Point-in-Time
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
POD	Point of Departure
POPC	Parameter of Potential Concern
POR	Point of Reception
PPE	Personal Protection Equipment
pVC	pathway valued component

RJ	Restorative Justice
RLEF	Indigenous peoples in the Red Lake and Ear Falls Area
RSA	Regional Study Area
RSPP	Regional Social Performance Plan
SLaFN	Sioux Lookout area First Nations
SLFNHA	Sioux Lookout First Nations Health Authority
SO_2	Sulphur dioxide
TISG	Tailored Impact Statement Guidelines
TKLUS	Traditional Knowledge Land Use Study
TMF	Tailings Management Facility
TRV	Toxicity reference value
$\mu g/m^3$	Micrograms per cubic metre
UNDRIP	The *United Nations Declaration on the Rights of Indigenous Peoples Act*
VOC	Volatile Organic Compound
WFN	Wabauskang First Nation
WHO	World Health Organization

Table of Anishinaabe Words, with English Translations

Anishinaabe	Used to describe oneself or a collective group of First Nations peoples belonging to this particular cultural and linguistic family. Individuals use Anishinaabe (or plural form, Anishinaabeg/Anishinabek) to indicate membership and belonging to that group. Commonly used to describe Ojibwe people, but can also refer to other First Nations that also identify as Anishinaabe
Anishinaabeg	plural form of Anishinaabe, referring to Anishinaabe Peoples
Manoomin	Wild rice
Nibi	Water

12.0 Predicted Changes to Indigenous Peoples – Asubpeeschoseewagong Netum Anishinabek

The Impact Statement complies with the *Impact Assessment Act* (IAA), a federal Act that evaluates how major projects may impact the environment, health, economy, and well-being of local Indigenous communities.

The IAA requires a consideration of the impact that a designated project may have on an interested Indigenous group or the rights of the Indigenous Peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982.* This consideration factor is also reaffirmed by Tailored Impact Statement Guidelines (TISG) for the Project as issued by the Impact Assessment Agency of Canada (IAAC).

Great Bear Resources, a wholly owned subsidiary of Kinross Gold Corporation, is seeking to develop and operate the Great Bear Gold Project (the Project), a proposed gold mine located near the Municipality of Red Lake in the District of Kenora, Northwestern Ontario within Treaty 3 territory.

Figure 12.1-1 illustrates the Project location relative to Treaty 3 territory, participating Indigenous Nations, and nearby municipalities including the Municipality of Red Lake and the Township of Ear Falls.

This assessment describes the current health and socio-economic conditions and assesses potential effects for Asubpeeschoseewagong Netum Anishinabek (ANA), based on the definition of adverse effects in the *Impact Assessment Act* (IAA), which includes:

> "adverse effects within federal jurisdiction means, with respect to a physical activity or a designated project,
>
> (e) with respect to the Indigenous Peoples of Canada, a non-negligible adverse impact — occurring in Canada and resulting from any change to the environment — on
>
> (i) physical and cultural heritage,
>
> (ii) the current use of lands and resources for traditional purposes, or
>
> (iii) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance;
>
> (f) a non-negligible adverse change occurring in Canada to the health, social or economic conditions of the Indigenous Peoples of Canada; and…"

The impact assessment process requires proponents to examine aspects of projects in different ways. These are referred to in this report as pathway valued components (pVCs) and federal valued components (fVCs). As outlined in Section 6, fVCs and pVCs are defined:

- fVCs are valued components within federal jurisdiction, as guided by key issues identified in the TISG for the Project
- pVCs are valued components that provide a pathway for direct or indirect effects to fVCs.

This assessment follows the framework used for other fVCs and pVCs and has been adapted to reflect the nature of social science analysis, and assessment of changes to Indigenous health, which considers the 'human experience'. This includes supplemental text and tables to add broader context.

The assessment of the Project and its potential effects on Indigenous Peoples and their interests are considered based on the following areas, based on the requirements of the TISG (Appendix A-1):

- **Community Services and Infrastructure**, to assess the potential effects of the Project on the use of services and infrastructure in the region by Indigenous Peoples (Section 12.5)
- **Current Use of Lands and Resources for Traditional Purposes**, to assess the potential effects of the Project on the current use of lands and resources by Indigenous Peoples for traditional purposes, including hunting, trapping, gathering, and experience of using the land (Section 12.6)
- **Indigenous Physical and Cultural Heritage, and Structures, Sites, or Things of Significance,** to assess the potential effects of the Project on sites or areas of Indigenous heritage importance (including archaeological, historical, or architectural sites), as well as associated ceremonial, spiritual and cultural values (Section 12.7)
- **Community Well-being**, to assess the potential effects of the Project on the broader social and economic conditions that contribute that contribute to the health, well-being, stability, resilience, and quality of life for Indigenous Peoples (section 12.8)
- **Health**, to assess the potential effects of the Project on environmental and socio-economic conditions that contribute to overall health and wellness for Indigenous Peoples, such as how changes in air or water quality impact biophysical human health outcomes, and how changes to community cohesion impact cultural continuity thus impacting mental, emotional and spiritual health (Section 12.9).

The assessment also considers potential effects of the Project on the exercise or practice of the rights of Indigenous Peoples[1] or the rights arising from treaties in the PA (Section 12.10). The assessment process, and associated Project TISG, is not a process for rights determination. The discussion that follows assesses the predicted changes and effects for each of the Indigenous communities identified as potentially affected by the Project in the TISG (Appendix A-1):

- **Asubpeeschoseewagong Netum Anishinabek (ANA), i.e., this section**
- Lac Seul First Nation (LSFN; Section 10);
- Northwestern Ontario Métis Community (NWOMC; Section 13);
- Wabauskang First Nation (WFN; Section 11); and
- Indigenous Peoples living in the Red Lake and Ear Falls area (Section 14).

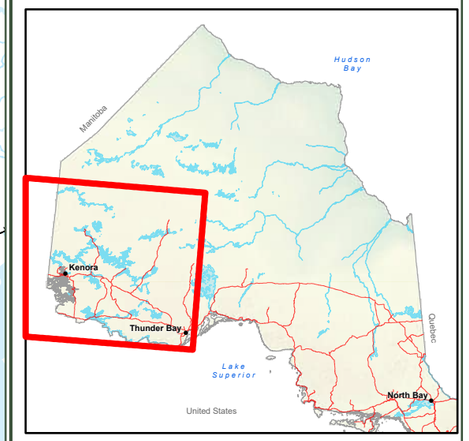
[1] "Rights of Indigenous Peoples" and "Rights" refers to the rights of the Indigenous Peoples of Canada, as recognized and affirmed in section 35 of the Constitution Act, 1982. (Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples)

Berens River
Pigeon River
Goose Creek
Leyond River
Minago Creek
Bloodvein River
Rice River
Beaver Creek
Gammon River
Wanipigow River
Manigotagan River
Sandy River
O'Hanly River
Black River
Moose River
Maskwa River
Cat Creek
Bird River
Stout Lake
Qoooowee Sahkaheekahn/ McInnes Lake
MacDowell Lake
WINTER ROAD
Postelnic Creek
Peekahchekahmeewee Sahkaheekahn/ Pikangikum Lake
Keechewahshaykahmeeshek/ Cairns Lake
Cat Lake
Tarp Creek
Ooshkahtahkahwee Sahkaheekahn/ Nungesser Lake
Birch Lake
Zionz Lake
Gull Lake
Trout Lake
Red Lake
Gullrock Lake
Bamaji Lake
Lake St. Joseph
Pashkokogan Lake
McCrea Lake
Whitewater Lake
Miniss Lake
Smoothrock Lake
Pakwash Lake
Sydney Lake
Lac Seul
Savant Lake
Caribou Lake
Wabauskang 21
Lac Seul 28
English River 21
Umfreville Lake
Separation Lake
Crowduck Lake
Seseganaga Lake
Sturgeon Lake
Rennie River
Bog River
Whitedell River
Big Vermilion Lake
Minnitaki Lake
HIGHWAY 72
Hazel Creek
Birch River
Seine River
Boggy River
Tourond Creek
Whitemouth River
Eagle Lake
Wabigoon Lake
Lake of the Woods (lac des Bois)
Shoal Lake
Dryberry Lake
Mameigwess Lake
Lake Nipigon
Atikwa Lake
Upper Manitou Lake
Rowan Lake
Lower Manitou Lake
Rat River
Roseau River
Sprague Creek
Reed River
Kakagi Lake
Lake of the Woods
HIGHWAY 11
White Otter Lake
HIGHWAY 17
Otukamamoan Lake
Marmion Lake
Lac des Mille Lacs
Rainy Lake (lac à la Pluie)
Dog Lake
Minnesota
HIGHWAY 11 & 71
Pickerel Lake
HIGHWAY 11
HIGHWAY 11 & 17
Rainy Lake
Kabetogama Lake
Namakan Lake
Namakan Lake
Lac la Croix
Lac la Croix
Northern Light Lake
Lake Superior (lac Supérieur)
Upper Red Lake
Lower Red Lake
Michigan

N

LEGEND:

- PROJECT AREA
- TREATY 3 BOUNDARY
- HIGHWAY
- RAILWAY
- WATERCOURSE
- WATERBODY
- FIRST NATION RESERVE
- MUNICIPAL BOUNDARY (LOWER TIER)



NOTES:
NOTE1: BASE DATA ACQUIRED FROM LAND INFORMATION ONTARIO.

0 5 10 20 30 km

SCALE 1:1,800,000
PAGE SIZE: 11 x 17
NAD 1983 UTM Zone 15N

THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD NOT BE USED FOR NAVIGATION

GREAT BEAR RESOURCES

GREAT BEAR GOLD PROJECT

TREATY 3 BOUNDARY

SLR

FIGURE NO:
12.1-1

DATE: November 19, 2025

PROJECT NO: 241.030825

12.1 Linkages to other Valued Components

Predicted social economic and health changes to Indigenous Peoples who may be affected by the Project are presented in this assessment. Other potential effects are covered in the appropriate sections as noted:

Pathway Valued Components (pVCs):

- **Air Quality** (Section 7.2), **Sound** (Section 7.3) and **Vibration** (Section 7.4): Project-related activities which may create changes to air quality, sound or vibration may cause changes to the current use of land and resources for traditional purposes and affect the quality of their experiences. A change in the quality of these experiences may also cause changes to the health and well-being of the community.
- **Groundwater** (Section 7.5): Project-related activities may result in changes to groundwater flows and levels which may impact use of land, water, and resources for traditional purposes and affect the quality of experiences. A change in quality of experiences may also cause changes to the well-being of the community.
- **Surface Water Levels and Flows** (Section 7.6): Project-related activities may result in changes to surface water quantity which may affect navigation and water-based activities related to the current use of lands for traditional purposes and health.
- **Water Quality** (Section 7.7): Project-related activities may result in changes to surface water quality which may affect navigation and water-based activities (i.e., fishing) related to the current use of lands and resources for traditional purposes and health.
- **Vegetation Communities** (Section 7.8) and **Wild Rice** (Section 7.9): Project-related activities may result in changes to vegetation communities or wild rice availability that may affect the use of the land and resources for traditional purposes and affect the quality of their experiences. A change in the quality of these experiences may also cause changes to the and health well-being of the community.
- **Moose** (Section 7.10), **Other Wildlife** (Section 7.11), and **Species at Risk** (Section 7.12): Project-related activities may affect moose, other wildlife (e.g., furbearers and other ungulates), and species at risk, resulting in changes to the ability to use the land or resources for traditional hunting, trapping, and harvesting purposes.
- **Land and Resource Use** (Section 7.13): Potential changes to land and resource use (particularly changes in land use, access, and navigation) may affect the current use of land and resources for traditional purposes and the quality of experience for LSFN while practicing their traditional activities near the Project.
- **Cultural Heritage** (Section 7.14): potential changes to cultural heritage during the construction, operations and closure phases of the Project may affect Indigenous physical and cultural heritage, including structures, sites, or things of significance.
- **Archaeology** (Section 7.15): potential changes to archaeology during the construction, operations and closure phases of the Project may affect Indigenous physical and cultural heritage, including structures, sites, or things of significance.

- **Local and Regional Economy** (Section 7.16): Project-related activities that result in changes to the local and regional economy may affect Community Services and Infrastructure and Community Well-being due to linkages with the employment and economy within the region.

Federal Valued Components (fVCs):

- **Fish and Fish Habitat** (Section 8): Project-related activities may affect fish and fish habitat resulting in changes to the ability to use the land for traditional purposes, such as fishing and the consumption of traditional foods.
- **Migratory Birds** (Section 9): Project-related activities may affect migratory birds (e.g., migration patterns, behaviours), resulting in changes in the ability to use the land for traditional purposes, such as hunting and the consumption of traditional foods.

Attached Table 12.1-1 provides a summary of the pVC and fVC mitigation measures and the residual changes or effects after mitigation. Detailed description of the methods, existing conditions, mitigation measures, and residual effects can be found in the respective section

12.2 Regulatory Setting

Government environmental regulations, objectives, policy or guidelines most relevant to Indigenous Peoples are summarized in the following. Further information regarding anticipated approval requirements is provided in Section 19. Further information regarding treaty, self-government, land claims or other agreements between federal and provincial governments and Indigenous Nations is presented in Section 12.10. Further information regarding negotiated agreements between Great Bear Resources and Indigenous communities is presented in Section 10.2.3.

12.2.1 Federal Legislation, Policies and Guidelines

Federal regulatory requirements related to Indigenous communities and populations are summarized in the following.

12.2.1.1 Impact Assessment Act

The Project follows the IAAC guidance when assessing and reviewing information from Indigenous communities, including:

- *Assessment of Potential Impacts on the Rights of Indigenous People* (Impact Assessment Agency of Canada 2024b)
- *Indigenous Knowledge Policy Framework for Project Reviews and Regulatory Decisions* (Impact Assessment Agency of Canada 2021)
- *Guidance: Indigenous Knowledge under the Impact Assessment Act* (Impact Assessment Agency of Canada 2024d)
- *Guidance: Protecting Confidential Indigenous Knowledge under the Impact Assessment Act* (Impact Assessment Agency of Canada 2024e)

The assessment of human health considers the following guidance from IAAC, and provided by Health Canada for used under the *Impact Assessment Act*:

- Interim Guidance – Health Impact Assessment of Designated Projects under the Impact Assessment Act. December 2024 (Health Canada 2024a)
- Analyzing Health, Social and Economic Effects under the Impact Assessment Act. 27 November 2020 (Impact Assessment Agency of Canada 2020)
- Guidance for Evaluating Human Health Impacts in Impact Assessment: Human Health Risk Assessment (Health Canada 2023a)
- Guidance for Evaluating Human Health Impacts in Impact Assessment: Air Quality (Health Canada 2023b)
- Guidance for Evaluating Human Health Impacts in Impact Assessment: Country Foods (Health Canada 2023c)
- Guidance for Evaluating Human Health Impacts in Impact Assessment: Drinking and Recreational Water Quality (Health Canada 2023d)

Additional guidance specific to the HHERA and HIA is presented in Appendix N-1 and Appendix N-2, respectively. In addition, relevant guidance related to other specific determinants of health are referenced in Section 12.9.

In addition to the *Impact Assessment Act*, this assessment also considers the regulations and requirements related to Indigenous communities and populations presented in Table 12.2-1.

Table 12.2-1: Indigenous Communities and Populations-Related Federal Regulatory Requirements

Act or Requirement	Ministry or Agency	Details
The United Nations Declaration on the Rights of Indigenous Peoples Act, 2021 (UNDRIP Act)	Government of Canada, and IAAC.	This federal legislation affirms UNDRIP as a universal international human rights instrument, applicable under Canadian law.
Constitution Act, 1982	Government of Canada	Section 35 recognizes and affirms existing Aboriginal and treaty rights.
Indian Act, 1876	Government of Canada	Governs matters pertaining to Indian Bands and reserves.
Migratory Birds Convention Act, 2005	Environment and Climate Change Canada	Contains broad legal safeguards and key protections that prohibit the killing, harming or disturbance of migratory birds and their nests or eggs. This includes effects from any lawful and permitted activities like construction and development related to the project.
Canadian Navigable Waters Act, 2019 (CNWA)	Transport Canada	Prohibits the construction or placement of any works in a navigable waterway that may interfere with the right to navigation, including Indigenous use as a means to exercise aboriginal or treaty rights, without complying with the requirements of the CNWA. The Project may require approvals under Section 5, 10, and 24 of the CNWA, and has completed a Navigable Waters Report.

Act or Requirement	Ministry or Agency	Details
Species At Risk Act, 2002	Environment and Climate Change Canada	Prevents the harm and disappearance of wildlife species in Canada. The act imposes critical habitat protection, permitting and compliance for activities that could affect listed species or their habitats, action plans, recovery strategies, and enforcement.
Fisheries Act, 1868/2019	Fisheries and Oceans Canada	Responsible for the proper management and control of fisheries; and the conservation and protection of fish and fish habitat including preventing pollution. Environment and Climate Change Canada (ECCC) may also be involved in fisheries issues, particularly in relation to the prevention provisions within the Fisheries Act.

12.2.1.2 Tailored Impact Statement Guidelines

The TISG, developed by IAAC for the Project, indicate that the proponent must:

- Provide an analysis of any potential effects on Indigenous communities including effects on: Community Infrastructure and Services (Section 12.5); Current Use of Land and Resources for Traditional Purposes (Section 12.6); Indigenous Physical and Cultural Heritage, Structures, Sites, or Things of Significance (Section 12.7); Community Well-being (Section 12.8); and Health (Section 12.9).
- Provide an analysis on the impact on the exercise or practice of Rights of Indigenous Peoples (Section 12.10).
- Work with each Indigenous community in the development of the Impact Statement, should they wish to participate. If communities choose to not participate, the proponent will continue to share information through preferred contact methods, such as providing Project updates through email, letter, or phone conversations.
- Describe the local and regional economic conditions and trends (Section 12.8). This includes information on any use of lands and water for economic activity (e.g., fishing and hunting guides, trapping, or seasonal resorts).

The TISG also references the implementation and consideration of responsibilities under the *Constitution Act*, 1982, the *Impact Assessment Act*, and the *UNDRIP Act*.

12.2.2 Provincial Legislation, Policies and Guidelines

Provincial regulatory requirements that have ties to Indigenous interests, or that may require the participation of or deeper engagement with Indigenous communities are summarized in Table 12.2-2. Section 19 contains details related to permitting requirements, some of which will require Indigenous consultation or notification.

Table 12.2-2: Indigenous Communities and Populations-Related Provincial Regulatory Requirements

Act or Requirement	Ministry or Agency	Details
Ontario *Heritage Act*, 1975/2005 (OHA)	Ministry of Citizenship and Multiculturalism	Governs the practice of archaeology and protecting archaeological and cultural / heritage sites. Consultation and verification with Indigenous communities is required during the preparation of a Cultural Heritage Evaluation Report (CHER).
Ontario *Water Resources Act*, 1990	Ministry of the Environment, Conservation and Parks	Governs mine development through water management permits, pollution prevention measures, and environmental compliance measures. There are multiple authorizations under this legislation that are informed by technical considerations and consultation with affected Indigenous Peoples.
Clean Water Act, 2006	Ministry of the Environment, Conservation, and Parks	This Act protects existing and future sources of drinking water through source water protection and prevention. The Act establishes locally led protection of drinking water supplies through prevention. It requires collaborative, watershed-based source protection. No source water protection plans are currently available for Red Lake and Ear Falls or surrounding areas.
Mining Act, 1990	Ministry of Energy and Mines	Governs mineral exploration and mining activities. Advanced exploration permits and the Closure Plan (rehabilitation measures) for the Project.
Crown Forest Sustainability Act	Ministry of Natural Resources	The cutting of merchantable timber reserved to the provincial Crown for site development will require a Provincial license and an agreement with the Sustainable Forest License holder.
Lakes and Rivers Improvement Act, Public Lands Act	Ministry of Natural Resources	Work Permits (or Letter of Authority) are required for work on provincial Crown land including within any setback and / or below the high-water mark of watercourses and waterbodies. Also required for construction of a dam below the high-water level of a lake or river requires approval for the location of the dam, and its plans and specifications

12.2.3 Other Requirements and Negotiated Commitments

Further details on agreements and negotiated commitments between by Kinross – Great Bear Resources with participating Indigenous communities can be found in Section 3 (Participation and Engagement).

An amended Exploration Agreement was signed jointly with Lac Seul First Nation and Wabauskang First Nation on July 19,2023. This includes a commitment to enter into negotiations for a Project Agreement for mine construction and operation. A Process Agreement was signed jointly with Lac Seul and Wabauskang on April 24, 2024, to assist with the negotiation of the Project Agreement. The parties are currently negotiating a Project Agreement.

A Relationship and Capacity Building Agreement was signed with the NWOMC and MNO on November 1, 2024, to provide Métis Parties with adequate capacity to participate in the regulatory process. This agreement also includes the commitment to negotiate and conclude a Community Benefit Agreement. Métis parties are currently negotiating a Benefit Agreement.

A Capacity Funding Agreement was signed with ANA on September 1, 2024, to support ANA's engagement with Great Bear Resources and the provincial and federal agencies related to this Project.

12.3 Assessment Approach

The assessment approach for the Project followed a step-by-step process as shown in Figure 12.3-1. A more thorough explanation of the approach is described in Section 6.

Sections 12.3.1 through 12.4 provide additional details on the assessment approach and influence of consultation and engagement. Sections 12.5 through 12.9 document the existing conditions, effects assessment, mitigation and enhancements, and residual effects. Residual effects after mitigation that are linked to the exercise or practice of rights as affirmed under the *Constitution Act*, 1982 are assessed in Section 12.10 to determine the Project's potential impacts on the ability of ANA to exercise or practice rights. Cumulative effects (if applicable) are assessed in Section 15.0.

Figure 12.3-1: Assessment Approach

12.3.1 Spatial and Temporal Boundaries

Spatial and temporal boundaries were established to describe the baseline existing conditions for, and to guide the assessment of, each criteria. The boundaries vary depending on the criteria and are generally considered separately for each one. Where appropriate, criteria share spatial boundaries.

12.3.1.1 Spatial Boundaries

Each spatial boundary is described and defined, including justification, in each individual criteria section (e.g., Sections 12.5.1, 12.6.1, 12.7.1, 12.8.1, and 12.9.1). Maps for each spatial boundary are provided in their respective section.

12.3.1.2 Temporal Boundaries

Temporal boundaries were defined by the schedule of phases of the Project (i.e., construction, operations, and decommissioning and closure), past conditions, and historical context of the Project.

The temporal boundaries for the assessment as defined in Section 6.5 are:

- Construction phase:
  - Years -3 to -1 (3 years) representing the primary period of Project construction
  - Mining of the Viggo pit will be completed during this phase and will be initiated in the last year of construction in the LP Central pit
- Operations phase:
  - Years 1 to 26 (26 years), during year 1 the Project will transition from construction into operations and will not be at full capacity
- Closure phase:
  - Years 27 to 29 (3 years) represent the active closure period when most of the decommissioning and reclamation of the Project area is completed
  - Year 30 is a passive closure period
  - Year 31 is the final closure (removal of water management infrastructure).

12.3.2 Effects Assessment Criteria

In undertaking the assessment of effects to ANA, the following criteria were used:

- Change in Community Services and Infrastructure
- Change in Current Use of Lands and Resources for Traditional Purposes
- Change in Indigenous Physical and Cultural Heritage, and Structures, Sites, or Things of Significance
- Change in Community Well-being
- Change in Health

To identify how the Project may result in positive or negative changes to the criteria, potential Project-related effects are assessed against the existing conditions.

Indicators characterize the existing conditions and used to measure the change due to the Project-related activities. The criteria, potential effects, and indicators are summarized in Table 12.3-1.

Table 12.3-1: Criteria, Potential Effects, and Indicators for ANA

Criteria	Potential Effect	Indicators
Change in Community Services and Infrastructure	• Change in housing and accommodations	• Existing housing (by type, quality, number of available units, vacancy rates) • Housing costs ($) • Planned builds ($, number of housing starts per year) • Size of anticipated non-local Project construction workforce (from Project Description and Employment and Economy pVC modelling)
	• Change in municipal, provincial, and non-profit service delivery capacity	• Number, capacity, and location of social service facilities, programs, and providers • Current accessibility, and planned upgrades for services (e.g., schools, Elder, youth, and women's services, health services, mental health and addiction services, and community recreation) – to be measured as a percent (%) availability
	• Change in transportation infrastructure	• Availability and timeliness of community transportation programs
Change in Current Use of Lands and Resources for Traditional Purposes	• Change in availability, access to, and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping)	• Location of areas for hunting, trapping, and wildlife harvesting in relation to the PA • Qualitative understanding of quality of experience, including spiritual and cultural activities and practices relating to transmission of knowledge, laws, customs, and traditions
	• Change in availability, access to, and quality of experience related to traditional aquatic harvesting (fishing)	• Location of areas for fishing and aquatic resources to in relation to the PA • Qualitative understanding of quality of experience, including spiritual and cultural activities and practices relating to transmission of knowledge, laws, customs, and traditions
	• Change in availability, access to, and quality of experience related to traditional plant harvesting (food and medicinal)	• Location of areas for plant harvesting (for food and medicinal purposes) in relation to the PA • Qualitative understanding of quality of experience, including spiritual and cultural activities and practices relating to transmission of knowledge, laws, customs, and traditions

Criteria	Potential Effect	Indicators
	• Change in availability, access to, and quality of experience related to traditional habitation, cultural, spiritual sites/areas	• Location of sites and areas for Indigenous traditional habitation, cultural and spiritual activities in relation to the PA. • Qualitative understanding of quality of experience, including spiritual and cultural activities and practices relating to transmission of knowledge, laws, customs, and traditions
Change in Indigenous Physical and Cultural Heritage, and Structures, Sites, or Things of Significance	• Alteration or destruction of sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	• Number and area of affected sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites • Indigenous cultural importance of sites, including current use for Indigenous social, cultural, economic, ceremonial, spiritual and other cultural practices and activities
	• Change in access to or quality of experience with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	• Number and area of affected currently visited / used sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites • Importance of sites, including current use for Indigenous social, cultural, economic, ceremonial, spiritual and other cultural practices and activities • Detectable changes to sensory conditions, including acoustic changes (sound and vibration), visual quality (including changes to sightlines and viewsheds), and air quality (including fugitive dust and airborne particles)
	• Change in sacred, ceremonial, spiritual and cultural values (including language, stories and traditions) associated with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	• Number and area of currently visited / used sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites • Importance of sites, including current use for Indigenous social, cultural, economic, ceremonial, spiritual and other cultural practices and activities • Detectable changes to sensory conditions, including acoustic changes (sound and vibration), visual quality (including changes to sightlines and viewsheds), and air quality (including fugitive dust and airborne particles)

Criteria	Potential Effect	Indicators
Change in Community Well-being	• Change in community well-being	• Changes in housing availability, and rental prices over time (e.g., housing unit counts, planned additional units, and population change percentages) • Cost of living metrics for goods and services (e.g., cost of living trends) • Safety statistics in RSA (e.g., number of incidents per year, rates per 100,000 population, Crime severity index values, and population change percentages) • Local crime rates (violent and non-violent) with a focus on crimes committed against women+ and girls • Employment participation data by gender • Access to lands and resources (e.g. proximity to harvesting areas and the presence of access constraints) • Service provider assessments of wait times, capacity limitations, and staffing needs in health, social, and education sectors • Community feedback and historical documentation on household pressures and caregiver challenges (e.g., interviews, service provider input) • Regional community feedback on perceived cohesion, division, or well-being collected through engagement and interviews • Proximity to traditional use areas, interview data on access and use.
Change in Health (1)	• Change in Health (Biophysical Determinants of Health)	Air Quality: • Change in air quality (measured as µg/m^3) • Change in health risks from exposure to air (measured as calculated Hazard Quotients, Incremental Lifetime Cancer Risks and / or Additional Lung Cancer Mortality) Multi-media Environmental Quality: • Change in soil quality (measured as milligrams per kilogram; mg/kg) • Change in water quality (measured as milligrams per litre; mg/L) • Change in traditional food quality (measured as mg/kg in food, mg/kg of body weight per day as dose) • Change in health risks from exposure to multiple environmental media including soil, water and traditional foods (measured as calculated Hazard Quotients and / or calculated Incremental Lifetime Cancer Risks) Access and Availability of Water:

Criteria	Potential Effect	Indicators
		• Change in access (location), and availability of water (flow, levels) for drinking, recreational and cultural uses • Change in perception of environmental quality (avoidance) Access and Availability of Traditional Foods: • Change in traditional foods access and availability via wildlife, vegetation and fish population changes (measured as qualified and / or quantified population-level changes and land use) • Change in risks to ecological receptors, including plants, mammals, birds, fish (measured as calculated Hazard Quotients) • Change in perception of environmental quality (avoidance) Sensory Disturbances (Sound, Vibration, Light): • Change in sound levels (measured in dBA) and % Highly Annoyed (%HA) • Change in vibration levels (measured as air overpressure in dB) • Change in light emissions (measured as sky glow and light trespass levels) • Change in environmental quality (avoidance)
	• Change in Health (Social Determinants of Health) [1,2]	Economics (Employment, Income, Education): • Change in cost of living and traditional economy (measured as change in cost of living metrics for goods and services, cost of living trends, traditional economy practices) • Change in economic opportunity and inequality (measured as people-years of employment, Project revenues, employment participation, access to employment, income $CAD) • Change in access to health and social services (measured by capacity for service delivery, availability of services) • Education and training statistics as it relates to employment opportunities Housing: • Change in Availability (measured as size of non-local workforce, and existing housing type, quality, available units, vacancy rates, planned builds)

Criteria	Potential Effect	Indicators
		• Change in Home Value, Affordability and Ownership (measured as size of non-local workforce, and existing housing costs $CAD; change in cost of living metrics for goods and services; change in economic opportunity and inequality) Access to Health and Social Services: • Change in access to health and social services (measured as number, capacity, and location of facilities, programs, providers, and planned upgrades e.g., schools, Elder, youth, and women's services, health services, mental health and addiction services, and community recreation) • Change in municipal, provincial, and non-profit service delivery (measured number, capacity, demand, planned upgrades) • Service provider assessments of wait times, capacity limitations, and staffing needs in health, social, and education sectors • Information on household pressures and caregiver challenges Food Security: • Changes in Food Security (measured by access, availability and utilization [quality and use] and stability of traditional foods; cost of living changes; perceptions of effects) • Changes in use (avoidance) of certain traditional food sources or drinking or recreational water sources, and resultant changes to traditional economy, due to the perception of environmental quality • Perceived changes in environmental quality and tranquillity and effects on diet Mental Wellness and Personal Behaviours Community Cohesion: • Change in mental wellness and personal behaviours (including perceived stress, depression, anxiety, concern for future generations) via qualitative discussion analysis of community feedback and regional data on the state of intergenerational trauma, mental wellbeing, cultural continuity, poverty, community cohesion, perception of wellness, and if applicable, substance use in the absence of site-specific quantitative data on mental wellness

Criteria	Potential Effect	Indicators
		• Change in community cohesion and perception of wellness (qualitative discussion of community feedback and regional data to describe potential changes to community cohesion in the absence of site-specific quantitative data) Actual and Perceived Safety (Accidents and Malfunctions): • Change in actual and perceived public safety, including emotional and social stress factors, due to risk of accidents and malfunctions (measured as risk characterization per potential accident type; qualitative analysis using community feedback in the absence of site-specific quantitative data on emotional and social stress) Safety of Indigenous Women and Girls: • Change in the safety of Indigenous Women and Girls (local crime rates [violent and non-violent] with a focus on crimes committed against women and girls) • Statistics on Missing and Murdered Indigenous Women and Girls (MMIWG)

Notes:
1 Health is assessed through consideration of upstream conditions and changes to biophysical and social determinants of health; therefore, the indicators identified above are for the assessment of the determinants of health, in accordance with HIA guidelines. The existing conditions and assessment of potential effects for these determinants are described in detail in the relevant Impact Statement sections and appendices, the Human Health and Ecological Risk Assessment (Appendix N-1) and in the Health Impact Assessment (Appendix N-2). To provide additional context for health, existing conditions around current health status for Indigenous communities in the region are summarized in the health sections below, and described in detail in Attachment A of the Health Impact Assessment (Appendix N-2).
2 Some indicators are the same as indicators/assessment criteria for upstream conditions (environment, social, cultural, economic); however, they are considered through a different lens in terms of effects (i.e., Indigenous health)
$CAD = Canadian dollars; dB = decibel; dBA = adjusted decibels; %HA = percent highly annoyed; mg/kg = milligram per kilogram; mg/L = milligrams per litre; PA = Project Area; pVC = pathway valued component; RSA = Regional Study Area; µg/m^3 = micrograms per cubic metre

12.3.2.1 Mitigation and Enhancement Measures

Following the identification of potential effects, each interaction between Project activities and indicators was evaluated to determine whether the proposed mitigation measures would manage any risk associated with the effect. Where mitigation measures were determined to effectively avoid the interaction, no residual effect was identified. Where the mitigation measures reduced, but did not fully eliminate, the potential for an effect, the interaction was carried forward for residual characterization.

Great Bear Resources believes that responsible mining includes the following characteristics: 1) generates sustainable value for investors, host countries and communities; 2) prioritizes health and safety; 3) strives to create positive economic and social benefits; 4) improves the overall quality of people's lives during and after the mine operation; and 5) employs responsible stewardship of the environment. Great Bear Resources' policy statement includes the following objectives:

- Align biodiversity practices with regulatory requirements and industry best practices to support responsible land use and long-term environmental benefits. Through proactive stewardship, we aim to support ecosystem recovery, promote sustainable land management, and leave a positive environmental legacy beyond mining.
- Develop and operate projects in a manner that respects and strengthens Indigenous communities and brings positive contributions to their quality of life which are sustainable after mine closure.

12.3.3 Assessment of Significance

An assessment of significance is completed in a structured format described in Section 6.6.2 if residual effects are identified. The significance of residual effects to these criteria is evaluated utilizing the following attributes according the three threshold levels listed in Table 12.3-2 and Table 12.3-3.

- Ecological and social context: a qualitative measure of the sensitivity and / or resilience of the criteria to the potential effect
- Magnitude: a quantitative (statistical desktop data, usually collected from Statistics Canada's Census) or qualitative (information collected through interviews, questionnaires and focus groups) measure of the size or severity of the effect after mitigation relative to the baseline condition and / or applicable guideline
- Extent: the geographic area where the effect is expected to occur
- Duration: the period of time over which an effect is expected to occur
- Frequency: how often an effect is expected to occur
- Reversibility: the ability for the effect to be reversed
- Timing: the degree to which the effect is expected to occur during a sensitive period for the criteria (applicable to select criteria).

For a residual effect of a criteria to be determined to be significant, the following conditions must both be satisfied:

- A Level II or III rating is attained for ecological and social context; and
- A Level II or III rating is attained for all of the attributes involving magnitude, extent, duration, frequency, reversibility, and timing, as applicable.

Similarly, the effect is not likely to be significant if it has low or limited importance to the ecological and / or social context.

- A Level I rating is achieved for any of the attributes involving magnitude, extent, duration, frequency, reversibility or timing; or, if a Level I rating is achieved for the ecological and / or social context, then the residual effect is not considered to be significant.

Table 12.3-2: Significance Determination Attributes and Rankings – ANA

Attribute	Description	Category
Ecological and Social Context	A qualitative measure of the sensitivity and / or resilience to change, based on professional judgement, consultation and Indigenous knowledge	• Level I: Criteria may or may not be sensitive, and can support the predicted change with typical mitigation measures • Level II: Criteria is sensitive and requires special measures to support the predicted change • Level III: Criteria is sensitive and unable to support the predicted change even with special measures
Magnitude	A qualitative or quantitative measure to describe the size or degree of the residual effects relative to baseline conditions	• Defined separately for each criteria in Table 12.3-3.
Geographic Extent	The spatial extent over which the residual effect will take place	• Level I: Effect is restricted to the LSA • Level II: Effect extends beyond the LSA but within the RSA • Level III: Effect extends beyond the RSA
Duration	The time period over which the residual effect will or is expected to occur	• Level I: Effect occurs over the short term: less than or equal to three years (1) • Level II: Effect occurs over the medium term: more than three years but less than 32 years (1) • Level III: Effect occurs over the long term: greater than 32 years (1).
Frequency	The rate of occurrence of the residual effect	• Level I: Effect occurs once, infrequently • Level II: Effect occurs intermittently or regularly • Level III: Effect occurs frequently or continuously
Reversibility	The extent to which the residual effect can be reversed	• Level I: Effect is fully reversible during the Project phases • Level II: Effect is partially reversible during the Project phases • Level III: Effect is not reversible during the Project phases.

Attribute	Description	Category
Timing (2)	A measure of whether the residual effect occurs during a sensitive period of the year	• Level I: Effects do not occur during a sensitive period, or related effects are fully mitigated • Level II: Effects occur during a sensitive period and are partially mitigated • Level III: Effects occur during a sensitive period and are not mitigated

Notes:
1. These timelines approximately align with the Project: construction phase is approximately three years, operations phase is approximately 26 years, and the active closure period is an additional three years.
2. As applicable.

Table 12.3-3: Criteria-specific Magnitude Rankings - ANA

Criteria	Category
Change in Community Services and Infrastructure	• Level I: Project-related demand for regional services and infrastructure used by local Indigenous People are manageable, and well within the existing regional capacity. • Level II: Some elements of regional services and infrastructure used by local Indigenous People are operating close to or beyond capacity; however, the Project-related demand for regional services and infrastructure can be managed with mitigation measures. • Level III: Some elements of regional services and infrastructure used by local Indigenous People are operating tenuously close to or beyond capacity, and the Project-related demand for regional services and infrastructure cannot be managed with mitigation measures.
Change in Current Use of Lands and Resources for Traditional Purposes	• Level I: Project-related changes may increase the effort necessary but will not reduce the ability of Indigenous Peoples to practice traditional activities related to the current use of lands and resources for traditional purposes. • Level II: Project-related changes may reduce but not eliminate the ability of Indigenous Peoples to practice traditional activities related to the current use of lands and resources for traditional purposes. • Level III: Project-related changes will greatly reduce or eliminate the ability of Indigenous Peoples to practice traditional activities related to the current use of land and resources for traditional purposes.
Change in Physical and Cultural Heritage, and Structures, Sites, or Things of Significance	• Level I: Project-related change that is insufficient to alter how Indigenous heritage structures, sites or things, are used, accessed or experienced. • Level II: Project-related change that may alter how Indigenous heritage structures, sites or things are used, accessed or experienced. Associated Indigenous interests (such as intergenerational knowledge transfer) may be affected. • Level III: Project-related change that will result in a loss of Indigenous heritage structures, sites or things, and loss of access or use. Associated Indigenous interests (such as intergenerational knowledge transfer) are impeded

Criteria	Category
Change in Community Well-being	• Level I: Measurable Project-related change in social determinants of well-being that may result in a slight adverse change in the social and / or economic conditions of local Indigenous people. • Level II: Measurable Project-related change in social determinants of well-being that will result in a moderate adverse change in the social and/or economic conditions of local Indigenous people. • Level III: Measurable Project-related change in social determinants of well-being that will result in a substantial adverse change in the social and / or economic conditions of local Indigenous people.
Change in Health	• Level I: measurable Project-related changes in environmental exposures and / or social determinants of health are unlikely to result in a material adverse change in population-level health status of local Indigenous people. • Level II: measurable Project-related changes in environmental exposures and / or social determinants of health may result in a material adverse change in population-level health status of local Indigenous people. • Level III: measurable Project-related changes in environmental exposures and / or social determinants of health will result in a substantial adverse change in population-level health status of local Indigenous people.

12.3.4 Analytical Methods

The assessment of the potential effects of the Project has been completed in accordance with standard regulatory methods. The methods used to assess Indigenous health are provided in the health section below (Section 12.9) and detailed in the HHERA (Appendix N-1) and the HIA (Appendix N-2).

The Project's effects on the criteria were assessed by first collecting data via desktop research from reputable sources, such as Statistics Canada and municipal websites. While Statistics Canada remains the standard data source in the assessment process, due to the timing of the census, some of the data may reflect pandemic related limitations of the time. The 2021 census data was primarily collected in 2020 during the COVID-19 pandemic. In addition, when reporting statistics for small populations, there may be data suppression, or rounding errors. This can result in the total counts not matching the reported data.

While community-maintained population records may reflect more current or locally specific information, particularly for on-reserve populations, Statistics Canada data were used across the Impact Statement to support consistency and comparability across communities and assessment components.

As part of the methods, Gender-Based Analysis Plus (GBA Plus) was applied to understand how the Project may affect different groups. GBA Plus is a framework that considers how intersecting identity factors, including but not limited to, gender, age, culture, and education levels can shape diverse experiences of project effects. Within this framework, the terms men+ and women+ are used to acknowledge diversity within gender groups, recognizing that individuals may experience impacts differently depending on these intersecting identities.

GBA Plus considerations are applied throughout this section, with each valued component including a dedicated subsection that addresses subgroup-specific effects in its context. This assessment prioritizes the use of on-reserve demographic and socio-economic data where available. However, due to limitations in data availability and public reporting at the on-reserve level, regional-scale data (e.g., Kenora District or provincial data) are used in some instances to provide contextual information. The geographic scale of all data sources is explicitly identified in the text.

At the time of producing this report, requests to meet with key on-reserve community service providers to verify desktop data, and collect information about resourcing, notable trends, capacity and thresholds were declined. The desktop information was used to characterize the current existing (or baseline) conditions for the criteria. Where feasible, additional data from other sources have been added to reflect more current statistics or provide additional information on restrictions or limitations of the data.

In addition to publicly available sources of information, the description of existing conditions was informed by the letters and reports prepared by or for ANA:

- A 2024 memo titled “ANA Letter to Kinross, MINES, IAAC” filed on behalf of Grassy Narrows First Nation by CELA counsel
- A 2024 report titled “Branfireun Riverbank Mercury Methylation Dynamics Study Technical Report”
- A 2025 memo titled Preliminary Comments on Fish Consumption and Risk Assessment, prepared by the Grassy Narrows Land Protection Team

ANA is currently undertaking a Land Use and Occupancy Study. At the time of writing this Impact Statement, the results of the Land Use and Occupancy Study were not available. The provision of the full study and its content remain at the discretion of ANA.

Great Bear Resources will continue to consider supporting studies and future monitoring identified by Indigenous communities during all phases of the Project.

Great Bear provided ANA with a secondary source document on January 31, 2025, to seek ANA's comments on the information. ANA has not yet responded. Great Bear Resources provided a follow up on the status of the Indigenous Knowledge and secondary sources, specifically relating to traditional foods on October 31, 2025. The response to traditional food consumption rates was provided by ANA on November 25, 2025.

Complementing these qualitative sources, the assessment of Indigenous health is conducted through a single comprehensive assessment. This approach relies on the combined findings of the Human Health and Ecological Risk Assessment (HHERA; Appendix N-1) and Health Impact Assessment (HIA; Appendix N-2) for all participating Indigenous communities (i.e., LSFN, WFN, ANA, NWOMC and RLEF). The health subsection includes the assessment and discussion of Indigenous health overall, presenting findings for all five Indigenous communities.

Interactions between the Project and valued components were determined based on professional judgment and technical expertise based on experience with other projects similar in breadth, along with input from consultation/engagement activities.

It is acknowledged that changes to pVCs and residual effects on fVCs represent distinct concepts. However, for the purpose of consistency in reporting across this Section, the terminology of “residual effects” may be applied uniformly to both pVCs and fVCs. This approach supports consistency while recognizing the methodological distinction.

The overall assessment methodology for the Project is further described in Section 6.

12.3.5 Assumptions and the Use of the Conservative Approach

Given the limited information available, the assessment of effects and significance is based on a conservative approach. This means assuming a ‘worst-case’ or less favorable scenario when considering the effect of a change. The details on the use of conservatism in the Indigenous health assessment are provided in the HHERA (Appendix N-1) and the HIA (Appendix N-2).

The available information may not reflect all activities for an Indigenous community and may also reflect cultural sensitivity about sharing such information in a study of this nature. In these instances, information from other sources, such as projects of similar nature or within the same region, was also used to supplement information to inform this assessment of Project-related changes.

The best available information is included, and if new information emerges about physical and cultural heritage sites, there are regulatory processes to identify and manage any such resources. The Project Area will continue to be subject to monitoring, and additional steps will be taken as required to support appropriate consideration of potential cultural and heritage values.

12.4 Influence of Consultation and Engagement

Consultation with ANA regarding the Project began on October 1, 2022, and is ongoing in relation to the various permits related to the Project, including during the exploration phase. The consultation has included emails, letters and virtual meetings.

ANA’s engagement has primarily taken place through correspondence and virtual meetings, supported by a capacity funding agreement to assist with review of technical information. Great Bear Resources provided ANA with documents for review and responded to written submissions, incorporating ANA’s concerns into project design modifications, particularly relating to water quality, mercury, and cultural heritage. The Indigenous Peoples ANA and Red Lake/Ear Falls chapters (excluding health) were shared with ANA on February 27 2026. A presentation was also shared on interim health results. This approach aimed to maximize the time for ANA’s review.

Section 3 provides more detail on the consultation to date. The Record of Consultation (Appendix C) includes detailed comments received, and responses provided, during the development of the Impact Statement.

12.4.1 Impact Statement Valued Components

As required by the Tailored Impact Statement Guidelines (TISG; Appendix A-1), the Impact Statement must identify the pVCs and fVCs of the environment that will be the focal points for the impact assessment. The pVCs and fVCs are components of the natural and human environment that are of particular concern or value to participants and that may be affected by the Project.

Great Bear Resources identified a preliminary list of potential pVCs and fVCs based on comments raised during consultation on the Project, as well as data from extensive biophysical and human environment baseline studies, and literature sources.

A preliminary list of pVCs and fVCs was developed and consulted upon during preparation of the Impact Statement, as summarized in Section 6. The pVCs and fVCs confirmed as important by participating Indigenous Nations includes air, wildlife, lands, water, and people. Based on the TISG and feedback received through consultation, the pVCs and fVCs identified for assessment in the Impact Statement include Indigenous Peoples and their interests: Community Services and Infrastructure; Current Use of Lands and Resources for Traditional Purposes; Indigenous Physical and Cultural Heritage and Structures, Sites, or Things of Significance; Community Well-being; and Health.

12.4.2 Overall Project Design

Between 2022 and 2025, ANA provided several comments on the Great Bear AEX Program. These comments have been carefully reviewed and, where feasible, incorporated into the design of the Great Bear Project.

- Water Quality and Fish: ANA is concerned about the potential for pollutants from the mine to negatively affect water quality and fish. Sturgeon was noted as important to the community. Water quality is assessed in Section 7.7. Fish and Fish Habitat are assessed in Section 8. Sturgeon have not been found in the area surveyed. Monitoring will continue.
- Air: Air quality concerns due to unpredictable wind patterns which can carry pollutants and other chemicals long distances. The potential to affect air quality is assessed in Section 7.2 of the Impact Statement. Dust management and mitigation will be employed to minimize fugitive dust.
- Wildlife: Request for information on moose, caribou, and wolverine and how they can be negatively affected by the Project. Great Bear Resources has included Moose (Section 7.10), Other wildlife (Section 7.11) and Species at Risk (Section 7.12) as pVCs in its Impact Statement.
- Archaeology/Cultural Heritage: ANA noted their sacred relationship and responsibility with the landscape, and with all its parts. Archaeological reports have been shared with Indigenous communities. Archaeology and Cultural Heritage are assessed in Section 7.14 and 7.15.
- Mercury: ANA is concerned about the potential for higher mercury levels in downstream water. ANA's primary concern relates to the potential for Project activities to influence fish tissue mercury concentrations, particularly through sulphate loading that could promote mercury methylation.

In response to the interests and concerns raised by ANA, Great Bear Resources provided ANA with all the relevant Project information, responded to the issues raised, and entered into a capacity funding agreement with ANA to assist with its review of the technical information.

Several key modifications have been made to the project, including the desulphurization of tailings, the use of reverse osmosis treatment to reduce sulphate concentrations in the final effluent, and implementation of a comprehensive Mercury Study Plan with expanded far-field baseline sampling (Appendix Q).

The mercury study area for the predictive modelling was expanded to the downstream English River, upstream of its confluence with Little Fox Lake, directly north of Grassy Narrows Lake. This expanded study area boundary does not reflect the area where Project-related effects on methylmercury are anticipated based on technical studies completed to date by WSP but rather in recognition of the concerns raised by ANA.

12.4.3 Community Services and Infrastructure

ANA has not raised direct concerns related to housing, workforce accommodations, or transportation infrastructure in relation to the Project activities to date. In written submissions to IAAC in 2022 though 2024, ANA noted broader systemic, and environmental pressures experienced by community members, such as constraints on community capacity to engage in regulatory processes, including limited resources to review technical materials or participate in permitting timelines. The ANA community also raised concerns about mitigation measures, long-term environmental damage and how decisions are made aimed at supporting transparency, information-sharing, and culturally appropriate engagement.

Based on available comments from ANA, key issues incorporated under community services and infrastructure (Section 12.5) include: changes to community services and infrastructure.

12.4.4 Current Use of Lands and Resources for Traditional Purposes

ANA identified concerns about the potential contamination of culturally and ecologically important waterbodies in March 6, 2024, letter to IAAC, the Minister of Mines, and Great Bear Resources. This concern underscores current ANA concerns with water contamination in the English-Wabigoon River System. ANA has identified culturally important species, including moose, caribou, and fish. This is assessed as a change to the quality of experience related to harvesting terrestrial, aquatic, and plant species and resources within the Project Area (PA). This is also assessed through the identification of water flow patterns and catchment areas that may be affected downstream of the PA.

ANA has identified that contamination concerns extend to resource quality, as well as concerns for increasing occurrences of disease, such as masses or tumours found in moose, and increase of dissolved organic carbon, sulphate, and other naturally occurring substances that may disrupt aquatic processes.

ANA has acknowledged that these substances are not classified as toxic or subject to regulation; however, they are recognized for their role in influencing mercury cycling, as well as the solubility, mobility, and toxicity of mercury in aquatic environments. Other concerns raised by ANA members include changes in air quality and the potential for wind to carry chemicals long distances, such as PCBs, as noted in correspondence on the Methylmercury Study Plan.

Changes in the access and availability of culturally and spiritually important sites and areas were identified by ANA. ANA understands their relationship with the landscape as holistic, rather than restricted to a finite set of sites and areas. Culturally and spiritually important areas were identified as a concern, noting that if these spiritual landscapes are not intact, spiritual sites may become desecrated and lose their function for ANA community members.

ANA points to this in direct relation to community well-being and cohesion, as inability to fulfill cultural and spiritual purposes on the landscape translates to disruptions of health (including mental health issues, conflicts, and reduced ability to hunt and harvest traditional foods).

Changes in water and land quality from Project activities were identified as having the potential to affect the quality of experience of ANA community members who use waterways and waterbodies as sites of transmitting intergenerational knowledge. These concerns, raised alongside broader issues related to cumulative environmental effects and historical degradation, highlighted the need for robust water treatment and protection for water quality and ecosystem health.

Based on available consultation information from ANA, key issues incorporated under current use of lands and resourced for traditional purposes (Section 12.6) include: changes to access, availability, and quality of experience related to terrestrial wildlife harvesting (wildlife and land quality), changes to access, availability, and quality of experience related to traditional aquatic harvesting (fishing and water quality), changes to access, availability, and quality of experience related to plant harvesting (vegetation and land quality), and changes in access to culturally important areas and the experience (traditional habitation, spiritual, and cultural sites).

12.4.5 Indigenous Physical and Cultural Heritage, and Structures, Sites or Things of Significance

Public correspondence from ANA to IAA, MEM and Great Bear Resources regarding the Project provides Project-specific input on ANA physical and cultural heritage in relation to Project activities (Asubpeeschoseewagong Netum Anishinabek 2024). This source highlights the integral relationship between the region's landscape and Indigenous ceremonial sites, spiritual sites, burial sites and other cultural heritage sites distributed across it, as well as the need to preserve that relationship to retain the sacred character and cultural meaning of these sites.

Based on engagement and consultation to date with ANA, key issues incorporated under physical and cultural heritage, and structures or things of significance (Section 12.7) include: alteration or loss of these physical and cultural areas; associated changes to the quality of experience and practices of ANA community members potentially undertaking traditional activities in these locations; and implications for cultural continuity and ANA's ability to transmit Indigenous Knowledge intergenerationally.

12.4.6 Community Well-Being

Input from ANA emphasized how disruptions to cultural practices on the land, such as harvesting, ceremonies, and land-based healing, are central to understanding the community's experience of harm and potential residual effects.

The community's emphasis on healing, cultural survival, and maintaining ties to the land shaped the understanding of potential effects on well-being and community cohesion. Additionally, ANA offered a perspective on the consultation process itself and their general sense of exclusion and mistrust.

Based on engagement with regional service providers in the Kenora District and consultation to date with ANA, key issues incorporated under community well-being (Section 12.8) include: increased cost of living in the region due to the increase in population; access to health and mental health support services; access to traditional food sources; potential effects to water, wildlife, fish, and vegetation that will affect the health and well-being of the community members; and change to overall community identity and community cohesion.

12.4.7 Health

This section provides a summary of the past and ongoing activities that have supported the discussion, scoping and assessment of Indigenous health.

As detailed in Impact Statement Section 3 (Participation and Engagement), engagement activities between Great Bear Resources and Indigenous communities have included in-person and virtual small group meetings, in-person and virtual community meetings, site visits, small workshops, formal presentations, public engagements, one-on-one in-person engagements, letters, and emails.

Feedback from Indigenous Nations and stakeholders has directly influenced the assessment of potential effects on Indigenous health and the development of mitigation and enhancement measures, including:

- **Potential Points of Reception:** Confidential reports in the form of Traditional Knowledge Land Use Study (TKLUS) for LSFN, WFN, and NWOMC included information on land and resource use, species of importance for subsistence and cultural purposes, and cultural areas of importance. The assessment of human health, including the selection of surrogate species and points of reception (PORs) used in the HHERA included consideration of this information. Further detail on this process is provided in Section 4.4 of Appendix N-2.
- **Wild Rice Enhancement Project:** At the request of LSFN and WFN, Great Bear Resources has funded a collaborative study to address the loss of historic Wild Rice production on Wabauskang Lake. The enhancement project, located on the WFN reserve and supported by LSFN, will develop options for habitat restoration and knowledge-sharing on sustainable harvesting practices, supporting long-term stewardship by community members. Wild Rice has been highlighted as a key interest by Indigenous communities. This mitigation measure supports Indigenous health and wellness.
- **Contamination:** In response to concerns about waterfowl exposure to contaminants (e.g., tailings and toxins), the Project has committed to robust tailings management, regular environmental monitoring, and transparent communication of results. Wildlife will be discouraged from inhabiting contact water ponds, including but not limited to the Tailings Management Facility (TMF) pond, mine water pond and collection water pond. Concerns presented by ANA include seeking information related to the Project's possible effects on increased mercury and mercury methylation in the English River System, cumulative impacts to the regional watershed as result of the Project and prior industrial activities, and impact to traditional rights, harvest, and rights bearing activities. In order to address concerns surrounding the possibility of the Project further contributing to ongoing mercury levels and risk of methylation, Great Bear Resources undertook a study requested by IAAC to evaluate potential methylmercury generation from Project in downstream watersheds and evaluated potential risk to human health associated with fish consumption. This study can be referenced in Appendix T.
- **Environmental monitoring and Indigenous participation:** Great Bear Resources has committed to ongoing engagement with Indigenous environmental monitors and the Environmental Management Committee, to support Indigenous knowledge informing the monitoring of species of importance.

- **Communication and adaptive management:** The Project will maintain open communication with communities regarding monitoring results, adaptive management measures, and opportunities for community input throughout the Project lifecycle.

Some of the information below was also summarized from publicly available sources (Asubpeeschoseewagong Netum Anishinabek 2024). At the time of writing this report, the results of the ANA Land Use and Occupancy Study were not available. The provision of the study and / or content remain at the discretion of ANA.

ANA has provided feedback on health directly, as well as feedback on upstream determinants and factors that may affect health indirectly. Through consultation and engagement, ANA has raised concerns that environmental contamination could change the experience of land users and result in changes to food safety, the transfer of cultural knowledge and health. ANA indicated concerns related to surface water contamination as a result of the Project, as well as concerns with existing water contamination, primarily mercury and methylmercury, in the English-Wabigoon River System that could adversely affect the safety and quality of traditional food sources, including hunted and trapped game, harvested plants and fish. Members indicated concerns related to culturally important species including moose, caribou, wolverine, and fish, including walleye and sturgeon. Additionally, concerns were raised that changes to air quality and changes to water quality may change the experience of land users and transmission of knowledge and ways of life, change access to traditional harvesting areas, disrupt aquatic processes, change resource quality and pose health risks.

Great Bear Resources provided ANA their applicable Indigenous Peoples effects assessment chapter and the RLEF effects assessment chapter on date February 27 ,2026 (excluding health). A presentation was also shared on interim health results. This approach aimed to maximize the time for ANA review. Great Bear Resources will address comments following submission of the Impact Statement.

It is noted that historical industrial activity in the region may have influenced existing (baseline conditions) in the region, particularly for ANA. Baseline concentrations of mercury (including methylmercury) in the LSA and RSA were incorporated into the risk characterization step of the HHERA (Appendix N-1). In addition, a Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies (Appendix T) was completed to evaluate potential Project contributions to mercury and methylmercury concentrations in waterbodies downstream of the RSA, the results of which were incorporated into the HHERA. The HHERA reviewed and incorporated relevant aspects of the Grassy Narrows Land Protection Team (GNLPT) memorandum (GNLPT 2025), such as heavy or subsistence consumption rates for fish and a variety of lifestages including sensitive lifestages (e.g., toddler, child-bearing female). The findings of the HHERA have been incorporated into the assessment of Indigenous health, as presented in Section 12.9.3.

Based on engagement and consultation to date with ANA, key considerations incorporated under health include: ongoing communication, access to traditional food sources; potential effects to water, wildlife, fish, and vegetation that will affect the health of the community members; and change to overall community identity and social cohesion.

12.5 Community Services and Infrastructure

Community services and infrastructure was selected as a criteria to evaluate how the Project may interact with the capacity of regional and local facilities, services, and infrastructure, including transportation networks utilized by ANA members. These components are assessed both individually and collectively. Collectively, they help evaluate the broader social and economic conditions of ANA that depend on the stability and reliability of these programs, services, and systems. The assessment of community services and infrastructure includes a review of:

- Housing and accommodations (including short-term rentals and temporary lodgings)
- Social services (e.g., childcare, daycare, Elder care, youth programs, community wellness workers, women's shelters, and mental health and addictions counselling)
- Healthcare services (including primary and secondary care)
- Emergency response services (e.g., fire, police, ambulance, and other emergency responders)
- Infrastructure (e.g., power, utilities, landfill and waste disposal, water and wastewater treatment)
- Traffic networks and transportation infrastructure.

This assessment focuses on services available specifically to members of ANA, while also acknowledging the regional health, social, and education programs and infrastructure accessed by ANA community members in the Kenora District. For a more comprehensive assessment of predicted changes to Indigenous Peoples' access to services and infrastructure in the Red Lake and Ear Falls area, including broader systems not specific to ANA, refer to Section 14, Predicted Changes to Indigenous Peoples living in the Red Lake and Ear Falls Area.

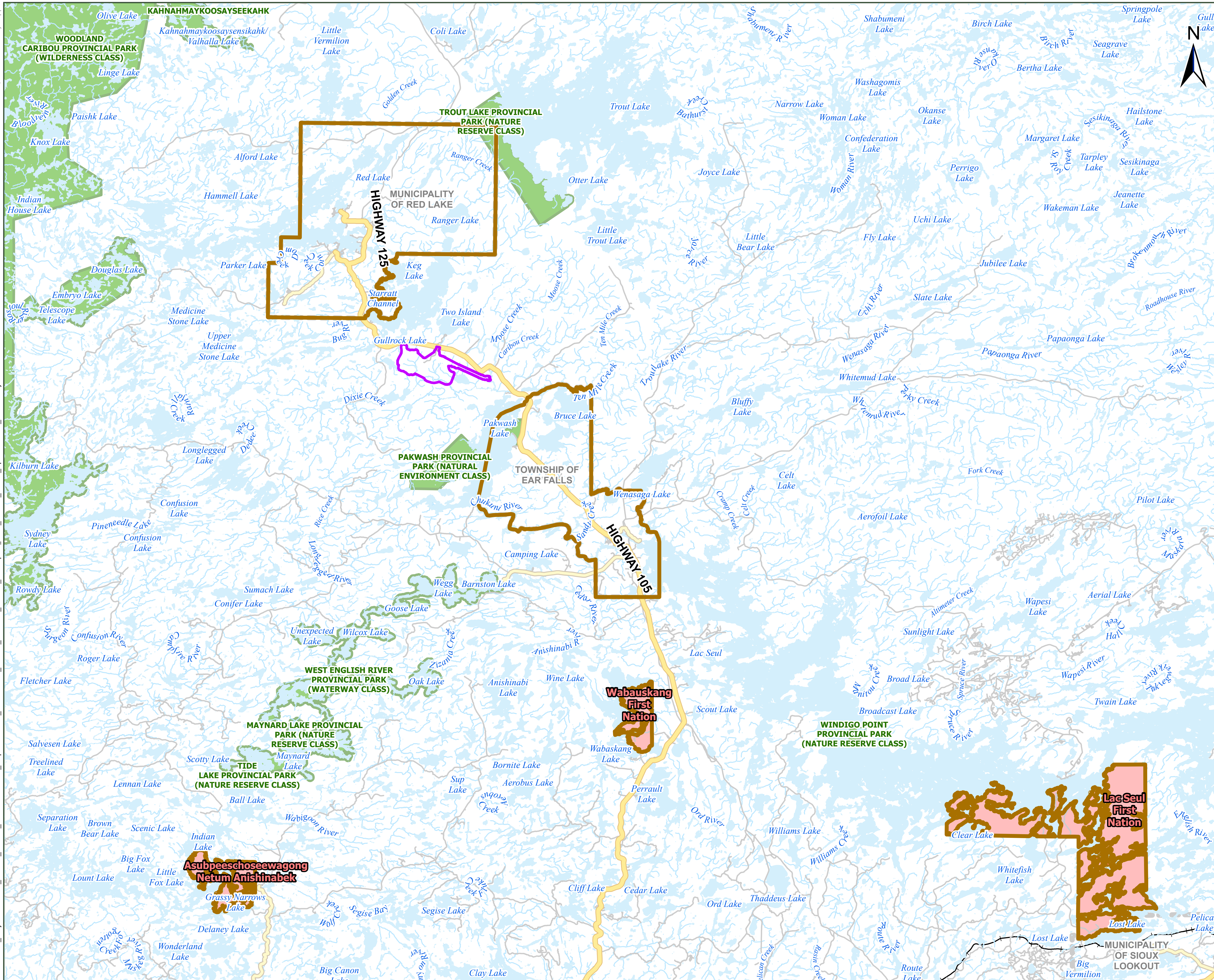
12.5.1 Spatial Boundaries

There are three study areas within the spatial boundaries. They are the Project Area (PA), the Local Study Area (LSA), and the Regional Study Area (RSA), which includes both the PA and the LSA. The spatial boundaries used for the assessment of community services and infrastructure are shown in Figure 12.5-1 and are defined:

- The PA is defined as the footprint of the Project including all temporary and permanent areas associated with the Project, as well as a buffer to allow for design optimizations prior to construction and over the mine life (Section 6.4). The PA is approximately 3,349 hectares (ha) in size.
- The LSA is the area within which Project-related effects may reasonably be expected to occur and can be predicted or measured with a reasonable degree of accuracy and confidence. The regions that the Project's socio-economic demands are expected to influence, possibly causing direct, indirect and / or induced effects on community services and infrastructure, include the Indigenous communities of ANA, LSFN, NWOMC (the community of Métis citizens in the region), WFN, and Indigenous Peoples living in the Red Lake and Ear Falls area.

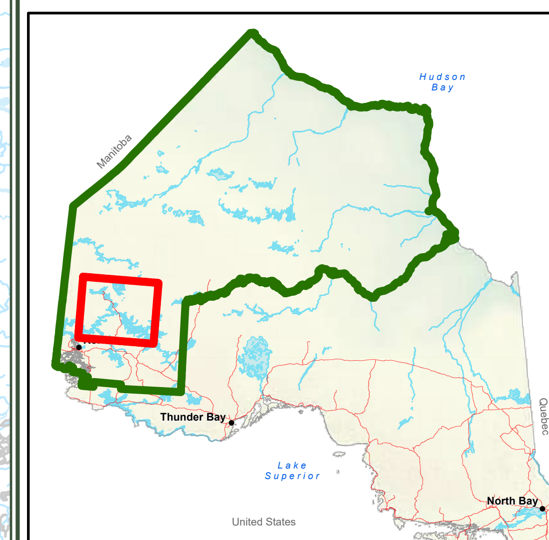
- The RSA encompasses the LSA and is used to provide regional context for the significance of residual effects. It is also the area within which potential for cumulative effects of the Project, in combination with other past, present or reasonably foreseeable projects or activities are considered. The region surrounding the LSA and the PA may also experience direct, indirect, and / or induced effects on community services and infrastructure due to the Project's socio-economic demands. This could include transportation corridors, or regionally operated services. The RSA for community services and infrastructure is the District of Kenora. The RSA is the region which cumulative effects on the pVCs and fVCs are likely to occur.

These boundaries are consistent with those used for other social criteria, including Community Well-being (Section 12.8) and Health (Section 12.9).



LEGEND:

- PROJECT AREA
- LOCAL STUDY AREA
- REGIONAL STUDY AREA
- HIGHWAY
- MAJOR ROAD
- LOCAL ROAD
- RAILWAY
- WATERCOURSE
- WATERBODY
- INDIGENOUS COMMUNITY
- PROVINCIAL PARK
- MUNICIPAL BOUNDARY (LOWER TIER)
- PROJECT AREA



NOTES:
NOTE1: BASE DATA ACQUIRED FROM LAND INFORMATION ONTARIO.

0 5 10 20 30 km

SCALE 1:550,000
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 15N
THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD NOT BE USED FOR NAVIGATION

GREAT BEAR RESOURCES

GREAT BEAR GOLD PROJECT

SPATIAL BOUNDARIES FOR COMMUNITY SERVICES AND INFRASTRUCTURE

SLR

FIGURE NO:
12.5-1

DATE: November 19, 2025   PROJECT NO: 241.030825

12.5.2 Existing Conditions

A summary of existing conditions for community services and infrastructure, along with the methods used to characterize baseline conditions is presented. Additional details are provided in the Socio-Economic Baseline Report (Appendix O-1).

Current services and infrastructure that are specific to ANA community are included; however, it is acknowledged that ANA community members also rely on the services and infrastructure available in Red Lake, Ear Falls and other larger centres within the RSA (such as the City of Kenora). Some services and infrastructure, as outlined in this Section and Section 15, are only provided in these larger communities and require community members to travel to access them. Specialized services are typically accessed in the broader RSA, including the Kenora District.

While the discussion centres on on-reserve ANA-specific service delivery, Section 14, Predicted Changes to Indigenous Peoples living in the Red Lake and Ear Falls Area, provides insight for a broader assessment of general community services and infrastructure used by ANA off-reserve community members in the Red Lake and Ear Falls area.

12.5.2.1 Methods

A description of existing community services and infrastructure conditions for ANA community members is presented. The existing conditions data was collected through desktop research of publicly available sources, including statistical data from the 2021 Census. and other public sources and, if available, qualitative information gathered through interviews with key service providers and community organizations.

The TISG also states that the description of baseline economic conditions must include “any relevant treaty provisions pertaining to economic development for Indigenous Peoples”. Great Bear Resources is not aware of any treaty provisions pertaining to economic development for ANA.

Additional information from related criteria sections, including community well-being, the Project Description, and employment and economy studies were used to understand the potential for effects on community services and infrastructure.

This quantitative and qualitative information is used to describe the current existing conditions. The potential Project-related changes to community services and infrastructure are relative to these existing (or baseline) conditions. The assessment of potential effects from these changes informs the development of appropriate mitigation measures, which in turn support the prediction of residual effects. The finding of this assessment will inform the mitigation measures and long-term monitoring proposed for the Project.

12.5.2.2 Description

Desktop sources, including statistical data (e.g., income, employment, housing), and regional service information, are used to characterize the conditions within ANA. Where relevant, this assessment refers to Section 14.5 (Predicted Changes to Indigenous Peoples living in the Red Lake and Ear Falls Area - Community Services and Infrastructure) for a broader understanding of infrastructure and service provision within the RSA.

Community services and infrastructure reflect the overall social and economic conditions that support populations within ANA. The existing capacity and challenges in infrastructure and service areas are also closely connected to other criteria, including:

- Current Use of Lands and Resources for Traditional Purposes (Section 12.6)
- Community Well-Being (Section 12.8)
- Health (Section 12.9)
- Local and Regional Economy (Section 7.16)

Existing conditions are based on both statistical information (e.g., income, employment, housing) and insights from community-based organizations. When presented together, these sources provide a foundation for evaluating how potential future changes may affect overall well-being in the LSA and RSA.

12.5.2.2.1 Accommodation and Lodging

As of October 2020, ANA had a population of approximately 1,200 residents, and as of the 2021 Census, a total of 185 occupied private dwellings (Sakatcheway Anishinabe High School n.d.). Of the 185 occupied dwellings, 180 households were living in residences provided by the local government, Indigenous Nation leadership, or Band Council. Among the occupied private homes, 90 required regular maintenance or minor repairs, while 95 needed major repairs (Statistics Canada 2023b).

The Housing Department addresses and responds to all housing issues and related requests. The services provided by the Housing Department include (211 Ontario 2026):

- Provides recommendations and changes to the housing policy
- Receives and reviews applications for renovations, new housing units, housing loans, and renovation loans
- Monitors rent payments to verify compliance
- Arranges inspections of rental units and community houses for maintenance and renovations
- Conducts annual maintenance and repair works on behalf of tenants and verifies completion
- Maintains a comprehensive database on all community housing units, including information such programs accessed for construction and repairs, outstanding loans, available services, inspection reports, unit condition, year built, and other details.

To address ongoing housing needs, the community has secured federal funding commitments totaling approximately $24 million to support the construction of about 100 additional housing units. Planned developments include 50 modular homes, a 20-unit apartment building, and 30 additional homes over a three-year period, many of which are intended to replace older units on designated southern lots (Stimpson 2024).

In addition to Band-managed housing, ANA residents may access housing support services offered through external programs. The local Ontario Works office provides financial assistance for eligible residents, including rent subsidies and pay-direct options (Northwest Health Line 2025).

12.5.2.2.2 Municipal, Provincial, and Non-Profit Service Delivery Capacity

12.5.2.2.2.1 Recreation and Leisure

The ANA community provides a variety of recreation and leisure opportunities through community-led programming, partnerships, and access to traditional land-based activities (Northwest Health Line, 2024; Kenora Chiefs Advisory Ogimaawabiitong, n.d.).

Facilities and activities include:

- Grassy Narrows Multipurpose Complex for indoor community events and gatherings (Northwest Health Line 2024)
- Sports programming provided by the Kenora Chiefs Advisory Ogimaawabiitong and the Right to Play initiative which includes regular weekly activities for children and youth aged 7 and up
- The Right to Play initiative includes leadership workshops, sport and recreational activities, volunteer opportunities, community events, sport clinics, summer camp programming, and youth-led initiatives (Kenora Chiefs Advisory Ogimaawabiitong n.d.).

These services are delivered by community mentors and local providers, aiming to enhance youth leadership, cultural identity, resilience, and physical well-being (Kenora Chiefs Advisory Ogimaawabiitong 2023).

12.5.2.2.2.2 Social Services

There are several organizations that provide a range of social services and family support services to ANA community members. Key services include:

- Kitapinoonjiiminaanik Family Services: Provides child protection, family support, and prevention services to reduce the risk of family breakdown and intergenerational trauma on behalf of Anishinaabe Abinoojii Family Services. Services include parenting workshops, foster care coordination within the community, and culturally grounded wellness programming (Northwest Health Line 2024).
- Ontario Works: Administered through the Band office, Ontario Works provides short-term financial assistance, extended health benefits, and support for employment readiness. Programs include childcare subsidies, transportation assistance, and other supports to help recipients meet participation requirements such as job searching or training (Northwest Health Line 2025).
- Grassy Narrows Child & Family Advocates: Offers advocacy services and system navigation support for families involved with child welfare or seeking reunification. Services include assistance with accessing housing, transportation, legal supports, cultural connections with Elders, and many other services (Grassy Narrows Child and Family Advocates n.d.).
- Migizi Wazason Child Care Centre: Offers licenced childcare services for infants, toddlers, and pre-school aged children. The centre integrates cultural teachings and community-based activities into its daily programming, supporting social, emotional, and cognitive development (Grassy Narrows Education Authority n.d.).

- The Naotkamegwanning Women's Shelter: Located within Treaty 3 territory at an undisclosed location, offers 10 emergency beds for Indigenous women+ and children fleeing violence (Northwest Health Line 2024).
- The Kiwiigiwaminan Supportive Housing program: Located in Kenora and offers 30 semi-independent living units for Indigenous adults aged 16 and older (Miner and News, 2024) (Waasegiizhig Nanaandawe'iyewigamig 2022).
- The Kenora Emergency Shelter: Operated by the Canadian Mental Health Association in partnership with the Kenora District Services Board, located in Kenora provides 46 beds for the broader regional population (Canadian Mental Health Association 2021).

At the time of this report, no qualitative information was available regarding specific service capacity, thresholds, or organizational vulnerabilities for these service providers.

12.5.2.2.2.3 Health Services, Elder Care, Mental Health, and Addiction Services

ANA has one primary community medical centre that coordinates general health services, visiting specialist clinics, and preventative care programs (Northwest Health Line 2025). In addition to the main clinic, the community is served by periodic visits from the mobile mental health and addictions clinic, which improves local access to mental health and addictions care (Canadian Mental Health Association 2021). The Mercury Care Home & Wellness centre is currently under development to support residents experiencing long-term effects of mercury exposure (Government of Canada 2025; Carver 2025). Community members also access specialized and hospital-based care at Lake of the Woods District Hospital in Kenora (Northwest Health Line 2025).

Table 12.5-1 summarizes health, Elder care, mental health, and addictions services available to ANA community members at the time of this report.

Table 12.5-1: Health Services - Asubpeeschoseewagong Netum Anishinabek, 2025

Health Services	Details
Available in Community	
Community Medical Centre	• Coordinates visiting physicians and nurse practitioners • Provides workshops and preventative care, including diabetes, immunization, sexual health, and communicable disease clinics • Foot care through visiting chiropodists • Identifies and attempts to correct health hazards • Intake assessments and referrals • Home visits to the sick, elderly, new mothers and persons with health care needs • Travel coordination for medical appointments (Northwest Health Line 2025)
Mobile Mental Health & Addictions Clinic	• Provides intake assessments and brief interventions • Offers psychiatric follow-up and referrals • Improves access to mental health and addictions care through rotational visits (Canadian Mental Health Association 2021)

Health Services	Details
National Native Alcohol and Drug Abuse Program	• Prevention, intervention, and aftercare services delivered through the Trappers Building • Activities include seminars, group meetings, social events, recreational and spiritual gatherings (Sober Kids Canada 2025)
Mercury Care Home & Wellness Centre	• 6,500 square m facility currently under construction as of 2025 • Planned 24-bed capacity including primary and long-term care services (Government of Canada 2025) • Includes rehabilitation, traditional healing, and cultural programming • Supported by Indigenous Services Canada capital and operational funding • Projected service delivery following construction completion targeted around 2027 (Carver 2025)
Available Regionally	
Hospital Access	• Community Medical Centre assists in coordinating transportation arrangements to Lake of the Woods District Hospital in Kenora (Northwest Health Line 2025) • 81-bed acute care hospital located in Kenora • 24-hour emergency department • Nurse practitioner • Outpatient services (Lake Of The Woods District Hospital n.d.)
Waasegiizhig Nanaandawe'iyewigamig	• Waasegiizhig Nanaandawe’iyewigamig offers primary health care and preventative services combining traditional and contemporary approaches to health and healing. • Complementary programs include a residential healing program and hostel accommodation for people accessing hospital services in Kenora.
Northwestern Health Unit (NWHU)	• Northwestern Health Unit (NWHU) is a public health unit, serving part of the Kenora district and the entire Rainy River district. • Using a distributed services model, we have offices in 12 municipalities that work to provide services across the region.
All Nations Health Partners	• evolved from the Kenora Area Health Care Working Group, formed in 2015 to address a critical doctor shortage and cross-border issue • includes Indigenous, municipal and health care leaders working toward the development of a seamless, patient-centred health care system
Dental Services	• Basic dental care, including exams, cleanings, fillings, and extractions • Diagnostic services, preventative and periodontal treatments • Access coordinated through Band Office and covered under Non-Insured Health Benefits (Government of Canada 2024; 211 Ontario North 2025)

Health Services	Details
Sexual Assault & Crisis Supports	• Kenora Sexual Assault Centre offers regional crisis intervention, counselling, and advocacy (Kenora sexual assault centre) • Ontario Native Women's Association Indigenous Sexual Assault Program provides culturally specific supports (Ontario Native Women's Association n.d.)
Note: For health service providers included in this table, direct interviews were not conducted as part of this assessment. In these cases, institution-specific operational challenges could not be confirmed. The absence of identified challenges should not be interpreted as confirmation that no service delivery, staffing, or resource limitations exist.	

12.5.2.2.2.4 Burial Services

ANA maintains a community cemetery with 72 recorded memorials, as documented by the Find A Grave website (Find A Grave 2025). There are no funeral homes or crematoria located on reserve, families access these services in nearby communities such as Kenora (Dignity Memorial 2025). Ontario Works may provide discretionary financial assistance to help cover funeral and burial expenses for eligible families (Northwest Health Line 2025).

12.5.2.2.2.5 Educational Services and Facilities

ANA provides a range of educational services through the Sakatcheway Anishinabe School and the Migizi Wazason Child Care Centre (Northwest Health Line 2025). The Community's education system is administered by the Grassy Narrows Education Authority and includes daycare, elementary, and high school divisions.

The daycare joined the authority in the 2022-2023 school year and is integrated with Junior Kindergarten, Senior Kindergarten, and Grade one as part of the Early Years Learning Team, which focuses on establishing strong foundational skills (Sakatcheway Anishinabe High School n.d.).

The enrollment process for the school system requires registration and submission of a child's birth certificate or status card, as well as immunization records. Eligibility includes all ANA community members aged four and older (211 Ontario North 2025).

The elementary division covers Grades one to eight and follows the Ontario elementary curriculum, while the high school division offers grades nine to twelve, is inspected and approved by the Ontario Ministry of Education. The high school emphasizes experiential and land-based learning, including a strong Outdoor Education program with access to canoes, ATVs, and other equipment. The school also offers trade-focused courses in auto mechanics supported by a dedicated auto mechanics garage, welding, hospitality and tourism, and design and textiles (Sakatcheway Anishinabe High School n.d.).

The school facilities include a gymnasium, cafeteria, library, computer room, and separate wings for elementary and secondary school students. A daily breakfast program and a bus transportation service are provided. Additional programming includes Native language instruction, cultural outings such as ice fishing, snowshoeing, canoeing, camping, and wilderness expeditions. The school also supervises a range of extracurricular activities, including sporting events, knitting nights, archery, painting, and regalia making (211 Ontario North 2025).

Special education support is available for students with learning difficulties, with a focus on maximizing integration into regular programs. The school serves approximately 200 students, and on-reserve teacher accommodations are available (211 Ontario North 2025).

At the time of producing this report, no qualitative information was available regarding capacity, thresholds or organizational vulnerabilities.

12.5.2.2.2.6 Emergency Services

Fire

ANA maintains a volunteer fire department managed through the Band Office. The department is responsible for fire prevention and administration of the Ontario Fire Code and issues applicable burn permits required for brush piles, incinerators, and open fires, excluding campfires (Northwest Health Line 2025).

Services include public education, emergency planning, fire investigation, fire suppression, hazardous materials information, and home safety inspections. Home safety efforts are carried out with the goal that all homes are equipped and annually inspected for functioning smoke alarms and charged fire extinguishers (Northwest Health Line 2025). Eligibility for services includes all ANA community members (211 Ontario 2025).

At the time of producing this report, no qualitative information was available regarding capacity, thresholds or organizational vulnerabilities.

Police

Policing services for ANA are provided by the Treaty Three Police Service, which operates 24 hours a day, seven days a week. The ANA detachment of the Treaty Three Police Service is located within the community, with regional headquarters located in Kenora.

The Treaty Three Police Service delivers policing across 30 Treaty 3 communities (Northwest Health Line 2025) with sub-detachments based in Wabigoon Lake Ojibway Nation, Eagle Lake First Nation, Naotkamegwanning First Nation, and Agency One Lands.

ANA exercises community sovereignty through the regulation of alcohol use on reserve. The community operates under local by-laws meaning the possession, sale, and consumption of alcohol are limited under local by-laws. In April 2021, ANA established a traditional Alcohol Inagonigaawin law, limiting personal alcohol possession to a maximum of 750 ml of wine, a 12-pack of beer, or 26 oz of spirits. Individuals exceeding these limits are referred to a traditional community justice panel (Turner 2021). This by-law is enforced by the Treaty Three Police Service, which provides policing and community safety services on reserve and supports the community's efforts to reduce substance-related harms (Turner 2021; Treaty Three Police 2024).

At the time of producing this report, no qualitative information was available regarding capacity, thresholds or organizational vulnerabilities.

Ambulance

ANA is served by the Northwest Emergency Medical Services by the Kenora District Services Board (KDSB), which has approximately 120 primary care paramedics and 10 administrative personnel and a fleet of 26 vehicles. The nearest ambulance base to ANA is in the City of Kenora, which is approximately 90km south of ANA.

Kenora hosts two of the nine regional stations in the district, staffing six ambulances and 47 paramedics (Kenora District Services Board 2025). In the surrounding remote communities, ambulance response times may reach up to 1.5 hours due to the distance paramedics must travel. When delays occur, the Ontario Provincial Police assist by transporting individuals to the hospital to allow timely access to care (Hall & Lamme 2025).

To help address emergency care challenges in northern and rural communities, the Province of Ontario has committed to expanding access to critical care services through enhanced Ornge air ambulance support and the development of virtual critical care programs (Ontario Newsroom 2024).

The Central Ambulance and Fire Communications Centre at Lake of the Woods District Hospital receives around 30,000 calls per year, including medical emergencies, fire response, patient transfers, and air ambulance requests (Lake of the Woods District Hospital 2025).

At the time of producing this report, no qualitative information was available regarding capacity, thresholds or organizational vulnerabilities.

12.5.2.2.3 Infrastructure

The infrastructure services available in ANA are presented in Table 12.5-2.

Table 12.5-2: Infrastructure Services - Asubpeeschoseewagong Netum Anishinabek, 2025

Service	Availability (Yes / No / Unknown)	Information
Transportation - Road	Yes	• Accessible by an all-weather paved road known as Highway 671, also known as Jones Road (Sakatcheway Anishinabe School n.d. - a). • In 2021, Ontario was ranked number one in road safety in North America with the lowest fatality rate of 0.52 per 10,000 licensed drivers. Total collisions reported in Kenora District account for only 0.4% of all collisions in Ontario (Ministry of Transportation 2021).
Transportation - Air	No	• There are no airports located within ANA with the closest airport is Kenora Airport. The aircrafts serve scheduled passenger services year-round (Kenora Airport n.d.).
Transportation - Rail	No	• N/A
Transportation - Water Access	No	• N/A
Utilities (wastewater)	Yes	• S. Burnett and Associates Limited has been working to upgrade the water treatment plant in ANA. ANA retained this company in response to the Boil Water Advisory put in place in June 2014. Upgrades were scheduled to be completed in 2020 (S. Burnett & Associates Limited 2020a).
Solid Waste Management	Yes	• N/A
Water Treatment	Yes	• Includes mercury (Pirkle, Muckle, & Lemire, 2016; Bettens, 2024)

Service	Availability (Yes / No / Unknown)	Information
Communications	Yes	• Telephone and cellular services are provided by Bell Canada and TELUS (Sakatcheway Anishinabe School n.d. - a). • According to PlanHub, the most efficient internet service provider for ANA community members is Starlink, offering the most reliable connectivity for remote users, with plans averaging approximately $78.57 per month (PlanHub 2025).
Energy Supply (power lines)	Yes	• Electricity is supplied by Hydro One Networks, located in Kenora (CanPages n.d.).

12.5.3 Potential Effects

The potential interactions between proposed Project-related activities and on-reserve community services and infrastructure for ANA are used to identify potential effects (positive and negative), and whether they are direct or indirect effects.

A detailed overview of the Project's potential interactions with community services and infrastructure for ANA is presented in Table 12.5-3. Project interactions are characterized as either having no interaction (-) or a potential interaction (✓). Project activities that result in no interaction were not considered further in the assessment. Project interactions that were identified as a potential interaction are carried forward to the potential effects assessment to determine the positive (desirable and beneficial) and negative (undesirable or adverse) potential effects on the community services and infrastructure criteria.

Table 12.5-3: Potential Interactions Between Project Activities and Community Services and Infrastructure - Asubpeeschoseewagong Netum Anishinabek

Project Component / Activity	Change in Housing and Accommodations	Change in Municipal, Provincial, and Non-Profit Service Delivery Capacity	Change in Transportation Infrastructure
Construction Phase			
Site preparation activities	-	-	-
Establishment and operation of water management and treatment facilities	-	-	-
Open pit mining	-	-	-
Underground mining	-	-	-
Management of rock and unconsolidated materials in stockpiles	-	-	-
Establishment of onsite fish habitat and compensation measures	-	-	-
Establishment of onsite aggregate operations	-	-	-

Project Component / Activity	Change in Housing and Accommodations	Change in Municipal, Provincial, and Non-Profit Service Delivery Capacity	Change in Transportation Infrastructure
Construction of the starter embankments for the tailings management facility	-	-	-
Construction and operation of buildings and infrastructure	-	-	-
Waste management	-	-	-
Commissioning of the process plant	-	-	-
Power supply	-	-	-
Employment and expenditures	✓	✓	✓
Operations Phase			
Underground mining	-	-	-
Mining of the LP Central pit	-	-	-
Management of rock and unconsolidated materials in stockpiles	-	-	-
Process plant operation	-	-	-
Management of desulphurized tailings in the tailings management facility	-	-	-
Management of concentrate tailings and contact water in the Viggo management facility	-	-	-
Operation of water management and treatment facilities	-	-	-
Construction of a mine water pond	-	-	-
Operation and maintenance of buildings and infrastructure	-	-	-
Waste management	-	-	-
Power supply	-	-	-
Progressive reclamation activities	-	-	-
Employment and expenditures	✓	✓	✓
Closure Phase			
Active closure	-	-	-
Passive closure	-	-	-
Final reclamation	-	-	-
Employment and expenditures	✓	✓	✓

Legend: ✓ = Interaction exists

- No interaction exists

The assessment considered potential interactions between Project activities and community services relevant to ANA. The analysis focuses primarily on on-reserve conditions, including potential changes to housing and accommodations and municipal, provincial, and non-profit service delivery capacity, and transportation facilities.

Given the distance (approximately 200km by road; 77km cross country) between the ANA on-reserve community and the location of the PA, no direct interactions on ANA on-reserve housing, community services, or infrastructure are anticipated. However, any potential effects on regional community services and infrastructure that ANA community members may access is assessed in Section 14, Predicted Changes to Indigenous Peoples living in the Red Lake

No measurable adverse effects to on-reserve community services or infrastructure are anticipated for ANA during any Project phase.

During construction, the Project is not expected to generate population growth or service demands within the ANA community, as housing and services are reserved for ANA members and their families.

Throughout operations, indirect effects on regional services accessed by some ANA members may occur if demand temporarily exceeds capacity. However, these are expected to be minor and within existing service thresholds.

The Project may also contribute to enhanced regional revenues that could indirectly support improvements to programs and infrastructure accessible to ANA community members.

Closure activities are similarly not expected to result in measurable effects, as workforce demobilization and reclamation activities will occur over a limited duration and scale.

12.5.4 Mitigation and Enhancement

No specific on-reserve mitigation or enhancement measures are proposed for community services and infrastructure during the construction, operations, or closure phases of the Project, as no potential effects have been identified for any phase. At the regional level, however, several mitigation and enhancement measures relevant to infrastructure and service delivery have been identified and are described in Section 14. These include commitments to ongoing coordination with municipal and regional authorities on housing, transportation safety, and community services to support Indigenous and non-Indigenous populations. Environment Committee(s) and community-based monitoring opportunities will be provided as a forum for ongoing information sharing, monitoring and adaptive management throughout the Project.

12.5.5 GBA Plus Considerations

The community of ANA is approximately 200km by road away from the PA (77km cross country). Community members seeking specialized services off-reserve access them in Kenora or Dryden, which is not anticipated to be impacted by the Project

Therefore, no GBA Plus considerations are anticipated for ANA regarding access to community services and infrastructure.

12.5.6 Residual Effects after Mitigation

No residual effects are anticipated. Existing conditions are expected to remain unchanged, and Project activities will not place additional demand on, or otherwise affect, community services and infrastructure within ANA on-reserve community.

12.5.7 Significance of Residual Effects

Since the assessment indicates no residual effects to on-reserve community services and infrastructure for ANA, a determination of significance is not required.

12.5.8 Confidence

The prediction confidence assignment reflects the information available through Project-specific TKLUS reports, publicly available data (statistical websites, government pages, previously completed EA/IS reports, understanding of the effectiveness of applicable mitigation measures, and outcomes of other pVCs and fVCs. The assessment is informed by substantial primary and secondary information and robust analysis.

With the proposed management and mitigation measures, including careful implementation of normal planning procedures by the relevant authorities, and liaison between GBR and those local authorities, the residual environmental effect of a change in capacity of community services and infrastructure has been determined with a high level of confidence.

12.6 Current Use of Lands and Resources for Traditional Purposes

Current use of lands and resources for traditional purposes (CULRTP) includes activities related to the harvesting of species and resources, such as trapping, hunting, fishing, gathering plants, and use of areas where the transfer of knowledge regarding cultural practices occurs, such as traditional habitation sites, ceremonial sites, travel routes, or sacred sites.

The CULRTP criteria reflects Indigenous Knowledge that is adaptive, intergenerational, and responsive to social, economic and environmental changes. Information regarding ANA rights and history, and the assessment of impacts on the right to exercise or practice traditional activities is provided in Section 12.10.

The CULRTP criteria evaluates how the Project may affect the ability of ANA members current use of lands and resources for traditional purposes, such as changes to access, use, and quality of experience while engaging in these activities.

As outlined in Assessment Approach (Section 12.3) the assessment includes consideration of the following potential effects:

- Change in availability, access to, and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping).
- Change in availability, access to, and quality of experience related to traditional aquatic harvesting (fishing and aquatic resources).
- Change in availability, access to and quality of experience related to traditional plant harvesting (food and medicinal purposes).
- Change in availability, access to, and quality of experience related to traditional habitation, cultural, and spiritual sites and areas.

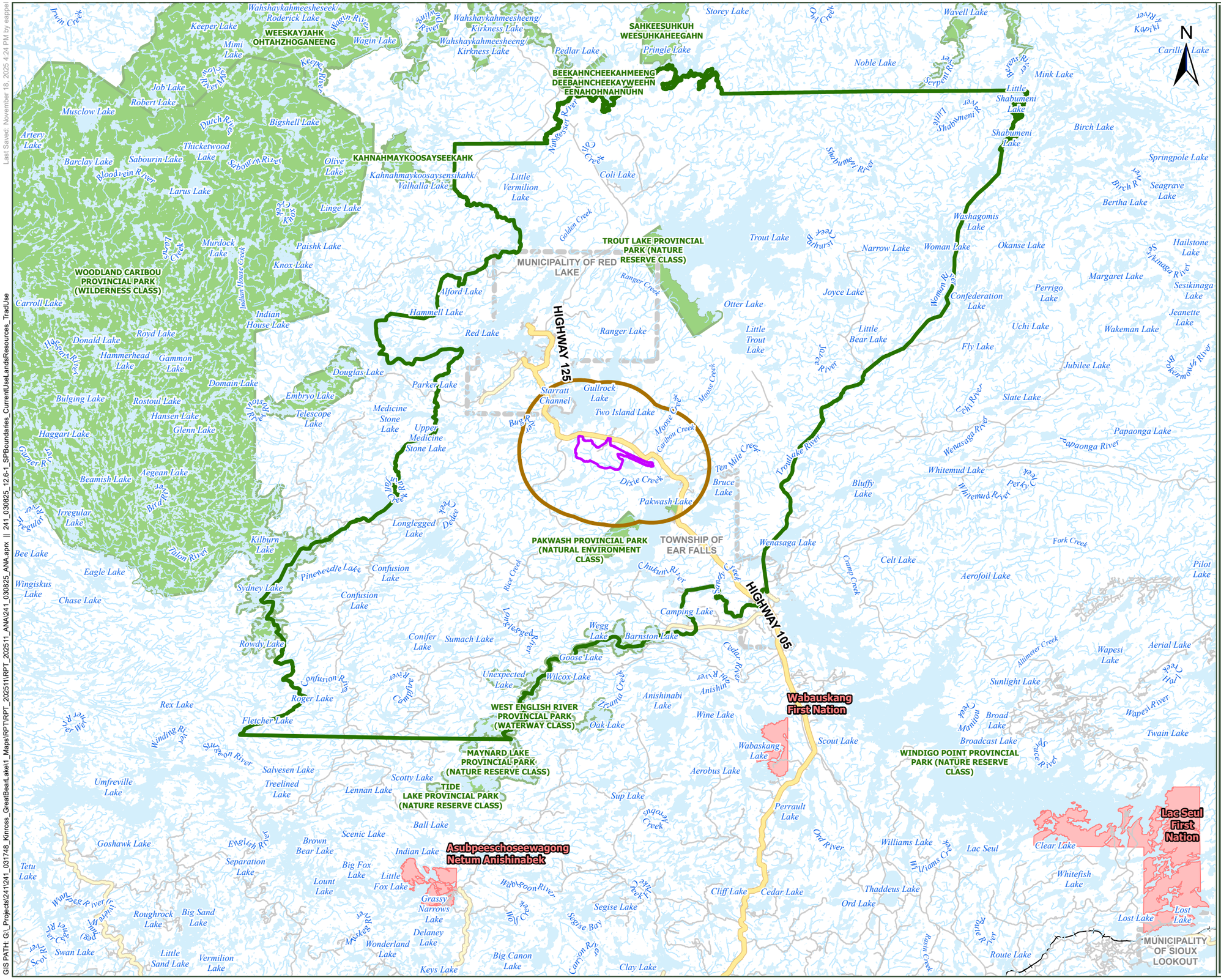
While both Section 12.6 and 12.7 assess traditional habitation, cultural, and spiritual use sites and areas, Section 12.6 (CULRTP) assesses the current use of these sites, inclusive of currently used campsites, cabins, and culturally important sites and areas. Section 12.7 assesses these sites and areas in relation to their heritage values (e.g., potential changes to their physical and cultural heritage values).

12.6.1 Spatial Boundaries

There are three study areas within the spatial boundaries. They are the Project Area (PA), the Local Study Area (LSA), and the Regional Study Area (RSA). The RSA includes both the PA and the LSA. The spatial boundaries used for the assessment of CULRTP are shown in Figure 12.6-1 and are defined as follows:

- The PA is defined as the footprint of the Project including all temporary and permanent areas associated with the mine site, as well as a buffer to allow flexibility for design optimizations prior to construction and over the mine life (Section 6.4). The PA is approximately 3,349 ha in size.
- The LSA is the area within which Project-related effects may reasonably be expected to occur and can be predicted or measured with a reasonable degree of accuracy and confidence. For CULRTP, the LSA is defined based on the same LSA for the Moose and Other Wildlife pVCs. This defines an area over which ongoing traditional use forms the basis for continuing practices integral to CULRTP, as well as associated intergenerational transfer of associated knowledge, values, beliefs and traditions. Specifically, the Moose and Other Wildlife pVCs captures the largest extent across which traditional use may be affected.
- The RSA encompasses the LSA and is used to provide regional context for the significance of residual effects and is also the area within which potential for cumulative effects of the Project in combination with other past, present or reasonably foreseeable projects or activities are considered. For current use of lands and resources for traditional purposes, the RSA is also defined based on the RSA for Moose and Other Wildlife pVCs for the same reasons as identified for the LSA. The Moose and Other Wildlife pVCs have relevance for past, present, and future traditional activities and captures the largest extent across which traditional use may be affected.

These boundaries are consistent with those used for Indigenous Physical and Cultural Heritage, and Structures, Sites, or Things of Significance.



LEGEND:

- PROJECT AREA
- LOCAL STUDY AREA
- REGIONAL STUDY AREA
- HIGHWAY
- MAJOR ROAD
- LOCAL ROAD
- RAILWAY
- WATERCOURSE
- WATERBODY
- INDIGENOUS COMMUNITY
- PROVINCIAL PARK
- MUNICIPAL BOUNDARY (LOWER TIER)

NOTES:
NOTE1: BASE DATA ACQUIRED FROM LAND INFORMATION ONTARIO.

0 5 10 20 30 km

SCALE 1:650,000
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 15N

THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD NOT BE USED FOR NAVIGATION

GREAT BEAR RESOURCES

GREAT BEAR GOLD PROJECT

SPATIAL BOUNDARIES FOR CURRENT USE OF LANDS AND RESOURCES FOR TRADITIONAL PURPOSES

SLR

FIGURE NO:
12.6-1

DATE: November 19, 2025 PROJECT NO: 241.030825

12.6.2 Existing Conditions

An overview of current use of lands and resources for traditional purposes by ANA includes demographic context, land governance, and spatial patterns of current cultural use (where available). It outlines known current practices of harvesting and ceremonial land use, which are central to Anishinaabe identity, health, and cultural continuity.

This Section focuses on ANA. Information on existing conditions of participating Indigenous Nations are provided in Sections 10 (LSFN), 11 (WFN), 13 (NWOMC), and 14 (off-reserve Indigenous Peoples living in the Red Lake and Ear Falls Area).

12.6.2.1 Methods

A description of the baseline conditions is presented to characterize the known and existing conditions for current uses of lands and resources for traditional (CULRTP) purposes by ANA community members. This is based on:

- Community knowledge: received through engagement activities such as meetings, oral input and written input traditional land use information, and Indigenous Knowledge for the area around the Project, and additional input described in Section 12.4 Influence of Consultation and Engagement;
- Publicly available secondary sources: relevant documents, media articles, and publicly available studies which contain biophysical, cultural heritage, archaeological aspects, Indigenous Knowledge, and traditional land use information for the area around the Project; and
- Socio-Economic Baseline Study for the Great Bear Project (2024) (Appendix O-1).

At the time of producing this report, the ANA Land Use and Occupancy Study had not been received.

These combined information sources provide an understanding of the current CULRTP information. The existing conditions are used to support the assessment of potential effects from the Project on CULRTP and will support long-term monitoring for the Project with interested ANA community members.

12.6.2.1.1 Importance of Land and Resource Use for Traditional Purposes

The nature and importance of current land and resource use for traditional purposes is based on the unique and deeply rooted relationships that Indigenous Peoples have with the land, water, animals, and ecosystems. These relationships are holistic, incorporating physical, economic, spiritual, cultural, and communal components. These cultural relationships with the natural world foster a sense of responsibility and stewardship, where caring for the land is a sacred duty passed down through generations. Access to land and resources is essential for Indigenous Peoples maintenance of their cultural practices, intergenerational knowledge sharing, food sovereignty, and community well-being.

Indigenous knowledge systems are based on observation, experience, and adaptation of diverse Indigenous communities through time. They offer valuable insight into land and resource use patterns. It is through traditional, and current land and resource use studies that an understanding of the existing nature and importance can be described and changes due to the Project can be determined. Important areas and sites of current use for ANA community members may reflect both past Indigenous community areas (e.g., village sites, historic harvesting, spawning, or hunting sites), and the ongoing significance of present-day campsites, tourist camps, water travel routes, or harvesting and social areas. Harvesting sites and areas for fishing, plant gathering, and hunting or trapping also reflect how many generations have accumulated knowledge through their deep relationships with the land and water and are used by ANA community members to maintain these connections to land and place.

12.6.2.1.2 Quality of Experience of Current Land and Resource Use for Traditional Purposes

Quality of experience for current use of land and resources for traditional purposes refers to the preferred and / or required conditions (e.g., not disturbed by changes in sensory conditions) needed to use or maintain traditional and current use practices (e.g., technologies, methods, and habits). This includes changes to environmental, biophysical, or spiritual and cultural qualities of areas, sites, and resources that would make them inappropriate for Indigenous use or value. These may change the ability of these lands, waters, and resources to support ANA cultural practices and traditions. Disturbances to land, waters, and resources include changes to sensory conditions (e.g., air and dust emissions, sound, light) which may affect tangible and intangible aspects of culture. Tangible aspects of culture include traditional current use areas, cultural sites, and landscapes. Intangible aspects of culture include gatherings, rituals, and embedded Indigenous Knowledge.

12.6.2.2 Description

This description of CULRTP by ANA community members includes demographic context, land governance, and spatial patterns of use by ANA. It also outlines known practices of harvesting and ceremonial land use, which are central to Indigenous identity, health, and cultural continuity. It is understood that ANA relies on Treaty 3 territory that extends beyond the lands directly around ANA reserve.

It is also understood that with ANA's limited use of traditional territories around the Grassy Narrows reserve as a result of historical contamination, that their reliance on Treaty 3 territories overlapping with the RSA has increased. For this reason, the description of existing conditions for CULRTP focuses on high-use and high-value areas within Treaty 3 territory that overlap with the LSA and RSA, including the English-Wabigoon Watershed, and the Chukuni River and its greater watershed (including Pakwash and Gullrock Lake, Wabauskang Lake, Red Lake, and Trout Lake).

At the time of writing this Impact Statement, the results of ANA's Land Use and Occupancy Study were not available. However, Great Bear Resources is aware that the Project is located in the ANA Interim Core Area of Interest for Mining and their proposed Indigenous Protected Conservation Area, which includes moose, caribou, and wolverine habitats.

12.6.2.2.1 Governance and Legal Characteristics

This description of governance includes legal characteristics and historic and modern governance of ANA. Further information regarding the history of Treaty 3 (Figure 12.1-1) and exercise of Treaty rights is presented in Section 12.10, Impact on the Exercise or Practice of Rights.

ANA signed Treaty 3 in 1873 that led to the creation of the ANA (Grassy Narrows) community. Their land base is the English River 21 Indian Reserve, spanning 4,145 hectares, with a registered population of 1,608, of which 971 live on-reserve (Government of Canada 2026). Treaty 3 covers approximately 142,450 km² from west of Thunder Bay to Manitoba. It is governed by the Grand Council Treaty 3, representing 28 Indigenous Nations and approximately 25,000 people.

Several councils guide and inform the work of Grand Council Treaty #3, including an Elder's Council, Oshkiniigiig (a Youth Executive Council), Mizi'iwe Aana Kwat (2SLGBTQIA plus), Gaagiidoo-Ikwewag (Women), and Mamawichi-Gabowitaa-Ininiwag (Men) councils (The Government of the Anishinaabe Nation in Treaty #3 n.d.). This is to maintain balance and equity across different sub-communities of Anishinaabeg.

The ANA community maintains a dual governance system that blends traditional Anishinaabe governance with the Indian Act electoral system. ANA elects one chief and four councillors for two-year terms and is affiliated with both Grand Council Treaty #3 and the Bimose Tribal Council. These councils provide vital services such as education, water management, and economic development (Bimose Tribal Council 2025).

ANA's governance is deeply rooted in Anishinaabe law and traditions, emphasizing ancestral knowledge, land stewardship, and spiritual connections to territory (Da Silva 2024). Historically, governance was tied to foodways and clan systems, with Anishinaabe-kwewag (women) playing key roles in caring for water and land (Simpson, DaSilva, Riffel, & Sellers 2009).

Central to ANA's governance is Anishinaabe Inakonigaawin (law) (The Government of the Anishinaabe Nation in Treaty #3, n.d.), which includes:

- Respect for land and water
- Offering thanks to spirit and Creator
- Recognition of Treaty 3 rights
- Stewardship responsibilities

Key written laws include (Grand Council Treaty #3 Women's Council 2019):

- Manito Aki Inakonigaawin (Great Earth Law)
- Nibi Declaration (Water Law)
- Abinooji Inakonigewin (Childcare Law)
- Alcohol Inakonigaawin (Alcohol Law)

Alcohol Inakonigaawin (Alcohol Law) combines mainstream and traditional justice processes to handle excessive alcohol being brought into the community. This is enforced through the Treaty Three Police Service (Turner 2021).

12.6.2.2.2 Traditional Harvesting of Wildlife Species, Including Hunting and Trapping

ANA community members practice traditional wildlife harvesting, hunting, and trapping activities in their traditional territories, using the areas rich landscape of waterways and boreal forest to move between harvesting and trapping grounds, and participating in their seasonal rounds. The Boreal region within Treaty 3 territory where ANA community members hunt and trap is characterized by long, severe winters and short summers, and diets varied throughout the year depending on availability of local resources (Vecsey 1987).

No current use of the PA has been identified by ANA for traditional wildlife harvesting. The PA and LSA overlap with ANA's asserted Indigenous Protected Conservation Area (ICPA) for moose, caribou, and wolverine habitat ranges (Asubpeeschoseewagong Netum Anishinabek 2024).

ANA has identified current use of the LSA, identifying that the forest south of Red Lake is one of few remaining moose hunting grounds used by their community members (Asubpeeschoseewagong Netum Anishinabek 2024). Further identified concerns relating to this reduction of currently available hunting and trapping areas is identified in Section 12.4 (Influence of Consultation).

Additional concerns around wolverine population revitalization efforts have been identified by ANA, noting that because wolverine populations have declined around English River 21 reserve area used by ANA, there is an increased reliance on LSA and RSA wolverine habitats (Asubpeeschoseewagong Netum Anishinabek 2024). As such, ANA is concerned that wolverine sensitivities to human-affected areas will be strained by Project activities (Asubpeeschoseewagong Netum Anishinabek 2024). At the time of reporting, it is unknown whether hunting and trapping of additional wildlife and migratory bird species have changed for ANA to preserve culturally important species populations.

Section 7.13 (Land and Resource Use) identifies four traplines identified either in the PA or the LSA (Table 12.6-1). The trapline areas within the PA include RL068 and RL059, which are both registered to LSFN trappers. In the LSA, trapline RL061 is registered to an ANA member. Additional registered traplines in the LSA are RL068 (where a non-Indigenous trapper is active), and RL073 (registered to a non-Indigenous individual).

Table 12.6-1: Trapline Areas in the LSA

Trapline Area	Trapline Total Area (km^2)	Overlap with PA (km^2)	Overlap with LSA (km^2)
RL061	215.3	0	108.6
RL073	360.8	0	44.7
RL068	789.2	26.2	363.5
RL059	650.8	7.3	173

Known species of large game and furbearers traditionally hunted and trapped in this region by ANA include: beaver, caribou, wolverine, deer, elk, muskrat, mink, moose, rabbit, and river otter (Sellers, 2014). Known species of waterfowl, migratory, and wild birds traditionally hunted or trapped by ANA in the RSA include: goose (Canada and snow) and ducks (mallard, wood, and ring-necked) (Shkilnyk 1985; Grassy Narrows First Nation 2025; Sellers 2014; Chan et al., 2014).

Anishinaabe economic livelihoods include harvesting traditional foods and the ceremonial practices of redistributing the wealth of seasonal harvests to different community members, such as Elders or families without hunters (Simpson, DaSilva, Riffel, & Sellers 2009). Traditional canoe routes rely on waterways to reach harvesting areas for migratory birds and waterfowl that populate wild rice ecosystems. Muskrat trapping was negatively affected in the 1950s after industrial damming of the English-Wabigoon Rivers affected their water-levels.

Hydroelectric project construction also flooded several traditional trapping areas in the old Grassy Narrows reserve area, freezing thousands of muskrats and other furbearers (Vecsey 1987).

Prior to industrial challenges to traditional wildlife harvesting in Treaty 3, ANA seasonal hunting and trapping practices were family-based throughout their traditional territories. These seasonal rounds of hunting and trapping include the following periods:

- November to December: Families would work traplines in their traditional use areas for beaver, muskrat, mink, otter, lynx, fox, and other furbearers that would later be stretched, smoothed, tanned, and sewed into furs and hides; periods of intensive trapping for fur-bearing animals
- Late Winter (mid-January to March): Rabbit snaring and moose hunting
- Spring: After the ice broke, families would move to the old Grassy Narrows reserve from far parts of their traditional land use area to create the summer camp; muskrat and beaver trapping occurred, and duck and goose hunting began as the first open water appeared
- Summer: Fishing and plant gathering (covered in subsequent sections)
- September: Men hunted moose and deer, and women+ harvested and dried meat from the summer and autumn catches (Shkilnyk 1985; Grassy Narrows First Nation 2025).

Interviews with ANA community members in 1985 identified the importance of trapping as a way of life and economic self-sufficiency: "*Trapping was our culture. Trapping kept the family together because everyone in the family had something to do: the man had to lay the traps and check them; the woman skinned the animals, cooked them… the kids, if they were old enough, had work to do. They had to set snares for rabbits*" (Shkilnyk 1985).

Typical to the Indigenous communities in the region, waterfowl are hunted in manoomin (wild rice) ecosystems. Field observations by ANA hunters, trappers, and Elders have reported seeing continued signs of disease in animals. Symptoms observed in culturally important wildlife species included "*unusual spots, textures, or colours of flesh and organs*" as well as declines in the fitness and population levels for some fur-bearing mammals (Sellers 2014). ANA members have specifically highlighted sickness increasing among moose populations, as well as decline in moose and caribou population numbers between 2004 and 2014 (Sellers 2014).

12.6.2.2.3 Traditional Harvesting of Aquatic Resources, Including Fishing

The Boreal region's vast network of waterways and waterbodies has supported populations of whitefish, walleye/pickerel, northern pike, suckers, and sturgeon. Freshwater fish remain central to the economic livelihoods, diets, and cultural traditions for the community (Lee, et al. 2025).

No current use of the PA for fishing has been identified by ANA. ANA has identified current fishing use areas in the LSA near the inflow of the Chukuni River, Dixie Creek, and extensive fishing sites on the English River around Grassy Narrows reserve (outside of the RSA) (Asubpeeschoseewagong Netum Anishinabek 2024). The PA and LSA also overlap with the watersheds identified in ANA's ICPA that inform walleye migrations.

ANA fishing and aquatic resource harvesting areas have been reduced due to the mercury contamination of the English-Wabigoon River System. Due to this, non-commercial fishing for family consumption has shifted, with an increased reliance on waterways in the RSA.

Known species of fish traditionally harvested by ANA in the LSA include (Shkilny, 1985; Grassy Narrows First Nation 2025; Sellers 2014; DaSilva 2009; Chan, et al. 2014): walleye (yellow pickerel), lake whitefish, trout (lake, speckled, rainbow), sturgeon, yellow perch, white perch (white bass), white sucker, ling (burbot or maria), sauger, and red (longnose) sucker.

As identified in Section 7.13 (Land and Resource Use), there are several waterbodies and watercourses located within the PA. Further detail on navigation is available in Section 7.13. ANA have not identified any watercourses within the PA or LSA as navigable. No groundwater sites (e.g., springs) or systems in the PA, LSA, or RSA have been identified by ANA.

Prior to the mercury contamination of the English-Wabigoon River system, the ANA economy was based on commercial fishing and guiding for tourists along the English-Wabigoon River system (Vecsey 1987). ANA fishers served as guides for three fishing lodges on the river system, including one at Ball Lake (Vecsey 1987). Most families in ANA would eat fish every day through the 1960s to 1970s (Lee, et al. 2025). Non-commercial fishing and harvesting of aquatic resources by ANA are seasonally based. These are described as (Shkilnyk 1985; Grassy Narrows First Nation 2025):

- Late winter: Ice fishing
- Mid-May to mid-July: tourist lodges opened for sports fishermen, with ANA fishermen serving as local guides until the waters became too warm in July and August
- September: drying and smoking fish for the winter began, with ANA fishing guides continuing to work as commercial fishermen throughout the season for domestic consumption and commerce.

Commercial fishery closures in 1970 disrupted ANA fishing and aquatic resource harvesting (Sellers 2014). This reduced ANA traditional food access, as community members shifted their diets from primarily fish-based to more market foods (Sellers 2014). Along with closure of commercial fisheries for ANA, fish consumption advisories were given to ANA in 1970. ANA community members were told to stop eating fish due to elevated mercury levels, with subsequent advisories suggesting avoiding certain fish species based on length and reducing the maximum number of fish meals per week (Sellers 2014).

The commercial fishery run by ANA was closed in 1970, due to the mercury contamination of the Wabigoon River. By this time, ANA community members were already disrupted in their fishing and aquatic resource harvesting after flooding, relocations, and the addition of a road that connected the community to Kenora (Sellers 2014). During this time, some lodge owners downplayed the severity of the contamination, placing ANA fishing guides in scenarios where they were to choose between health and livelihood (Lee, et al. 2025). These factors contribute to an increased sensitivity towards changes in fishing and aquatic resources for ANA, as their existing alternatives have been reduced from cumulative industrial effects to the landscape.

Additional details regarding the history of ANA's use of lands and resources for traditional purposes and the mercury contamination of the English-Wabigoon River system is provided in Section 12.10.1.

Current challenges with fishing and fish consumption remain. In a short documentary with an ANA community member, she describes that levels of mercury remain toxic in the fish that would be traditionally eaten (DaSilva 2009). Advisories around fish consumption suggest eating whitefish, since this is an herb-eating fish that would have less mercury accumulation. However, the ANA community member highlights that walleye is the main traditional fish consumed by ANA community members, and that it is a carnivore that eats minnows.

In the short documentary, the ANA community member also describes how these have impacted which traditional fish species the community can eat, noting that "*whitefish is not as good, but that's what we're told to eat. Our way of life gets taken away from these pollutants*." (DaSilva 2009).

ANA has identified the long distances that walleye travel throughout their lifespan, particularly during spawning, and noted concerns that through these travels, walleye may be exposed to toxins that can accumulate if walleye should migrate toward the PA (Asubpeeschoseewagong Netum Anishinabek 2024).

12.6.2.2.4 Traditional Harvesting of Plants for Food and Medicine

ANA community members rely on the waterways within Treaty 3 to reach traditional manoomin harvesting areas, as well as to harvest migratory birds and waterfowl that populate the wild rice ecosystems. Manoomin is a critically important crop, spiritually and culturally for Anishinaabeg (Shkilnyk 1985). Under the Nibi Declaration, there is a sacred relationship between manoomin and nibi (water), where the spread of manoomin through water during the harvest supports humans and non-humans (Paridy 2021). Under Anishinaabe migration stories, manoomin is understood as food growing on the water, becoming a sacred gift (Paridy 2021)

No current use of the PA or LSA for plant gathering has been identified by ANA. However, ANA has collected plants in and around the Red Lake fur trading routes in the LSA and RSA, with continued family ties to the area. In the Cultural Heritage Report, two cultural heritage resource (CHR) sites were identified that were associated with wild rice fields: CHR 3 in the PA and CHR 5 in the LSA. No changes to CHR 5 are anticipated as it is located outside the PA.

ANA participated in a long-term research study that assessed food, nutrition, and environment, sampling culturally important plant species within their ecozone, Boreal Sheild and Subarctic. In this zone, Indigenous Nations adults reported a great proportion of adults cultivated and eating traditional food (corns, bean, and squash). Traditional plant foods identified by these reports include those consumed by ANA community members within Treaty 3 territories. From these reports, typically harvested species include: blueberries, wild strawberries, wild raspberries, blackberry, black raspberries, cranberries (low bush or lingonberry), cherry (pin, chokecherry, sand), gooseberry or current, serviceberry (juneberry), crab apple, highbush cranberry (squashberry, mooseberry), crowberry, juniper, wild rice, wihkes (muskrat/rat root), labrador tea leaves, mint leaves, wild onions, fiddleheads, dandelions, thimbleberry / salmon berry shoots, maple syrup, pine needles, poplar (inner bark) spruce (inner bark), corn/hominy, and beans (Chan, et al. 2014). No groundwater sites (e.g., springs) or systems have been identified by ANA relating to manoomin or terrestrial plant gathering.

In the Cultural Heritage Report, two cultural heritage resource (CHR) sites were identified that were associated with wild rice fields: CHR 3 in the PA and CHR 5 in the LSA.

No changes to CHR 5 are anticipated as it is located outside the PA. In addition to using plants as sources of food and medicine, ANA members prepare the land for summer. Trails are maintained for travel and resource use, and brushing is performed so that desirable species can thrive for picking and harvesting (Kenny & Parker 2004).

Blueberry gathering and wild rice harvesting were practiced in traditional land use areas beyond the new Grassy Narrows reserve, within Treaty 3 territories (Vecsey, 1987). To access traditional manoomin harvesting areas, ANA community members rely on waterways (Shkilnyk 1985).

Historically, Anishinaabe communities in the region would control water levels for the seeding of wild rice, managing the lands for subsequent seasons, and harvesting of rice (Kenny & Parker 2004). As described further in Section 12.6.2.2.2, these were destroyed during the 1950s flooding of a large tract of ANA territory for a hydroelectric project, which subsequently altered water-levels in the region (Simpson, DaSilva, Riffel, & Sellers 2009).

ANA plant harvesting and gardening activities is seasonally based:

- Spring: a time for planting vegetable gardens for all ANA families, including potatoes, corn, turnips, and carrot cultivation; maple trees were also tapped for syrup.
- July to August: as the waters became too warm for fishing, berries ripened. Whole ANA families would camp alongside berry picking and harvesting areas.
- September: the harvesting of wild rice, followed by intensive domestic harvesting of plants, berries, and garden crops (Kenny & Parker 2004; Shkilnyk 1985).

12.6.2.2.5 Use of Traditional Habitation, and Cultural and Spiritual Sites and Areas

ANA land use is inseparable from culturally important spaces, as land and water hold knowledge about cultural identifies, stories, traditions, and relations. Cultural and spiritual sites and areas can include traditional habitation sites, birth and marriage sites, burial sites, settlement areas, historic and contemporary harvesting and gathering sites, and sacred or spiritual areas. This section includes an assessment of ANA's current use of these sites and areas. An assessment of these sites physical and cultural heritage value for ANA is assessed in Section 12.7

No current use of the PA relating to traditional habitation, cultural, or spiritual sites has been identified by ANA at the time of writing. However, in the LSA, ANA has identified current use areas of cultural and spiritual importance around fishing areas, wild rice harvesting areas, and the canoe transportation route along Chukuni River.

While some of these identified areas and sites may not have current harvesting use by ANA, they maintain their spiritual and cultural value. Manoomin is sacred for ANA, and the spiritual important of wild rice and water for ANA is maintained through the integrity of these traditional sites of spiritual and cultural importance. No groundwater sites (e.g., springs) or systems have been identified by ANA relating to manoomin or cultural and spiritual sites and areas.

For ANA, cultural and spiritual understandings of the land are infused into cultural identity and continuity. ANA has described that spiritual practices and effects are difficult to share, as they have been misrepresented and misunderstood by government and industry (Asubpeeschoseewagong Netum Anishinabek 2024).

ANA has noted that spirituality is linked to the landscape and their way of life, representing a holistic relationship with the landscape as a whole, rather than a set of finite sites and point values (Asubpeeschoseewagong Netum Anishinabek 2024). ANA community members have described their perspective on these relations: when fish, animals, plants, and birds are sick, or when the land is sick, then the people are sick, too (Simpson, DaSilva, Riffel, & Sellers 2009). ANA understands that these sicknesses must be addressed before the community may move forward. (Simpson, DaSilva, Riffel, & Sellers 2009)

The ongoing contamination of the English-Wabigoon River System and additional concerns relating to logging and mining industry in their traditional territory and IPCA have had a lasting effect on the spiritual and cultural elements of ANA community members. It has disrupted access to the land and water, which has reduced availability of culturally important sites and areas for ANA (Gauthie, n.d.).

12.6.3 Potential Effects

Potential interactions between proposed Project-related activities and CULRTP criteria identifies the potential effects (positive and negative), and whether they are direct or indirect effects.

A detailed overview of the Project's potential interactions with current use of land and resources for traditional purposes for ANA is presented in Table 12.6-2. Project interactions are characterized as either having no interaction (-) or a potential interaction (✓). Project activities that result in no interaction are not considered further in the assessment. Project interactions that were identified as a potential interaction are carried forward to the potential effects assessment to determine the positive (desirable and beneficial) and negative (undesirable or adverse) potential effects on the CULRTP criteria.

Table 12.6-2: Potential Interactions Between Project Activities and Current Use of Land and Resources for Traditional Purposes - Asubpeeschoseewagong Netum Anishinabek

Project Component / Activity	Change in availability, access to and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping)	Change in availability, access to and quality of experience related to traditional aquatic harvesting (fishing)	Change in availability, access to and quality of experience related to traditional plant (food and medicinal) harvesting	Change in availability, access to and quality of experience related to traditional habitation, cultural, spiritual sites/areas
Construction Phase				
Site preparation activities	✓	✓	✓	✓
Establishment and operation of water management and treatment facilities	✓	✓	✓	✓
Open pit mining	✓	✓	✓	✓

Project Component / Activity	Change in availability, access to and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping)	Change in availability, access to and quality of experience related to traditional aquatic harvesting (fishing)	Change in availability, access to and quality of experience related to traditional plant (food and medicinal) harvesting	Change in availability, access to and quality of experience related to traditional habitation, cultural, spiritual sites/areas
Underground mining	-	-	-	-
Management of rock and unconsolidated materials in stockpiles	✓	✓	✓	✓
Establishment of onsite fish habitat and compensation measures	✓	✓	✓	✓
Establishment of onsite aggregate operations	✓	✓	✓	✓
Construction of the starter embankments for the tailings management facility	✓	✓	✓	✓
Construction and operation of buildings and infrastructure	✓	✓	✓	✓
Waste management	-	-	-	-
Commissioning of the process plant	✓	✓	✓	✓
Power supply	✓	✓	✓	✓
Employment and expenditures	-	-	-	-
Operations Phase				
Underground mining	-	-	-	-
Mining of the LP Central pit	✓	✓	✓	✓
Management of rock and unconsolidated materials in stockpiles	✓	✓	✓	✓
Process plant operation	✓	✓	✓	✓

Project Component / Activity	Change in availability, access to and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping)	Change in availability, access to and quality of experience related to traditional aquatic harvesting (fishing)	Change in availability, access to and quality of experience related to traditional plant (food and medicinal) harvesting	Change in availability, access to and quality of experience related to traditional habitation, cultural, spiritual sites/areas
Management of desulphurized tailings in the tailings management facility	✓	✓	✓	✓
Management of concentrate tailings and contact water in the Viggo management facility	✓	✓	✓	✓
Operation of water management and treatment facilities	✓	✓	✓	✓
Construction of a mine water pond	✓	✓	✓	✓
Operation and maintenance of buildings and infrastructure	-	-	-	-
Waste management	-	-	-	-
Power supply	-	-	-	-
Progressive reclamation activities	✓	✓	✓	✓
Employment and expenditures	-	-	-	-
Closure Phase				
Active closure	-	-	-	-
Passive closure	-	-	-	-
Final reclamation	✓	✓	✓	✓
Employment and expenditures	-	-	-	-

Legend: ✓ = Interaction exists
- No interaction exists

The interactions identified in Table 12.6-2 are used in Sections 12.6.3.1 to 12.6.3.3 to identify potential effects on CULRTP prior to the application of mitigation measures. These potential effects may be direct, indirect, negative effects, where applicable.

While the ANA on-reserve community is located several hundred kilometres downstream, the Project overlaps with ANA Treaty 3 territory where ANA community members exercise their harvesting, cultural, and spiritual practices and traditions. There has been no identified current use of the PA by ANA community members, though there is current use of the LSA and RSA by ANA community members. Based on this, there is a possibility of direct or indirect interactions between the Project and ANA's current use of lands and resources for traditional purposes in the LSA and RSA.

12.6.3.1 Construction Phase

The construction phase of the Project is expected to occur over three years and will include preparation of the site and construction of Project infrastructure. Since the construction phase is expected to cause potential interactions with the natural environment and landscape, there may be direct or indirect effects on ANA use of land and resources for traditional purposes.

During the construction phases, interactions and effects may occur within the LSA and RSA. No current use of the PA has been identified by ANA at the time of writing. Project activities identified in Table 11.6-2 have the potential to result in effects to current land and resource use for traditional purposes.

12.6.3.1.1 Wildlife Harvesting (Hunting and Trapping)

There is no identified current use of the PA for hunting or trapping by ANA members. ANA has confirmed use of the LSA for hunting and trapping of terrestrial wildlife species. Interactions with Project activities may lead to direct and indirect effects on Indigenous Peoples current use of the LSA for hunting and trapping activities.

The availability of traditionally hunted and trapped terrestrial wildlife species may be indirectly affected by habitat loss or alteration, changes in surface water quality, and sensory disturbances such as dust and visual changes. These factors can disrupt ecosystems that support traditional harvesting activities. Wildlife availability in the LSA may also be indirectly affected by habitat changes and disturbances due to sound, and vibration that can alter wildlife behavior, distribution, and presence.

Access to areas where ANA community members traditionally hunt and trap species are not anticipated to change, since there is no identified current use of the PA where access would be restricted. While ANA does hunt and trap in the LSA and RSA, this access is not anticipated to be altered during construction. Access to the trapline registered to an ANA individual (RL061) is not anticipated to change.

The quality of experience for ANA community members while hunting and trapping in the LSA may decline due to sensory disturbances, in proximity to the PA. Sound, dust, vibration, light and visual changes to the landscape may make these areas less culturally suitable for hunting and trapping activities. As detailed in Section 7.13, land and resource use, changes to visual setting will commence during construction and will continue throughout all phases of the Project. Construction-related activities, such as vegetation clearing and development of Project infrastructure may also influence the quality of harvesting experiences near the site.

12.6.3.1.2 Fishing and Aquatic Resource Harvesting

While there is no identified current use of the PA by ANA community members for fishing or aquatic resource harvesting, ANA identified current use of the LSA. Indirect potential effects are anticipated as a result of Project activities.

There may be an indirect change to the availability of fished species or aquatic resources in the LSA due to Project-related changes. Aquatic habitats may be indirectly affected by vibration, surface water runoff, and sedimentation, which may in turn affect fish and aquatic species population and distribution. These changes can damage fish habitats or spawning habitats in the Chukuni River or Dixie Creek and reduce the availability of culturally important fish species. Additionally, treated effluent discharge into the Chukuni River may impact water quality and fish health.

The Cultural Heritage Report (Appendix P-1) indicates that while a segment of the Chukuni River (comprising CHR 1) falls partly within the PA, it will not be subjected to direct or indirect effects from the Project. The Cultural Heritage Report predicts that the planned effluent pipe will not hinder river use for travel, and the discharge from the pipe will avoid changes to water and fish by adhering to regulatory requirements for water quality and quantity (Appendix P-1, p. 27).

Since there is no identified current use of the PA for fishing identified by ANA, no potential effects on access to fishing and aquatic resource harvesting areas and sites are anticipated. Additionally, none of the watercourses or waterbodies identified in the PA have met the definition of ‘navigable waters’ as defined by the *Canadian Navigable Waters Act.*

The quality of experience of fishing in traditional areas within the LSA may be diminished due to sensory disturbances. A reduction of groundwater flows and levels during construction and operations will reduce groundwater contributions to the baseflow of some watercourses and waterbodies within or adjacent to the PA. Project activities may lead to a change in the quality of fishing and aquatic harvesting experiences. Sound, vibration, and dust, along with changes to the landscape and view, can disrupt the experience and make these fishing areas less suitable for cultural activities in proximity to the PA.

12.6.3.1.3 Traditional Plant Harvesting (Including for Food and Medicinal Purposes)

While there is no identified current use of the PA by ANA community members for terrestrial or aquatic plant gathering, there is identified current use of the LSA and RSA by ANA. Indirect negative potential effects are anticipated as a result of Project activities.

Changes in the availability of plant species for harvesting in the LSA by ANA community members may change as a result of indirect effects to vegetation health and availability. Vegetation health and availability may change as a result of several factors, including dust, changes in surface water quality and flow, and alteration to vegetation areas caused by vegetation removal and clearing. As a result, the availability of plant harvesting areas in the LSA may decline due to indirect environmental changes.

Since there is no current use of the PA for plant gathering identified by ANA, no potential effects on access to harvesting areas and sites are anticipated.

The quality of experience at traditional plant harvesting areas in the LSA may be changed due to sensory disturbances from Project activities. A reduction of groundwater flows and levels during construction and operations will reduce groundwater contributions to the baseflow of some watercourses and waterbodies within or adjacent to the PA.

Sound, dust, and vibrations during closure activities can interfere with the culturally meaningful nature of harvesting practices. Project components such as the Mine Rock Storage Areas and Tailings Management Area may change the landscape and viewscape, which may make these areas less suitable for traditional plant gathering activities.

12.6.3.1.4 Traditional Habitation, Cultural, and Spiritual Sites and Areas

There is no confirmed current use of traditional habitation, cultural, or spiritual sites and areas for ANA in the PA. As such, there are no potential effects anticipated that would change access or availability in the PA. However, the Project has the potential to indirectly change detectable sensory conditions for ANA members quality of experience with traditional habitation, cultural, and spiritual sites and areas in the LSA. The assessment of these sites' cultural and physical heritage value is found in Section 12.7.

Sensory disturbances that have the potential to change for ANA in the LSA include levels of sound and dust deposition. A reduction of groundwater flows and levels during construction and operations will reduce groundwater contributions to the baseflow of some watercourses and waterbodies within or adjacent to the PA. Changes to the landscape, particularly from the development of Project components such as the Mine Rock Storage Areas and Tailings Management Area, may visually alter culturally important areas for ANA community members while in the LSA.
These disruptions from sensory disturbances, altered travel routes, or environmental changes may make traditional areas less suitable for cultural use.

12.6.3.2 Operations Phase

The operations phase is anticipated to extend over a 26-year period. Similar interactions as the construction phase will continue, and potential effects to CULRTP for ANA may occur within the LSA and RSA during operations. Availability of wildlife for hunting and trapping, fishing and aquatic areas, and plant harvesting areas will continue to be indirectly affected by Project-related activities, though on a larger area, as the footprint of the operations will advance over the operations phase.

As there is no identified access to the PA for hunting and trapping, fishing, plant gathering, or traditional habitation and cultural and spiritual sites, there are no potential effects anticipated that would change access or availability in the PA throughout Project operations.
However, access to land and resource areas within the LSA will remain available during Project operations.

Quality of experience for ANA community members harvesting or using traditional sites and areas in the LSA may continue to be affected by changes in groundwater flows and levels for waterbodies adjacent to the PA from interactions with open pit and underground mining activities in the PA, or sensory disturbances from sound and visual changes during operations for those sites and areas in the LSA that are in close proximity to the PA. Project facilities, such as the Tailings Management Facility and the Mine Rock Storage Area, will be at maximum height and extent during operations. These additional features on the landscape may have the potential to affect land users visual experience while accessing or visiting harvesting or traditional sites and areas within the LSA where the Project is visible
(refer to Appendix O-3 for further detail on viewshed analysis).

12.6.3.3 Closure Phase

The active closure phase is anticipated to occur over a three-year period, immediately after operations stop. Closure activities will start the initial reclamation and revegetation of mining areas and stockpiles. Mining and equipment used during closure will be similar to those used during construction, but on a much smaller scale. The passive closure period includes occasional maintenance, limited use of mining and construction equipment, and a short final close-out period where water treatment infrastructure will be removed. Project activities during the closure phases are expected to result in temporary and short-term ground and sensory disturbances, and continued changes to harvesting site access related to the Project.

Interactions similar to those identified during the construction and operation phases will continue during closure activities for ANA community members in the LSA and RSA. This includes potential effects relating to availability of traditionally harvested species and traditional habitation, cultural, and spiritual use sites and areas, as well as potential changes to the quality of experience while harvesting or accessing current use sites and areas.

With progressive rehabilitation, the re-establishment of vegetation communities would allow wildlife to return to the PA and surrounding area. Progressive and final reclamation, including active and passive revegetation, will minimize visual effects.

A viewshed analysis conducted for the Project (Appendix Q) concluded that there will be very limited viewing of the Project facilities even at their maximum extent and height, generally later in operations and only in the far distance. Once progressive and final reclamation activities are completed, supplemented by natural regrowth after closure, the residual stockpiles are expected to visually blend into the natural landscape in the limited location where they are visible in the far distance.

Sensory disturbances due to sound and vibration are expected to change over the active closure phase as mining and milling operations cease. Changes to groundwater flows and levels are expected to return to near baseline conditions post-closure, after the cessation of open pit and underground mining. With the closure of the PA and site rehabilitation allowing for the return of wildlife, there is the possibility of a return of use of the PA for harvesting for food and medicinal purposes.

12.6.4 Mitigation and Enhancement

Mitigation measures for CULRTP have been developed to address potential effects identified in Section 12.6.3. Mitigation measures are technical measures proposed by the Project, informed by baseline studies and predictive reports, and engagement with Indigenous communities.

Great Bear Resources is designing the mine operation with appropriate safeguards and believes in the spirit of cooperation and consultation; the mine will be a strong source of positive benefits for host communities and Indigenous groups. This commitment is illustrated through Great Bear Resources funding a regional community-based Chukuni Watershed Aquatic Monitoring Program. This will focus on the transfer of knowledge from Elder Advisors from each Nation to youth throughout all phases of the Project. The program will also serve to increase capacity of the Indigenous Nations to complete future monitoring programs to protect the waters throughout Treaty 3 territory.

Mitigation measures include a mix of Project design measures, operational policies, and community partnerships for environmental monitoring. The goal with these mitigation measures is to reduce the magnitude, duration, and likelihood of adverse residual effects on CULRTP.

Table 12.6-3 outlines the mitigation measures thematically, aligning with the interactions identified in Section 12.6.3. These are anticipated to apply to all Project phases, unless indicated otherwise. Anticipated residual effects after application of these mitigation measures are discussed in more detail in Section 12.6.4.

Table 12.6-3: Project Design, Mitigation, and Enhancement Measures for CULRTP – Asubpeeschoseewagong Netum Anishinabek

Potential Effects	Project Design, Mitigation and Enhancement Measures
Change in availability, access to, and quality of quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping)	Access: There will be no access within the PA (the active mine site), due to safety. Access will be maintained to the LSA, via the existing road/trail network or planned forestry roads. Environment Management Committee: Great Bear Resources will work with the environmental management committee(s) and interested Indigenous members throughout the duration of the Project (all phases), to facilitate ongoing communications, sharing and integration of Indigenous Knowledge and environmental information, and share and evaluate Project approvals, adaptive management and monitoring plans, and address emerging issues and interests identified by Indigenous Nations. Environmental Monitors: Great Bear Resources will continue to work with the Environmental Management Committee and engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring practices for Project activities. Herbicide use: Avoid the use of chemical herbicides. Inclusive and Local Hiring Strategy (Project policies): Support reasonable requests and work schedule flexibility for Indigenous employees relating to time off to pursue traditional land use and harvesting activities. Great Bear Resources will offer employees an Annual Fitness and Mental Health Benefit fund ($500 per annum) which may be used to purchase gear and equipment which would facilitate land-based activities including but not limited to fishing equipment and snowshoes. Integrated Mine Closure: Great Bear Resources is committed to progressively rehabilitating the mine site wherever practical to reduce potential erosion, improve stability and work towards meeting end land use objectives. Closure end land use objectives will be informed by ongoing consultation with local Indigenous nations. Test plot revegetation studies may occur during operation as part of the commitment to progressive rehabilitation. These studies will evaluate the most effective revegetation approach for various application areas. The results will be used to update and inform the revegetation approach with respect to growth medium, seed mixes and nutrient mixes. Active and passive re-vegetation of Project area to encourage and support terrestrial and aquatic species. Prohibition of Fishing and Hunting: Prohibit fishing and hunting within the PA by employees, suppliers, and contractors while working or residing on site. Project Design (visual, dust, and sound): Infrastructure and mine stockpile height have been limited to reduce effects on standard viewscapes; Controlling dust and debris from roads through water sprays and potentially chemical suppressants.

Potential Effects	Project Design, Mitigation and Enhancement Measures
	The Project has also been designed to minimize construction sounds where applicable (e.g., reduction of generator noise, reduced sound haul trucks); where practical, maintain trees and other vegetation to provide a buffer for the view of Project components. Trapline Engagement: Maintain regular communication with trapline holders regarding activities and opportunities to facilitate their land use activities. Work with Ministry of Natural Resources and trapline license holders (LSFN members) to determine alternative options for trapline losses.
Change in availability, access to, and quality of experience related to traditional aquatic harvesting (fishing and aquatic resources)	Environment Management Committee: Great Bear Resources will work with the environmental management committee(s) and interested Indigenous members throughout the duration of the Project (all phases), to facilitate ongoing communications, sharing and integration of Indigenous Knowledge and environmental information, and share and evaluate Project approvals, adaptive management and monitoring plans, and address emerging issues and interests identified by Indigenous Nations. Environmental Monitors: Great Bear Resources will continue to work with the Environmental Management Committee and engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring practices for Project activities. Fish Offsetting Plan: Develop and implement Fish Habitat Offset and Compensation plan, including habitat diversion plans, and fish relocation from affected watercourses. Inclusive and Local Hiring Strategy (Project policies): Support reasonable requests and work schedule flexibility for Indigenous employees relating to time off to pursue traditional land use and harvesting activities. Great Bear Resources will offer employees an Annual Fitness and Mental Health Benefit fund ($500 per annum) which may be used to purchase gear and equipment which would facilitate land-based activities including but not limited to fishing equipment and snowshoes. Integrated Mine Closure: Great Bear Resources is committed to progressively rehabilitating the mine site wherever practical to reduce potential erosion, improve stability and work towards meeting end land use objectives. Closure end land use objectives will be informed by ongoing consultation with local Indigenous nations. Test plot revegetation studies may occur during operation as part of the commitment to progressive rehabilitation. These studies will evaluate the most effective revegetation approach for various application areas. The results will be used to update and inform the revegetation approach with respect to growth medium, seed mixes and nutrient mixes. Active and passive re-vegetation of Project Area to encourage and support terrestrial and aquatic species. Prohibition of Fishing and Hunting: Prohibit fishing and hunting within the PA by employees, suppliers, and contractors while working or residing on site.
Change in availability, access to, and quality of experience related to traditional plant harvesting (food and medicinal)	Access: There will be no access within the PA (the active mine site), due to safety. Access will be maintained to the LSA, via the existing road/trail network or planned forestry roads.

Potential Effects	Project Design, Mitigation and Enhancement Measures
	Environment Management Committee: Great Bear Resources will work with the environmental management committee(s) and interested Indigenous members throughout the duration of the Project (all phases), to facilitate ongoing communications, sharing and integration of Indigenous Knowledge and environmental information, and share and evaluate Project approvals, adaptive management and monitoring plans, and address emerging issues and interests identified by Indigenous Nations. Environmental Monitors: Great Bear Resources will continue to work with the Environmental Management Committee and engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring practices for Project activities. Herbicide use: Avoid the use of chemical herbicides. Inclusive and Local Hiring Strategy (Project policies): Support reasonable requests and work schedule flexibility for Indigenous employees relating to time off to pursue traditional land use and harvesting activities. Great Bear Resources will offer employees an Annual Fitness and Mental Health Benefit fund ($500 per annum) which may be used to purchase gear and equipment which would facilitate land-based activities including but not limited to fishing equipment and snowshoes Integrated Mine Closure: Great Bear Resources is committed to progressively rehabilitating the mine site wherever practical to reduce potential erosion, improve stability and work towards meeting end land use objectives. Closure end land use objectives will be informed by ongoing consultation with local Indigenous nations. Test plot revegetation studies may occur during operation as part of the commitment to progressive rehabilitation. These studies will evaluate the most effective revegetation approach for various application areas. The results will be used to update and inform the revegetation approach with respect to growth medium, seed mixes and nutrient mixes. Active and passive re-vegetation of Project Area to encourage and support terrestrial and aquatic species. Plant Harvesting (for food and medicinal purposes): Where there is interest, provide opportunities to local Indigenous community members to harvest plants for traditional purposes prior to construction activities. Project Design (visual, dust, and sound): Infrastructure and mine stockpile height have been limited to reduce effects on standard viewscapes; Controlling dust and debris from roads through water sprays and potentially chemical suppressants. The Project has also been designed to minimize construction sounds where applicable (e.g., reduction of generator noise, reduced sound haul trucks); where practical, maintain trees and other vegetation to provide a buffer for the view of Project components. Wild Rice Enhancement Project: Great Bear Resources has funded a study by Northern Bioscience and Harris Ecological Consulting, upon the request of LSFN and WFN. The purpose of this study is to help address the loss of historic wild rice (Manoomin) production on Wabauskang Lake. Potential effects on wild rice are anticipated because of an overprint at Unnamed Waterbody 1 by Project infrastructure. The enhancement study is anticipated to offset potential effects on wild rice as a result of the Project. The wild rice enhancement location, on WFN reserve, has been recommended by the WFN and supported by LSFN. The study will develop potential enhancement options for implementation in 2026.

Potential Effects	Project Design, Mitigation and Enhancement Measures
	In addition to habitat restoration, the Project will incorporate education and knowledge-sharing on sustainable harvesting practices, supporting long-term stewardship by community members. This collaborative initiative could support broader wild rice revitalization projects in the future and could be shared with other Indigenous communities in the local area if there is interest, advancing the understanding, and recovery of this culturally and ecologically important plant. Together, these efforts will support a more holistic understanding of Wild Rice habitats, cultural values, and their continued importance to the region.
Change in availability, access to, and quality of experience related to traditional habitation cultural, and spiritual sites and areas	Access: There will be no access within the PA (the active mine site), due to safety. Access will be maintained to the LSA, via the existing road/trail network or planned forestry roads. Environment Management Committee: Great Bear Resources will work with the environmental management committee(s) and interested Indigenous members throughout the duration of the Project (all phases), to facilitate ongoing communications, sharing and integration of Indigenous Knowledge and environmental information, and share and evaluate Project approvals, adaptive management and monitoring plans, and address emerging issues and interests identified by Indigenous Nations. Environmental Monitors: Great Bear Resources will continue to work with the Environmental Management Committee and engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring practices for Project activities. Inclusive and Local Hiring Strategy (Project policies): Support reasonable requests and work schedule flexibility for Indigenous employees relating to time off to pursue traditional land use and harvesting activities. Great Bear Resources will offer employees an Annual Fitness and Mental Health Benefit fund ($500 per annum) which may be used to purchase gear and equipment which would facilitate land-based activities including but not limited to fishing equipment and snowshoes. Integrated Mine Closure: Great Bear Resources is committed to progressively rehabilitating the mine site wherever practical to reduce potential erosion, improve stability and work towards meeting end land use objectives. Closure end land use objectives will be informed by ongoing consultation with local Indigenous nations. Test plot revegetation studies may occur during operation as part of the commitment to progressive rehabilitation. These studies will evaluate the most effective revegetation approach for various application areas. The results will be used to update and inform the revegetation approach with respect to growth medium, seed mixes and nutrient mixes. Active and passive re-vegetation of Project area to encourage and support terrestrial and aquatic species. Project Design (visual, dust, and sound): Infrastructure and mine stockpile height have been limited to reduce effects on standard viewscapes; Controlling dust and debris from roads through water sprays and potentially chemical suppressants. The Project has also been designed to minimize construction sounds where applicable (e.g., reduction of generator noise, reduced sound haul trucks); vegetation buffer around the Project.

Attached Table 12.1-1 includes the mitigation measures applicable to the management of effects on pVCs and fVCs that are linked with CULRTP for ANA. It includes relevant plans, policy, and measures from predictive reporting on linked pVCs and fVCs. These will be applied for effects management.

12.6.5 GBA Plus Considerations

During the life of the Project, the PA will be inaccessible. This is expected to last for approximately 32 years once construction begins until the end of active closure.

There have been no current use activities in the PA identified by ANA at the time of writing, therefore, no GBA Plus interactions are anticipated.

12.6.6 Residual Effects after Mitigation

After the implementation of mitigation measures, assessment and characterization of potential residual effects on CULRTP is completed using the methodology outlined in Section 6. Further details on residual effect criteria ratings that are specific to CULRTP are defined in Section 6 and in Section 12.3.2.

The attached Table 12.1-1 summarizes the results of the assessment for the linked pVC and fVC components. Detailed description on the methods, existing conditions, mitigation measures, and residual effects can be found in their respective sections.

Based on the assessment of pVCs and fVCs, residual changes after mitigation considered as part of the assessment of residual effects on CULRTP are:

- Migratory birds (fVC)
- Air quality (pVC)
- Sound (pVC)
- Vibration (pVC)
- Visual Environment (pVC)
- Groundwater (pVC)
- Surface Water Flows and Levels (pVC)
- Water quality (pVC)
- Vegetation communities (pVC)
- Moose (pVC)
- Other wildlife (pVC)
- Species at Risk (pVC)
- Cultural Heritage (pVC)

There are other linked pVCs and fVCs listed in Table 12.1-1 and section 12.1 that do not have residual changes after mitigation measures have been applied. This includes the fVC Fish and Fish Habitat, and pVCs Wild Rice, Land and Resource Use and Archaeology. This means that Project activities will not change their existing conditions over the Project life cycle. Therefore, those linked pVCs and fVCs are not carried forward into the residual effects assessment for ANA community members.

12.6.6.1 Residual Effects after Mitigation - Asubpeeschoseewagong Netum Anishinabek

Following the identification of potential effects between Project activities and CULRTP indicators, potential effects were evaluated to determine whether the proposed mitigation measures would fully address the effect. Where mitigation measures were determined to effectively avoid the interaction, no residual effect was carried forward. Where the mitigation measures reduced but did not fully eliminate the potential for an effect, the interaction was carried forward for residual effects characterization. This process made sure that only unmitigated or partially mitigated effects were included in the residual effects assessment.

Table 12.6-4 summarizes the potential effects that remain after mitigation and enhancement measures are implemented.

Table 12.6-4: Residual Effects Remaining After Mitigation - Asubpeeschoseewagong Netum Anishinabek

Potential Effect		Potential Residual Effect Remaining After Mitigation (Y/N)
Change in availability, access to, and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping)	Availability (quantity of traditionally hunted and trapped wildlife species available)	Y
	Access (to locations and areas for hunting and trapping)	N
	Quality of experience (detectable changes to sensory conditions at harvesting sites or areas)	Y
Change in availability, access to, and quality of experience related to traditional aquatic harvesting (fishing)	Availability (quantity of traditionally fished species available)	N
	Access (to locations for fishing and aquatic harvesting)	N
	Quality of experience (detectable changes to sensory conditions at harvesting sites or areas)	N
Change in availability, access to, and quality of experience related to traditional plant harvesting (food and medicinal purposes)	Availability (quantity of traditionally gathered plant species available)	N
	Access (to locations for plant gathering and picking)	N
	Quality of experience (detectable changes to sensory conditions at harvesting sites or areas)	N
Change in availability, access to, and quality of experience related to traditional habitation, cultural, and spiritual sites and areas	Availability (of traditional habitation, cultural, and spiritual sites and areas – e.g., not altered or destroyed)	N
	Access (changes to access to sites and areas identified)	N
	Quality of experience (detectable changes to sensory conditions at traditional habitation, cultural, or spiritual sites and areas currently used)	Y

12.6.6.1.1 Change in Availability, Access to, and Quality of Quality of Experience Related to Traditional Terrestrial Wildlife Harvesting (Hunting and Trapping)

As ANA hunts and has a registered trapline in the LSA, there may be indirect changes to availability and quality of experience relating to terrestrial wildlife harvesting for ANA community members.

Project activities through construction to closure may affect wildlife behaviour and responses directly in the PA. This may result in a localized change in environmental conditions within the PA, which could indirectly affect available wildlife harvesting opportunities within the LSA for ANA community members in proximity to the PA.

While no changes to access of the LSA for trapline RL061 or hunting by ANA community members are anticipated, availability of hunting and trapped species and quality of experience may still be indirectly affected in areas immediately adjacent to the PA. This is due to changes in wildlife behaviour as a result of sensory disturbance, and sensory disturbances related to changes in sensory conditions for those hunting and trapping in the LSA. As noted in Table 12.1-1, there is habitat in the LSA and RSA for all wildlife species, and there are no Project features expected to affect any furbearing species or populations.

No critical moose habitat is anticipated to be eliminated in the PA, and there were no residual effects on the Moose, Other Wildlife, or Species at Risk pVC assessment. Due to this, it is anticipated that availability of large and small game will not change for hunting and trapping activities in the LSA as a result of changes to wildlife populations. While residual effects were predicted for migratory birds, they were predicted to be not significant after mitigation has been applied.

Table 12.6-5 characterizes the residual effect attributes related to terrestrial wildlife harvesting.

Table 12.6-5: Characterization of Negative Residual Effects on a Change in Availability and Quality of Experience Related to Traditional Terrestrial Wildlife Harvesting (Hunting and Trapping) - Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level I	Criteria may or may not be sensitive and can support the predicted change with typical mitigation measures.
Magnitude	Level I	Project-related changes may increase the effort necessary but will not reduce the ability of Indigenous Peoples to practice traditional activities related to the current use of lands and resources for traditional purposes. ANA do not access the PA for terrestrial wildlife harvesting or trapping, and harvesting opportunities remain in the LSA. Changes to availability and experience in the LSA may increase the effort necessary to harvest but not reduce the ability to practice these traditional activities.
Geographic Extent	Level I	Effect is restricted to the LSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level II	Effect occurs intermittently or regularly.

Attribute	Category	Rationale
Reversibility	Level I	Effect is fully reversible during the Project phases.
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated.

12.6.6.1.2 Change in Availability, Access to, and Quality of Experience Related to Traditional Habitation, Cultural, and Spiritual Sites and Areas

For ANA visiting traditional habitation, cultural, or spiritual sites or areas in the LSA, access and availability of sites will not be directly affected, as they are outside of the PA. Available campsites, cultural and spiritual sites and areas and other habitation sites currently used will remain accessible in the LSA and RSA.

However, these traditional habitation, cultural, and spiritual sites and areas in the LSA may still be indirectly affected by changes in the quality of experience. This is due to changes in flows and levels of groundwater reducing groundwater contributions to waterways and waterbodies adjacent to the PA, and sensory disturbances (dust, sound, light and vibration) around ANA habitation, cultural, and spiritual sites and areas in the LSA.

Table 12-6-6 characterizes the residual effect attributes relating to traditional habitation, cultural, and spiritual sites and areas.

Table 12.6-6: Characterization of Negative Residual Effects on Change in Quality of Experience Related to Traditional Habitation, Cultural, and Spiritual Sites and Areas - Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level I	Criteria may or may not be sensitive, and can support the predicted change with typical mitigation measures:
Magnitude	Level I	Project-related changes may increase the effort necessary but will not reduce the ability of Indigenous Peoples to practice cultural activities while visiting and using traditional habitation, cultural, and spiritual sites and areas related to the current use of lands and resources for traditional purposes.
Geographic Extent	Level I	Effect is restricted to the LSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level II	Effect occurs intermittently or regularly.
Reversibility	Level I	Effect is fully reversible during Project phases.
Timing	Level I	Effects do not occur over a sensitive period, or related effects are fully mitigated.

12.6.7 Significance of Residual Effects

The magnitude of the effect on CULRTP as a result of Project-related activities is low (Level I) and restricted to the LSA (Level I). The effect will occur infrequently (Level I), over the medium term of more than three years but less than 32 years (Level II) and will be fully reversible at closure (Level I).

The importance of conducting traditional practices is very high for Indigenous Peoples, however the small, localized effect can be accommodated in terms of social context (Level I). The residual effect is therefore not significant.

12.6.8 Confidence

The prediction confidence assignment reflects the information available through Project-specific TKLUS reports, publicly available data (statistical websites, government pages, previously completed EA/IS reports, understanding of the effectiveness of applicable mitigation measures, and outcomes of other pVCs and fVCs. The assessment is informed by substantial primary and secondary information and robust analysis however, as noted in the assessment, there are some instances where the information collected had data gaps or lacked detail.

The overall confidence in residual environmental effect and significance predictions for CULRTP is moderate. As additional information continues to be shared through Great Bear Resources' ongoing consultation with local Indigenous communities over Project life, relevant information will be incorporated into Project planning as practical.

12.7 Indigenous Physical and Cultural Heritage, Including Structures, Sites or Things of Significance

Indigenous physical and cultural heritage was selected as a criteria to evaluate how the Project may interact with sites or areas of Indigenous heritage importance (including archaeological, historical, or architectural sites), as well as associated ceremonial, spiritual and cultural values. Indigenous physical and cultural heritage differs from the pVCs of archaeology and cultural heritage in that it is an fVC; also, it encompasses both tangible heritage, such as physical places of heritage value, and intangible heritage, such as customs, practices, and teachings that convey cultural knowledge of heritage value. Potential effects are assessed to evaluate potential changes to these sites, areas as a whole. As outlined in the methods (Section 6), the assessment of Asubpeeschoseewagong Netum Anishinabek (ANA) physical and cultural heritage considers the following criteria:

- Alteration or destruction of sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites
- Change in access to or quality of experience with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites
- Change in sacred, ceremonial, spiritual and cultural values (including language, stories and traditions) associated with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites

Publicly available summaries of Indigenous physical and cultural heritage for ANA are limited; however, public correspondence from ANA to IAA, MEM and GBR regarding the Project provides Project-specific ANA input (Asubpeeschoseewagong Netum Anishinabek 2024).

Sites and areas discussed in relation to the archaeology and cultural heritage pVCs include physical heritage sites and areas, as defined under the *Ontario Heritage Act* (OHA). These are considered OHA-defined physical heritage, which is also commonly regarded as having heritage importance to Indigenous communities.

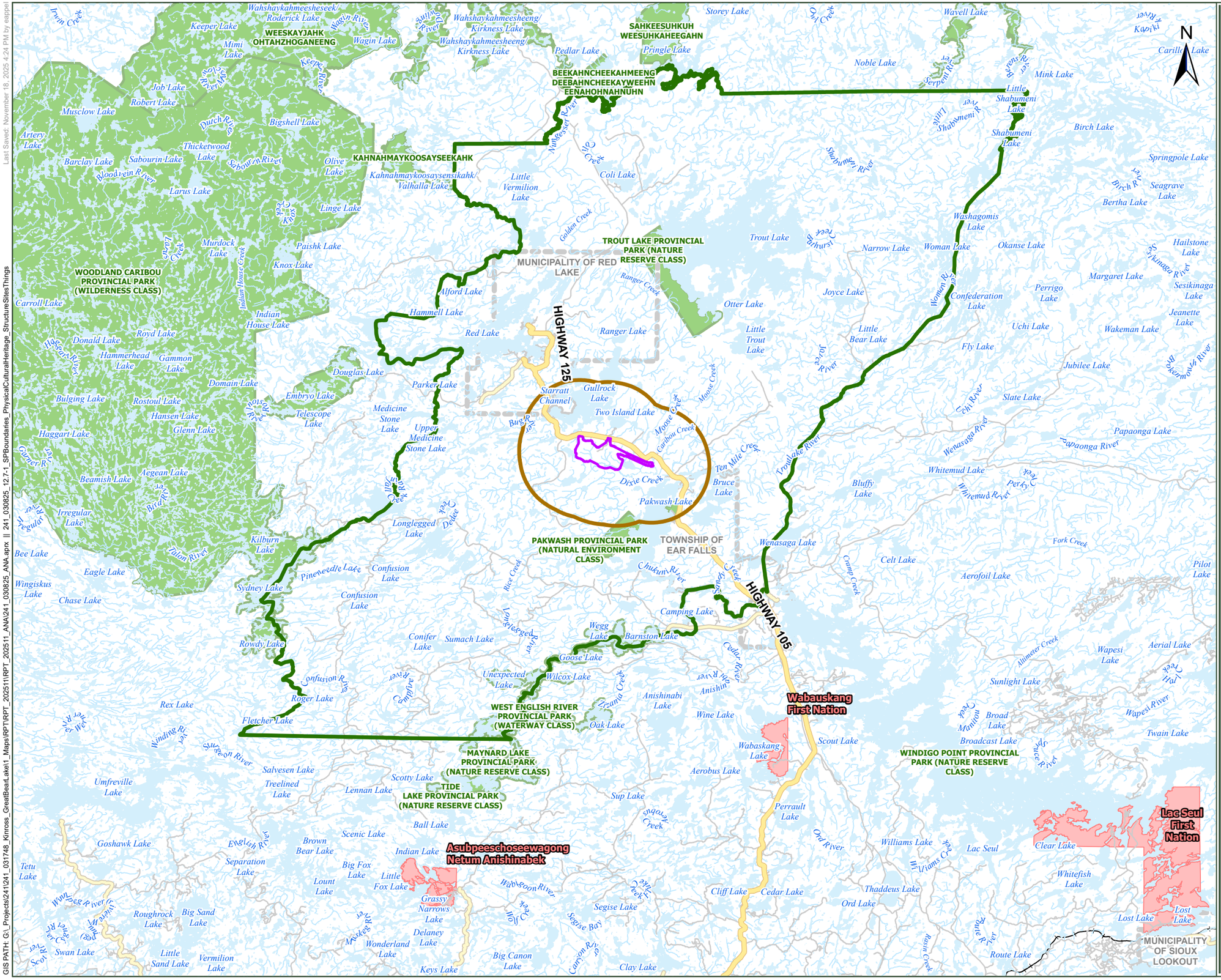
The current use of lands and resources for traditional purposes criteria was also considered to reflect forms of Indigenous physical and cultural heritage that are not defined or protected under the OHA but are commonly valued by Indigenous communities, including ANA, as indicated in their public correspondence regarding their traditional land use in relation to the Project (Asubpeeschoseewagong Netum Anishinabek 2024).

12.7.1 Spatial Boundaries

There are three study areas within the spatial boundaries. They are the Project Area (PA), the Local Study Area (LSA), and the Regional Study Area (RSA), which includes both the PA and the LSA. The spatial boundaries used for the assessment of Indigenous physical and cultural heritage are shown in Figure 12.7-1 and are defined:

- The PA is defined as the footprint of the Project, including all temporary and permanent areas associated with the mine site, as well as a buffer to allow flexibility for design optimizations prior to construction and over the mine life (Section 6.4). The PA is approximately 3,349 hectares (ha) in size.
- The LSA is the area within which Project-related effects may reasonably be expected to occur and can be predicted or measured with reasonable accuracy and confidence. Based on the relationship between Indigenous heritage and the current use of lands and resources for traditional purposes, these criteria share an LSA, which is defined using the LSAs of the moose and other wildlife pVCs. These LSAs integrate a range of resources and places that support traditional use, which in turn supports cultural practices integral to Indigenous physical and cultural heritage, along with associated intergenerational knowledge transfer. This LSA also encompasses the LSAs for the pVCs of archaeology and cultural heritage, which are more narrowly defined by a buffer of 1 km around the PA for both; the selection of these areas as the LSAs for these pVCs is guided by the potential for direct physical effects to the integrity of archaeological and cultural heritage resources; the selection of these areas as the LSAs for these pVCs is guided by the potential for direct physical effects to the integrity of archaeological and cultural heritage resources.
- The RSA encompasses the LSA and is used to provide regional context for the significance of residual effects; it is also the area within which potential for cumulative effects of the Project in combination with other past, present or reasonably foreseeable projects or activities are considered. For Indigenous physical and cultural heritage, the RSA are again defined based on the RSAs for the moose and other wildlife pVCs for the same reasons as identified for the LSA. The RSAs for the related pVCs of archaeology and cultural heritage are the same as the LSAs, again reflecting these pVCs' primary concern with physical effects to archaeological and cultural heritage resources.

These boundaries are consistent with those used for Current Use of Lands and Resources for Traditional Purposes (CULRTP).



LEGEND:

- PROJECT AREA
- LOCAL STUDY AREA
- LOCAL STUDY AREA
- HIGHWAY
- MAJOR ROAD
- LOCAL ROAD
- RAILWAY
- WATERCOURSE
- WATERBODY
- INDIGENOUS COMMUNITY
- PROVINCIAL PARK
- MUNICIPAL BOUNDARY (LOWER TIER)

NOTES:
NOTE1: BASE DATA ACQUIRED FROM LAND INFORMATION ONTARIO.

0 5 10 20 30 km

SCALE 1:650,000
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 15N

THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD NOT BE USED FOR NAVIGATION

GREAT BEAR RESOURCES

GREAT BEAR GOLD PROJECT

SPATIAL BOUNDARIES FOR INDIGENOUS PHYSICAL AND CULTURAL HERITAGE AND STRUCTURES, SITES, OR THINGS

SLR

FIGURE NO:
12.7-1

DATE: November 19, 2025 PROJECT NO: 241.030825

12.7.2 Existing Conditions

A summary of existing conditions for Indigenous physical and cultural heritage, along with the methods used to characterize baseline conditions, is informed by publicly available, Project-specific ANA correspondence regarding potential Project effects on ANA traditional activities, practices and values, including those linked to ANA physical and cultural heritage (Asubpeeschoseewagong Netum Anishinabek 2024).The discussion also draws on publicly available sources, including academic literature, government reports, and information available on relevant websites (Free Grassy Narrows, n.d.-a; Free Grassy Narrows n.d.-b). The ANA correspondence indicates that the Project is within ANA territory and the area where ANA members practice traditional use activities/exercise their Treaty rights. For this assessment, it is assumed that any traditional use locations, whether current or historical, may hold heritage meaning and value to any Indigenous Peoples that use the area, which may include ANA community members.

12.7.2.1 Methods

This assessment includes consideration of the archaeology and cultural heritage pVCs, along with the current use of land and resources for traditional purposes criteria and Project-specific ANA correspondence), since these collectively describe places and practices of possible heritage interest to the potentially affected Indigenous communities (Asubpeeschoseewagong Netum Anishinabek 2024). Specifically, the archaeology and cultural heritage pVCs provide information on physical heritage places that are protected under the OHA and of potential importance to Indigenous communities. The current use of lands and resources for traditional purposes criteria captures ongoing traditional activities that both extend from and pass forward these Indigenous communities' physical and cultural heritage places, values and teachings.

The archaeology studies (Appendix Q-1) and cultural heritage studies (Appendix P-1) undertaken in support of this Impact Statement were consulted for information on the identification of physical heritage as required under the Ontario Heritage Act (OHA) and Ontario Regulations (O. Reg.) 9/06 and 10/06. The terrestrial archaeology assessment report is in Appendix Q-1, and the marine archaeological assessment report is in Appendix Q-2. Public correspondence from ANA to IAA, MEM and Great Bear Resources regarding the Project was used to further inform on the current use of lands and resources for traditional purposes (Asubpeeschoseewagong Netum Anishinabek 2024).

This assessment also used available public sources and engagement records.
However, defining Indigenous physical and cultural heritage in relation to the Project remains somewhat interpretive, as its holistic continuity with traditional land- and water-based cultural places and activities, including the transfer of intergenerational knowledge, makes it challenging to consider in isolation. For this reason, a conservative approach to the identification of Indigenous physical and cultural heritage was used. An inclusive approach was also applied specifically to the current use of lands and resources for traditional purposes; that is, all places and practices considered in relation to the current use of lands and resources for traditional purposes were regarded as having possible heritage value.

Publicly available sources used in the assessment of Indigenous physical and cultural heritage include:

- Publicly available ANA submissions to IAAC regarding the Project and its assessment
- Academic literature, including published books and articles and unpublished theses and dissertations

- Sources available through the Free Grassy Narrows website, including the 2018 ANA declaration of an Indigenous Sovereignty and Protected Area (Asubpeeschoseewagong Netum Anishinabek 2018), as well as summaries and archives of articles and studies on ANA's recent history, and correspondence regarding development activities by ANA community members
- Government documents and reports on the Treaty #3 area and its Anishinaabe signatories, including ANA
- Reports prepared for Grand Council Treaty #3, which represents Treaty #3 signatory communities, including ANA
- Recent news or information articles and websites
- Sources and summaries available from online resources

At the time of writing this Impact Statement, the results of ANA's Land Use and Occupancy Study are not yet available. However, the Great Bear Resources is aware that the Project is located in the ANA Interim Core Area of Interest for Mining and their proposed Indigenous Protected Conservation Area for moose.

12.7.2.2 Description

The description of physical and cultural heritage sites, areas or things of significance by ANA community members includes a description of the historic and, where applicable, current land use and governance at these sites, areas or things.

12.7.2.3 Past and Current Traditional Use of Places and Practices

The heritage elements of traditional places and practices are rooted in past use, which often continues to the present day because of ANA's ongoing use of lands and waters. Heritage value also develops and evolves over time.

12.7.2.3.1 Historical Context of Asubpeeschoseewagong Netum Anishinabek

For countless generations, the families and communities that gave rise to ANA followed a mobile lifeway, accessing key resources, including large and small game, fish and plants, as they came into season (Free Grassy Narrows n.d.-a). The fall harvest of wild rice, or manoomin, provided a food source that could be stored over the winter and beyond. Travel relied on land-based trails and water-based travelways, and portages were key terrestrial linkages between water-based travel on lakes and rivers. The pattern of seasonal harvesting activities also integrated and supported an array of social, economic, ceremonial, spiritual and other cultural activities, as well as the associated passing of Anishinaabe knowledge, beliefs, values and practices between generations. Indigenous trade between Anishinaabeg, as well as with neighbouring Indigenous groups, built and maintained regional relationships (Simpson 2008).

Prior to the eighteenth century, European trade goods entered the region from Hudson's Bay Company (HBC) posts on Lake Winnipeg and the coast of Hudson's Bay via intermediaries like the Cree and Nakota. Direct trade was established when the HBC, the Northwest Company (NWC) and other fur trade enterprises established posts in the region, including at Red Lake, Lac Seul and the confluence of the Chukuni and English rivers (Appendix Q-1; (Hinshilwood 2023a; Taylor-Hollings 2017).).

The region's Anishinaabe families and communities supplied these posts by focusing their winter and spring activities to varying degrees on trapping, managing attendant changes including nineteenth century overexploitation of the region's fur and game species, and the twentieth century decline in fur prices (Shkilnyk 1985). These pressures were compounded by substantial population loss and social disruption associated with the introduction of multiple epidemic diseases (Taylor-Hollings 2017).

In the late nineteenth century, the Government of Canada began efforts to establish regularized transportation routes across this region to the Red River colony. The region's Anishinaabeg sought compensation for this use of their lands, signing Treaty #3 in 1873 (Filice 2025). Chief Sahkatcheway of the Lac Seul and English River bands was among the signatories (Filice 2025). The Anishinaabe families whom he led were eventually split between reserves at Grassy Narrows and Wabauskang Lake ((NationTalk 2008; Shkilnyk 1985; Vecsey 1987).

The Anishinaabeg of the Grassy Narrows reserve continued a land- and water-oriented lifeway that included trapping and trading furs at HBC posts at Oak Lake, Wilcox Lake and Ball Lake, until, in 1911, the HBC established a post at Grassy Narrows (Shkilnyk 1985; Vecsey 1987).

Non-Indigenous settlers continued to arrive, facilitated by completion of the Canadian Pacific Railway, along with its station at Kenora, in the late 1800s, and the more northerly Canadian National Railway, with stops in Quibell and McIntosh, in the early 1900s (Anderson 2020; NationTalk 2008; Shkilnyk 1985). Logging and mining in the region continued to expand, and the first pulp mill was operating in Dryden by 1913 (Johnston 2014; Shkilnyk 1985)

With the establishment of nearby residential schools in the early 1900s, many children from Grassy Narrows were taken to schools in McIntosh or Kenora (Shkilnyk 1985).Separation from their families created deep cultural ruptures. Anishinaabe cultural continuity was also challenged by the *Indian Act*, which banned traditional ceremonial gatherings and activities (Taylor-Hollings 2017).Construction of the first hydroelectric generating station on the English-Wabigoon River system in 1929, along with further hydroelectric development in the 1950s, dammed and flooded areas traditionally used for wild rice harvesting and trapping(Brophy 2005; Free Grassy Narrows n.d.-a; Vecsey 1987)

After World War II, families at Grassy Narrows continued to pursue a land- and water-oriented economy along with employment at recreational fishing lodges and in commercial fisheries along the English-Wabigoon River system (Vecsey 1987). However, establishment of a provincial government trapline registry, along with licensing of non-Indigenous commercial wild rice harvesting, disrupted Anishinaabe use and stewardship of traditional use areas (Chapeskie 1994; Shkilnyk 1985; Taylor-Hollings 2017; Vecsey 1987).

In the early 1960s, the federal government relocated the people on the Grassy Narrows reserve to a site with road access that would facilitate the delivery of health, education and other services (Free Grassy Narrows n.d.-a; Shkilnyk 1985; Vecsey 1987). However, this move moved families away from traditionally used trapline areas, as well as valued wild rice lakes, garden plots, and commercial fishing locations (Free Grassy Narrows n.d.-a; Vecsey 1987).

These issues were compounded in 1970 when residents of Grassy Narrows learned that, from 1962 to 1970, untreated mercury from the Dryden Chemicals Ltd. plant had been dumped into the English-Wabigoon River system upstream from Grassy Narrows (Free Grassy Narrows n.d.-a; Shkilnyk 1985; Vecsey 1987). Commercial and recreational fishing were impacted, though, due to the importance of fish in Anishinaabe diet, some individuals continued to fish for subsistence, and many community members suffered from the effects of mercury poisoning.

As well as loss of fishing-related employment (Free Grassy Narrows n.d.-a; Shkilnyk 1985; Vecsey 1987).

This history underpins the physical and cultural heritage places and practices of Indigenous communities in the region (e.g., formation of archaeological sites, continuation of deeply rooted traditional harvesting practices). At the same time, it has eroded both the tangible and intangible elements of Indigenous physical and cultural heritage (e.g., flooding of wild rice lakes by hydroelectric facilities, disruption of intergenerational knowledge transfer by residential schools).

12.7.2.3.2 Current Heritage Perspectives of Asubpeeschoseewagong Netum Anishinabek

ANA community members strongly value their traditional food systems and opportunities for their restoration. As such, they have voiced concerns with further industrial development, including forestry and mining and advocated for decision-making control over their traditional territory (Ontario Nature n.d.; Simpson et al. 2009; Vecsey 1987).

ANA issued a 2018 declaration identifying that territory as an Indigenous Sovereignty and Protected Area and banning all industrial logging (Asubpeeschoseewagong Netum Anishinabek 2018; Ontario Nature n.d.). The northern extent of this Indigenous Sovereignty and Protected Area overlaps with the PA, as well as the LSA and RSA around and south of Highway 105. In 2023 ANA also mapped an Interim Area of Interest for Mining in relation to their interests and concerns regarding further mining development in the region; the PA and parts of the LSA and RSA fall within its northeastern boundary. ANA community members have also maintained a logging blockade continuously since 2002. Located outside of the RSA on Highway 671, the blockade's site has become a hub for community and heritage activities, including land-based education (Turner 2023).

ANA indicates that their concerns about loss of intact ecosystems to development are based in historical and ongoing use of their territory for traditional activities (Free Grassy Narrows n.d.-a; Swain n.d.). In relation to the Project, ANA indicates that hunting in the LSA and RSA south of Red Lake is important to its community members due to declines in moose populations elsewhere, and that health of the English River downstream of the Chukuni River is of concern due to their use of fish from this drainage, as well as the presence of sturgeon, an ANA clan animal (Asubpeeschoseewagong Netum Anishinabek 2024). They also note that caribou are another ANA clan animal that relies on a range that overlaps the PA, LSA and RSA (Asubpeeschoseewagong Netum Anishinabek 2024).

Additionally, trapline R061, which overlaps the western portion of Gullrock Lake, is owned by an ANA community member and falls partially within the LSA. Several trapper cabins are reported within or near the part of Trapline R061 that lies within the LSA; they are described as occurring on the southwestern edge of Gullrock Lake, on an unnamed lake near the Bug River where it enters Gullrock Lake, on Stone Lake, and on Dixie Lake.

ANA indicates that the continuing ability of their members to undertake harvesting activities supports the transfer of traditional practices to future generations by ANA community members (Asubpeeschoseewagong Netum Anishinabek 2024).

They also highlight the importance of cultural continuity in ceremonial and spiritual practices at sacred places, such as burial sites and locations where spirits are believed to reside. ANA is concerned that ongoing industrial development will affect these activities and ANA community members' associated cultural and heritage relationships with the landscape, emphasizing the effects of downstream water contamination and airborne pollution, as well as sensory and habitat disturbances (Asubpeeschoseewagong Netum Anishinabek 2024).

12.7.2.4 Archaeological Sites

Archaeology is a Western-based science that uses material remains to understand past ways of life. It relies on physical evidence to define archaeological sites, so it may not capture less tangible forms of heritage, although these are often discussed in the context of cultural heritage and TKLUS reports (see Section 7.14 and Section 7.15).

As required under the OHA, archaeological studies supporting the Project to date have included Stage 1, 2, and 3 desktop and field studies for terrestrial areas (Appendix Q-1). Additionally, a marine archaeological study focused on waterbodies was conducted, involving both desktop and fieldwork (Appendix Q-2). In both cases, initial desktop studies and subsequent field surveys extended to the boundary of the Great Bear Resources Property, covering the PA and nearby areas. All archaeological work to date falls within the LSA of the Indigenous physical and cultural heritage criteria (see Section 7.15).

The desktop component of the marine archaeological study identified Unnamed Waterbody 1, Unnamed Waterbody 2, Unnamed Waterbody 6, Pakwash Lake, Dixie Lake, Dixie Creek and the Chukuni River in the PA and adjacent portions of the LSA as having archaeological potential (Appendix Q-2)

The 2024 and 2025 fieldwork supporting the marine archaeological study involved visual inspections of Unnamed Waterbody 1, as well as the Chukuni River, where an effluent discharge pipe is planned; no archaeological materials were identified (Appendix Q-2).

The survey work carried out for the Stage 2 terrestrial archaeological studies resulted in the identification of five previously undocumented Pre-contact archaeological sites within the surveyed area (Appendix Q-1) These sites include:

- EfKj-1: a Late Woodland period site within the PA on Unnamed Waterbody 1
- EfKj-2: a Pre-contact period site on Dixie Creek within the LSA
- EfKj-3: a Late Paleo period site within the LSA on Unnamed Waterbody 6, adjacent to EfKj-4
- EfKj-4: a Late Paleo period site on Unnamed Waterbody 6, within the LSA
- EeKi-4: a Middle and Late Woodland period site on Pakwash Lake within the LSA

Stage 3 work has been undertaken at EfKj-1, EfKj-2, EfKj-3, and EfKj-4; no further work was pursued at EeKi-4 due to its distance from the PA. As outlined in Ontario's Standards and Guidelines for Consulting Archaeologists, affected Indigenous communities must be engaged during Stage 3 when assessing the cultural heritage value or interest of sites which are (a) the subject of Indigenous oral history, (b) have known or potential sacred or spiritual importance, or (c) show an association with traditional land use or geographic features of cultural heritage interest (MTCG 2011). These communities must also be engaged when formulating the Stage 4 mitigation strategy for Indigenous sites characterized as rare, sacred or of Woodland age.

These requirements are applicable to EfKj-1, EfKj-2, EfKj-3, and EfKj-4, and based on these sites' Pre-Contact cultural materials and affiliations, LSFN and WFN have shared Anishinaabe perspectives on them during site visits during the Stage 3 work in 2024 and 2025 (Appendix Q-1), indicating, in the course of their site visits, that they regard EfKj-1, EfKj-2, EfKj-3 and EfKj-4 as holding clear cultural interest and community value. On this basis, avoidance has been selected as the means to mitigate potential effects on these sites.

These archaeological findings have been shared with ANA through the provision of the associated archaeological reporting.

12.7.2.5 Cultural Heritage Landscapes and Built Heritage Resources

For regulatory purposes in Ontario, cultural heritage landscapes are defined as:

> *…a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association*. (Ministry of Municipal Affairs and Housing 2024)

Built heritage resources may be part of a cultural heritage landscape or occur discretely. In Ontario, they are defined as:

> *a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community.* (Ministry of Municipal Affairs and Housing 2024)

Cultural heritage landscapes are important in considerations of Indigenous heritage in Ontario due to the frequently mobile character of traditional Indigenous lifeways and the associated distribution of culturally and historically meaningful places, including harvesting areas, across their THTs. These places may include, but are not limited to, natural features, built structures, archaeological sites and / or traditional use places.

For the purposes of cultural heritage studies in Ontario, including the one undertaken for this Project, cultural heritage landscape features may be individually identified and described as "cultural heritage resources" (CHR) to simplify and facilitate discussion of elements indicative of cultural heritage landscapes (see Section 7.14).

A 40-year moving window is commonly used as a nationally and provincially recognized threshold for identifying when a building or landscape has "cultural heritage value or interest," as discussed under the OHA and reflected in these definitions. However, the ongoing use of Indigenous heritage places or resources may not fit with this approach, and Indigenous heritage may include elements that are not captured by federal or provincial regulatory frameworks.

In the RSA, waterbodies once used for wild rice harvesting may no longer support wild rice stands due to changes in water levels caused by hydroelectric damming in the English-Wabigoon River system. However, these areas, as well as waterbodies used for fishing and travel, may still form parts of cultural heritage landscapes because of their known historical use; wild rice lakes also hold potential for future Indigenous use through the restoration of suitable conditions or access. The background research and field review undertaken for the Project's Cultural Heritage Report (Appendix P-1) identify five potential Cultural Heritage Resources (CHRs) within a study area comprised of the PA and a 1-km buffer around it. This study area only covers the portions of the Indigenous physical and cultural heritage LSA that are closest to the PA. Of these five CHRs, three (CHR 2, 4, and 5) were found to be located entirely outside the PA, beyond Project-related disturbance. The fourth, designated Chukuni River (CHR 1), is located within the PA and adjacent parts of the LSA. It was identified because:

> *"The river may have cultural heritage significance for local Indigenous Nations as it supports customary practices such as harvesting, hunting and was historically used as a canoe transportation route. This watercourse may have heritage significance for historical / associative and contextual reasons."* (Appendix P-xx, p. 22)

The Cultural Heritage Report (Appendix P-1) indicates that, while the segment of the Chukuni River that comprises CHR 1 falls partly within the PA, it will not be subject to direct or indirect effects from the Project. Specifically, the report anticipates that the planned effluent pipe to be installed in this location will not hinder river use for travel, and discharge from the pipe will avoid changing water and fish by adhering to regulatory requirements for water quality and quantity (Appendix P-1, p. 27).

The Project cannot avoid CHR 3, which is comprised of wild rice fields between Unnamed Waterbodies 1 and 2. A Cultural Heritage Evaluation Report (CHER) for CHR 3 was undertaken to determine if it has cultural heritage value or interest (CHVI) per Ontario Regulation (O. Reg. 9/06) of the OHA.

Based on publicly available sources and confidential reports shared by Indigenous communities, the CHER determined that CHR 3 meets multiple criteria for CHVI based on its historical/associative and contextual value (Appendix P-2). A Cultural Heritage Impact Assessment (CHIA) prepared in consultation with Indigenous communities was required to identify appropriate conservation strategies and / or mitigation measures. measures (Appendix P-3). Consistent with the findings of the CHIA, Great Bear Resources' engagement with LFSN and WFN regarding Unnamed Waterbody 1's wild rice stands has resulted in collaborative development of the Wild Rice Enhancement Project (see Section 7.14).

12.7.3 Potential Effects

Potential interactions between the proposed Project activities and ANA's Indigenous physical and cultural heritage identifies the possible effects, including both positive and negative effects, as well as whether they are direct or indirect. It examines the current use of land and resources for traditional purposes criteria and the pVCs of archaeology and cultural heritage (Sections 7.14 and 7.15), along with Project-specific studies conducted to support their assessment; for the two pVCs, the focus is on Indigenous input as required under the OHA. The results of engagement and consultation, beyond archaeological and cultural heritage studies, are also considered in relation to the potential Project effects on aspects of current traditional land and resource use with heritage significance.

A detailed overview of the Project's potential interactions with Indigenous physical and cultural heritage prior to mitigation is provided in Table 12.7-1. Project interactions are classified as either having no interaction (-) or a potential interaction (✓). Project activities that result in no interaction are not further considered in the assessment. Project interactions identified as potential interactions are carried forward to the effects assessment to evaluate both positive (desirable and beneficial) and negative (undesirable or adverse) potential effects on Indigenous physical and cultural heritage.

The Project overlaps with ANA Treaty 3 territory where ANA community members exercise their harvesting, cultural, and spiritual practices and traditions. There has been no identified current use of the PA by ANA community members, though there is current use of the LSA and RSA by ANA community members. However, based on the historic and traditional use presented in Section 12.7 and Section 12.10, there is a possibility of direct or indirect interactions between the Project and ANA's Indigenous physical and cultural heritage in LSA and RSA.

Table 12.7-1: Potential Interactions Between Project Activities and Indigenous Physical and Cultural Heritage and Structures, Sites or Things of Significance - Asubpeeschoseewagong Netum Anishinabek

Project Component / Activity	Alteration or destruction of sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	Change in access to or quality of experience with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	Change in sacred, ceremonial, spiritual and cultural values (including language, stories and traditions) associated with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites
Construction Phase			
Site preparation activities	✓	✓	✓
Establishment and operation of water management and treatment facilities	✓	✓	✓
Open pit mining	✓	✓	✓
Underground mining	-	-	-
Management of rock and unconsolidated materials in stockpiles	✓	✓	✓
Establishment of onsite fish habitat and compensation measures	✓	✓	✓
Establishment of onsite aggregate operations	✓	✓	✓
Construction of the starter embankments for the tailings management facility	✓	✓	✓
Construction and operation of buildings and infrastructure	✓	✓	✓
Waste management	-	-	-
Commissioning of the process plant	✓	✓	✓
Power supply	✓	✓	✓
Employment and expenditures	-	-	-
Operations Phase			
Underground mining	-	-	-
Mining of the LP Central pit	✓	✓	✓

Project Component / Activity	Alteration or destruction of sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	Change in access to or quality of experience with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	Change in sacred, ceremonial, spiritual and cultural values (including language, stories and traditions) associated with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites
Management of rock and unconsolidated materials in stockpiles	✓	✓	✓
Process plant operation	✓	✓	✓
Management of desulphurized tailings in the tailings management facility	✓	✓	✓
Management of concentrate tailings and contact water in the Viggo management facility	✓	✓	✓
Operation of water management and treatment facilities	✓	✓	✓
Construction of a mine water pond	✓	✓	✓
Operation and maintenance of buildings and infrastructure	✓	✓	✓
Waste management	-	-	-
Power supply	✓	✓	✓
Progressive reclamation activities	✓	✓	✓
Employment and expenditures	-	-	-
Closure Phase			
Active closure	✓	✓	✓
Passive closure	-	-	-
Final reclamation	✓	✓	✓
Employment and expenditures	-	-	-

Legend: ✓ = Interaction exists

- No interaction exists

12.7.3.1 Construction Phase

The construction phase of the Project is expected to occur over a three-year period and will include site preparation and the construction of Project infrastructure.

The construction phase activities checked off in Table 12.7-1 were specifically identified and included for consideration due to their potential physical, sensory and experiential effects on Indigenous physical and cultural heritage places and practices. These activities may result in pathways to potential direct and indirect effects on Indigenous physical and cultural heritage as follows:

- A loss or alteration of vegetation in the PA which may affect:
  - plant habitat, and current plant harvesting places and opportunities, as well as embedded cultural activities and intergenerational knowledge transfer
  - wildlife habitat, and current hunting places and opportunities, as well as embedded cultural activities and intergenerational knowledge transfer
  - fishing habitat, and current fishing places and opportunities, as well as embedded cultural activities and intergenerational knowledge transfer
  - current camping and habitation places and opportunities, as well as embedded cultural activities and intergenerational knowledge transfer
  - current trails and travelways, as well as embedded cultural activities and intergenerational knowledge transfer
  - the condition of archaeological sites, historical sites, cultural heritage landscapes and other places with Indigenous heritage value (e.g., harvesting areas used in past, old trails, landmarks used in navigation or discussed in oral traditions) in a way that affects that value
- Vegetation and ground disturbance, which may lead to erosion, sedimentation or other alteration of surface water quality and quantity, thereby affecting:
  - fish, wildlife and plant habitat, and current harvesting places and opportunities, as well as embedded cultural activities and intergenerational knowledge transfer
  - the condition of archaeological sites, historical sites, cultural heritage landscapes and other places with Indigenous heritage value in a way that affects that value
- Use of vehicles and equipment, blasting and human activity, which may lead to altered wildlife or fish behaviour or increased wildlife or fish mortality, thereby affecting:
  - wildlife and fish habitat, and current hunting and fishing places and opportunities, as well as embedded cultural activities and intergenerational knowledge transfer;
  - the quality of experience and condition of archaeological sites, historical sites, cultural heritage landscapes and other places with Indigenous heritage value
- Use of vehicles and equipment, blasting and human activity which may lead to changes to sensory qualities (e.g., sound and vibration levels, viewsheds, dustfall), thereby affecting:
  - the quality of experience of places and practices currently used for traditional harvesting and cultural activities, including sacred, spiritual and ceremonial activities, as well as intergenerational knowledge transfer;
  - the quality of experience and condition of archaeological sites, historical sites, cultural heritage landscapes and other places with Indigenous heritage value.
- Changes in access to:

- places currently used in past or present for traditional activities, including harvesting, camping and travelling, as well as sacred, spiritual and ceremonial practices, and intergenerational knowledge transfer;
- places integrating archaeological sites, historical sites, cultural heritage landscapes and other places with Indigenous heritage value.

These interactions are similar to those involving the criteria of current use of lands and resources for traditional purposes because locations still subject to Indigenous use may have Indigenous heritage significance based on their role in ongoing cultural practices established at that place in the past, as well as their importance in passing those practices between generations. These interactions also resemble those in archaeology and cultural heritage (Section 7.14 and Section 7.15) because Indigenous physical and cultural heritage values can be tied to cultural heritage landscapes or archaeological sites.

Potential effects during the construction phase may affect ANA community members, if they use this area for their land- and water-based activities, as well as teachers and learners involved in passing on cultural knowledge across generations.

These effects will include loss of access to the PA, although access to the LSA will continue. Direct effects are not predicted for the LSA, but some indirect effects, such as sensory disturbances, may occur in parts of the LSA that are proximal to the PA.

12.7.3.2 Operations Phase

The operations phase is anticipated to extend over a 26-year period. The operations phase activities checked off in Table 12.7-1 have been specifically identified, since they may result in the same pathways to potential physical, sensory and experiential effects on Indigenous physical and cultural heritage as construction phase activities.

While ground disturbance activities and vegetation removal are planned to occur during the construction phase, it is possible that additional ground disturbance or vegetation removal may occur during operations. Specifically, any further vegetation removal, ground disturbance, and related activities linked to expansion or progressive remediation of mining features and facilities may alter vegetation, wildlife and fish, as well as their habitats, and associated harvesting opportunities, thereby disrupting cultural activities linked to Indigenous heritage, including knowledge transmission. Such changes may also affect places and things that derive Indigenous heritage importance from sacred, spiritual, ceremonial, or other cultural practices not directly linked to or embedded in harvesting, as well as archaeological and historic sites, cultural heritage landscapes, and other places with Indigenous heritage value. Interactions with operational activities may also alter or hinder access to and use of heritage places and things. Indigenous physical and cultural heritage may experience further potential effects parallel to those of the archaeology and cultural heritage pVCs (Section 12.6 and Section 12.7).

Potential effects during the operations phase may affect ANA community members, if they use this area for their land- and water-based activities, as well as teachers and learners involved in intergenerational transfer of cultural knowledge.

These effects will include loss of access to the PA, although access to the LSA will remain.

Direct effects are not predicted for the LSA, but some indirect effects, such as sensory disturbances, may occur in parts of the LSA that are proximal to the PA.

12.7.3.3 Closure Phase

The closure phase will be initiated with a three-year active closure period immediately after operations cease, followed by a one-year passive closure period and then a final close-out period anticipated to extend for one year. While ground disturbance activities and vegetation removal are planned to occur during the construction phase, it is possible that additional ground disturbance or vegetation removal may occur during closure. Closure phase activities may physically disturb plant, wildlife and fish habitats, as well as cultural activities associated with their harvesting, including intergenerational knowledge transfer. They may also alter the physical and sensory character of heritage places and things, thereby affecting the conditions preferred or required to maintain their heritage value, as well as cultural activities that rely on these places and things, including knowledge sharing. Access may also be altered or obstructed.

The closure phase will involve filling mine pits with water and removing infrastructure. Physical activities associated with infrastructure removal and associated remediation have the potential to affect Indigenous physical and cultural heritage through physical and sensory disturbances, and obstruction of, or alteration of access to, sites or areas of Indigenous heritage importance. Culturally valued places, as well as access to these places, may also be affected by physical alterations resulting from erosion or the redirection of surface water.

Potential effects during the closure phase may affect ANA community members if they use this area to engage with their physical and cultural heritage through land- and water-based activities, as well as teachers and learners who are actively involved in intergenerational transfer of cultural knowledge. These effects will include loss of access to the PA, although access to the LSA will continue. Direct effects are not predicted for the LSA, but some indirect effects, such as sensory disturbances, may occur in parts of the LSA that are proximal to the PA.

12.7.4 Mitigation and Enhancement

Mitigation of potential effects to Indigenous physical and cultural heritage is connected to mitigation for the archaeology and cultural heritage pVCs when the recognition of heritage importance by archaeological and cultural heritage practitioners aligns with the values of Indigenous communities. This occurs when Indigenous communities agree that an archaeological site or cultural heritage landscape feature identified under the OHA is also considered important from their perspective.

For the archaeological sites identified in or near the PA, archaeological reports have been shared with Indigenous communities, and, based on input from LSFN and WFN, avoidance of all potentially affected archaeological sites has been selected as the mitigation.

Potential effects to the locations identified by the cultural heritage studies within the PA will be mitigated by Project design features at CHR 1 (Chukuni River) and by a wild rice enhancement study for CHR 3 (wild rice stands between Unnamed Waterbodies 1 and 2).

Great Bear Resources has funded a study by Northern Bioscience and Harris Ecological Consulting to explore and address the loss of historic wild rice production on Wabauskang Lake through wild rice enhancement. In addition to habitat restoration, the Project will incorporate education and knowledge sharing on sustainable harvesting practices, supporting long-term stewardship efforts. Results of this collaborative initiative have potential to inform Indigenous and other wild rice revitalization projects in the future and to support the ongoing presence and success of the species across the region.

The mitigation and enhancement measures for multiple biophysical fVCs and pVCs, in combination with the mitigation measures for current use of lands and resources for traditional purposes (Section 12.7), further contribute to the mitigation of potential effects to Indigenous physical and cultural heritage, extending to sites and areas associated with current use of lands and resources for traditional purposes. Protection of Indigenous access to and quality of experience of places and resources which are traditionally valued and used for cultural and heritage reasons will be mitigated through design and management measures aimed at limiting the physical and temporal extent of sensory effects outside the PA, as well as the need for land users to adjust patterns of movement in the LSA around the lack of access to the PA. Additional mitigations include vibration control and reducing visual disturbance through design, such as the height and placement of mine structures and stockpiles.

A commitment to support and respect ceremonial practices includes integrating ceremonial activities in collaboration with local Indigenous communities. Indigenous environmental monitoring, engagement with trapline holders, and continued feedback through the environmental committee will provide opportunities for ongoing input on Project activities and mitigation measures concerning traditional activities and cultural heritage considerations.

This committee will facilitate continuous sharing and application of Indigenous Knowledge, address new issues raised by Indigenous communities, and encourage communication and dialogue about Project activities, approvals, and adaptive management and monitoring plans.

The mitigation measures specific to potential effects on Indigenous physical and cultural heritage include:

- **Chance Find Procedure (CFP)**: An Archaeological Resources Protection Procedure (Chance Find Procedure) has been established for the Project.
- **Cultural Heritage Protection Plan (CHPP)**: The CHPP will be developed with participating Indigenous Nations to support protection of Indigenous heritage (including intangible values), archaeological and cultural heritage sites. The CHPP will be a version-controlled living document, updated through the Chance Find Procedure, with decisions documented jointly.

  For the archaeological sites identified in or near the PA, archaeological reports have been shared with Indigenous communities, and based on input from LSFN and WFN, avoidance of all potentially affected archaeological sites has been selected as the mitigation.
- **Environmental Management Committee**: Great Bear Resources will work with the environmental management committee(s) and interested Indigenous members throughout the duration of the Project (all phases), to facilitate ongoing communications, sharing and integration of Indigenous Knowledge and environmental information, and share and evaluate Project approvals, adaptive management and monitoring plans, and address emerging issues and interests identified by Indigenous Nations.
- **Environmental monitors:** Great Bear Resources will continue to work with the Environmental Management Committee and engage Indigenous environmental monitors from local communities in the implementation of mitigation and monitoring.
- **Indigenous-led ceremonies:** Great Bear Resources is committed to incorporate appropriate ceremonial practices into the Project. Ceremonies will be held under the direction of local Indigenous Nations.

Attached Table 12.1-1 includes mitigation measures applicable to the management of effects on pVCs and fVCs that are linked to Indigenous physical and cultural heritage by ANA.
It includes relevant plans, policies, and measures from predictive reporting on linked pVCs and fVCs. These will be applied for effects management.

12.7.5 GBA Plus Considerations

During the life of the Project, the PA will be largely inaccessible. This is expected to last for approximately 30 years once construction commences. The northern extent of ANA's Indigenous Sovereignty and Protected Area overlaps with the PA.

As presented in Appendix X, the GBA Plus subgroups that may experience negative effects by restricted access include:

- Indigenous Peoples. This includes men+, women+, Elders and youth. The inability to access sites of Indigenous physical and cultural heritage importance may result in the loss of knowledge transmission across multiple generations.

12.7.6 Residual Effects after Mitigation

After the implementation of mitigation measures, assessment and characterization of potential residual effects on Indigenous physical and cultural heritage, including structures, sites, or things of significance is completed using the methodology outlined in Section 6. Further details on residual effect criteria ratings that are specific to physical and cultural heritage sites or things are defined in Section 6 and in Section 12.3.2.

The attached Table 12.1-1 summarizes the results of the assessment for the linked pVC and fVC components. Detailed description on the methods, existing conditions, mitigation measures, and residual effects can be found in their respective sections.

Based on the assessment of linked pVCs and fVCs, residual changes after mitigation considered as part of the assessment of residual effects on Indigenous physical and cultural heritage structures, sites, or things of significance include:

- Cultural Heritage (pVC)

There are other linked pVCs and fVCs listed in Table 12.1-1 and section 12.1 that do not have residual changes after mitigation measures have been applied. This includes the linked fVC Fish and Fish Habitatt, and linked pVCs of Wild Rice, Land and Resource Use, and Archaeology. This means that Project activities will not change their existing conditions over the Project life cycle. Therefore, those linked pVCs and fVCs are not carried forward into the residual effects assessment for ANA community members.

12.7.6.1 Residual Effects to Asubpeeschoseewagong Netum Anishinabek Physical and Cultural Heritage after Mitigation

Sections 12.7.6.1.1, 12.7.6.1.2 and 12.7.6.1.3 summarize the results of the residual effects assessment for the three potential effects to Indigenous physical and cultural heritage. These sections draw from the two PVCs of archaeology and cultural heritage and the criteria of current use of land and resources for traditional purposes.

These are the three sources of information that encompass both tangible and intangible places and things relevant to the assessment of Indigenous physical and cultural heritage. Table 12.7-2 summarizes the potential effects that remain after mitigation and enhancement measures are implemented.

Table 12.7-2: Residual Effects Remaining after Mitigation Measures for Indigenous Physical and Cultural Heritage - Asubpeeschoseewagong Netum Anishinabek

Potential Effect	Potential Residual Effect Remaining
Alteration or destruction of sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	N
Change in access to or quality of experience with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites	Y
Change in sacred, ceremonial, spiritual and cultural values (including language, stories and traditions) associated with sites or areas of Indigenous heritage importance, including archaeological, historical, or architectural sites.	Y

No residual effect involving alteration or destruction of sites or areas of Indigenous heritage importance is anticipated in relation to heritage-related past and current use of land and resources for traditional purposes, archaeological sites or cultural heritage landscapes. This is based on:

- ANA correspondence regarding the Project, in combination with other publicly available sources, indicates that ANA members hunt and trap in the LSA and RSA and fish in portions of the English River system in the RSA. Both areas overlap with the RSA but do not intersect the PA, and specific ANA traditional harvesting sites or areas within the PA are not identified. ANA notes the traditional importance of wild rice harvesting but does not indicate ANA harvesting locations in the PA. ANA also expresses concerns about disturbances to rocks, such as blasting, that may affect associated spirits. However, ground-disturbing activities will be limited to the PA, and specific locations of this type are not identified within it.
- For archaeological heritage, Great Bear Resources has made design changes to components within the PA to protect EfKj-1 through avoidance. Archaeological work to date has confirmed that the Project will not have an effect on archaeological site EeKi-4 due to its location beyond the archaeology pVC LSA and RSA (Appendix Q-1). Although EfKj-2, EfKj-3 and EfKj-4 are located closer the PA, they are also beyond the archaeology pVC LSA and RSA (Appendix Q-1).
- For cultural heritage landscapes, the Project cannot avoid CHR 3, the wild rice fields between Unnamed Waterbodies 1 and 2 (Appendix P-1)). A wild rice study has been selected as the appropriate mitigation. The results of this study have the potential to inform future Indigenous and non-Indigenous wild rice revitalization initiatives and to support the presence and success of the species across the region.

12.7.6.1.1 Residual Effects on Change in Access to or Quality of Experience with Sites or Areas of Indigenous Heritage Importance

ANA correspondence regarding the Project, in combination with other publicly available sources, indicates that their community members hunt and trap in the LSA and RSA, including on trapline R061, and fish in the LSA including near the inflow of the Chukuni River, and Dixie Creek.

However, no ANA traditional harvesting sites or areas are identified in the PA, suggesting that loss of access during the lifetime of the Project will not change associated ANA cultural activities and practices.

ANA does not identify cultural heritage values, including campsites, gathering places, and spiritual areas in the PA. These sites occur elsewhere in the LSA and RSA, and access to these sites will not be affected by the Project.

ANA notes concern regarding downstream contamination and airborne pollution, on traditional activities and associated cultural practices. As stated in the cultural heritage study of the Chukuni River as a CHR, a planned effluent pipe in this location will not interfere with the use of the river for travel, and discharge from the pipe will avoid effects on water and fish by complying with regulatory requirements for water quality and quantity. These measures, in turn, will mitigate potential effects along the Chukuni River in the LSA.

ANA also notes concern regarding the effects of development-related sensory disturbances. The quality of experience while hunting and trapping in the LSA in proximity to the PA and using the Chukuni River in the LSA for fishing and cultural purposes may be affected by sensory disturbances due to increased sound, vibration, and dust, and changes to visual quality.

On this basis, a residual effect on Indigenous physical and cultural heritage is anticipated in relation to heritage-related past and current use of land and resources for traditional purposes. Residual effects involving changes in access to or quality of experience associated with archaeological sites or cultural heritage landscapes of Indigenous heritage importance are not anticipated for ANA.

The associated characterizations are presented in Table 12.7-3 and are based on the following assumptions regarding the effectiveness of relevant mitigations. It is assumed that application of mitigations for Indigenous physical and cultural heritage, as well as linked pVCs, protects heritage sites, areas and things that support cultural values and knowledge, as well as intergenerational knowledge transfer. It is assumed that mitigation measures which restore ANA access and experience at closure (e.g., reclamation) are sufficiently advanced that conditions after 32 years are consistent with those needed for practicing, teaching and learning activities that support Indigenous cultural heritage. It is also assumed that mitigation measures for sensory effects restrict residual effects to the LSA such that their frequency in areas accessible to ANA community members during the Project is infrequent, and their timing does not affect sensitive seasonal periods key to practicing and sharing cultural activities (e.g., fall harvest of wildlife and plants in the LSA).

Table 12.7-3: Characterization for Negative Residual Effects on Change in Effect on Access to or Quality of Experience with Sites or Areas of Indigenous Heritage Importance – Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level I	Criteria may or may not be sensitive, and can support the predicted change with typical mitigation measures:
Magnitude	Level I	Project-related change that is insufficient to alter how Indigenous heritage structures, sites or things, are used, accessed or experienced
Geographic Extent	Level I	Effect is restricted to the LSA
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years
Frequency	Level II	Effect occurs infrequently
Reversibility	Level I	Effect is fully reversible during the Project phases
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated:

12.7.6.1.2 Residual Effects on Sacred, Ceremonial, Spiritual and Cultural Values Associated with Sites or Areas of Indigenous Heritage Importance

ANA correspondence regarding the Project, in combination with other publicly available sources, indicates that their community members hunt and trap in the LSA and RSA, including on trapline R061, and fish in the LSA including near the inflow of the Chukuni River, and Dixie Creek.

ANA notes concern regarding downstream contamination and airborne pollution, on traditional activities and associated cultural practices, extending to intergenerational knowledge transmission. ANA expresses concern about the effects of habitat change on species which serve as ANA clan animals, specifically caribou and sturgeon.

As stated in the cultural heritage study of the Chukuni River as a CHR, a planned effluent pipe and its discharge will avoid effects on water and fish by complying with regulatory requirements for water quality and quantity. These measures, in turn, will mitigate potential effects along the Chukuni River in the LSA.

ANA also notes concern regarding the effects of development-related sensory disturbances. Wildlife species of cultural importance may be indirectly affected by sensory disturbance. The quality of experience while hunting and trapping in the LSA in proximity to the PA and using the Chukuni River in the LSA for fishing and cultural purposes may be affected by sensory disturbances due to increased sound, vibration, and dust, and changes to visual quality, which may affect sacred, ceremonial, spiritual and cultural values by impeding knowledge sharing and intergenerational cultural transmission.

On this basis, a residual effect on Indigenous physical and cultural heritage is anticipated in relation to heritage-related past and current use of land and resources for traditional purposes. Residual effects involving changes in sacred, ceremonial, spiritual, and cultural values associated with archaeological sites or cultural heritage landscapes of Indigenous heritage importance are not anticipated for ANA.

The associated characterizations are presented in Table 12.7-4 and are based on the following assumptions regarding the effectiveness of relevant mitigations. It is assumed that applying mitigations for Indigenous physical and cultural heritage, as well as linked pVCs, protects heritage sites, areas, or things that support cultural values and knowledge, as well as intergenerational knowledge transfer. It is assumed that mitigation measures which restore ANA access and quality of experience at closure (e.g., reclamation) are sufficiently advanced that conditions after 32 years are consistent with those needed for practicing, teaching and learning activities that support Indigenous cultural heritage. It is also assumed that mitigation measures for sensory effects restrict residual effects to the LSA such that their frequency in areas accessible to ANA members during the Project is infrequent, and their timing does not affect sensitive seasonal periods key to practicing and sharing cultural activities (e.g., fall harvest of wildlife and plants in the LSA).

Table 12.7-4: Characterization for Negative Residual Effect Potential Effect on Sacred, Ceremonial, Spiritual and Cultural Values Associated with Sites or Areas of Indigenous Heritage Importance – Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level I	Criteria may or may not be sensitive, and can support the predicted change with typical mitigation measures:
Magnitude	Level I	Project-related change that is insufficient to alter how Indigenous heritage structures, sites or things are used, accessed or experienced:
Geographic Extent	Level I	Effect is restricted to the LSA:
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years:
Frequency	Level II	Effect occurs intermittently or regularly:
Reversibility	Level I	Effect is fully reversible during the Project phases:
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated

12.7.7 Significance of Residual Effects

The magnitude of the residual effects on Indigenous physical and cultural heritage as a result of Project-related activities is low (Level I) and restricted to the PA and LSA (Level I). The effect will occur intermittently (Level II) and will be present throughout construction, operations, and closure (Level II). It will be fully reversible as of closure (Level I). The limited spatial extent of the Project, along with design and mitigation measures, including provision for ceremonies in the PA as appropriate, reduces any Project contribution (Level I). The residual effect is therefore not significant.

12.7.8 Confidence

The prediction confidence assignment reflects the information available through Project-specific TKLUS reports, publicly available data (statistical websites, government pages, previously completed EA/IS reports, understanding of the effectiveness of applicable mitigation measures, and outcomes of other pVCs and fVCs.

The assessment is informed by substantial primary and secondary information and robust analysis however, as noted in the assessment, there are some instances where the information collected had data gaps or lacked detail.

The overall confidence in residual environmental effect and significance predictions for Indigenous physical and cultural heritage and structures, sites or things of significance is moderate. As additional information continues to be shared through Great Bear Resources' ongoing consultation with local Indigenous communities over Project life, relevant information will be incorporated into Project planning as practical.

12.8 Community Well-being

Community well-being was identified as a criteria as it reflects the broader social and economic conditions that influence quality of life. These conditions may be directly or indirectly affected by Project-related changes to social determinants of health including, income, employment, housing affordability, food security, access to services, community cohesion, and access to land and resources. These factors are considered individually and collectively to assess the broader social and economic conditions that contribute to health, stability, resilience and quality of life of ANA members across the LSA and RSA.

The community well-being assessment incorporates the following key themes, reflected in the structure of the existing conditions and effects assessment:

- Social determinants of health (e.g. income, employment, housing, cost of living, traditional economy and education level, access to health and social services)
- Community Cohesion (e.g. household dynamics, gender-based and caregiver vulnerabilities, family stability, and community inclusion)
- Public Safety (e.g. crime and gender-based violence including safety risks for women+, girls+, and 2SLGBTQIA plus people, where "women+" and "girls+" refer to women+, girls, and non-binary individuals as defined by Statistics Canada)
- Access to land and resources (e.g. harvesting, cultural practices, and land stewardship).
- Population Dynamics (e.g. regional population growth, mobility, and demographics)
- Economic opportunity and inequality (e.g. access to employment and training, and barriers for Indigenous and vulnerable groups)

A GBA plus lens was applied to consider the experiences of diverse groups (e.g., Elders, youth, 2SLGBTQIA plus, women+). The assessment integrates desktop research and qualitative data from interviews with key service providers to develop a comprehensive understanding of existing conditions and potential effects on community well-being.

Information sources include a desktop baseline socio-economic report (Appendix O-1), publicly available statistics, academic literature, media reports, and non-confidential Indigenous Knowledge and land use information, where available.

As outlined in the Section 12.3.2, Effects Assessment Criteria, and summarized in Table 12.3-1, the assessment draws on a set of quantitative and qualitative indicators covering housing and cost of living, income inequality, service capacity, safety, employment participation, household pressures, community cohesion, and access to traditional resources. These indicators align directly with previous themes listed and form the basis for evaluating changes in community well-being.

12.8.1 Spatial Boundaries

There are three study areas within the spatial boundaries. They are the Project Area (PA), the Local Study Area (LSA), and the Regional Study Area (RSA), which includes both the PA and the LSA. The spatial boundaries used for the assessment of community well-being are shown in Figure 12.8-1 and are defined:

- The PA is defined as the footprint of the Project including all temporary and permanent areas associated with the mine site, as well as a buffer to allow flexibility for design optimizations prior to construction and over the mine life (Section 6.4). The PA is approximately 3,349 hectares (ha) in size.
- The LSA is the area within which Project-related effects may reasonably be expected to occur and can be predicted or measured with a reasonable degree of accuracy and confidence. The regions that the Project's socio-economic demands are expected to influence, possibly causing direct, indirect and / or induced effects on community well-being include the Indigenous communities of ANA, LSFN, WFN, NWOMC (the community of Métis citizens in the region), and Indigenous Peoples living in the Red Lake and Ear Falls area.
- The RSA encompasses the LSA and is used to provide regional context for the significance of residual effects and is also the area within which potential for cumulative effects of the Project in combination with other past, present or reasonably foreseeable projects or activities are considered. The region surrounding the LSA and the PA may also experience direct, indirect, and / or induced effects on community well-being due to the socio-economic demands of the Project. This could include transportation corridors, and / or services which operate throughout the region. The RSA for community well-being is the District of Kenora. The RSA is the region which cumulative effects on the pVC and fVC are likely to occur.

These boundaries are consistent with those used for other social pVCs and fVCs, including community services and infrastructure (Section 12.5).

KAHNAHMAYKOOSAYSEEKAHK
WOODLAND CARIBOU PROVINCIAL PARK (WILDERNESS CLASS)
TROUT LAKE PROVINCIAL PARK (NATURE RESERVE CLASS)
MUNICIPALITY OF RED LAKE
HIGHWAY 125
HIGHWAY 105
PAKWASH PROVINCIAL PARK (NATURAL ENVIRONMENT CLASS)
TOWNSHIP OF EAR FALLS
WEST ENGLISH RIVER PROVINCIAL PARK (WATERWAY CLASS)
MAYNARD LAKE PROVINCIAL PARK (NATURE RESERVE CLASS)
TIDE LAKE PROVINCIAL PARK (NATURE RESERVE CLASS)
WINDIGO POINT PROVINCIAL PARK (NATURE RESERVE CLASS)
Wabauskang First Nation
Asubpeeschoseewagong Netum Anishinabek
Lac Seul First Nation
MUNICIPALITY OF SIOUX LOOKOUT

Olive Lake, Kahnahmaykoosaysensikahk/ Valhalla Lake, Little Vermilion Lake, Coli Lake, Linge Lake, Golden Creek, Bloodvein River, Paishk Lake, Knox Lake, Alford Lake, Ranger Creek, Red Lake, Hammell Lake, Indian House Lake, Ranger Lake, Otter Lake, Trout Lake, Bathurst Creek, Narrow Lake, Woman Lake, Okanse Lake, Confederation Lake, Joyce Lake, Little Trout Lake, Little Bear Lake, Fly Lake, Uchi Lake, Jubilee Lake, Douglas Lake, Parker Lake, Keg Lake, Starrau Channel, Embryo Lake, Telescope Lake, Medicine Stone Lake, Upper Medicine Stone Lake, Two Island Lake, Gullrock Lake, Moose Creek, Caribou Creek, Ten Mile Creek, Trout Lake River, Dixie Creek, Bruce Lake, Pakwash Lake, Longlegged Lake, Kilburn Lake, Confusion Lake, Pineneedle Lake, Sydney Lake, Rice Creek, Chukuni River, Wenasaga Lake, Camping Lake, Sandy Creek, Cedar River, Rowdy Lake, Sumach Lake, Conifer Lake, Wegg Lake, Barnston Lake, Goose Lake, Unexpected Lake, Wilcox Lake, Anishinabi River, Lizamia Creek, Oak Lake, Roger Lake, Fletcher Lake, Anishinabi Lake, Wine Lake, Lac Seul, Scout Lake, Salvesen Lake, Treelined Lake, Scotty Lake, Maynard Lake, Lennan Lake, Bornite Lake, Aerobus Lake, Sup Lake, Perrault Lake, Ball Lake, Wabigoon River, Separation Lake, Brown Bear Lake, Scenic Lake, Indian Lake, Big Fox Lake, Lount Lake, Little Fox Lake, Grassy Narrows Lake, Segise Bay, Segise Lake, Delaney Lake, Wonderland Lake, Big Canon Lake, Clay Lake, Cliff Lake, Cedar Lake, Ord Lake, Thaddeus Lake, Williams Lake, Ord River, Wabauskang Lake, Broad Lake, Broadcast Lake, Twain Lake, Sunlight Lake, Aerial Lake, Wapesi Lake, Wapesi River, Hall Creek, Spruce River, Clear Lake, Whitefish Lake, Lost Lake, Pelican Lake, Route Lake, Big Vermilion Lake, Pelican River, Fork Creek, Celt Lake, Aerofoil Lake, Pilot Lake, Papaonga River, Papaonga Lake, Whitemud Lake, Whitemud River, Wenasaga River, Bluffy Lake, Slate Lake, Uchi River, Roadhouse River, Wesley River, Brokenmouth River, Jeanette Lake, Wakeman Lake, Tarpley Lake, Sesikinaga Lake, Hailstone Lake, Margaret Lake, Seagrave Lake, Bertha Lake, Birch Lake, Shabumeni Lake, Springpole Lake, Gull Lake, Shabumeni River, Birch River, Ogoki River

N

LEGEND:

- LOCAL STUDY AREA
- REGIONAL STUDY
- HIGHWAY
- MAJOR ROAD
- LOCAL ROAD
- RAILWAY
- WATERCOURSE
- WATERBODY
- INDIGENOUS COMMUNITY
- PROVINCIAL PARK
- MUNICIPAL BOUNDARY (LOWER TIER)
- PROJECT AREA

NOTES:
NOTE1: BASE DATA ACQUIRED FROM LAND INFORMATION ONTARIO.

0 5 10 20 30 km

SCALE 1:550,000
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 15N

THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD NOT BE USED FOR NAVIGATION

GREAT BEAR RESOURCES

GREAT BEAR GOLD PROJECT

SPATIAL BOUNDARIES FOR COMMUNITY WELL-BEING

SLR

FIGURE NO:
12.8-1

DATE: November 19, 2025

PROJECT NO: 241.030825

12.8.2 Existing Conditions

Community well-being reflects the social, economic, cultural, and service conditions that influence overall quality for ANA members.

To align with the assessment indicators used in the effects analysis, information is organized by: social determinants of health (income, housing, cost of living, employment, education level); access to services (health and social); household dynamics (including gender-based and caregiver vulnerabilities); public safety (including gender-based violence); economic opportunity and inequality; community cohesion; access to land and resources; and population dynamics.

The baseline characterization draws on desktop research. Additional details are provided in the Socio-Economic Baseline Study (Appendix O-1).

12.8.2.1 Methods

The information presented was collected via desktop research utilizing publicly available data sources such as Statistics Canada and other public websites (e.g. municipal, Indigenous communities) as well as qualitative information gathered through interviews with key regional service providers and community organizations. Statistical information specific to ANA is limited.

The analysis is guided by the TISG, which requires consideration of health, social, and economic conditions, with specific attention to the well-being of ANA community members. It is important to note that the reference year for income data is 2020, during the first year of the COVID-19 pandemic. This period was marked by considerable disruptions to employment, earnings, and government transfers, which may have had both short- and medium-term effects on reported income levels across Canada, particularly in small or remote communities.

The TISG also states that the description of baseline economic conditions must include “any relevant treaty provisions pertaining to economic development for Indigenous Peoples”. Great Bear Resources is not aware of any treaty provisions pertaining to economic development for ANA.

12.8.2.2 Description

Community well-being reflects the overall social and economic conditions that support the health, stability, and resilience of individuals, families, and communities. It is closely connected to other pVCs and fVCs, including:

- Local and Regional Economy (Section 7.16)
- Community services and infrastructure (Section 12.5)
- Current use of lands and resources for traditional purposes (Section 12.6)
- Health (Section 12.9).

Statistical information (e.g., income, employment, housing) provides an understanding of community conditions. These sources offer a foundation for evaluating how existing pressures and potential future changes may affect overall well-being in the LSA and RSA.

12.8.2.2.1 Community Well-Being Index

The Community Well-Being (CWB) Index is a composite measure developed by Indigenous Services Canada that provides a high-level snapshot of regional socio-economic conditions across Canadian communities.

ANA is not included in the CWB Index program; therefore, no CWB score is available for this community. The assessment relies on other available sources of information to describe socio-economic conditions for the community.

12.8.2.2.2 Social Determinants of Health

Social determinants of health, including income, education, housing, and employment are evaluated to understand baseline conditions across the LSA and RSA.

Where specific on-reserve data for ANA is not available, broader Kenora District data is used to illustrate regional trends and context. This approach is important because the Kenora District reflects many of the systemic challenges and opportunities affecting small, remote, and Indigenous communities across northwestern Ontario. It is also important to note that residents of the LSA and RSA frequently access specialized services, such as healthcare, emergency shelters, and social supports, located in regional centres such as City of Kenora, reinforcing the connection between regional trends and on-reserve well-being.

Although ANA community members may occasionally access specialized services in regional hub centres, the assessment focuses primarily on conditions and well-being indicators relevant to ANA and the surrounding area.

Quantitative data, as it is available, (such as Statistics Canada information) is integrated throughout the Section to provide a comprehensive understanding of current conditions and community well-being.

12.8.2.2.2.1 Income and Employment

Income is a determinant of individual and household well-being, and defines access to housing, education, health care, and other basic needs. It informs financial security, quality of life, and the overall social and economic resilience of communities. Regional data on income levels, income inequality, income distribution and sources of income are included. Together, these indicators provide insight into financial stability, affordability pressures, and broader socio-economic conditions across the LSA and RSA.

Income and Income status

In 2020, the median after-tax income of households in ANA's on reserve population was $49,600, a change of 92.2% from $25,800 in 2015 (Statistics Canada 2023b).

The median income in 2020 for ANA's on-reserve population was $31,400 lower than that of Ontario. Similarly, the average employment income in 2020 was $40,400 lower than that of Ontario. In both ANA and Ontario, women+ had a lower median and average employment income compared to men+ (Statistics Canada 2023b).

Table 12.8-1: Employment Income Statistics - Asubpeeschoseewagong Netum Anishinabek and Ontario 2025

Income Statistics	Total	Men+	Women+
ANA			
Number of employment income recipients (aged 15 years and over in private households who worked full year full time in 2020)	95	40	50
Median employment income in 2020 among recipients (Full-year full-time workers)	$35,600	$36,800	$33,600
Average employment income in 2020 among recipients (Full-year full-time workers)	$42,000	$44,000	$39,000
Ontario			
Number of employment income recipients (aged 15 years and over in private households who worked full year full time in 2020)	3,865,695	2,145,810	1,719,885
Median employment income in 2020 among recipients (Full-year full-time workers)	$67,000	$72,000	$61,600
Average employment income in 2020 among recipients (Full-year full-time workers)	$82,400	$90,700	$72,000

Low-income Prevalence (LIM-AT)

The on-reserve ANA low-income rate, as defined by the Low Income Measure – After Tax (LIM-AT) was 44%, notably higher than the provincial average of 10% (Statistics Canada 2023f)). Rates exceed 40% across all age groups, reflecting substantial income insecurity in the community. By comparison, provincial rates were notably lower across all age categories:

- 11.5% for children under 18,
- 9.1% for adults aged 18–64, and
- 12.1% for seniors aged 65 and over.
- Men+ and women+ were affected at similar rates overall (44% and 45% respectively)

Gender-based disparities emerged more clearly among children and working-age adults:

- Among children aged 0–17, 48% of girls+ lived in low income compared to 38% of boys+,
- Among adults aged 18–64, 51% of men+ were affected versus 44% of women+.

These findings suggest that economic vulnerability is shaped by both age and gender.

Table 12.8-2: Prevalence of Low Income by Age Group- Asubpeeschoseewagong Netum Anishinabek and Ontario, 2025

Age Group	Total (%)	Men+	Women+	Ontario Total (%)
All Ages	44	45	44	10
0–17 years	43	38	48	11.5
18–64 years	47	51	44	9
65+ years	25	25	25	12
Source: (Statistics Canada 2023f) Note: Reference year is 2020				

Income Inequality

The Gini Index (or Gini coefficient) is a commonly used statistical measure of income inequality within a population. It ranges from 0 to 1, where:

- 0 represents perfect equality, meaning every household has the exact same income.
- 1 represents complete inequality, where one household has all the income and all others have none.

In practice, a lower Gini Index suggests a more equal distribution of income, while a higher index signals greater inequality.

A Gini coefficient is not available for ANA, likely due to data suppression by Statistics Canada to protect confidentiality and account for small population size. This is a common limitation for smaller Indigenous communities where detailed income distribution data are either not collected or not publicly reported.

Income Distribution

Detailed income distribution data, such as income percentiles, are not available for ANA likely due to data suppression associated with small population size and privacy considerations.

Employment and Economic Participation

Labour market engagement is a core component of community well-being, contributing to income security and access to services.

As of 2021, as shown in Table 12.8-3:, ANA reported an on-reserve participation rate of 45% and an employment rate of 35%. The unemployment rate in ANA was 19%, above the provincial average of 12% (Statistics Canada 2023f):

- Women+ had a participation rate of 50% and an employment rate of 43%.
- Men+ had a participation rate of 40% and an employment rate of 30%.
- Unemployment rates were 14% for women+ and 25% for men+.

These figures indicate moderate labour force engagement, as well as notable barriers to securing stable employment, particularly among men+.

Increased unemployment rates in small Indigenous communities often reflect structural challenges, including limited local job availability, reliance on seasonal or informal work, and access barriers such as education, transportation, and childcare.

The relatively higher participation and lower unemployment rates among women+ suggest that women+ may be more actively engaged in the local labour market, though this could also reflect the availability of jobs in sectors traditionally employing women+, or limited access to alternative income sources. For men+, the combination of lower participation and higher unemployment may point to limited opportunities in male-dominated sectors, educational gaps, or other systemic barriers.

Table 12.8-3: Labour Force Indicators by Gender - Asubpeeschoseewagong Netum Anishinabek,2025

	ANA			Ontario		
Labour Force	**Total**	**Men+**	**Women+**	**Total**	**Men+**	**Women+**
Participation rate (%)	47	40	50	62.8	67.1	58.7
Employment rate (%)	35	30	43	55.1	59.6	50.8
Unemployment rate (%)	19	25	15	12.2	11.2	13.4

Source: (Statistics Canada 2023f)

Note: Reference year is 2020

Note: The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons.

Sources of Income

While the previous section (Table 12.8-3:) showed that women+ in ANA had higher labour force participation and employment rates than men+, this does not translate into higher earned income. To better understand this, the composition of income in ANA, including the relative contributions of employment earnings, market income, and government transfers is examined. The income composition for ANA's on-reserve population and the Province of Ontario is presented in Table 12.8-4. The data show that the on-reserve population in ANA receives a lower share of total income from employment and market sources (65%) compared to Ontario, and a higher reliance on government transfers (35%). Additionally, men+ accounted for a greater proportion of market and employment income, while women+ received a larger share of government transfers (Statistics Canada 2023b; Statistics Canada 2023f).

This suggests that while women+ are more active in the labour market, they may also experience greater economic vulnerability, relying on a mix of earned income and government supports to meet their needs.

In addition to community-specific income characteristics, household income stability within ANA is influenced by broader regional economic conditions. In October 2025, the Ear Falls sawmill, a major employer within the Kenora District, announced its closure, affecting approximately 150 unionized positions. The closure was characterized as a community-level disruption within Ear Falls and the surrounding regional labour market, reflecting the region's reliance on resource-sector employment (CBC News 2025).

While the sawmill was not located on ANA reserve and no information was available at the time of writing to indicate direct employment or income effects for ANA members, the closure represents a source of broader regional economic uncertainty.

Such regional labour market changes may influence income stability, employment availability, and service demand over time; however, any community-specific implications for ANA remain uncertain.

Table 12.8-4: Income Composition - Asubpeeschoseewagong Netum Anishinabek and Ontario, 2025

Income Composition	Total	Men+	Women+
ANA			
Market Income (%)	65.0	72.0	62.0
Employment Income (%)	63.0	68.0	58.0
Government Transfers (%)	35.0	29.0	38.0
Ontario			
Market Income (%)	82.8	87.0	77.8
Employment Income (%)	67.4	71.4	62.3
Government Transfers (%)	17.1	13.0	22.3

Source: (Statistics Canada 2023b; Statistics Canada 2023e).

Note: Reference year is 2020

Note - The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons.

Education Level

Educational attainment in ANA remains below provincial averages, highlighting ongoing systemic barriers to accessing and completing formal education. As shown in Table 12.8-5 regional census data shows that, 61% of individuals aged 15 and over had no certificate, diploma, or degree, while 19% had completed a high school diploma, and 17% had attained any form of postsecondary education (Statistics Canada 2023f) . In comparison, the provincial averages were lower for those with no formal certification (15.3%) and higher for postsecondary attainment (57.5%). Sakatcheway Anishinabe School is the one school located within ANA. It hosts students from kindergarten to grade 12 and is affiliated with the Migizi Wazason Childcare Centre. (Sakatcheway Anishinabe High School n.d.)

Postsecondary attainment was higher among women+ (19.0%) than men+ (17.5%) in ANA, with 7.1% of women+ holding a university degree compared to 0% of men+. High school completion was more common among men+ (22.5%) than women+ (19.0%), though both rates were below provincial averages.

College-level attainment was similar across gender groups in ANA (around 10%), but notably lower than in Ontario, where 22.2% of women+ and 18.3% of men+ held such credentials.

These patterns reflect not only a gap between ANA and Ontario but also gendered differences in access to and completion of formal education.

Lower attainment levels may relate to barriers such as the absence of nearby institutions, financial limitations, and caregiving responsibilities, which often disproportionately affect women+.

The data presented here are drawn from the 2021 Census of Population, which is currently the only comprehensive source available for education indicators in ANA. It is important to recognize that publicly available statistics may not fully capture local realities or the role of community-based learning and Indigenous Knowledge systems.

As such, these figures should be interpreted as a broad indication of formal attainment patterns rather than a complete picture of educational experience within the community.

It is important to recognize that publicly available statistics may not fully capture local realities or the role of community-based learning and Indigenous Knowledge systems. As such, these figures should be interpreted as a broad indication of formal attainment patterns rather than a complete picture of educational experience within the community.

Table 12.8-5: Educational Attainment - Asubpeeschoseewagong Netum Anishinabek and Ontario, 2025

Category	ANA			Ontario		
	Total (%)	Men+ (%)	Women+ (%)	Total (%)	Men+ (%)	Women+ (%)
No certificate, diploma or degree	61.4	60	61.9	15.3	15.8	14.8
High school diploma or equivalent	19.3	22.5	19	27.2	28	26.4
Any postsecondary education	14.5	17.5	19	57.5	56.2	58.8
College/CEGEP or other non-university diploma	9.6	10	9.5	20.3	18.3	22.2
Bachelor's degree or higher	4.8	0	0	19.6	18	21.1

Source: (Statistics Canada 2023e).
Note - The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons.

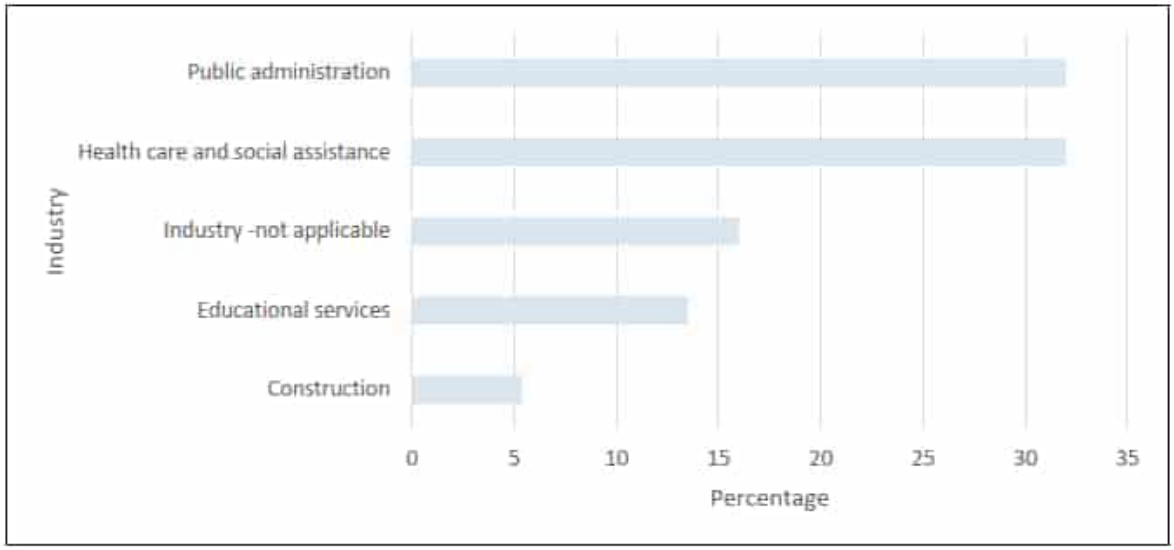
Workforce by Industry

Figure 12.8-2 presents the workforce of ANA's on-reserve population by industry according to 2021 Census data. Data shows that approximately 32% of those in the workforce were in the health care and social assistance industry, 32% were in public administration, 16% were in an industry that was not specified in the Census, 13% were in educational services, and 5% were in construction. Women+ made up a higher proportion of the labour force under all of the industries specified in Figure 12.8-2. For example, women+ made up 40% of the health care and social assistance labour force, while men+ made up 25%. Women+ made up the entire labour force working in construction (Statistics Canada 2023f).

Figure 12.8-3 shows the types of occupations held by ANA on-reserve residents for those employed at the time of the 2021 Census.

The most common occupations were those in education, law and social, community and government services (46%), occupations that were not specified in the Census (16%), sales and service occupations (13%), business, financial and administration occupations (8%), occupations in manufacturing and utilities (5%), natural resources, agriculture and related production occupations (5%), trades, transport and equipment operators and related occupations (5%), and natural and applied sciences and related occupations (5%) (Statistics Canada 2023f).

Figure 12.8-2: Workforce by Industry - Asubpeeschoseewagong Netum Anishinabek,2025

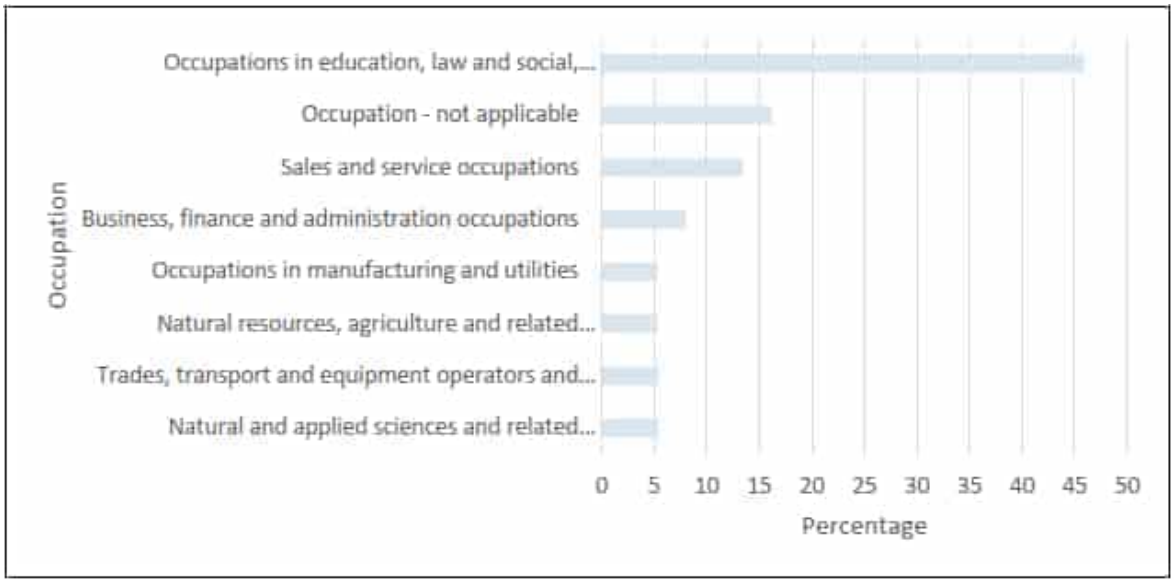


Source: (Statistics Canada 2023b).

Note: Reference year is 2020

Note: The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons.

Figure 12.8-3: Workforce by Occupation - Asubpeeschoseewagong Netum Anishinabek, 2025



Source: (Statistics Canada 2023f)

Note: Reference year is 2020

Note: The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons

12.8.2.2.3 Economic Opportunity and Inequality

Economic opportunity and inequality are not assessed within the ANA-specific analysis and are instead examined at a regional scale; refer to Section 14.0, Predicted Changes to Indigenous Peoples living in the Red Lake and Ear Falls Area, for supporting context.

Given the community's stance on resource development, they are not expected to seek employment and/or contracting opportunities with the Project.

12.8.2.2.3.1 Economic Development

Information available provides only limited insight into ANA-specific economic development; regional context is presented in Section 14, Predicted Changes to Indigenous Peoples living in Red Lake and Ear Falls Area.

12.8.2.2.3.2 Barriers to Employment Income and Participation

Economic participation is a key determinant of community well-being, influencing access to stable income, housing, education, and health services.

12.8.2.2.3.3 Childcare Access as a Barrier to Employment

The average cost of childcare in Ontario as of 2018 was $11,500 per child per year, meaning the average income earner on-reserve in ANA would spend 27% of their income on childcare (from, 2018). This is higher compared to Red Lake and Ear Falls, who would be spending 14.5% and 14.8% of their income on childcare, respectively. There is one childcare service operating in ANA, with a limited supply of available subsidies.

The combination of affordability issues and accessibility have disproportionately negative effects on women+, whose work hours decrease more than men with the presence of a child in the household (Moyser 2017)

12.8.2.2.3.4 Additional Employment Constraints

In addition to structural challenges such as limited local job opportunities and low educational attainment rates, community-specific values and governance decisions also shape employment patterns in ANA. The community has taken a firm stance against resource development activities within its traditional territory, particularly in relation to forestry and mining (Chamberlain 2024).

As a result, community members may choose not to participate in employment opportunities linked to these sectors, even when such jobs are available regionally. This position reflects deeply held concerns around environmental protection, cultural preservation, and self-determination, rather than a lack of willingness or capacity to work. This stance has created a distinct employment dynamic, in which ANA's labour force is less engaged in dominant regional industries, and more reliant on employment opportunities aligned with community values, including land stewardship, education, and community services, where the number of opportunities, and/or salary is not as high as those employment opportunities found in the primary resource sector.

12.8.2.2.3.5 Housing

Access to safe, stable, and appropriate housing is a cornerstone of individual and community well-being, directly influencing health, security, and social inclusion.

Housing affordability and access

As of October 2020, ANA had a total of 185 occupied private dwellings (Sakatcheway Anishinabe High School n.d.). Of the 185 occupied dwellings, 180 households were living in residences provided by the Band. Among the occupied private homes, 90 required regular maintenance or minor repairs, while 95 needed major repairs (Statistics Canada 2023b).

Additionally, the community has secured federal funding (approximately $24 million) to support the construction of about 100 additional housing units. Planned developments include 50 modular homes, a 20-unit apartment building, and 30 additional homes, many of which are intended to replace older units on designated southern lots (Stimpson 2024). Housing in ANA is not open to outsiders; only ANA members can access housing 'on-reserve'. Housing is an issue across the region. Interviews with regional service providers such as the Kenora Sexual Assault Centre, Northwest EMS, and the OPP reinforced that housing scarcity extends beyond vulnerable individuals to affect critical service delivery. These organizations cited challenges in recruiting and retaining qualified staff due to high housing costs and limited availability. It was reported that organizations had lost educator hires due to unaffordable or inaccessible housing, while the OPP noted that transient populations and housing insecurity are increasingly tied to mental health and safety concerns (Wesley 2025; Hamilton 2025; Hall & Lamme 2025). Findings from the 2024 Point-in-Time (PIT) Count conducted by the Kenora District Services Board (KDSB) highlighted the increasing housing pressures in the region. As of October 2024, 500 individuals were identified as experiencing homelessness in the Kenora District, including 325 in the City of Kenora alone. This reflects a 168% increase in homelessness in Kenora since the 2021 PIT count (Kenora District Services Board 2024).

The data further show that 76 individuals were residing in encampments and that 164 respondents had slept in jail, prison, or a remand centre the night before the count.

The PIT count also found that:

- 81 individuals cited low income as the main barrier to securing housing.
- 89% of respondents expressed a desire to be housed.
- 144 of 249 respondents identified as First Nations or Métis (58%), with the actual proportion potentially higher due to non-responses.
- 109 respondents had completed only some high school; with non-responses, the percentage could reach 67%.

The KDSB reported that the waiting list for housing in the Kenora District increased by 354% since 2011, highlighting the scale of the housing crisis (Kenora District Services Board 2024)

Homelessness studies may not capture everyone experiencing housing insecurity. People who are couch-surfing, living in overcrowded homes, staying temporarily with friends or family, or in unsafe housing situations are often missed in traditional counts.

Supportive and Emergency Housing

The community of WFN does not have supportive or emergency housing. Community residents in need would have to access services in Red Lake, or the City of Kenora. Access to regional supportive and emergency housing plays a critical role in community well-being by helping individuals maintain safety, dignity, and social stability during periods of acute housing insecurity These services are especially vital for women+, Indigenous residents, and individuals with complex needs who may lack other forms of support, and may require specialized housing.

For detailed descriptions of shelter infrastructure, bed capacity, and service utilization rates, refer to Section 15.5.1.3.2, Accommodation and Lodging in Community Services and Infrastructure (Red Lake Indian Friendship Centre n.d.)

12.8.2.2.3.6 Cost of Living and Traditional Economy

While there is no community-specific cost of living index available for the Kenora District, regional data for Northwestern Ontario suggests that the cost of goods, utilities, and services is elevated compared to other parts of the province. This is attributed to geographic remoteness, transportation limitations, and seasonal supply constraints. The Ontario Ministry of Health acknowledges these pressures through programs such as the Northern Health Travel Grant, which offsets travel costs for medical appointments in distant communities (Ontario Ministry of Health 2024).

Homelessness studies may not capture everyone experiencing housing insecurity. People who are couch-surfing, living in overcrowded homes, staying temporarily with friends or family, or in unsafe housing situations are often missed in traditional counts.

Many Indigenous communities, particularly those who are remote, and/or in an area with limited employment and income opportunities will participate in traditional economy activities. The Indigenous traditional economy is a land-based, community-centered economic system built on:

- Subsistence Activities – hunting, fishing, trapping, and gathering plants (e.g. medicinal, firewood, cooking) may replace and / or augment food sources and / or supplement household income
- Reciprocity and Sharing - this economy emphasizes sharing resources with family, Elders, and community members where giving creates social bonds, supporting collective well-being.
- Stewardship of the Land – maintaining balance so species and ecosystems regenerate (‘taking only what you need”) and viewing land and resources as a living relative, not a commodity (Seven Grandfather Teachings)
- Governance and Cultural Values – informed by Elders' knowledge, Band Councils, and cultural protocols.

Measuring Indigenous traditional economy is complex because it does not fit neatly into Western economic metrics like Community Wellness Index, Gross Domestic Product or income. Instead, it is described using qualitative and holistic information that reflect cultural, ecological, and social values.

12.8.2.2.4 Community Cohesion

Community cohesion is integral to community well-being, particularly in rural and remote areas where access to services may be limited.

The low mobility observed in ANA, where 95.7% of residents reported not moving in the past year (Statistics Canada 2023f), suggests a high degree of residential stability, which is associated with stronger community cohesion. In the context of small, Indigenous communities, such stability can reflect deep-rooted cultural and familial ties, intergenerational presence, and a strong sense of place.

Stable residency supports the development and maintenance of social networks, shared community norms, and mutual support systems, all of which are important components of community cohesion. It can also contribute to the continuity of cultural practices, language transmission, and collective community identity.

However, low mobility may not always be purely voluntary, it may also reflect limited housing options, economic barriers, or jurisdictional constraints. Still, the data suggests that ANA’s population is not highly transient, which in turn supports a strong foundation for community cohesion.

12.8.2.2.4.1 Collective Action and Community Cohesion

ANA has demonstrated a history of organized resistance to resource development activities, including coordinated protests and advocacy efforts (Boan 2023). These actions reflect not only the community’s environmental and territorial concerns, but also a high level of internal cohesion and collective purpose. The ability to mobilize in defense of shared values, such as land stewardship, cultural preservation, and sovereignty, indicates strong social bonds, mutual trust, and intergenerational solidarity.

This form of collective action can be seen as an extension of community cohesion, rooted in a unified community identity and a shared understanding of community priorities.

In March 2024, ANA submitted a letter to IAAC outlining the community's increasing concerns regarding the potential effects of the Project on water, cultural practices, and treaty rights, and formally requested a federal impact assessment.

The letter also emphasized the inadequacy of existing consultation processes and reiterated the community's longstanding opposition to extractive development on their traditional territory (Asubpeeschoseewagong Netum Anishinabek 2024). This direct and coordinated political action supports the continued relevance of collective self-determination in ANA's governance.

ANA's community cohesion is closely tied to collective resilience rooted in cultural values and a long-standing commitment to self-determination (Asubpeeschoseewagong Netum Anishinabek 2024). Solidarity within the community is expressed not only through social and familial networks but also through shared responsibilities in protecting and caring for the land and water. Stewardship practices are deeply embedded in Anishinaabe identity, governance, and spirituality, and are often carried forward through matriarchal roles (Chiblow 2019).

These responsibilities are reflected in the Nibi Declaration, as described in section 12.6.2, which articulates Anishinaabe law and sacred relationships with water, as guided by women+. This connection reinforces both cultural continuity and collective well-being, supporting community cohesion through the transmission of traditional governance, knowledge, and responsibilities across generations. In this context, water stewardship is not only an environmental concern but a practice of cultural survival and intergenerational solidarity (Grand Council Treaty #3 2021; Grand Council Treaty #3 2020).

12.8.2.2.5 Public Safety

Indigenous people in Canada experience higher rates of victimization due to the enduring impacts of systemic racism, colonialism, and past and present government policies. A 2022 report from the Canadian Centre for Justice and Community Safety Statistics outlines key factors contributing to this reality. Some of the issues identified in the report include, but not limited to, the following (Perreault 2022):

- Four in ten Indigenous people experienced sexual or physical violence by an adult before the age of 15, according to self-reported data.
- 26% of Indigenous women+ experienced sexual violence by an adult during their childhood (9.2% for non-Indigenous women+, 5.8% for Indigenous men and 2.8% for non-Indigenous men).
- The homicide rate involving Indigenous victims is six times higher than non-Indigenous victims.
- 8.4% of Indigenous people were victims of sexual assault, robbery or physical assault in 2019, about twice the proportion of non-Indigenous people (4.2%).
- Indigenous people were about twice more likely than non-Indigenous people to have little or no confidence in their local police service.

Additionally, research indicates that one in three Canadian women+ will experience sexual assault in their lifetime, with Indigenous women+ experiencing a higher rate of sexual assault compared to non-Indigenous women+ (Sexual Assault Support Centre n.d.). While sexual assault data for ANA is not available, sexual assault statistics for the broader area include:

- Sexual assaults (430) reported in Northwestern Ontario in 2021, represented an increase of 31% from 2020 (Levesque 2022).
- In Kenora district, there were 211.5 reported sexual assaults per 100,000 of the population in 2020 (Canada Crime Index 2021).

In Canada, there is a relationship between industrial camp populations and a rise in crime, sexual violence, and the trafficking of Indigenous women+ (MacMaster & Seck 2020). The remote locations of projects and Indigenous communities result in low reporting rates. In addition, local community health centres lack the resources to address incidents of sexual assault (Prospectors and Developers Association 2019). However, this is not specific to Indigenous women+ within communities, but rural and urban Indigenous women+ that live near resource-intensive areas. Given the presence of mining projects in the area, Indigenous women+ are at a higher risk of increased violence (MacMaster & Seck 2020).

Crime statistics are reported to Statistics Canada using the Uniform Crime Reporting Survey. The survey measures the incidence of crime in Canada. The data reflects crimes reported to police and so it does not capture a count of all crimes as some go undetected or unreported to police (Statistics Canada 2024). Crime statistics for Canada and Ontario are shown in Table 12.8-6.

Table 12.8-6: Crime Statistics for 2019 and 2023 - Canada and Ontario, 2025

	Canada (total, all violations)		Ontario (total, all violations)	
	2019	**2023**	**2019**	**2023**
Actual Incidents	2,440,496	2,526,877	660,927	737,246
Rate per 100,000 population	6,487.49	6,301.79	4,535.11	4,723.40
Total, persons charged (adult & youth)	645,614	591,770	205,148	198,291

Source: (Statistics Canada 2024)

Crime severity index (CSI) is a measure that analyses the severity and number of crimes and is intended to complement other crime statistics such as crime rate and self-reported victimization data. The CSI has a base index value of 100 for 2006 (Statistics Canada 2024).

- In 2023, the CSI for Canada was 80.5, an increase of 2%, but still lower than in 2006 (Statistics Canada 2024).
- In Ontario, the CSI in 2023 was 60.9, an increase of 4%, again still much lower than in 2006 (Statistics Canada 2024) .

Statistics Canada reports CSI for metropolitan areas with populations greater than 100,000, therefore, a CSI for ANA is not available. However, the Nishnawbe Aski Police Service provides policing to Indigenous Nations throughout much of Northern Ontario (Nishnawbe Aski Police n.d.).

In 2023, they reported a CSI of 302.3 for their service area, 241.4 higher than the provincial number (Nishnawbe Aski Police 2024). While the Nishnawbe Aski Police Service does not directly service ANA they do police the area and communities in much of the rest of northwestern Ontario and so this statistic is meant to show general crime trends in remote communities in this part of the province.

The Treaty 3 Police Service produces an annual report that provides crime statistics. Table 12.8-7 shows the number of on-reserve reported incidents from 2017 to 2023. The Treaty 3 Police do not report a CSI in their annual reports and information presented is intended to show trends in crime over time within the community.

While there are some years with an increased number of incidents, between 2017 and 2023, the number of incidents has remained consistent. However, from 2016 to 2021, the years population data is available, population in ANA fell by 8.5%, from 638 people to 584 people (Statistics Canada 2023e). This would indicate that during this timeframe, crime on a per person basis rose even though the number of incidents remained similar.

Table 12.8-7: Total Number of Incidents Reported to Police from 2017 to 2023 - Asubpeeschoseewagong Netum Anishinabek, 2025

Year	Total number of incidents reported
2023	1,423
2022	1,218
2021	1,381
2020	1,236
2019	1,098
2018	1,144
2017	1,191

Source: (Treaty Three Police 2018; Treaty Three Police 2019; Treaty Three Police 2020; Treaty Three Police 2021; Treaty Three Police 2022; Treaty Three Police 2023; Treaty Three Police 2024)

A study conducted by the Liard Aboriginal Women's Society found that women's jobs within the extractive industry jeopardizes their safety. This included exposure to harassment, discrimination and assault in the workplace and within mining camps. It also found that Indigenous and racialized women+ felt that they could not report incidents and felt that authorities (i.e., police, agencies, employers) failed to address violence in the industry. o address these issues, the report recommends that regulatory agencies and the criminal justice system focus on addressing systemic gaps to strengthen protections for workers' safety and human rights (Moodie, Mason, & Moorcroft 2021).

The National Inquiry into Missing and Murdered Indigenous Women and Girls sought to understand the systemic causes of violence against Indigenous women+, girls and 2SLGBTQIA plus people.

The inquiry found that extraction projects lead to increased violence against Indigenous women+ at the hands of non-Indigenous men and increased violence within Indigenous communities. This was associated with the nature of the industry including, transient workers and rotational shift work, as well as harassment and assault in the workplace, substance abuse and addictions, and economic insecurity (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019).

The National Inquiry determined that no one knows exactly how many Indigenous women+, girls and 2SLGBTQIA plus people have gone missing or been murdered, though it numbers in the thousands (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019).

The National Inquiry made 231 Calls for Justice that cover a range of actions to address violence and crimes against Indigenous women+, girls and 2SLGBTQIA plus people, including (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019):

- Governance and Accountability
  - Calls for governments and institutions to take accountability and to create a national action plan that emphasises accountability and measurable outcomes.
- Public Safety and Justice
  - Calls for reform of policing and the criminal justice system to address biases, racism and lack of responsiveness to Indigenous Peoples.
- Cultural and Social Reconciliation
  - Calls for restoring cultures, languages and practices as well as inclusion of Indigenous history, cultures and rights in the Canadian educational system.
- Healing and Wellness
  - Calls for Indigenous-led healing programs and safe spaces for the well-being of Indigenous women+, girls and 2SLGBTQIA plus people.
- Action on Poverty and Marginalization
  - Calls for economic, education and social policies that address poverty and marginalization and for increased access to economic opportunities, housing and healthcare.
- Support for Families and Survivors
  - Calls for support systems for the families and survivors of the missing and murdered.

12.8.2.2.6 Access to Land and Resources

Access to community and natural resources, including land, water, food systems, and social infrastructure, are central to community well-being and self-determination for ANA.
For Indigenous communities both on and off-reserve, access to shared and exclusive resources and cultural landscapes is essential to their identity; a major determinant of physical, mental and spiritual health, and community cohesion (Public Health Agency of Canada 2023).

Historical and contemporary policy decisions, from colonial land appropriation to the legacy of residential schools and settlement expansion, have disrupted Indigenous Peoples' ability to access and steward the lands and resources they have long relied on. These legacies continue to shape governance and economic frameworks today, at the risk of the health of local populations (Boska, Joober, & Kirmayer 2015)

The information presented draws primarily on regional data and literature related to Indigenous communities within the broader Kenora District. While specific information for ANA is limited, available insights have been incorporated where possible. As such, general trends and themes that may apply to ANA but should not be interpreted as a comprehensive or definitive account of community-specific conditions.

12.8.2.2.6.1 Land Tenure and Mineral Resources

Ontario's natural resource and extraction economy present both an opportunity and risk to Indigenous communities, adding pressure to an already historically affected landscape to practice traditional systems. Approximately 87% of Ontario's landmass is Crown land, the vast majority of which is managed by Ontario's Ministry of Natural Resources (Government of Ontario 2015).

Crown land is made up of numerous tenures, including but not limited to mining and mineral claims, forestry tenures, and managed parks and conservation areas. Due to a surge in claims in the Ring of Fire area, mining claims in northern Ontario have grown 30% in the past year (Law 2023).

Indigenous Peoples often find themselves in the difficult position of seeking participation and inclusion in a rapidly growing resource economy, and seeking protections to their lands, resources, and livelihoods tied to the natural environment (Indigenous Relations and Northern Affairs Canada 2017). While Treaty 3 affirms Indigenous rights to traditional land use (such as hunting, fishing, gathering), it provides limited protection against industrial development. Notably, mineral rights were excluded from the treaty text, limiting community participation and benefit-sharing from resource extraction activities. Historical records indicate that while Indigenous signatories were promised protections within reserve lands, these rights were not extended beyond reserve boundaries and were omitted from the final treaty (Daugherty 1986).

Under Ontario law, mining claims can be registered without prior consultation with Indigenous Nations. While exploration permits cannot proceed without consultation, the initial staking and registration of mineral claims may still be perceived as occupation without consent, particularly in regions with limited consultation capacity or where historical mineral patents remain in force. From an Indigenous perspective, this contributes to ongoing legal inequity, as it enables incursions on traditional territories that may disrupt constitutionally protected land use and traditional food systems (Carver 2023).

Additional barriers to economic participation that Ontario Indigenous Nations face include:

- Limited technical capacity to participate, review and respond to the high number of staked claims, including complex permitting and regulatory processes
- Limited access to capital and resources
- Competing social priorities, including protection and stewardship of the land, and social challenges including mental health and addictions, housing crises, access to clean water and food sources (Law 2023).

In 2024, ANA filed a judicial review application challenging Ontario's free-entry mining claim system. The application argued that the current process under the *Mining Act* allows mineral claims to be registered on ANA's traditional territory without consultation or consent, contrary to Treaty 3 rights and the Crown's duty to consult (CBC News 2024).

12.8.2.2.6.2 Food and Water Access

Treaty 3 (Figure 12.1-1) protects, preserves and enhances Treaty and Aboriginal rights. It offers protection to traditional activity, lands and resources, and trapping (The Government of the Anishinaabe Nation in Treaty #3 2025). The region surrounding the Project has an expansive waterbody system that the traditional and cultural activity is inextricably linked to.

The Anishinaabe connection with water is expressed and explained in the Nibi Declaration produced by the Grand Council Treaty #3. It speaks to the sacred relationship and responsibilities that the Anishinaabe have with water, water beings, and the waterways and waterbodies (Grand Council Treaty #3 Women's Council 2019). Water access and water quality are notable issues for Indigenous communities in the region.

Industrial development including mining, forestry, and power generation disrupts the relationship and access to water resources for Indigenous communities in the Treaty 3 (Simpson, DaSilva, Riffel, & Sellers 2009). Traditional practices and cultural gathering spaces are generally tied to waterbodies where harvesting, trapping, fishing, and hunting opportunities tend to occur. Current use of lands and resources for traditional purposes, and evidence for how use is typically tied to waterbodies is found in section 12.6.2.

Beyond cultural significance, water systems are tied to economic and food systems in the region. Waterways and waterbodies were a source for drinking water, fishing, and commercial revenue in the region. Commercial fishing was banned in the English-Wabigoon River system in 1970 when mercury contamination from the Reed Paper mill was discovered and acknowledged, damaging the economy in the region. The employment rate in ANA communities fell to 10%, and traditional, staple food systems were disrupted (Brophy 2005).

Many ANA community members travel to waterways and waterbodies outside of the English-Wabigoon system to safely fish, harvest aquatic resources and participate in traditional activities linked to waterbodies. However, many continue to fish closer to their residence/community because they do not own vehicles or boats or will not change their habits or way of life (Thompson 2018).

The disruption of traditional food sources (e.g., fish and wild rice) across the region has forced dietary changes, contributing to health issues, shifting cultural practices, and contributed to food insecurity.

Food insecurity remains a public health concern in northwestern Ontario. According to the Northwestern Health Unit (NWHU), approximately 21% of households in the Kenora–Rainy River Districts face food insecurity, which is higher than the provincial average of 19% and the regional average of 19% (Northwestern Health Unit 2024). The monthly cost to feed a family of four in the region reached $1,537.84 in 2024, representing a 9% increase from 2023. For those living on minimum wage or social assistance, food costs may consume 50% or more of monthly income, leaving minimal funds for housing, transportation, or other basic needs. A summary of regional food insecurity indicators is provided in Table 12.8-8.

While community food programs such as hampers, school nutrition programs, and food banks provide necessary short-term relief, the NWHU emphasizes that these are not long-term solutions and that income-based policy responses are needed to address the root causes of food insecurity. Additional regional challenges include:

- high transportation costs,
- limited grocery competition, and
- increased risk of food spoilage due to long-distance shipping, especially in remote areas.

The Nutritious Food Basket tool used to monitor affordability may also underestimate the true cost of food, as it does not reflect cultural preferences, processed or specialty diets, or real-world conditions such as limited time or access to quality stores (Northwestern Health Unit 2024).

Table 12.8-8: Food Insecurity and Cost Indicators for 2024 -Kenora-Rainy River Region, 2025

Indicator	Value
% of households facing food insecurity	21.3%
Provincial average	18.7%
Regional average (Northwestern Ontario)	19.2%
Monthly cost to feed a family of four in 2024	$1,537.84
Year-to-year cost increase (2023 – 2024)	9%
Estimated monthly deficit for Ontario Works / Ontario Disability Support Program (ODSP) households	$700
Remaining income for minimum wage families after food + housing	~$599
Source: (Northwestern Health Unit 2024)	

12.8.2.2.6.3 Drinking Water and Wastewater Systems

Access to clean, safe drinking water is essential to public health and community well-being in both urban and rural areas. At the time of desktop research, information was not available regarding improved water infrastructure being planned for ANA.

ANA struggled with poor quality water over many years and faced challenges related to resources pollution as result of low-quality water treatment plants. The poor wastewater management continues to affect a safe living environment for the community members of ANA.

The historical events of mercury contamination during 1960s affected the community's' ability to gain access to clean drinking water. According to records the community was asked to relocate to a new area along the river that subsequently affected their access to water (Kerrich & Wagner 2021). The lack of funding to guarantee the upkeep of the infrastructure remains a problem in addition to minimal budget provided by the federal government (Kerrich & Wagner 2021).

As of January 2025, plans supported by the federal government are underway to upgrade water and wastewater systems in ANA, reflecting a broader effort to improve public health and infrastructure in Indigenous communities (Government of Canada 2025).

12.8.2.2.6.4 Social Infrastructure and Community Spaces

Access to inclusive and culturally relevant social spaces plays an important role in strengthening community well-being, particularly through intergenerational connection, healing, and cultural continuity.

In ANA, publicly available information on existing or fully operational cultural and social spaces remains limited. However, in 2022, a project was announced to support the development of a new cultural space and shelter building within the community (Government of Canada 2022). While the initiative may contribute to addressing long-standing gaps in infrastructure, it also reflects the broader context in which many Indigenous Nations continue to advocate for spaces that align with their governance systems, cultural values, and self-determined priorities.

Social infrastructure for Indigenous communities also includes trapper cabins, traplines, and wild rice areas near waterbodies where hunting and harvesting occurs. For more information on current use and existing cultural spaces, see Sections 12.6 and 12.7.

12.8.2.2.7 Population Dynamics

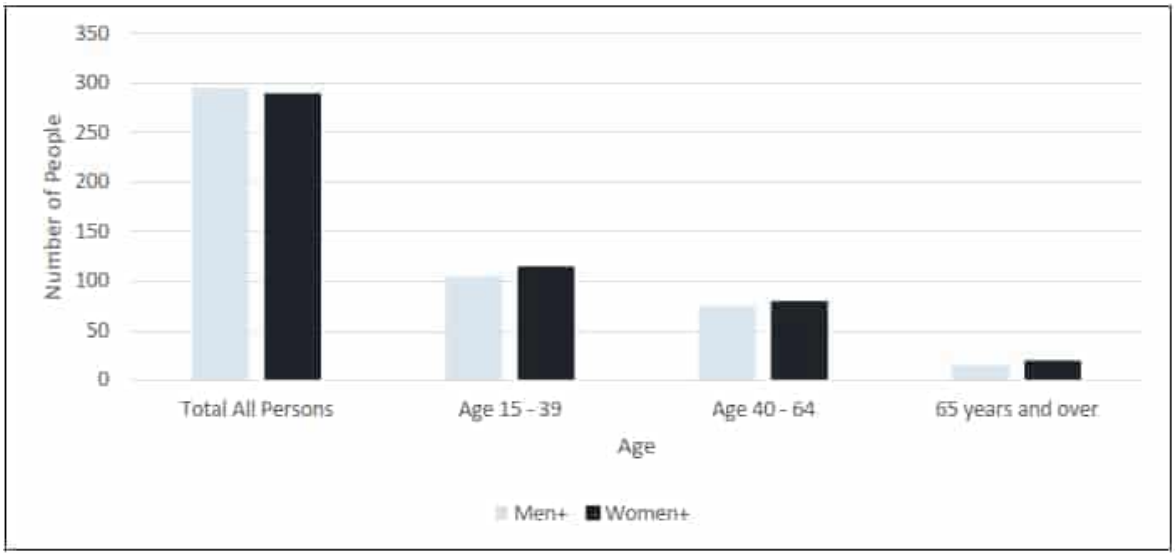
Population size and stability are important in understanding how communities experience economic change, service pressures, and development effects. In smaller communities, even modest demographic shifts may affect housing, infrastructure needs, and cultural continuity.

12.8.2.2.7.1 Age and Gender Identity

Figure 12.8-4 presents age characteristics for ANA's on-reserve population. As of 2021, the breakdown of the total on-reserve population by gender shows there to be:

- 295 individuals who identify as men+, and 290 individuals who identify as women+;
- the median age of the on-reserve population of ANA was 27.8, with the largest age group for both men+ and women+ being 15 to 39 years, with 40 to 64 years close behind.
- the age range of 65 years and over made up the smallest amount of the total population (6%) (Statistics Canada 2023f).

Figure 12.8-4: Age and Gender Characteristics - Asubpeeschoseewagong Netum Anishinabek, 2025



Source: (Statistics Canada 2023f)

Note: The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons.

12.8.2.2.7.2 Migration and Mobility

The population changes for ANA's on-reserve population are presented in Table 12.8-9 Statistics Canada's data from 2021 demonstrates that the majority of residents did not move in the past year (95.7%). Women+ made up a higher proportion of the total population that moved in the past year (2.6%) compared to men+ (1.7%) (Statistics Canada 2023b), indicating a high degree of residential stability. This level of rootedness is consistent across gender groups, with higher non-mobility among men+ (96.6%) than women+ (94.6%).

Among the small proportion of on-reserve residents who did move in the past year (4.3%), women+ made up a larger share (2.6%) than men+ (1.7%). Notably, no reported moves occurred within Ontario or from another province, suggesting that individuals who did move likely relocated outside of ANA. Moves within the same community or reserve are not captured in this data, and therefore the figures may underrepresent intra-community mobility.

This low level of residential mobility may reflect strong cultural and familial ties to the community, limited off-reserve housing opportunities, or challenges associated with relocation such as affordability, transportation, or access to services. It may also indicate a constrained housing market, in which few units are available for movement or turnover.

This data reflects the pandemic period, during which overall mobility across Canada was suppressed due to public health measures and economic uncertainty, therefore, the mobility data for the province of Ontario was not included. Nonetheless, the stability observed here appears consistent with longstanding patterns of attachment to place within the community.

Mobility data from the 2016 Census reveals a higher rate of on-reserve residential movement in the five years prior (Statistics Canada 2019):

- 15.8% of the population had moved, compared to 4.3% in the 2021 one-year mobility estimate.
- Among these movers in 2016, external migration was 0%, while internal migration accounted for 7.9% (with 5.3% interprovincial and 2.6% interprovincial).
- Women+ accounted for a slightly higher share of movers overall in 2016 as well.

These longer-term trends reinforce the picture of a relatively stable community with limited in- or out-migration, shaped by both cultural and structural constraints. However, the decrease in movement between 2016 and 2021 likely reflects pandemic conditions.

Table 12.8-9: Mobility Characteristics - Asubpeeschoseewagong Netum Anishinabek, 2025

Mobility Characteristics	Total	Men+	Women+
Total responses	580	295	280
Did not move in the past year (%)	95.7	96.6	94.6
Moved in the past year (%)	4.3	1.7	2.6
Moved within Ontario (%)	0.0	0.0	0.0
Moved into Ontario from a different province (%)	0.0	0.0	0.0
Source: Statistics Canada 2023b).Note - The category men+ includes men, as well as some non-binary persons. The category women+ includes women, as well as some non-binary persons.			

12.8.3 Potential Effects

For the Community Well-Being criteria, a single potential effect is assessed: change in community well-being. This assessment considers how Project-related activities may influence the community well-being of the ANA through regional and downstream pathways.

In contrast to the Community Infrastructure and Services assessment, which focuses on physical assets and service capacity, this section addresses social and human outcomes, which are considered alongside the cultural information shared through reported land use activities (see Section 12.8) including cost of living, access to services, safety, economic opportunity, community cohesion, and cultural continuity, with particular attention to groups that may experience disproportionate effects, including Indigenous women+, girls, and 2SLGBTQIA plus people.

Table 12.8-10 summarizes potential interactions between Project activities and community well-being for ANA (✓ = potential interaction; – = no interaction). Only potential interactions are carried forward to the phase-based assessment.

Given the distance (approximately 200km by road; 77km cross country) between the Asubpeeschoseewagong Netum Anishinabek (ANA) community and the location of the PA, no direct interactions on ANA
on-reserve community well-being indicators are anticipated. However, any potential effects on community well-being through its impact to current use of lands and resources for traditional purposes in the LSA and RSA may result in direct or indirect interactions between the Project and ANA's community well-being. A regional assessment of community well-being indicators that ANA community members may access is assessed in Section 14, Predicted Changes to Indigenous Peoples living in the Red Lake and Ear Falls area.

Based on community context and distance from the Project, housing-related effects on-reserve were determined to have no interaction (see Section 1.8.2.2.2.2), and are not assessed further; the assessment therefore focuses on:

on potential interactions related to:

- Social Determinants:
  - Cost of living and traditional economy
  - Access to services (health and social services),
- Community cohesion
- Public safety
  - Public safety and gender-based violence
- Access to lands and resources

Table 12.8-10: Potential Interactions Between Project Activities and Community Well-being

Project Component / Activity	Change in Community Well-being
Construction Phase	
Site preparation activities	✓
Establishment and operation of water management and treatment facilities	✓
Open pit mining	✓
Underground mining	✓
Management of rock and unconsolidated materials in stockpiles	✓
Establishment of onsite fish habitat and compensation measures	✓
Establishment of onsite aggregate operations	✓
Construction of the starter embankments for the TMF	✓
Construction and operation of buildings and infrastructure	✓
Waste management	✓
Commissioning of the process plant	✓
Power supply	-
Employment and expenditures	✓
Operations Phase	
Underground mining	✓
Mining of the LP Central pit	✓
Management of rock and unconsolidated materials in stockpiles	✓
Process plant operation	✓
Management of desulphurized tailings in the TMF	-
Management of concentrate tailings and contact water in the VMF	-
Operation of water management and treatment facilities	✓
Construction of a mine water pond	✓
Operation and maintenance of buildings and infrastructure	-
Waste management	✓
Power supply	-
Progressive reclamation activities	✓
Employment and expenditures	✓
Closure Phase	
Active closure	✓
Passive closure	✓

Project Component / Activity	Change in Community Well-being
Final reclamation	✓
Employment and expenditures	✓

Legend: ✓ = Interaction exists

- No interaction exists

12.8.3.1 Construction Phase

The construction phase will occur over approximately three years and include site preparation, infrastructure development, and workforce mobilization.

For ANA, no direct on-reserve physical interactions are expected due to the distance from the Project. However, a number of social, cultural, and economic pathways may influence community well-being through regional linkages.

12.8.3.1.1 Cost of Living and Traditional Economy

No measurable change in the cost of goods and services is anticipated on-reserve. However, construction activities may raise concerns about environmental disturbance near traditional harvesting areas, which could affect confidence in local food and medicine sources, , reducing the household benefits associated with participating in the traditional economy..

Any disruption to access or change in the quality of experience on the land may also influence opportunities for intergenerational knowledge transmission, contributing to gradual shifts in household reliance on market goods and land-based livelihoods.

12.8.3.1.2 Access to Health and Social Services

Changes to the landscape and associated industrial activities may contribute to emotional or psychological stress for ANA community members, given their strong cultural and spiritual ties to the land. The Project's presence on traditional territory may result in feelings of grief, anxiety, or a sense of loss, commonly referred to as environmental grief, especially considering ANA's historical experiences with environmental harm, such as mercury contamination and longstanding water advisories.

These responses, though indirect, may influence community well-being and lead to change in reliance on health and mental health services, particularly those grounded in Indigenous Knowledge and cultural safety.

While the Project is not expected to directly interact with services located in ANA, there is a potential for indirect strain on regional service systems. The closest centre offering specialized health, mental health, and social services is the City of Kenora, which ANA community members access periodically for care not available on-reserve. Additionally, if the Project contributes to population changes or changes in demand for regional services within the RSA, ANA members who travel off-reserve to access care may face longer wait times or delayed access, especially for services that are already stretched. This could be particularly impactful (for Elders and caregivers who face transportation, mobility, or financial barriers). While these effects would be indirect, they may still influence individual and collective well-being by limiting access to time-sensitive or culturally appropriate care. Community services and infrastructure are described in detail in Section 12.5.

At the same time, employment opportunities with the Project (employees will have access to additional resources through the EAP, including telehealth) could lessen reliance on local health and social programs During the construction phase, a change in temporary and permanent population from the Project in the region may contribute to higher demand for these already limited services.

Any added demand may change the timeliness with which ANA members can access services when needed. As such, community well-being may be affected not through new service gaps, but through deepened inequities in access and availability for populations already experiencing systemic barriers.

12.8.3.1.3 Public Safety and Gender-Based Violence

No direct interactions with public safety or gender-based violence are anticipated on-reserve in ANA during construction. However, the Project will bring a temporary influx of non-local workers into the region, which may elevate broader safety concerns, particularly among Indigenous women+, girls, and 2SLGBTQIA plus people. These concerns reflect ongoing systemic safety risks and the national crisis of Missing and Murdered Indigenous Women and Girls.

For ANA, where environmental trauma and mistrust of external systems are part of the lived experience, the presence of a new workforce, even if not physically proximate, may generate emotional or psychological stress. Perceived risks of violence or misconduct can contribute to a sense of vulnerability, even in the absence of direct interactions, potentially affecting community well-being.

12.8.3.1.4 Community Cohesion

The construction phase may influence community identity and cohesion by disrupting land-based practices that are central to ANA's cultural continuity and collective well-being. For ANA, community cohesion is closely tied to the ability to access, steward, and transmit knowledge. Changes to access to these areas, whether due to physical limitations, fear of contamination, or a sense of cultural displacement, may interfere with intergenerational knowledge transfer, land-based healing, and ceremonial activities. These disruptions could weaken the continuity of shared values and cultural identity over time.

The community's demonstrated history of collective resistance to resource development highlights the depth of connection between land, governance, and social unity (Chamberlain 2024). Interference with land-based practices during construction may not only affect individuals but could be perceived as a broader infringement on self-determination and solidarity. These changes, even if temporary, may contribute to decreased trust, emotional distress, or a diminished sense of cultural safety within the community. Over time, these shifts could affect the continuity of cultural identity and the strength of shared community values, which are key components of overall well-being (Chamberlain 2024).

12.8.3.1.5 Access to Lands and Resources

Road use, construction, dust and vibrations related to Project development activity have the potential to affect wildlife and vegetation, and subsequently, the traditional use and enjoyment of the land, affecting ANA's community well-being, and potentially disrupting ANAs access to typical food and water sources..

Water levels, flow and travel routes within the waterbodies within the PA may be affected by mine related activities or mine infrastructure (WSP Canada Inc. 2024). Local waterbodies and waterways will also be receiving the treated effluent from the Project.

During construction, access to parts of the Chukuni River watershed and changes to the upstream catchment area of the Unnamed Waterbody 6, may be physically restricted or culturally discouraged. If traplines are active or harvesting occurs within the LSA, construction-related disturbance could reduce the availability or quality of resources

Fear of contamination, whether based on past experiences or current perception, may also result in self-imposed limitations on land use, contributing to social, cultural, and nutritional effects. These disruptions may influence individual and collective well-being during the construction phase, even in the absence of direct physical interaction with the Project. Since these land-based activities are foundational to cultural identity, food sovereignty, and intergenerational knowledge sharing, any concerns around contamination can undermine community well-being by affecting not only physical health and diet, but also community cohesion, cultural continuity, and mental health.

As described in Section 12.6, many of these areas form part of established land use patterns for hunting, trapping, fishing, and plant gathering. Any disruption to access, whether physical or perceptual, should therefore be understood in the context of ongoing and intergenerational land-based practices.

12.8.3.2 Operations Phase

The operations phase will occur over approximately 26 years. Pathways of interaction with ANA community well-being are similar to those identified for construction but are expected to be less intensive and more prolonged in duration. No population growth or direct workforce presence is anticipated within ANA; however, indirect and perception-based effects, including consumption patterns of land and water-based resources, may continue through ongoing Project activity in the region.

During operations, continued concerns about land and water quality, particularly within the Chukuni River watershed, may sustain avoidance of harvesting areas and influence participation in traditional economic and cultural practices. Cumulative demand on regional health and social services may persist but is expected to stabilize over time. Perceptions of cultural loss or environmental change may continue to influence identity, cohesion, and emotional well-being.

Overall, effects during operations are expected to be similar in nature but longer in duration than those during construction.

12.8.3.3 Closure Phase

During the approximately three-year closure period, activities will resemble those of the construction phase but at a smaller scale, involving similar equipment and reclamation work.

For ANA, the transition into closure may influence community well-being in several interconnected ways. While Project closure is not expected to alter the cost of goods or services, ongoing limits to traditional harvesting, whether due to lingering environmental concerns or reduced confidence in land and water systems, may continue to constrain access to non-market food sources.

These effects are expected to diminish over time when environmental conditions stabilize and confidence is restored. Even minimal or localized environmental changes can carry emotional weight given the historical context of contamination in the region.

Community identity and community cohesion may similarly shift during closure. For some ANA members, reclamation may represent an opportunity for reconnection with the land; for others, long-term landscape changes may reinforce loss if closure activities do not reflect community priorities or expectations. Meaningful involvement in closure planning will shape whether this period is experienced as a time of healing or continued exclusion.

Access to lands and resources is expected to improve as infrastructure is removed and areas become physically more accessible; however, use of these areas may remain limited if concerns persist regarding contamination, water withdrawal locations, or effluent discharge zones. Continued avoidance may restrict opportunities for land-based practices, spiritual activities, and cultural revitalization, with implications for community well-being during the transition out of operations.

12.8.4 Mitigation and Enhancement

Mitigation measures for community well-being consider both direct and indirect effects, and includes Project design measures, workforce policies, community partnerships, Indigenous engagement, and regionally targeted supports.

The goal of these measures is to reduce the magnitude, duration, and likelihood of adverse residual effects on social determinants of health, household dynamics, public safety, and overall well-being for both Indigenous and non-Indigenous communities.

For the community well-being criteria, mitigation approaches reflect a combination of:

- Physical design measures (e.g., construction of worker accommodations, on-site medical and recreation facilities, separation of workforce from community to reduce direct interaction);
- Programmatic measures (e.g., workforce training, cultural awareness programming, gender-based violence protocols, community engagement and advisory groups); and
- Service supports (e.g., partnerships with Indigenous service providers, coordination with local agencies, funding to expand community services where needed).

Table 12.8-11 outlines mitigations thematically, aligning with Project interactions.
These mitigations are anticipated to apply across all Project phases unless otherwise specified.

Table 12.8-11: Project Design, Mitigation, and Enhancement Measures for Community Well-being

Potential Effects	Project Design, Mitigation and Enhancement Measures
Change in Community Well-being	Camp Operations and Services A camp complex will be established on the Property. The camp will accommodate 1,000 people during construction, and then scaled down to approximately 300 people during operations. A portion of the workforce will come from outside the local community and work on a rotational basis. Great Bear Resources will also continue discussions with local municipalities to discuss potential housing and/or infrastructure initiatives in the region. The camp complex will include recreation, and a non-denominational spiritual space.
	Camp Operations and Services ("dry" camp) Maintain a “dry” camp, managed through Human Resources (HR) policy and specific Health and Safety measures.
	Camp Operations and Services (health care) Project HR and medical staff will be specifically trained to recognize, prevent, and appropriately respond to incidents of violence, harassment, or trauma, in alignment with established protocols. Provide emergency response and basic health services to the on-site workforce. On-site medical facilities and staff will be in place to address health services for emergencies, injuries, and other routine needs. Medical personnel will be trained on supports that are available through Employee Assistance Program (EAP), Telus telehealth (or similar service/provider), and local/regional providers to foster connected health care on and off-site. Information about these services and supports (available to employees and their immediate families), will be posted in a visible location at the medical facilities and accommodations. Create access to Telus telehealth or similar provider for employees (and immediate family members) throughout the life of the Project helping to alleviate pressures on local services.
	Camp Operations and Services (PPE provision) Provision of required PPE including but not limited to boots, reflective clothing, gloves, and hard hats.
	Camp Operations and Services (site security) Controlled site access, perimeter security, and monitoring technology to deter and detect potential issues. Site security will be maintained and consistent with other Ontario mining operations. Access will be limited to Great Bear Resources’ workers and contractors, and approved visitors. Security guardhouses will be positioned where appropriate Cameras, routine patrols and other methods will be utilized to monitor and ensure site security. Workers will be housed in separate accommodations by gender with locked access (e.g., keys) for each room and a separate mining dry / change rooms. Ongoing monitoring will occur throughout the mine life and policies will be updated as required.
	Community Financial Support Sponsor cultural awareness initiatives and social integration programming. Address barriers to training or employment through transport assistance, and inclusive program design.

Potential Effects	Project Design, Mitigation and Enhancement Measures
	Support regional communities to expand social services and health care services in the region, including mental health and addiction services, and implement an adaptive management approach (as part of the Social Performance Plan) to address additional pressures resulting from the influx of workers and their families. Great Bear Resources will work collaboratively to fund programming through the Friendship Centre and community partners, including programing and supports to promote physical and mental health outcomes for Indigenous adults and youth. Establish and maintain Community Liaison Committee to monitor changes and service capacities and / or the effectiveness of mitigation measures Continue to partner with community organizations and educational institutions to support youth programming through summer camps and in-school programming, provide workshops, tours and presentations to youth that promote careers and opportunities in Mining and STEM fields Partner with local Indigenous communities to evaluate community health and well-being to prevent negative pathways associated with the Project from developing.
	<u>Community Partnerships</u> Collaborate with Friendship Centre, Kenora Sexual Assault Centre, and other safety advocates to support community-based safety networks. Partner with the Friendship Centre, the Evolution Centre, and other community organizations to co-develop inclusive events that reflect local traditions and cultural practices.
	<u>Education and training (Project)</u> Provide budgeting and financial literacy tools available to all employees through the EAP, including a combination of organized workshops during working hours and optional individual supports that employees and their families can access on their own time. Deliver mandatory Cultural Awareness training for employees and contractors (including supervisors and managers) on safety, harassment awareness and prevention, and MMIWG2S+ and human trafficking awareness training. Provide voluntary health and wellness seminars, nutrition and substance use seminars for interested employees through the EAP. Provide opportunities for youth with vocational skills, including those that prepare them for local job markets and mining-related knowledge.
	<u>Education and Training (Region)</u> Provide bursaries and targeted mentorship. Mentorship programs may include new hire initiatives which pair up new employees with a senior staff member who will provide guidance and support during the onboarding process, internships and summer programming for youth. Deliver training locally using mobile facilities and simulators. Implement job-matching, retraining programs, and economic diversification supports in anticipation of closure. Great Bear Resources has committed to the establishment of the Industrial Research Chair (IRC) in Mineral Exploration with Lakehead University.

Potential Effects	Project Design, Mitigation and Enhancement Measures
	Great Bear Resources recognizes the importance of this research and its potential to drive advancements in mineral exploration, which directly supports our business and the broader mining sector in northwestern Ontario and the community in which we operate. In addition, Great Bear Resources will continue to support STEM and educational based programming with youth consistent with Company standards. Great Bear Resources is also progressing a STEM-based and training strategy on a range of opportunities including apprenticeship opportunities, on-the-job training, work readiness, and scholarships and bursaries. Great Bear Resources will offer training to local Indigenous job seekers and contractors. Great Bear Resources are committed to working with local suppliers, including Indigenous owned businesses, to develop their capacity to effectively compete and win business while meeting the Company's standards for ethical conduct, due diligence, quality of goods and services, health and environmental safety. Identify critical roles and recruitment barriers; provide job-readiness scholarships/bursaries. Develop equity-based hiring protocols, Indigenous procurement policies, and job coaching programs.
	<u>Inclusive and Local Hiring Strategy:</u> Provide timely workforce projections to communities and vendors to support planning. Collaborate with regional providers to support recruitment and job-sharing. Increase local household income by prioritizing regional employment, ensuring that wages remain within the community and support local businesses. This helps enhance quality of life for residents while reinforcing economic resilience. Identify critical roles and recruitment barriers; provide job-readiness scholarships/bursaries. Develop equity-based hiring protocols, Indigenous procurement policies, and job coaching programs. Partner with Indigenous training and employment organizations to support employment of Indigenous workers, provide training, priority hiring and work towards continuous improvement including training and employment opportunities for Indigenous women+.
	<u>Inclusive and Local Hiring Strategy (hiring policies)</u> Reduce employment barriers by offering on-the-job training for "almost qualified" candidates and providing entry-level skills development.
	<u>Social Closure Plan:</u> Support consistent communication and planning throughout closure with emphasis on legacy, continuity, and shared decision-making. Develop a community transition plan in consultation with local Indigenous communities and groups so that decisions are made with integrity, based on cultural, spiritual and Indigenous well-being in mind. The plan will include collaborative planning, Implement job-matching, retraining programs, financial literacy workshops, and economic diversification supports in anticipation of closure.
	<u>Procurement and Business Opportunities</u> Provide timely workforce projections to communities and vendors to support planning.

Potential Effects	Project Design, Mitigation and Enhancement Measures
	Collaborate with regional providers to support recruitment and job-sharing. Coordinate with regional and Indigenous suppliers to reduce supply strain and inflationary effects. Great Bear Resources is committed to working with local suppliers, including Indigenous owned businesses, to develop their capacity to effectively compete and win business while meeting the Company's standards for ethical conduct, due diligence, quality of goods and services, health and environmental safety. Great Bear Resources will offer training to local Indigenous job seekers.
	Transportation Management Buses may be offered if there is sufficient interest (e.g., from the Red Lake Municipal Airport and from Ear Falls and Red Lake as well as local Indigenous communities) to limit personal vehicle traffic on the road and reduce the risk of driver fatigue and travel during poor weather conditions. Car-pooling will also be encouraged, as appropriate. Busing may also be utilized to gather contractors and employees from larger hubs (i.e., Thunder Bay and Winnipeg) during the construction phase to consolidate transportation to and from the Project. Provision of buses reduces commuting burdens for employees and contractors and has the potential to support other community services.

Attached Table 12.1-1 include mitigation measures applicable to the management of effects on pVCs and fVCs that are linked to community well-being of ANA. It includes relevant plans, policies, and measures from predictive reporting on linked pVCs and fVCs. These will be applied for effects management.

12.8.5 GBA Plus Considerations

The ANA on-reserve community is not near the Project, and the community has previously opposed industry (as seen in 12.8.2.2.2.9 Employment Income and Participation). In addition to structural challenges such as limited local job opportunities, community specific values and governance decisions also shape employment patterns in ANA. The community has taken a firm stance against resource development activities within its traditional territory, particularly in relation to forestry and mining (Chamberlain 2024). Therefore, no Gender Based Plus considerations for the ANA on-reserve population is expected for community well-being.

At the time of producing this report, ANA had not responded to requests for interviews; it is unknown if their community members will be seeking economic opportunities with the Project.

12.8.6 Residual Effects after Mitigation

After the implementation of mitigation measures, assessment and characterization of potential residual effects on on-reserve ANA community well-being are assessed using the methodology outlined in Section 6. Further details on residual effect criteria ratings that are specific to CWB are defined in Section 6 and in Section 12.3.2.

The attached Table 12.1-1 summarizes the results of the assessment for the linked pVC and fVC components. Detailed description on the methods, existing conditions, mitigation measures, and residual effects can be found in their respective sections.

Based on the assessment of linked pVCs and fVCs, the residual changes after mitigation considered as part of the assessment of residual effects on community well-being include:

- Local and Regional Economy (pVC)

There are no other pVCs and fVCs listed in Table 12.1-1 linked to community well-being.

12.8.6.1 Characterization of Residual Effects After Mitigation - Asubpeeschoseewagong Netum Anishinabek

While no direct residual effects are expected on ANA's community well-being as a result of Project related activities, indirect residual effects are expected. This is because it is recognized that ANA members may rely on regional services located in the RSA. See Section 14 for the assessment of these regional components of housing, service access, emergency response, or safety.

Table 12.8-12 summarizes the indicators used to assess residual change in the region's community well-being following the implementation of mitigation and enhancement measures.

Table 12.8-12: Potential Residual Effects for Community Well-being - Asubpeeschoseewagong Netum Anishinabek

Potential Effect: Change in Community Well-Being	Potential Residual Effect Remaining (Y/N)
Indicators	
Population Growth, Housing Availability and Affordability	N
Cost of Living and Traditional Economy	Y
Access to Services (Health, Social, and Education Services)	Y (regional)
Household Dynamics	N
Public Safety and Gender-Based Violence	N
Community cohesion	Y
Access to land and resources	Y
Population Dynamics	N/A
Economic Opportunity and Inequality	N

12.8.6.1.1 Change in the Region's Community Well-being - Cost of Living and Traditional Economy

Following implementation of Project design features and mitigation measures, no direct residual effects on the cost of goods and services in ANA are anticipated, as residents primarily access essential goods either on-reserve or through regional hub centres such as Kenora.

However, indirect residual effects may occur due to changes to the traditional economy. Restrictions to land access or perceived contamination risks may lead to decreased participation in traditional harvesting activities. This could increase household expenditure on store-bought food or reduce supplemental income from activities such as fur trading or craft production.

Due to limited available information on the structure and contribution of ANA's traditional economy, this assessment applies a precautionary lens and characterizes the residual effect as low, recognizing both perceived and practical implications, particularly for households that rely more heavily on land-based livelihoods.

Based on the criteria outlined in Section 12.4.3.3, the residual effect is not considered significant. All attributes except duration are rated as Level I (see Table 12.8-13); duration is rated as Level II. This outcome reflects that, while the Project may contribute to perceived or indirect effects on traditional harvesting and household costs, these are expected to be limited in scale and reversible. Planned mitigation and monitoring measures are expected to effectively reduce risks to cost of living and traditional economic stability.

The limited data available on the structure and contribution of ANA's traditional economy introduces a degree of uncertainty. Therefore, the residual effect has been conservatively assessed using a precautionary approach.

Table 12.8-13: Characterization for Negative Residual Effect for Cost of Living and Traditional Economy - Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level I	Criteria may or may not be sensitive and can support the predicted change with typical mitigation measures.
Magnitude	Level I	Measurable Project-related change that is insufficient to alter the social and/or economic conditions of local Indigenous People. Expected to be low, with limited measurable impact on overall household income.
Geographic Extent	Level I	Effect is restricted to the LSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level II	Effect occurs intermittently or regularly.
Reversibility	Level I	Effect is fully reversible during the Project phases.
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated.

12.8.6.1.2 Change in the Region's Community Well-being - Access to Services (Health, Social, and Education Services)

Population growth linked to Project development may worsen existing barriers to accessing health, social, and education services in the region. For ANA, no direct effect is anticipated on community-based services. However, indirect residual effects may occur due to some community members reliance on regional specialized services located in regional centres in the LSA such as the City of Kenora.

If Project-related population changes contribute to longer wait times, reduced service availability, or added pressure on regional systems, ANA members who travel for care may experience delays or reduced access, particularly for services already operating at or near capacity. These effects, while indirect, may compound existing inequities in access and negatively affect individual and community well-being.

Given ANA's historical experiences with environmental concerns, these indirect effects may manifest as renewed concerns, or increased need for culturally appropriate mental health supports. However, because the Project does not introduce direct population pressure on ANA's services and because potential responses are perception-based rather than capacity-driven, the residual effect has been characterized as low in magnitude. This reflects the limited scale and reversibility of potential changes.

While mitigations are expected to be effective in addressing direct pressures, the intergenerational context of environmental trauma and historical mistrust highlights the need for continued attention to emotional and perceived effects that cannot be fully mitigated by service planning alone.

Based on the criteria outlined in Section 12.4.3.3, the residual effect is not considered significant as most attributes are rated as Level I or Level II (see Table 12.8-14). While the Project may contribute to emotional stress or indirect demand for culturally appropriate mental health supports, these effects are expected to be low in magnitude, intermittent, and reversible with adequate programming and engagement.

Table 12.8-14: Characterization for Negative Residual Effect for Access to Services - Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level I	Criteria may or may not be sensitive and can support the predicted change with typical mitigation measures.
Magnitude	Level I	Measurable Project-related change that is insufficient to alter the social and/or economic conditions of local Indigenous people. Effects are expected to be low in magnitude since most of the Project in-migration population can mostly rely on services in Red Lake and Ear Falls.
Geographic Extent	Level II	Effect extends beyond the LSA but within the RSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level II	Effect occurs intermittently or regularly.
Reversibility	Level I	Effect is fully reversible during the Project phases.
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated.

12.8.6.1.3 Change in the Region's Community Well-being - Community Cohesion

Residual effects on community cohesion in ANA are anticipated to be low in magnitude and indirect, with specific concern around the Project's influence on land-based cultural continuity and intergenerational knowledge transfer. The Project may result in perceived restricted access to parts of ANA's traditional territory, which could interrupt land use practices such as hunting, fishing, and plant gathering.

Community identity and cohesion in many Indigenous Nations are closely tied to the land, both as a source of sustenance and as a setting for cultural learning, ceremony, and collective healing. While no direct engagement data was collected for ANA, it is reasonable to consider that reduced access to traditional territories could affect land use patterns and, in turn, effect opportunities for cultural transmission and intergenerational learning. This, in turn, may affect shared cultural experiences, weaken social bonds, and contribute to a broader sense of disconnection from place.

Although no direct Project activities are anticipated within ANA's reserve boundaries, the boundaries of the traditional territory, especially around the Chukuni River, overlap the Project and changes to the land and resources have the potential to indirectly effect community cohesion.

Given the community's long-standing experience of environmental harm and mistrust of government and industrial sectors, community members may be more sensitive to indirect effects and changes.

While mitigation measures (e.g., culturally appropriate reclamation, land stewardship partnerships, and monitoring) are expected to reduce potential long-term effects, some residual uncertainty remains regarding the Project's influence on community cohesion. The relationship between ANA and the land is rooted in cultural and intergenerational practices. While technical mitigations are planned, they may not fully address the emotional, and spiritual connection to the Chukuni River or the effects of environmental grief linked to historical contamination.

Table 12.8-15: Characterization for Negative Residual Effect for Community Identity and Community Cohesion - Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Rationale
Ecological or Social Context	Level II	Criteria may or may not be sensitive and can support the predicted change with typical mitigation measures.
Magnitude	Level I	Measurable Project-related change in social determinants of well-being that may result in a slight adverse change in the social and / or economic conditions of local Indigenous people.
Geographic Extent	Level II	Effect extends beyond the LSA but within the RSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level I	Effect occurs once, infrequently.
Reversibility	Level I	Effect is fully reversible during the Project phases.
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated.

12.8.6.1.4 Change in the Region's Community Well-being - Access to Land and Resources

A Level I magnitude residual effect is anticipated for ANA in relation to access to lands and resources. Although ANA has identified longstanding concerns related to historical contamination in the region, the Project is not expected to create direct barriers to land access.

However, because the broader land and water systems hold cultural significance for ANA, Project activities may contribute to perceived changes in environmental quality or safety. These perceptions may influence how some community members choose to engage in land-based practices, even in the absence of direct physical disturbance.

Such responses reflect the community's historical experience with environmental harm, rather than Project-driven changes to access or availability of resources.

The limited availability of community-specific documentation on current land use patterns introduces some uncertainty; therefore, the Project has applied a precautionary classification. The residual effect has been characterized as Level I to acknowledge the cultural sensitivity of land stewardship for ANA while recognizing that Project activities are unlikely to alter access or cause irreversible changes to resource use opportunities.

Based on the criteria in Section 12.3.4.3, the residual effect is assessed as not significant. Planned mitigation, engagement, and monitoring measures are expected to be effective in maintaining confidence and minimizing the potential for long-term concerns.

The limited availability of community-specific land use information introduces a degree of uncertainty. Therefore, the residual effect has been conservatively assessed using a precautionary approach.

Table 12.8-16: Characterization for Negative Residual Effects for Access to Land and Resources - Asubpeeschoseewagong Netum Anishinabek

Attribute	Category	Description
Ecological or Social Context	Level I	Criteria may or may not be sensitive, and can support the predicted change with typical mitigation measures.
Magnitude	Level I	Measurable Project-related change in social determinants of well-being that may result in a slight adverse change in the social and / or economic conditions of local Indigenous people.
Geographic Extent	Level I	Effect is restricted to the LSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level II	Effect occurs intermittently or regularly.
Reversibility	Level I	Effect is fully reversible during the Project phases.
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated.

12.8.7 Significance of Residual Effects

The ecological or social context and magnitude of the effects due to Project-related activities to Region's Community Well-being are low (Level I) and either restricted to the LSA (Level I) or extends beyond the LSA but within the RSA (Level II). The effect will occur once (Level I), and will occur over the medium term of more than three years but less than 32 years (Level II) and fully reversible at closure (Level I). The residual effect is therefore not significant.

12.8.8 Confidence

The prediction confidence assignment reflects the information available through Project-specific TKLUS reports, publicly available data (statistical websites, government pages, previously completed EA/IS reports, understanding of the effectiveness of applicable mitigation measures, and outcomes of other pVCs and fVCs. The assessment is informed by substantial primary and secondary information and robust analysis however, as noted in the assessment, there are some instances where the information collected had data gaps or lacked detail.

The overall confidence in residual environmental effect and significance predictions for community well-being is moderate. As additional information continues to be shared through Great Bear Resources' ongoing consultation with local Indigenous communities over Project life, relevant information will be incorporated into Project planning as practical.

12.9 Health

The fVC Indigenous Peoples is inclusive of health consistent with the TISG (Section 6.3). Project-related changes to upstream of environmental, social, economic and cultural conditions may interact with Indigenous health. The assessment of Indigenous health expands upon pVCs and fVCs assessments provided in other Impact Statement sections to evaluate and interpret how the findings of these assessments may influence the biophysical and social determinants of health.

The objective of the health assessment summarized in this section is to assess potential Project-related changes to health of Indigenous communities identified as participants in the Impact Statement (LSFN, WFN, ANA, NWOMC and Indigenous people living in Red Lake and Ear Falls [RLEF]). To achieve this objective, detailed studies were completed to inform a holistic assessment of potential beneficial and adverse effects, that are appended to the Impact Statement:

- Human Health and Ecological Risk Assessment (HHERA; Appendix N-1)
- Health Impact Assessment (HIA; Appendix N-2).

The HHERA evaluated potential Project-related health effects on human and ecological receptors due to Project-related changes to air and multi-media (i.e., soil, water and traditional foods) quality. The HIA evaluated a wide range of biophysical and social determinants of health. The HIA drew on the findings from other assessments to understand the changes to upstream environmental, social, economic and cultural conditions that have the potential to influence Indigenous health, including the results of:

- HHERA for the assessment of biophysical determinants of health
- Assessment of changes to pVCs and fVCs with pathways to health
- Assessments of Community Services and Infrastructure (CSIN), CULRTP and CWB, associated with the fVC Indigenous Peoples.

Health is a complex and multi-faceted concept. *“[The World Health Organization’s] WHO’s definition of health is the most commonly used and cited definition in the field of HIA. This definition asserts that health is ‘a state of complete physical, mental and social wellness and not merely the absence of disease or infirmity.’ In 1986, the WHO further clarified that health is ‘a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities.’ Expanding its understanding of health, the WHO has defined mental health as ‘a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community”* (Health Canada 2024a).

According to the WHO, *“many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances, environment and personal behaviours. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all has considerable impacts on health”* (WHO 2017). Stemming from a large body of literature, the social determinants of health help explain why health inequities exist, and how non-medical factors help to determine health outcomes for both the individual and population groups (Marmot 2005; PHAC 2011; Mancini and Sala 2018).

It is understood that health is viewed holistically by Indigenous communities, which is based on the interconnected nature of physical, mental, spiritual, and emotional health and wellness (Lewis et al. 2021). It is also recognized that cultural diversity exists across First Nations and Métis peoples, and that many Indigenous perspectives on health and wellness are unique and distinct. Therefore, how different communities define health, and what factors determine positive health outcomes, may vary.

The Indigenous health assessment evaluates the following determinants of health, reflected in the structure of the existing conditions and effects assessment detailed in Appendix N-2:

- Biophysical determinants of health, including:
  - Air Quality
  - Multi-media Environmental Quality
  - Access and Availability of Water
  - Access and Availability of Traditional Foods
  - Sensory Disturbances: Sound, Vibration and Light
- Social determinants of health, including:
  - Economics (Employment, Income and Education)
  - Housing
  - Access to Health and Social Services
  - Food Security
  - Mental Wellness and Personal Behaviours
  - Actual and Perceived Public Safety (Accidents and Malfunctions)
  - Safety of Indigenous Women and Girls

The assessment of Indigenous health draws on a set of quantitative and qualitative indicators to form the basis for evaluating changes in Indigenous health. The HIA (Appendix N-2) which is relied upon for the assessment of Indigenous health, drew on a variety of sources (qualitative and quantitative) to assess potential beneficial and adverse effects to health while incorporating existing conditions data, peer-reviewed scientific literature, publicly available data, community-specific information, and Indigenous knowledge where available and pertinent. A GBA Plus lens was applied through the entirety of the assessment to consider the unique experiences of diverse population subgroups (e.g., Elders, youth, women+).

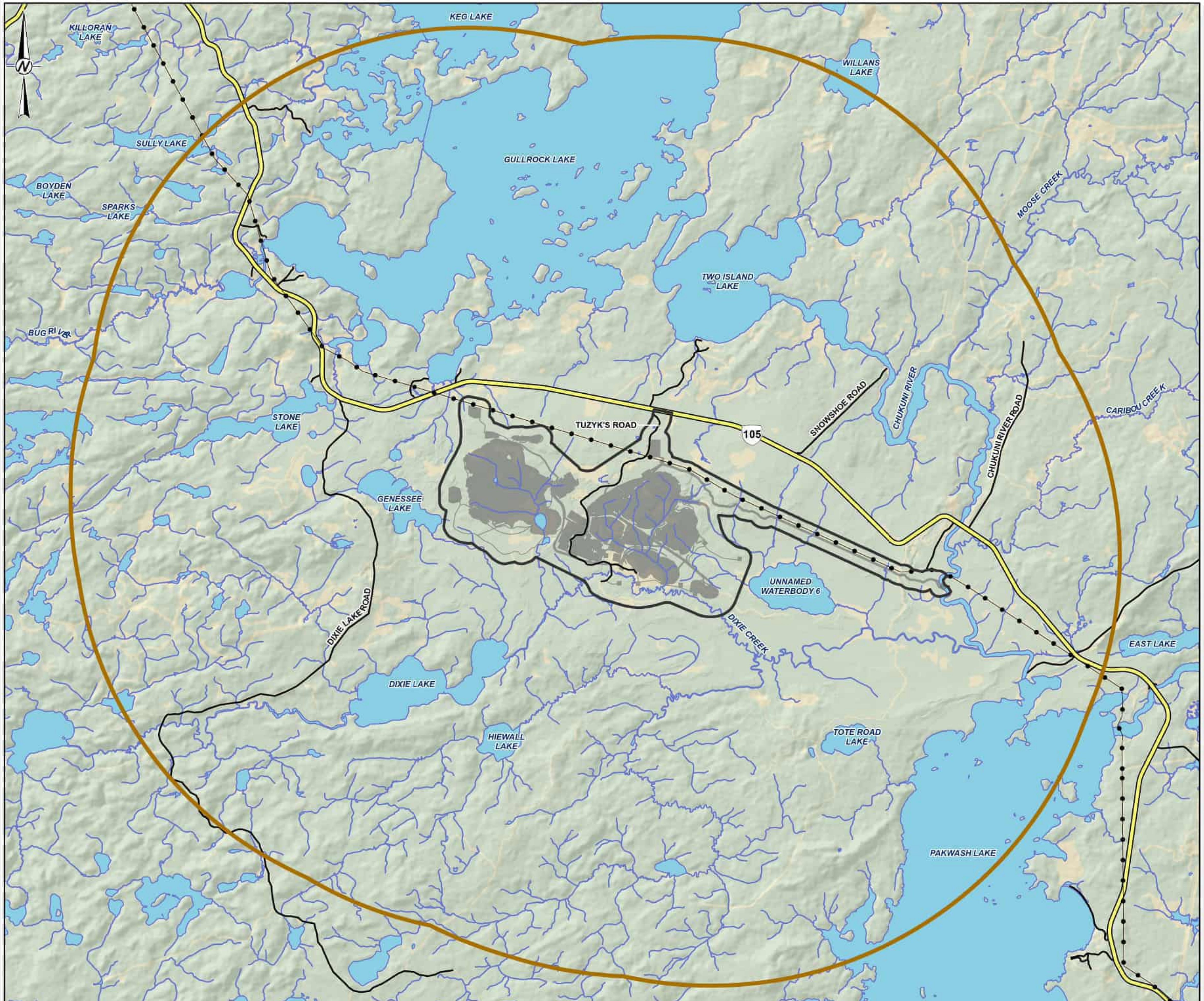
For Indigenous health, a single comprehensive assessment was completed that relies on the combined findings of the HHERA (Appendix N-1) and HIA (Appendix N-2) for all participating Indigenous communities (i.e., LSFN, WFN, ANA, NWOMC and RLEF). This subsection includes the assessment and discussion of Indigenous health overall, presenting findings for all five Indigenous communities.

12.9.1 Spatial Boundaries

There are three study areas used as spatial boundaries for the Impact Statement (Section 6.4). They are the PA, the LSA and the RSA. The spatial boundaries used for the assessment of health are shown in Figure 12.9-1 and Figure 12.9-2 for biophysical determinants of health, and in Figure 12.9-3 for social determinants of health.

For biophysical determinants of health, the spatial boundaries are defined as:

- **PA:** the Project footprint including all temporary and permanent areas associated with the mine site development, as well as an outside buffer to allow flexibility for design optimizations prior to construction and over the mine life. The PA is approximately 3,349 hectares (ha) in size.
- **LSA:** is the area within which Project-related effects may reasonably be expected to occur and can be predicted or measured with a reasonable degree of accuracy and confidence. The LSA extends beyond the PA and is intended to capture potential direct effects from the Project (such as emissions, discharges and habitat loss) and indirect effects resulting from the Project.
    - The LSA for biophysical determinants of health is adopted from the HHERA LSA, and represents a combination of both the air quality and surface water system LSAs. The LSA encompasses the area adjacent to the PA to capture the maximum predicted ground-level concentrations due to the Project and where air quality can be predicted or measured with a reasonable degree of accuracy. This zone includes the leased claims boundary and extends approximately 10 km from the main area of the PA (excluding a buffer for the Chukuni River pipelines or pump house). For surface water, the LSA includes sub-watersheds of Dixie Creek that intersect with the PA, as well as the Chukuni River (the receiving environment). It also includes the Chukuni River upstream to the Snowshoe Rapids Dam, and downstream to the outlet of Pakwash Lake.
- **RSA:** encompasses the LSA and is used to provide regional context. The RSA extends beyond the PA and encompasses the LSA and, where appropriate, extends further to support a regional context in the assessment of potential Project effects. It is the maximum geographical extent or zone of influence in which potential effects from the Project are assessed.
    - The RSA for biophysical determinants of health is adopted from the HHERA RSA, which represents a combination of both the air quality RSA which is 10 km further than the LSA, and surface water system RSA which encompasses the LSA and extends into the Dixie Creek watershed, encompassing Dixie Lake and Hiewall Lake. Upstream, it follows the Chukuni River to include Two-Island Lake, Gullrock Lake, Keg Lake and Red Lake. Downstream, the RSA continues through Pakwash Lake and along the Chukuni River to its confluence with the English River.



LEGEND

- GREAT BEAR PROJECT FOOTPRINT
- PROJECT AREA
- LOCAL STUDY AREA FOR BIOPHYSICAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT
- HIGHWAY
- LOCAL ROAD
- EXISTING TRANSMISSION LINE
- WATERCOURSE
- WATERBODY

0 1 2 4

1:105,000 KILOMETRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. ROADS INFORMATION PROVIDED BY GREAT BEAR RESOURCES, AUGUST 2022.
3. SITE PLAN BASED ON INFORMATION PROVIDED BY GREAT BEAR RESOURCES, DECEMBER 2024 / JUNE 2025.
4. COORDINATE SYSTEM: NAD 1983 UTM ZONE 15N

CLIENT
GREAT BEAR RESOURCES

PROJECT
GREAT BEAR PROJECT

TITLE
LOCAL STUDY AREA FOR BIOPHYSICAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT

CONSULTANT

YYYY-MM-DD	2026-03-31
DESIGNED	----
PREPARED	MD
REVIEWED	----
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
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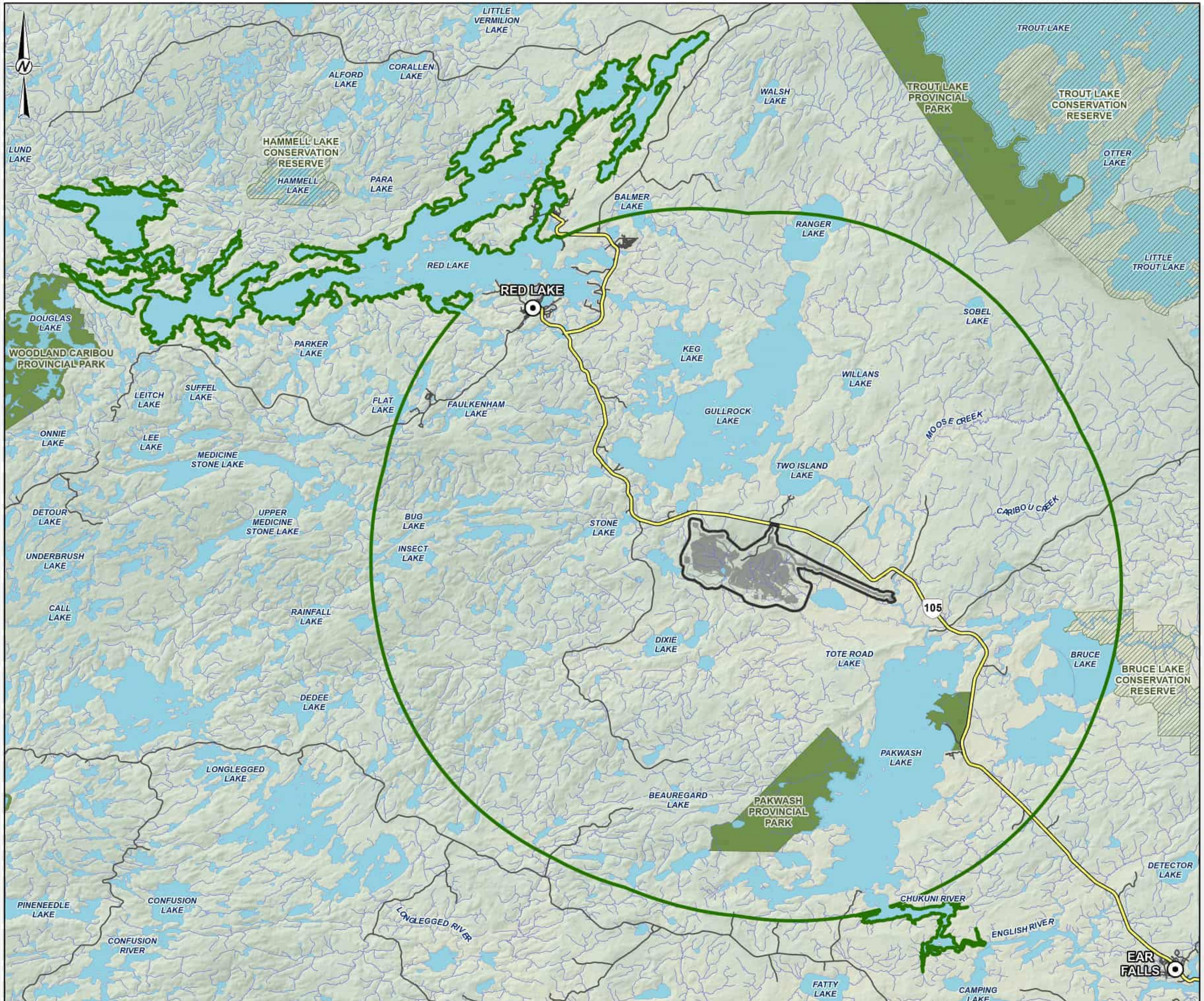

LEGEND

- GREAT BEAR PROJECT FOOTPRINT
- PROJECT AREA
- REGIONAL STUDY AREA FOR BIOPHYSICAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT
- TOWN
- CONSERVATION RESERVE
- PROVINCIAL PARK
- HIGHWAY
- LOCAL ROAD
- WATERCOURSE
- WATERBODY

0 2.5 5 10

1:250,000 KILOMETRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. ROADS INFORMATION PROVIDED BY GREAT BEAR RESOURCES, AUGUST 2022.
3. SITE PLAN BASED ON INFORMATION PROVIDED BY GREAT BEAR RESOURCES, DECEMBER 2024 / JUNE 2025.
4. COORDINATE SYSTEM: NAD 1983 UTM ZONE 15N

CLIENT
GREAT BEAR RESOURCES

PROJECT
GREAT BEAR PROJECT

TITLE
REGIONAL STUDY AREA FOR BIOPHYSICAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT

CONSULTANT

YYYY-MM-DD	2026-03-31
DESIGNED	----
PREPARED	MD
REVIEWED	----
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
CA0031271	0001	A	12.9-2

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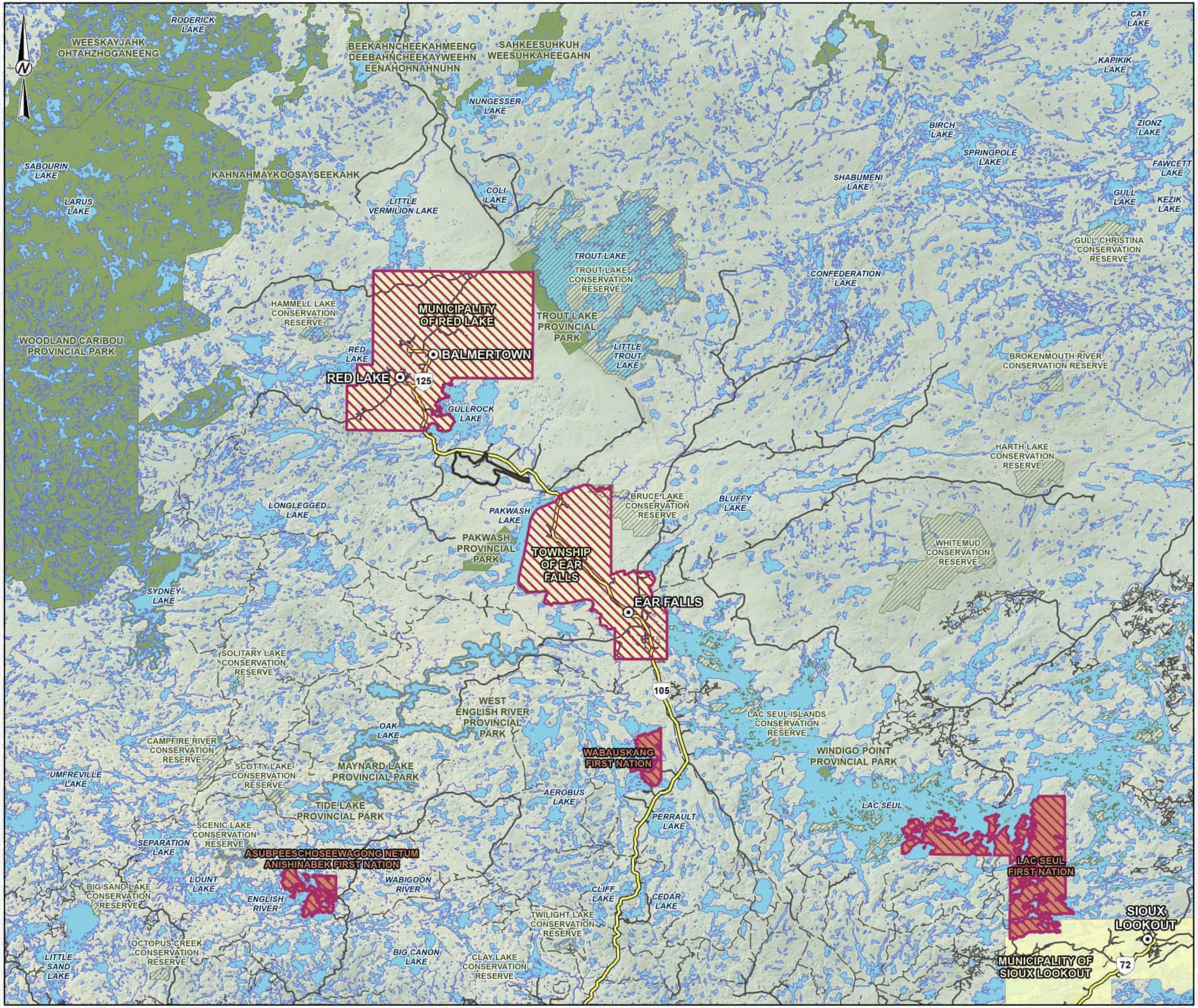
For social determinants of health, the spatial boundaries are defined as:

- **PA** (the same as for biophysical determinants of health): the footprint of the Project including all temporary and permanent areas associated with the mine site, as well as a buffer to allow flexibility for design optimizations prior to construction and over the mine life.
- **LSA:** is the area within which Project-related effects may reasonably be expected to occur and can be predicted or measured with a reasonable degree of accuracy and confidence. The regions that the Project's socio-economic demands are expected to influence, possibly causing direct, indirect and / or induced effects on Indigenous health, include the Indigenous communities of LSFN, WFN, ANA, NWOMC, and RLEF.
    - The LSA boundary is same as applied for community well-being (Section 12.8)
- **RSA:** encompasses the LSA and is used to provide regional context. The region surrounding the LSA and the PA may also experience direct, indirect, and / or induced effects on Indigenous health due to the socio-economic demands of the Project. The RSA for Indigenous health, specifically the social determinants, is the District of Kenora.
    - The RSA boundary is same as applied for community well-being (Section 12.8).

The boundaries used for assessment of biophysical and social determinants of health are the same as utilized in the HIA (Appendix N-2).



REGIONAL STUDY AREA OVERVIEW

SCALE: 1:30,000,000

LEGEND

- PROJECT AREA
- TOWN
- FIRST NATION RESERVE
- LOWER TIER MUNICIPAL BOUNDARY
- CONSERVATION RESERVE
- PROVINCIAL PARK
- HIGHWAY
- LOCAL ROAD
- RESOURCE / RECREATION ROAD
- WATERBODY
- LOCAL STUDY AREA FOR SOCIAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT
  - LAC SEUL FIRST NATION
  - WABAUSKANG FIRST NATION
  - ASUBPEESCHOSEEWAGONG NETUM ANISHINABEK FIRST NATION
  - TOWNSHIP OF EAR FALLS
  - MUNICIPALITY OF RED LAKE
- REGIONAL STUDY AREA FOR SOCIAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT (SHOWN IN OVERVIEW MAP)
  - DISTRICT OF KENORA

0 7.5 15 30

1:700,000 KILOMETRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. WATERCOURSES AND WATERBODY ACQUIRED FROM LAND INFORMATION ONTARIO (MNRF) AND MODIFIED TO MATCH AERIAL IMAGERY AND LIDAR.
3. ROADS INFORMATION PROVIDED BY GREAT BEAR RESOURCES, AUGUST 2022.
4. COORDINATE SYSTEM: NAD 1983 UTM ZONE 15N

CLIENT
GREAT BEAR RESOURCES

PROJECT
GREAT BEAR PROJECT

TITLE
SPATIAL BOUNDARIES FOR SOCIAL DETERMINANTS OF HEALTH - HEALTH IMPACT ASSESSMENT

CONSULTANT

YYYY-MM-DD	2026-03-31
DESIGNED	----
PREPARED	MD
REVIEWED	----
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
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12.9.2 Existing Conditions

Health is assessed through consideration of upstream conditions and changes to biophysical and social determinants of health; therefore, the indicators identified in **Error! Reference source not found.**, including existing conditions for these indicators, are collectively considered in the assessment of the determinants of health, in accordance with HIA guidelines (Health Canada, 2024a). The existing conditions for these determinants are described in detail in the relevant Impact Statement sections and appendices, the Human Health and Ecological Risk Assessment (Appendix N-1), and in the Health Impact Assessment (Appendix N-2).

A summary of existing conditions for Indigenous health, including physical health (e.g., chronic conditions, communicable diseases and demographics), health-related behaviours (e.g., food consumption, physical activity and substance use) and mental wellness (e.g., depression, stress / anxiety and perception of risk) are summarized below, along with the methods used to characterize baseline conditions. Further details, including community-specific profiles, are provided in the Baseline Health Profile included as Attachment A of Appendix N-2. Socio-economic conditions and community resources are reported in the Socio-economic Baseline Study (Appendix O-1).

It is important to note that the data presented are primarily from publicly available sources, with some local data from a community survey. Limited data on Indigenous health at the community-level were available to Great Bear Resources; therefore, the data presented may not necessarily be representative of the individual Indigenous communities being assessed (i.e., LSFN, WFN, ANA, NWOMC and RLEF). The information provided in this section is intended to reflect Indigenous health overall in the region and is assumed to be generally applicable to the local identified communities. Where possible, Indigenous-specific data were used; however, in the absence of these data, general population data were also included.

12.9.2.1 Methods

Baseline health-related information was identified from both publicly available sources, and confidential reports prepared by Indigenous communities in the region provided to Great Bear Resources. In addition to population health indicators (e.g., burden of disease, birth rates, injuries, and mental health rates and status), Indigenous-specific indicators such as land-based health, cultural continuity, community relationships, language and knowledge preservation, and spiritual wellness were also described. The existing (baseline health) conditions characterization was informed by primary (data collection) and secondary (desktop) research using a broad range of information sources, including:

- Data collected from local community members, including Indigenous members, via a Great Bear Project Community Health Survey administered in 2024 (details provided in Attachment A of Appendix N-2)
- Interviews with organizations within some of the local communities to investigate the tangible and intangible impacts that may occur during the development phases of the Project (records of contact from community engagement interviews completed for the Socio-economic Baseline Study; Appendix O-1)
- Municipal, provincial and federal government publications (e.g. policy and planning materials, government reports, municipal websites and plans)
- Statistical publications (e.g., Statistics Canada Community Profiles from both 2016 and any available 2021 data, and the results of the National Household Survey)

- Relevant publicly available information (e.g., community organization websites, business websites, primary and grey literature, and letters from Indigenous communities to government agencies)
- Media articles, including websites.

The baseline characterization also draws on information from the Socio-economic Baseline Study (Appendix O-1).

Baseline conditions were characterized using a tiered hierarchy of information sources. Indigenous knowledge studies, community-provided information, and consultation inputs were prioritized where available. Second, local First Nations specific health data were used, primarily sourced from publications by the Sioux Lookout First Nations Health Authority (SLFNHA). Third, to supplement these sources, regional health data from Public Health Ontario's NWHU were also considered, recognizing that these data are not specific to Indigenous health but to the general population in the area.

The smallest geographical scale for which health data are available through Public Health Ontario are public health units. The LSA and RSA communities fall within the NWHU. The boundaries of the NWHU encompasses several communities, including LSFN, WFN, ANA, NWOMC, the Municipality of Red Lake, the Township of Ear Falls, and the District of Kenora. Accordingly, unless otherwise stated, the health statistics presented throughout this section are drawn from the RSA's corresponding public health unit - NWHU.

Public health data for the NWHU are largely drawn from the database of statistics available through Statistics Canada and Public Health Ontario, which in turn have been sourced from the following: National Ambulatory Care Reporting System; the Ministry of Health and Long-Term Care; IntelliHealth, Discharge Abstract Database; Vital Statistics Mortality; Healthy Babies Healthy Children Integrated Services for Children Information System; Reporting Sub-System; the Ministry of Children, Community and Social Services; Statistics Canada; and the Canadian Community Health Survey (CCHS). Age-standardized rates have been adjusted by Public Health Ontario to the 2011 Canadian population.

It is recognized that public health datasets often do not fully capture people living on First Nations reserves or in small, remote communities, and are constrained by sampling limitations. As a result, some indicators presented in this section may underrepresent true health conditions within the local Indigenous communities and should be interpreted with this limitation in mind. The use of regional health data was not intended to replace or supersede Indigenous knowledge, community-led research, or community-specific health information. Rather, it complements those sources by providing additional context and addressing data limitations where they may exist. The limitations associated with applying regional datasets to community-level health characterization are further discussed in Appendix N-2.

In addition to compiling information from publicly available resources and databases, a Great Bear Project Community Health Survey was administered to collect primary data in order to better understand specific aspects of community health and wellness, including: community demographics; priority issues of importance; perceptions of health and wellbeing status; and to gather some information related to ways the land is used in the areas surrounding the Project. This survey was administered online and designed to collect information from local residents, including residents who identify as Indigenous. The findings provide only a snapshot of information provided by some Indigenous participants and may not be representative of the interests, opinions, and values of the local Indigenous communities as a whole, or the interests, opinions, and values of individuals within those communities.

As applicable, health status information is sufficiently disaggregated and analyzed to support the analysis of potential effects to underrepresented groups and support GBA Plus. In addition, a summary of historical and current conditions related to Indigenous health is provided.

Unless explicitly stated, references to results being higher or lower throughout this section indicate comparative differences only and should not be interpreted otherwise.

12.9.2.2 Description

The description of existing conditions for health also requires consideration of the upstream environmental, social, cultural, and economic conditions that influence health and wellness. Therefore, health is connected (directly and / or indirectly) to other pVCs and fVCs and technical appendices, including:

- Air Quality (Section 7.2)
- Sound (Section 7.3)
- Vibration (Section 7.4)
- Groundwater Quantity (Section 7.5)
- Surface Water Flows and Levels (Section 7.6)
- Water Quality (Section 7.7)
- Vegetation Communities (Section 7.8)
- Wild Rice (Section 7.9)
- Moose (Section 7.10)
- Other Wildlife (Section 7.11)
- Species at Risk (Section 7.12)
- Local and Regional Economy (Section 7.16)
- Fish and Fish Habitat (Section 8)
- Migratory Birds (Section 9)
- Community Services and Infrastructure (Sections 10.5, 11.5, 12.5, 13.5 and 14.5)
- Current Use of Lands and Resources for Traditional Purposes (Sections 10.6, 11.6, 12.6, 13.6 and 14.6)
- Community Well-Being (Sections 10.8, 11.8, 12.8, 13.8 and 14.8)
- Night-Time Light Levels Baseline and Predictive Assessment (Appendix G)
- Socio-economic Baseline Study (Appendix O-1)
- HHERA (Appendix N-1).

A description of existing conditions of the linked pVCs, fVCs, and technical appendices listed above, as they relate to the biophysical and social determinants of health, is presented in Section 6 of the HIA (Appendix N-2). Collectively, the information from the upstream pVCs, fVCs, and technical appendices informed the existing conditions of the biophysical and social determinants of health.

In addition, the description of existing conditions for Indigenous health includes data and information on current health status and conditions within the LSA and RSA, as shaped by interrelated environmental, cultural, mental health, and socio-economic factors, with land-based practices, family and relationships, and cultural continuity identified as important indicators of health and wellness. This information is summarized below and detailed in Attachment A of Appendix N-2.

12.9.2.2.1 Historical Health Context

This section provides a summary of information for each of the local Indigenous communities that is relevant to health, including historical information. Further detail is provided in Attachment A of Appendix N-2.

Colonialism in Canada has operated as an interconnected system of laws, institutions, and policies, including the residential school system, that displaced First Nations, Inuit and Métis peoples from their lands, suppressed their cultures and governance systems, and undermined self determination (PHAC 2024). Many current health disparities observed in Indigenous populations are attributed to colonialism in Canada (PHAC 2024; SLFNHA 2024a). While there are common themes, such as land dispossession, forced assimilation and intergenerational trauma, there are also distinct forms for Indigenous groups, such as treaties and the *Indian Act* for First Nations, forced relocations and epidemics for Inuit, and land scrip and exclusion from treaties for Métis (PHAC 2024).

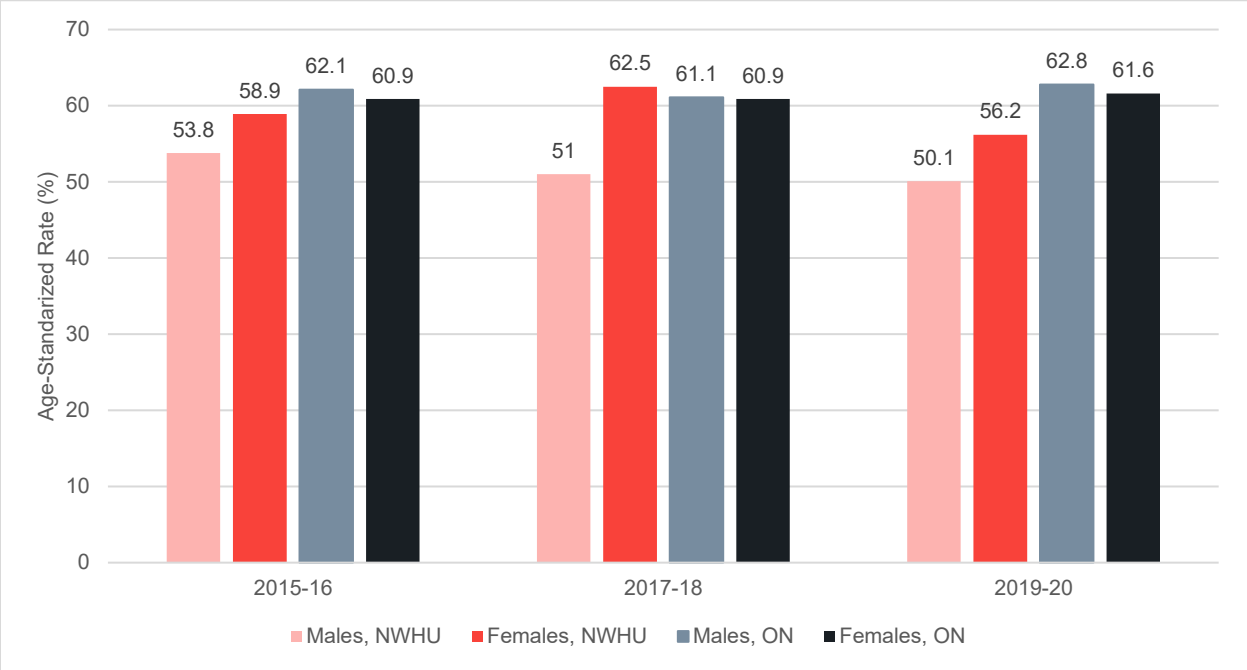
In a confidential report prepared for LSFN, some members described the effects of colonialism on their community. For example, community members shared how even the creation of the reserve boundaries had an impact, as the creation of these boundaries restricted their way of life and their culture to exist within artificial or colonial lines. They discuss how these impacts and the impacts of language loss and the residential school system are felt through generations. For ANA, colonial policies have *"led to intergenerational trauma and the loss of language, cultural teachings, and self-sufficiency"* (GNFN ANA 2025). For Métis populations in Canada, *"the root cause of poorer health outcomes suffered by the Métis lies in inter-generational family and individual experiences of trauma caused by colonial policies and adversity in their childhood"* (Métis National Council 2025). Perspectives on colonization from confidential reports prepared for WFN or community websites were not available. These examples are not intended to fully capture the complex history of colonial impacts on Indigenous people, but instead to highlight some of the distinct ways colonialism has shaped and continues to shape their experiences.

12.9.2.2.2 Perceptions of Health and Wellness

This section provides an overview of perceptions of health in the NWHU, in comparison to provincial averages. Figure 12.9-4 presents the age-standardized rates of respondents to the CCHS, from the NWHU and the province of Ontario, who reported a good or excellent perception of their overall health. The rates of males in the NWHU who reported a good or excellent perception of their overall health slightly declined from 2015-2016 to 2019-2020, and were lower than the rates for females in the NWHU (not statistically validated). In addition, the rates for males in the NWHU were also lower than rates for males in the province (only significantly lower for the 2017-2018 and 2019-2020 period; no significant difference in the 2015-2016 period) (Ontario Agency for Health Protection and Promotion 2023a). The rates of females in the NWHU who reported a good or excellent perception of their overall health was relatively steady throughout the years.

The rates for females in the NWHU were lower than the rates for females in the province in 2015-2016 and 2019-2020, however rates for females were not significantly lower than provincial rates.

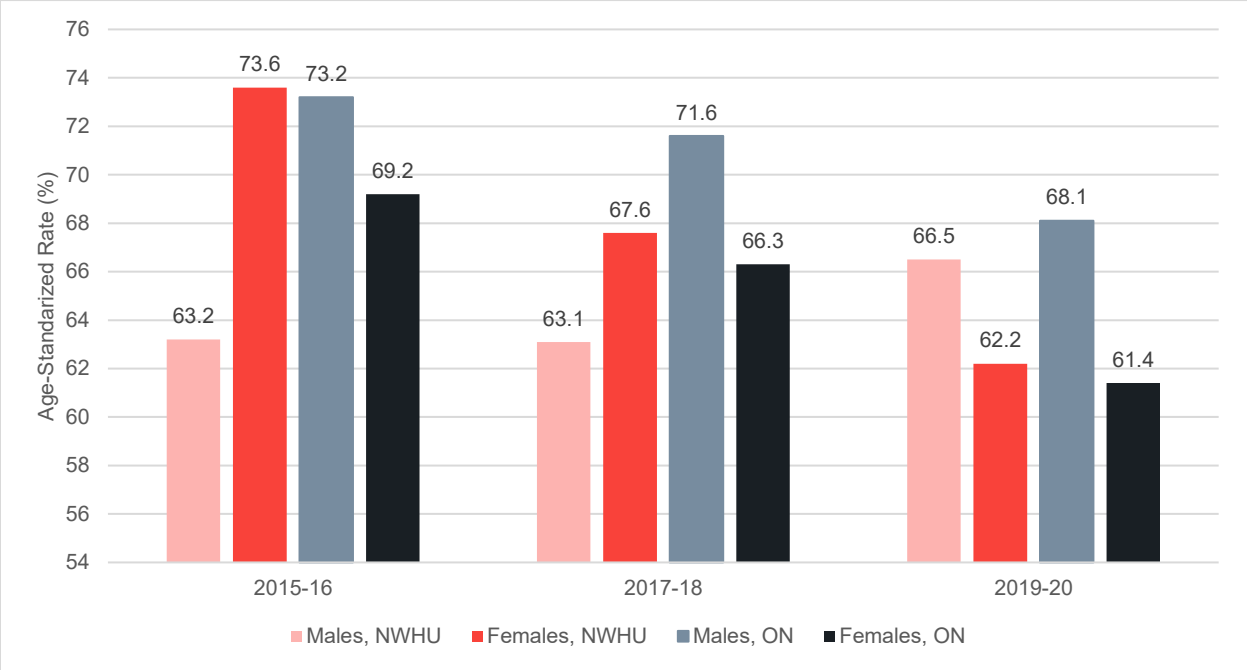
Figure 12.9-4: Perceived Health is Good or Excellent, Northwestern Health Unit and the Province of Ontario, 2015-2020



Source: (Ontario Agency for Health Protection and Promotion 2023a)

Figure 12.9-5 presents the age-standardized rates of respondents to the CCHS from the NWHU and the province who reported a good or excellent perception of their mental health. The rates of females in the NWHU who reported a good or excellent perception of their mental health were higher than the provincial average, while the rates for males were lower than the provincial average between 2015-2016 to 2019-2020 (Ontario Agency for Health Protection and Promotion 2023a). The rates of females in the NWHU who reported a good or excellent perception of their mental health were higher than the rates for males in NWHU in 2015-2016 and 2017-2018 and were lower than the rates for males in the NWHU in 2019-2020.

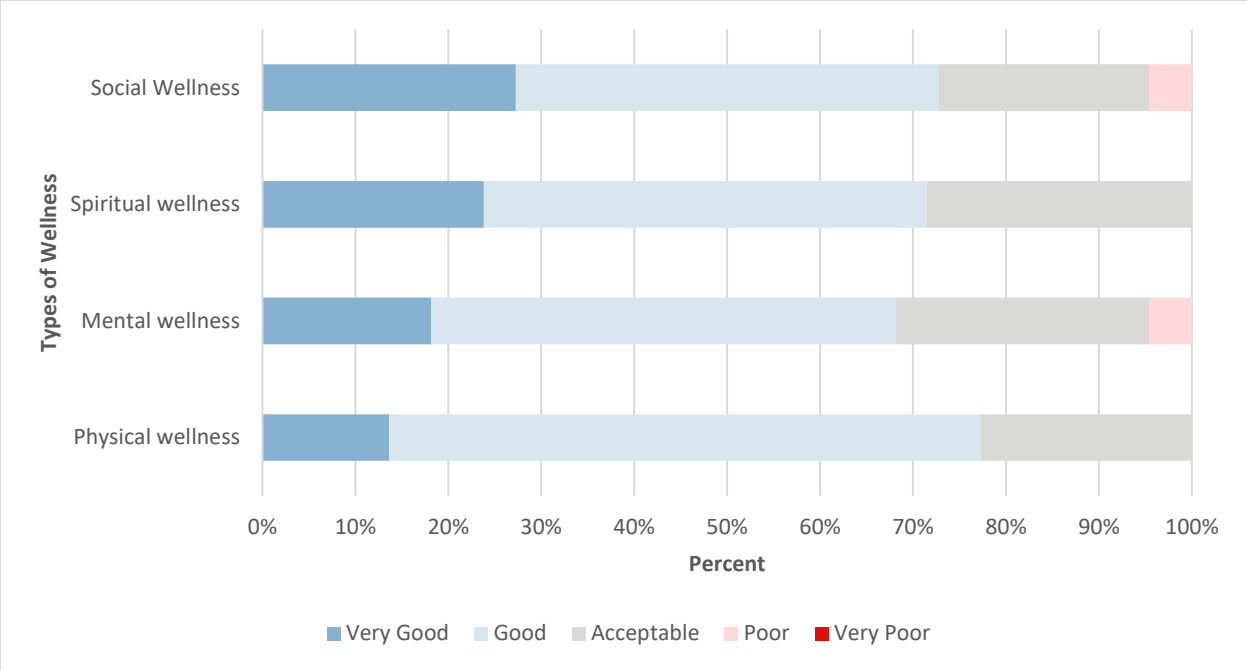
Figure 12.9-5: Perceived Mental Health is Good or Excellent, Northwestern Health Unit and the Province of Ontario, 2015-2020



Source: (Ontario Agency for Health Protection and Promotion 2023a)

The Great Bear Project Community Health Survey asked survey respondents to rate their current feelings of health and well-being for the following categories: physical, mental, spiritual, and social wellness on a scale from very good to very poor. Most self-identified Indigenous respondents selected positive answers (i.e., very good or good) across all categories, followed by neutral (i.e., acceptable), and negative (poor), as presented in Figure 12.9-6. No respondents selected very poor in any of the four categories queried.

Figure 12.9-6: Current State of Health and Well-Being, Self-Identified Indigenous Respondents (n=22)



Source: Great Bear Project Community Health Survey (Attachment A of Appendix N-2)

12.9.2.2.3 Lifestyle and Behaviours

Detailed information regarding lifestyle and behaviour is presented in Attachment A of the HIA (Appendix N-2) including referencing to source information. Data on lifestyles and behaviours were available for Métis people in Canada, and for the general public in the RSA health units' catchment areas (i.e., NWHU), in comparison to provincial averages.

Smoking rates among Métis adults in Ontario declined between 2007 and 2014, whereas the smoking rate among non-Indigenous adults remained relatively constant (Métis National Council 2022). In 2015-2016 and 2017-2018, males and females in the NWHU had higher rates of current daily smoking than the provincial averages, with higher rates of smoking among males for both NWHU and Ontario (Ontario Agency for Health Protection and Promotion 2023b).

NWHU had higher rates of self-reported age-standardized rates of heavy drinking than the province in 2015-2016 and 2017-2018, with rates among males being higher than rates among females in both the NWHU and the province (Ontario Agency for Health Protection and Promotion 2023c).

Despite similar levels of physical activity across all age groups and genders when compared with Ontario, NWHU reports self-reported obesity rates that are approximately twice the provincial average among individuals aged 45 and older in 2021, primarily among males. When disaggregated by age, those in age groups 45 to 64 and 65+ in the NWHU were significantly higher than their Ontario counterparts, whereas those aged 18 to 44 in the NWHU were similar to their Ontario counterparts (Ontario Agency for Health Protection and Promotion 2023d).

12.9.2.2.4 Hospitalizations and Safety

Hospitalizations and safety statistics provide an overview of injury and illness trends in the region.

The leading causes of hospital admissions for adults 20 years of age and older, among Sioux Lookout area First Nations were injuries (15% of hospital admissions) followed by digestive system issues (14%) (SLFNHA 2019a).

With respect to the causes of intentional injuries resulting in Sioux Lookout area First Nations hospital admissions for adults aged 20 years and older between 2012-2016, assault accounted for 49% of intentional injuries, followed by self-poisoning (40%) (SLFNHA 2019a).

The leading reasons for emergency department visits for adults 20 years of age and older, among Sioux Lookout area First Nations between 2012-2016 were: signs, symptoms and abnormal lab findings (21%); injuries (15%); and mental health, musculoskeletal system, and respiratory system (9% each) (SLFNHA 2019a).

Attachment A of Appendix N-2 provides additional information regarding hospitalization and safety in Sioux Lookout area First Nations and in the NWHU.

12.9.2.2.5 Chronic and Communicable Diseases

Chronic health conditions represent an existing and ongoing concern within Indigenous communities in northern Ontario.

Rates of diabetes-related hospital visits and diabetes-related deaths among Indigenous populations are approximately four times higher than the Ontario average. First Nations individuals age 20 and above from Sioux Lookout area were seen in the emergency department for diabetes at a rate three times the Ontario average (SLFNHA 2019a). In addition, First Nations from Sioux Lookout area individuals age 20 and above were admitted to hospital for diabetes at a rate four times the Ontario average (SLFNHA 2019a).

In contrast, regional public health data from the NWHU indicate lower reported prevalence rates of asthma and hypertension compared to provincial rates in 2020 (Ontario Agency for Health Protection and Promotion 2023e). The rates of hospitalization for asthma for males in NWHU between 2012 and 2019 were lower than the rates for women in NWHU, and for males in Ontario (Ontario Agency for Health Protection and Promotion 2023f). The rates of hospitalization for asthma for females in NWHU increased sharply in 2014, 2016 and 2019 as compared to the previous year.

The rates of hospitalization for cardiovascular disease in NWHU and the province were compared between 2012 and 2021. The rates for males in the NWHU showed a slight decreasing trend during this period and were higher than the rates for females in NWHU and males in the province (Ontario Agency for Health Protection and Promotion 2023f).

The rate of Human Immunodeficiency Virus (HIV) for both males and females in Ontario from 2013 to 2022 is generally stable, with males having higher rates than females over these years. In contrast, the rates for males and females in the NWHU display more noticeable fluctuations, with some periods of increase and decrease. Overall, males had higher rates than females in most years, although the NWHU rates appear more variable compared to Ontario (Ontario Agency for Health Protection and Promotion 2023g).

Attachment A of Appendix N-2 provides additional information regarding chronic and communicable disease trends in Sioux Lookout area First Nations and in the NWHU.

12.9.2.2.6 Mental Health and Substance Use

Mental health and substance-related disorders are consistently identified in local health reports as a priority area of concern and a large contributor to health service utilization in the region (SLFNHA 2024b; NWHU and Yusuf 2023; MNP LLP 2020). Slightly over one third of diagnoses for Sioux Lookout area First Nations nursing station visits related to mental health and substance use were substance-related or for addictive disorders (33.5%) (SLFNHA 2024b).

As stated in SLFNHA (2024b): *"Between 2015 to 2020 across the community nursing stations, more women than men visited nursing stations to seek help for substance use / addictive disorders (55.3 females vs. 44.7 males per 1000 visits) and self-harm / suicidal attempts (71.9 females vs. 28.1 males per 1000 visits). However, both men and women had similar numbers of visits for anxiety disorders."*

When examining emergency department visit rates for intentional self-injury for Sioux Lookout area First Nations and regional health units between 2011-2021, rates for Band members both on- and off-Reserve were generally higher than the provincial average and rates for the NWHU (SLFNHA 2024b).

Emergency department visit rates per 1,000 population for mental health and substance use for Sioux Lookout Band Members on- and off-reserve rates were generally higher than the provincial average and rates for the NWHU between 2011-2021 (SLFNHA 2024b).

The Red Lake and Ear Falls 2020 Community Safety and Well-Being (CSWB) Plan further identifies substance use and mental health as top community priorities, noting that hospitalizations due to mental health conditions are higher in Red Lake and Ear Falls than provincial levels (MNP LLP 2020). In particular, youth and young adults in the region are experiencing higher rates of mental health issues (e.g., hospitalizations and emergency departments related to self-injury and / or substance use) than their Ontario counterparts (Mergler et al. 2023; MNP LLP 2020; NWHU and Yusuf 2023; SLFNHA 2018, 2024b).

With respect to self-reported prevalence of anxiety disorders in the NWHU in comparison to the province of Ontario, females were more likely than males to report anxiety in both the NWHU and the province (Ontario Agency for Health Protection and Promotion 2023h).

A report published by the Northern Policy Institute and authored by Parsons (2022) examined the homelessness, addiction, and mental health crisis in northern Ontario. The report uses data from district social services administration boards (DDSABs) in northern Ontario communities and regions. DDSABs are required to conduct detailed enumerations of their homeless populations every two years, in accordance with a new requirement that began in 2018 under the Housing Services Act (Parsons 2022). The report highlights how the rising rates of homelessness and substance use in northern Ontario suggest a growing trend of mental health crises among vulnerable populations (Parsons 2022). In 2021, the District of Kenora region reportedly had 3.1 homeless individuals per 1,000 persons, which was the third highest of the regions included in the study and represent larger homeless populations than some of the most populus cities in Ontario (Parsons 2022). In the District of Kenora, 65% and 75% of homeless individuals in 2021 reported they struggled with mental health and addiction, respectively (Parsons 2022).

Given the high percentage of homeless individuals reporting to be struggling with addiction, it is noteworthy that opioid-related emergency department visits and deaths between 2017 and 2021 more than doubled in in the NWHU (Parsons 2022).

Attachment A of Appendix N-2 provides additional information regarding mental health and substance use trends for Indigenous communities in the region and the NWHU.

12.9.2.2.7 Cancer and Mortality

A report titled Kayamowemakak Ahkosiwin Tipacimowin Cancer in Sioux Lookout area First Nations 2006-2022 (SLFNHA 2025), examined cancer trends in Sioux Lookout area First Nations. During most single years between 2006 and 2020, using age-standardized rate measures, the overall cancer incidence (new cases) rates among Sioux Lookout area First Nations, which includes LSFN and WFN, were lower than the rates seen in other public health units (Thunder Bay District Health Unit and NWHU), and Ontario (SLFNHA 2025).

Métis National Council (2022) summarizes current trends in cancer and tobacco-related risk factors for Métis populations in Canada. Research suggests that cancer rates among Métis populations are comparable to, or higher than, those observed among non-Indigenous populations. Mazereeuw et al. (2018) as cited in (Métis National Council 2022), examined cancer incidence and mortality using data from the Canadian Census Health and Environment Cohort (1992–2009). Their analysis found that, when all cancer types and both sexes were considered together, overall cancer incidence among Métis adults was similar to that of non-Indigenous adults. However, statistically significant higher relative risks of cancer were identified for Métis adults for breast, lung, liver, laryngeal, gallbladder, and cervical cancers. In contrast, lower relative risks were observed among Métis people for colorectal cancer among women, as well as for melanoma and leukemia when men and women were considered together. Differences in incidence for other cancer types were not statistically significant (Métis National Council 2022).

A report published by the SLFNHA (Mamow Ahyamowen 2020) examined mortality and chronic health conditions among members of 59 First Nations communities in Northern Ontario. It compared mortality trends to the Ontario population overall and highlights key health challenges and inequities faced by First Nations communities. Although SLFNHA serves 33 First Nation communities in the Sioux Lookout region in Ontario, Canada, including LSFN and WFN, this report was published by the Mamow Ahyamowen (everyone's voices) Partnership, which is an epidemiology partnership of 11 First Nations organizations collectively serving 78 communities across northern Ontario. 59 communities participated in this analysis including ANA and LSFN (Mamow Ahyamowen 2020). It is noted that WFN and NWOMC were not participants in this analysis and as such, the data may not be representative of these communities. Members of Mamow Ahyamowen communities are more likely to die before retirement age (65 years old) than the overall Ontario population, with the average age at death among Mamow Ahyamowen communities being 54 years old compared to 74 years old for Ontario. The most common causes of death among Mamow Ahyamowen community members between 1992 and 2014 included injuries, circulatory, cancer, and diabetes related deaths. Mamow Ahyamowen communities have more deaths due to injuries and diabetes than Ontario overall, whereas circulatory and cancer deaths showed similar rates to Ontario overall. More people in Mamow Ahyamowen communities tend to have diabetes when they die compared to Ontario overall, and women were more likely to have a history of diabetes when they die compared to men (Mamow Ahyamowen 2020).

Cancer incidence rates (all types) show a general downward trend for both males and females in the NWHU between the years of 2010-2014, though there are some year-to-year fluctuations. In comparison, the rates in Ontario for both genders remain relatively steady, with only a slight decline over time. Overall, cancer incidence rates for both males and females were relatively higher than rates in the NWHU for both males and females between 2010-2014 (Ontario Agency for Health Protection and Promotion 2023i).

Attachment A of Appendix N-2 provides additional information regarding cancer and mortality characteristics in the region.

12.9.2.2.8 Food Security

Food security remains a key determinant of health for Indigenous communities in northern Ontario, and food insecurity represents a public health concern in northwestern Ontario. For many First Nations communities, colonization and the imposition of colonial policies have disrupted traditional food knowledge and practices. These interventions have resulted in a shift away from longstanding Indigenous food systems toward reliance on market foods, which are commercially produced, store-bought items that are imported into communities from retailers (SLFNHA 2024a).

The average monthly cost of food in Sioux Lookout area First Nations estimated to be between 37% and 69% higher than the average monthly cost for other municipalities elsewhere in northern Ontario (SLFNHA 2024a). In addition, the NWHU reported food insecurity rates in the Kenora-Rainy River Districts (21%) as being slightly higher than provincial and regional averages (19%) (NWHU 2024).

In 2011, the First Nations Food Nutrition and Environment Study (FNFNES) assessed food security in First Nations communities using the Household Food Security Survey Module and results are summarized in a report titled FNFNES Ontario Regional Report (2011–2012) (Chan et al. 2014). It is noted that LSFN, WFN, NWOMC, and RLEF were not participants in this study; however, ANA participants were included. The highest household food insecurity rate (52%; 34% moderately and 18% severely) was reported among First Nations households located in the Boreal Shield / Subarctic Ecozone 1 (which encompasses northern First Nations including ANA) compared to other Ontario ecozones in the study (Chan et al. 2014). In Ontario (all ecozones), when asked if their household would like to have more traditional food, most adults (73%) said that they would (Chan et al. 2014).

Rates of food insecurity in the NWHU (2018-2020) were higher than provincial averages, with 79.9% of households in the NWHU being food secure compared to 83.3% of households in the province (Ontario Agency for Health Protection and Promotion 2023j).

Attachment A of Appendix N-2 provides additional information regarding food security trends in the region.

12.9.3 Potential Effects

The potential interactions between proposed Project-related activities and Indigenous health are used to identify potential effects (positive and negative), and whether these effects are direct or indirect.

For each Project phase, a detailed overview of the Project's potential interactions (direct and indirect) with Indigenous health is presented in Table 12.9-1. All Project activities were identified as having a potential interaction with Indigenous health.

The potential interactions are considered to be applicable to each of the Indigenous communities being assessed (LSFN, WFN, ANA, NWOMC and RLEF).

Table 12.9-1: Potential Interactions Between Project Activities and Indigenous Health

Project Component / Activity	Change in Health (Indigenous Peoples)
Construction Phase	
Site preparation activities	Yes
Establishment and operation of water management and treatment facilities	Yes
Open pit mining	Yes
Underground mining	Yes
Management of rock and unconsolidated materials in stockpiles	Yes
Establishment of onsite fish habitat and compensation measures	Yes
Establishment of onsite aggregate operations	Yes
Construction of the starter embankments for the TMF	Yes
Construction and operation of buildings and infrastructure	Yes
Waste management	Yes
Commissioning of the process plant	Yes
Power supply	Yes
Employment and expenditures	Yes
Operations Phase	
Underground mining	Yes
Mining of the LP Central pit	Yes
Management of rock and unconsolidated materials in stockpiles	Yes
Process plant operation	Yes
Management of desulphurized tailings in the TMF	Yes
Management of concentrate tailings and contact water in the VMF	Yes
Operation of water management and treatment facilities	Yes
Construction of a mine water pond	Yes
Operation and maintenance of buildings and infrastructure	Yes
Waste management	Yes
Power supply	Yes
Progressive reclamation activities	Yes
Employment and expenditures	Yes
Closure Phase	
Active closure	Yes
Passive closure	Yes
Final reclamation	Yes

Project Component / Activity	Change in Health (Indigenous Peoples)
Employment and expenditures	Yes

Notes:
Yes = Interaction exists
No = No interaction exists
TMF = Tailings Management Facility; VMF = Viggo Management Facility

The assessment of potential effects on Indigenous health relied on two main approaches, HHERA (Appendix N-1) and HIA (Appendix N-2). In order to understand and interpret the potential effects sections below, a brief description of these two methodologies is required. Additional details can be found in the technical appendices (Appendix N-1 and N-2).

For Indigenous health, a single comprehensive assessment was completed that relies on the combined findings of the HHERA (Appendix N-1) and HIA (Appendix N-2) for all participating Indigenous communities (i.e., LSFN, WFN, ANA, NWOMC and RLEF). This subsection includes the assessment and discussion of Indigenous health overall, presenting findings for all five Indigenous communities.

In order to interpret the potential effects sections below, a brief summary of relevant HHERA and HIA methodologies have been provided:

12.9.3.1 HHERA Methodology

For changes to air, multi-media environmental quality and access and availability of traditional foods, the potential effects assessment relies on findings from the HHERA. A brief summary of HHERA inputs, assumptions, methodology and results are provided herein. See Appendix N-1 for additional details. In addition, a Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies is included as Appendix T, some data from which was incorporated in the HHERA, as detailed in Appendix N-1

Project activities may emit chemical parameters into air (through fugitive dust, vehicle exhaust and direct facility emissions) and water (through permitted emissions and runoff). Consequently, human and / or ecological receptors around the Project may be exposed to parameters of potential concern (POPCs) originating from the Project present in environmental media through inhalation, ingestion, incidental ingestion, dermal contact, and ingestion of food items.
The HHERA, which consists of a human health risk assessment (HHRA) and an ecological risk assessment (ERA), evaluates cumulative exposure via relevant pathways to determine potential health risks from the Project. The HHERA evaluates exposures and associated risks for baseline (i.e., existing conditions) and for each Project phase (i.e., construction, operations and closure).

The HHERA process involves four fundamental steps, problem formulation, exposure assessment, toxicity assessment, and risk characterization. The results of the HHERA are determined as part of the risk characterization step. This involves qualitatively and / or quantitatively evaluating the potential risks by comparing the results of the exposure assessment with the findings of the toxicity assessment to determine whether there is potential for POPCs to pose adverse human or ecological health effects.

- For human health, risk estimates for non-carcinogenic (i.e., threshold) POPCs are expressed as a hazard quotient (HQ). When considering multiple exposure pathways through cumulative exposure including background exposures, an HQ of less than 1.0 indicates that exposures would not be expected to result in adverse human health effects (Health Canada 2024b).
- For carcinogenic (i.e., non-threshold) POPCs, risk estimates are expressed as incremental lifetime cancer risk (ILCR), and were compared to a target risk value of 1-in-100,000 (i.e., 1.0E-05) (Health Canada 2024b).
- For diesel particulate matter (DPM), in addition to calculating ILCRs, Health Canada (2016) recommends an approach to provide an estimate of additional lung cancer mortality (ALCM) associated with additional DPM emissions related to the Project for chronic exposure. The ALCM values are compared against a benchmark value of 1, representing an incremental cancer risk of 1-in-100,000.
- For ecological health, risk estimates were expressed as HQs and compared to a target risk value of 1.0 because baseline or background exposures were included in the ERA.

The HHERA included both an inhalation and multi-media assessment to evaluate the potential effects to Indigenous health associated with changes to air quality and multi-media environmental quality (i.e., exposure to air, groundwater, surface water, and through the consumption of traditional foods) from Project activities.

The inhalation assessment considered exposure from Project-related air emissions that could occur at the maximum point of impingement (MPOI: a non-static location which represents the highest predicted ground level air concentrations anticipated along the Leased Claims Boundary of the PA) and at PORs within the LSA and RSA through the inhalation of outdoor air. It was conservatively assumed that the Indigenous Resident was present 100% of their time at each long-term (chronic) POR and up to 24 hours of their time at each short-term (acute) POR, which included locations identified as part of Indigenous knowledge. The locations selected to represent potential exposure from Project-related air emissions are detailed in the HHERA inhalation assessment (Appendix N-1). included:

Initial Air Quality PORs: PORs 1-29 were (selected by the air quality discipline; as reported in Appendix D-2), and consist of primarily long-term stay locations (e.g., cottage, cabin, lodge, camp), with the exception of POR1, which is a short-term stay storage area.

Additional PORs: PORs 30-41 were selected in the HHERA to represent additional areas that were either identified in available confidential TKLUS reports or were identified to account for the potential for exposure on water bodies not otherwise identified in TKLUS reports. PORs 30-38 and 40 consist of primarily short-term stay TKLUS locations (e.g., fishing area, gathering area and cultural area) identified through TKLUS reports or chosen to represent exposure on water bodies. POR 39 is an overnight stay location. For completeness and to represent a worse-case area near Red Lake, POR41 was added near Red Lake as a long term stay location within the RSA.

MPOI: a non-static location which represents the highest predicted ground level air concentrations anticipated along the Leased Claims Boundary of the PA. It is noted that human receptors (e.g., Indigenous Resident) in the LSA are not expected to spend an appreciable amount of time at the MPOI and, therefore, the short-term and long-term stay and TLKUS locations represented by PORs more accurately represent potential exposure.

For both assessments, the Indigenous Resident (receptor) was considered representative of Indigenous individuals who are assumed to reside in and / or harvest traditional foods in the LSA or RSA year-round for their entire lifetime; however, the HHERA focused on exposures and risks in the LSA. The multi-media assessment considered two types of Indigenous Residents to capture exposures from varying levels of traditional foods consumption:

- **Indigenous Resident (Heavy Consumer):** The heavy consumer Indigenous resident was based on a receptor that consumes high amounts of traditional foods (i.e., 95th percentile consumption rates).
- **Indigenous Resident (Average Consumer):** The average consumer Indigenous resident was based on a receptor that consumes average amounts of traditional foods (i.e., mean consumption rates) and was considered to represent the general Indigenous population.

For the assessment of non-carcinogens (i.e., threshold) POPCs, the toddler lifestage (the most sensitive life stage due to their exposure rates relative to body weight) and adult lifestage were evaluated; and a woman of childbearing age was also evaluated given the potential presence of developmental toxicants (i.e., mercury). For the assessment of carcinogens (i.e., non-threshold) POPCs, a composite receptor was evaluated which incorporates exposure through all lifestages: infant, toddler, child, teen, and adult (or Elder).

Additional details on the HHERA methodology, including inputs, assumptions and modelling approach are provided in Appendix N-1.

12.9.3.2 HIA Methodology

The assessment of effects (beneficial and adverse) on Indigenous health was also informed by an HIA (Appendix N-2) following established best-practices in the field, including Health Canada's Interim HIA guidance for designated projects (Health Canada 2024a). The HIA (Appendix N-2) included an assessment of potential effects using available evidence (primary and secondary), established indicators, and a combination of quantitative and qualitative approaches, to identify Project effects on Indigenous health. This approach aims to weave together Indigenous knowledge, and other information that has been obtained through engagement with the local Indigenous communities, with publicly available data, information and established impact assessment methods. The HIA relies on a large number of inputs to support the assessment of Project-related effects on Indigenous health. Full details on the methodology of the HIA are provided in Appendix N-2 and are briefly summarized below.

The HIA process follows a prescriptive set of steps that are intended to provide a framework for the assessment of potential beneficial and adverse effects on human health and wellness. These steps include: screening, scoping, assessment (and a baseline health profile), mitigations and enhancements, reporting, monitoring and evaluation. These steps are described in detail in Appendix N-2.

The assessment step involves systematically determining the potential health effects (both beneficial and adverse) from Project activities, including understanding the distribution of those effects across communities and subgroups, and an indication of required mitigation and / or enhancement measures needed based on assessment findings. A combination of quantitative and qualitative assessment methods are used to identify, characterize and assess potential effects both at the individual determinant level and to support an overall assessment for health. Key components of the assessment step, as outlined in the interim HIA guidance (Health Canada 2024a) are:

- Development of a Baseline Health Profile to gain an understanding of existing health conditions and population health status (Attachment A of Appendix N-2).
- Identification of potential effects to predict whether health effects (direct or indirect) may occur as a result of the Project, as well as the extent of these effects. In doing so, it is important to consider which groups are likely to benefit, which groups may be adversely affected, and which groups may be unaffected by the Project (includes GBA Plus).
- Apply an assessment framework to assess Project-related effects. An assessment framework provides a consistent and transparent approach for assessing Project-related effects. Assessment criteria are selected based on the jurisdiction (i.e., Health Canada 2024a), project context and site information, scientific evidence and community feedback.

As a result of the assessment step, the HIA identifies specific mitigation and enhancement measures based on assessment of individual determinants of health but also based on the holistic evaluation of overall health and wellness. Mitigation measures are features of a project intended to eliminate, reduce, control or offset the adverse effects of a project.

The following sections present the results of the assessment of Indigenous health including the HHERA (Appendix N-1) and HIA (Appendix N-2).

12.9.3.3 Construction Phase

The construction phase is expected to occur over a three-year period and will include site preparation, infrastructure development, and mobilization of the construction workforce. Activities during construction include, but are not limited to, open pit and underground mining, management of rock and unconsolidated materials in stockpiles, and construction of buildings and infrastructure. Site preparation activities for the mine site area include clearing, grubbing, bulk earthworks and the establishment of onsite road infrastructure. The potential interactions during construction are explored as contributions to the potential effect of an overall change in Indigenous health.

12.9.3.3.1 Air Quality

As stated in Section 7.2 (Air Quality), air quality during construction may be influenced by changes in particulate, silica, metals, nitrogen dioxide (NO_2), sulphur dioxide (SO_2), carbon monoxide (CO), DPM, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and other air parameters due to emissions from the operation of equipment (e.g., generators), material handling, and the use of unpaved surfaces associated with site preparation activities, construction and development of mine infrastructure (including blasting) and operation of the construction camp. Additionally, emissions from the operation of a concrete batch plant, cemented rockfill plant, and paste plant may interact with air quality.

Project interactions with air could result in elevated concentrations of POPCs in outdoor air, which could subsequently be inhaled by Indigenous people. The HHERA evaluated potential human health risks from POPCs from the inhalation of outdoor air as part of the HHERA inhalation assessment. The results of the HHERA inhalation assessment are presented below in Table 12.9-2 and Table 12.9-3, with full details provided in the HHERA (Appendix N-1).

Table 12.9-2: Acute Non-Carcinogenic Risk Estimates (Hazard Quotients) for Indigenous Receptor

POPC	Exposure Period	Receptor Group	Baseline	Project-Alone (2)		Project + Baseline (2)		POR with Max HQ
				Construction / Active Closure (1)	Operations	Construction / Active Closure (1)	Operations	
NO_2 (3)	1-Hour	MPOI (4)	0.06	0.64	0.87	0.70	0.93	N/A
NO_2 (3)	1-Hour	Initial Air Quality POR (5)	0.06	0.56	0.57	0.62	0.63	POR1
NO_2 (3)	1-Hour	Additional POR (6)	0.06	0.63	0.64	0.70	0.70	POR33 - Construction / Active Closure POR39 - Operations
DPM	1-Hour	MPOI (4)	0.046	**2.8**	**2.9**	**2.9**	**2.9**	N/A
DPM	1-Hour	Initial Air Quality POR (5)	0.046	0.46	0.42	0.51	0.47	POR21
DPM	1-Hour	Additional POR (6)	0.046	0.23	0.22	0.28	0.27	POR39

Notes:

1 Air emissions associated with the Project during active closure are assumed to be the same as during construction.

2 Air emissions associated with the Project are assumed to be 0 during post-closure (following Project decommissioning)

3 The CCME CAAQS for NO_2 is based on the maximum average of predicted 98th percentile results from three consecutive years (CCME 2025). The matching statistic was selected as the EPC for NO_2 for the MPOI and each POR for each Project phase. This is consistent with the approach applied by the Air Quality assessment (Appendix D-2).

4 MPOI: a non-static location which represents the highest predicted ground level air concentrations anticipated along the Leased Claims Boundary of the PA. It is noted that human receptors (e.g., Indigenous Resident) in the LSA are not expected to spend an appreciable amount of time at the MPOI and, therefore, the short-term and long-term stay and TLKUS locations represented by PORs more accurately represent potential exposure.

5 Initial Air Quality POR: PORs 1-29 were (selected by the air quality discipline; as reported in Appendix D-2), and consist of primarily long-term stay locations (e.g., cottage, cabin, lodge, camp), with the exception of POR1, which is a short-term stay storage area.

6 Additional POR: PORs 30-41 were selected in the HHERA to represent additional areas that were either identified in available confidential TKLUS reports or were identified to account for the potential for exposure on water bodies not otherwise identified in TKLUS reports. PORs 30-38 and 40 consist of primarily short-term stay TKLUS locations (e.g., fishing area, gathering area and cultural area) identified through TKLUS reports or chosen to represent exposure on water bodies. POR 39 is an overnight stay location. For completeness and to represent a worse-case area near Red Lake, POR41 was added near Red Lake as a long term stay location within the RSA.

CAAQS = Canadian Ambient Air Quality Standards; CCME = Canadian Council of Ministers of the Environment; DPM= diesel particulate matter; MPOI= maximum point of impingement; N/A = not applicable; NO_2= nitrogen dioxide; POPC= parameter of potential concern; POR= point of reception.

Gray shade and bold = HQ is above risk target of 1.

Table 12.9-3: Chronic Carcinogenic Risk Estimates (Incremental Lifetime Cancer Risks and ALCM) for Indigenous Receptor

POPC	Exposure Period	Receptor Group	Construction / Active Closure[2]	Operations	Total ILCR[1,3]	POR with Maximum ILCR	Total ALCM[4]
DPM	Annual	Initial Air Quality POR [5]	1.2E-06	4.3E-06	5.5E-06	POR4	0.08 to 0.80
DPM	Annual	Additional POR [6]	1.7E-06	4.9E-06	6.6E-06	POR39	0.09 to 0.95
Acceptable ILCR or ALCM			<1.0E-05			N/A	1

Notes:

1 Incremental lifetime cancer risk is based on a lifespan of 80 years.

2 Air emissions associated with the Project during active closure are assumed to be the same as during construction.

3 Air emissions associated with the Project are assumed to be 0 during post-closure (following Project decommissioning).

4 Total ALCM is the sum of the ALCM for the construction, operations and closure phases that were assumed to emit DPM.

5 Initial Air Quality POR: PORs 1-29 were (selected by the air quality discipline; as reported in Appendix D-2), and consist of primarily long-term stay locations (e.g., cottage, cabin, lodge, camp), with the exception of POR1, which is a short-term stay storage area.

6 Additional POR: PORs 30-41 were selected in the HHERA to represent additional areas that were either identified in available confidential TKLUS reports or were identified to account for the potential for exposure on water bodies not otherwise identified in TKLUS reports. PORs 30-38 and 40 consist of primarily short-term stay TKLUS locations (e.g., fishing area, gathering area and cultural area) identified through TKLUS reports or chosen to represent exposure on water bodies. POR 39 is an overnight stay location. For completeness and to represent a worse-case area near Red Lake, POR41 was added near Red Lake as a long term stay location within the RSA.

ALCM = additional lung cancer mortality; DPM = diesel particulate matter; ILCR= incremental lifetime cancer risk; N/A = Not applicable; POPC = parameter of potential concern; POR= point of reception

Gray shade and bold = ILCR is above risk threshold of 1 in 100,000 (1.0E-05) or ALCM is above the target risk threshold of 1 in 100,000 (i.e., 1).

As shown in Table 12.9-2 above, the HHERA inhalation assessment reported HQs above the target HQ of 1 for DPM only at the MPOI during the construction phase for Project Alone and Project+Baseline. As shown in Table 12.9-2 and Table 12.9-3 above, HQs for short-term NO_2 exposure were below the target HQ of 1 and estimated ILCRs and ALCMs for chronic DPM exposure were below the target ILCR of 1.0E-05 (i.e., 1 in 100,000) and target ALCM of 1. As such, potential risks associated with short-term NO_2 and chronic DPM exposure in air were negligible.

The MPOI is a theoretical point that is a non-static location, where maximum air concentrations are predicted outside of the Project property boundaries, in close proximity to the PA. As the MPOI is a conservative assumption that varies and is typically used for the human health worst-case scenario, individuals are not likely to be exposed to concentrations that relate to exposures above the risk target (i.e., HQ above 1). The HHERA inhalation assessment reported that although HQs above the target HQ of 1 were identified at the MPOI, the frequency of these instances was low during construction / active closure (i.e., 0.13% at the MPOI), which equates to less than 24 hours (i.e., 1 day) of HQs above the target in a year.

With respect to DPM, the majority of the toxicological evidence is related to respiratory and cardiovascular health effects. Health Canada (2016) has reviewed results from controlled human exposure studies to establish the critical effect point of departure (POD) for short-term exposures to DPM and observed increases in airway resistance in mildly asthmatic individuals and respiratory inflammation in healthy individuals exposed to 100 micrograms per cubic metre ($\mu g/m^3$) DPM based on short-term exposure (Mudway et al. 2004; Behndig et al. 2006, 2011; Riedl et al. 2012; Stenfors et al. 2004; as cited in Health Canada 2016). This concentration was selected as the critical effect and POD. The maximum predicted 1-hour concentration of DPM for Project+Baseline (i.e., construction / active closure) was 28.3 $\mu g/m^3$, which was below the POD of 100 $\mu g/m^3$. Therefore, potential risks to the Indigenous Resident from Project-related DPM exposure during construction were considered to be low, given that the predicted concentrations were below the POD of 100 $\mu g/m^3$, the predicted frequency of DPM concentrations above targets was low (less than 1 day / year), conservative assumptions were used in the air quality assessment, the assumption that all particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) vehicle combustion was related to DPM is conservative, and people are not expected to be at the MPOI for extended periods that would constitute risk.

Overall, Project activities are not anticipated to pose risks to the Indigenous Resident from exposure to POPCs in air during construction. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Given the HHERA process considers conservative assumptions related to the amount of time people are assumed to be present outdoors (i.e., 100% of their time), adverse health effects to Indigenous people are not expected from acute or chronic exposure to Project-related changes in air quality (i.e., NO_2 and DPM levels) during construction.

While Indigenous health is not expected to be directly affected by Project interactions with air quality during construction, it is important to acknowledge that Indigenous views on wellness are holistic and include complex connections to the environment and all living things. It is possible that perception issues related to air quality may indirectly change or limit the amount of time spent outdoors by Indigenous communities, including for traditional land practices. The effect of changes in traditional land use on Indigenous health is assessed via multi-media environmental quality and access and availability of traditional foods.

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during construction. For example, as discussed in Section 7.2 (Air Quality), Great Bear Resources plans to actively manage emissions from the Project. While the HHERA did not identify adverse effects to Indigenous people's health from Project activities via the inhalation of outdoor air, these measures are expected to continue mitigating potential effects from exposure during construction. Given the HHERA is based on predicted data, additional measures were proposed to monitor air quality parameters in order to validate assumptions, if needed. Data sharing agreements with local Indigenous communities, and support of Indigenous environmental monitoring programs were also identified. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for air quality are presented in Section 7 of Appendix N-2.

Overall, direct effects on Indigenous health from changes to air quality as a result of Project activities during construction are not anticipated; however, mitigation and enhancement measures presented in Section 12.9.4 are required to validate assumptions and promote Indigenous participation in environmental monitoring and data sovereignty.

12.9.3.3.2 Multi-media Environmental Quality

As stated in Section 7.2 (Air Quality), Project interactions which could potentially effect soil, surface water and traditional foods as a result of deposition from airborne emissions include emissions from the operation of equipment, material handling, and the use of unpaved surfaces, construction and development of mine infrastructure and operation of the construction camp. Additionally, operation of a concrete batch plant, cemented rockfill plant, and paste plant are anticipated to interact with soil, surface water and traditional foods as a result of deposition from airborne emissions during construction.

As stated in Section 7.7 (Water Quality), Project interactions which could potentially effect surface water and traditional foods quality during construction include erosion and sedimentation effects to local water features, fugitive dust emissions and subsequent deposition on surface water features, changes to existing catchment areas and associated catchment loading to surface water features, and blasting residue impacting runoff and dewatering water quality.

Project interactions with soil and / or surface water could result in elevated concentrations of POPCs in these media which can result in direct contact by Indigenous people (e.g., incidental ingestion, ingestion, dermal contact and / or inhalation of soil particulates), and / or can be taken up by plants and animals, and subsequently ingested by Indigenous people. The HHERA (Appendix N-1) evaluated potential human health risks from direct contact with soil (incidental ingestion, dermal contact, inhalation of soil particulates), surface water (ingestion of drinking water, incidental ingestion, dermal contact), and ingestion of traditional foods which were assumed to have taken up POPCs from soil and / or surface water as part of the multi-media assessment. The results of the human health multi-media assessment are presented in Table 12.9-4, Table 12.9-5, Table 12.9-6 and Table 12.9-7 below, with full details provided in the HHERA (Appendix N-1).

Table 12.9-4: Maximum Non-Carcinogenic Risk Estimates (Hazard Quotients) for Indigenous Receptor (Average Consumer, Toddler)

POPC	Baseline	Project + Baseline				Project Alone			
		Construction	Operations	Closure	Post Closure	Construction	Operations	Closure	Post Closure
Inorganic Arsenic	**3.4**	**3.4**	**3.4**	**3.3**	**3.3**	0.0084	0.012	0.013	0.0083
Inorganic Mercury (1)	0.30	0.30	0.32	0.32	0.30	0.0012	0.020	0.020	0.0022
Methylmercury (1)	**1.9**	**1.9**	**1.9**	**1.9**	**1.9**	0.0063	0.049	0.052	0.013
Selenium	0.11	0.11	0.11	0.11	0.12	0.0037	0.0058	0.0088	0.024

Notes:

1 Inorganic mercury and methylmercury risk estimates were calculated as the sum of HQs for fish and surface water pathways (estimated from the Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies report [Appendix T]) and HQs for other assessed exposure pathways (estimated from the HHERA multi-media assessment [Appendix N-1]).

For Baseline and Project + Baseline, HQ values > 1.0 are shaded and **bolded**.

For Project Alone, HQ values > 0.2 are shaded and **bolded**.

HHERA = Human Health and Ecological Risk Assessment; HQ = hazard quotient; POPC = parameter of potential concern.

Table 12.9-5: Maximum Non-Carcinogenic Risk Estimates (Hazard Quotients) for Indigenous Receptor (Heavy Consumer, Toddler)

POPC	Baseline	Project + Baseline				Project Alone			
		Construction	Operations	Closure	Post Closure	Construction	Operations	Closure	Post Closure
Inorganic Arsenic	**4.6**	**4.6**	**4.5**	**4.4**	**4.3**	0.018	0.020	0.020	0.010
Inorganic Mercury (1)	1.0	1.0	**1.1**	**1.1**	1.0	0.0032	0.073	0.074	0.0062
Methylmercury (1)	**6.8**	**6.8**	**6.9**	**6.9**	**6.8**	0.019	0.18	0.18	0.041
Selenium	0.44	0.45	0.45	0.47	0.47	0.014	0.021	0.035	0.085

Notes:

1 Inorganic mercury and methylmercury risk estimates were calculated as the sum of HQs for fish and surface water pathways (estimated from the Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies report [Appendix T) and HQs for other assessed exposure pathways (estimated from the HHERA multi-media assessment [Appendix N-1]).

For Baseline and Project + Baseline, HQ values > 1.0 are shaded and **bolded**.

For Project Alone, HQ values > 0.2 are shaded and **bolded**.

HHERA = Human Health and Ecological Risk Assessment; HQ = hazard quotient; POPC = parameter of potential concern.

Table 12.9-6: Non-Carcinogenic Risk Estimates (Hazard Quotients) for the Adult Female Indigenous Receptor (Average and Heavy Consumer)

Receptor	POPC	Baseline	Project + Baseline				Project Alone			
			Construction	Operations	Closure	Post Closure	Construction	Operations	Closure	Post Closure
Indigenous Resident (Average Consumer)	Inorganic Mercury (1)	0.21	0.21	0.21	0.21	0.21	0.00088	0.016	0.016	0.0015
	Methylmercury (1)	0.97	0.97	1.0	1.0	0.97	0.0047	0.027	0.028	0.0091
Indigenous Resident (Heavy Consumer)	Inorganic Mercury (1)	0.56	0.57	0.60	0.60	0.56	0.0020	0.040	0.040	0.0041
	Methylmercury (1)	**3.5**	**3.6**	**3.7**	**3.6**	**3.5**	0.013	0.10	0.10	0.032

Notes:

1 Inorganic mercury and methylmercury risk estimates were calculated as the sum of HQs for fish and surface water pathways (estimated from the Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies report [Appendix T) and HQs for other assessed exposure pathways (estimated from the HHERA multi-media assessment [Appendix N-1]).

For Baseline and Project + Baseline, HQ values > 1.0 are shaded and **bolded**.

For Project Alone, HQ values > 0.2 are shaded and **bolded**.

HHERA = Human Health and Ecological Risk Assessment; HQ = hazard quotient; POPC = parameter of potential concern.

Table 12.9-7: Carcinogenic Risk Estimates (Incremental Lifetime Cancer Risks) for Indigenous Receptor (Average Consumer and Heavy Consumer, Lifetime Composite)

Receptor	POPC	Construction	Operations	Closure	Post Closure	Total ILCR
Indigenous Resident (Average Consumer)	Inorganic Arsenic	1.8E-08	1.5E-07	1.8E-08	1.2E-07	3.1E-07
Indigenous Resident (Heavy Consumer)		4.2E-08	3.3E-07	3.5E-08	2.1E-07	6.8E-07

Notes:

ILCR values > 10E-05 are shaded and **bolded**.

ILCR = incremental lifetime cancer risks; POPC = parameter of potential concern.

As presented in Table 12.9-4 and Table 12.9-5, the human health multi-media assessment identified non-carcinogenic risks (i.e., HQs above the target HQ of 1.0) from exposure to inorganic arsenic for both the average and heavy consumer Indigenous resident (toddler) for baseline and when accounting for Project+Baseline for the construction phase. When accounting for Project-Alone contributions, HQs were below the target HQ of 0.2 for construction and are considered negligible. This indicated that Project+Baseline HQs above the target HQ of 1 are associated with the background conditions (i.e., baseline) rather than the Project, and the Project is not expected to increase arsenic-related human health risks for the average consumer or heavy consumer Indigenous resident living, working, and recreating in the LSA and RSA during construction. For the Indigenous resident, the maximum HQs were observed for the toddler life stage (most sensitive life stage for non-carcinogenic exposure to arsenic) and surface water exposure (i.e., ingestion as drinking water, incidental ingestion, dermal contact) was the primary exposure pathway. Surface water exposure accounted for approximately 83% of the arsenic HQs for the average consumer toddler Indigenous resident, and approximately 62% of the arsenic HQs for the heavy consumer toddler Indigenous resident. Surface water exposure represents a conservative assumption in the HHERA as surface water in the RSA and LSA was assumed to be the only source of drinking water for Indigenous resident receptors.

Arsenic was additionally assessed as a carcinogen as presented in Table 12.9-7. The calculated ILCR values for the lifetime composite Indigenous resident receptor were below the target ILCR of 1.0E-05 (i.e., 1-in-100,000) for both the average and heavy consumer Indigenous resident for the construction phase, and for the total ILCR for an 80-year lifetime. As such, unacceptable carcinogenic risks are not expected from the Project.

For the assessment of mercury, a Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies (Appendix T) was conducted to evaluate potential risks to human health associated with fish and surface water consumption, based on predicted changes in fish tissue mercury and methylmercury concentrations resulting from treated effluent discharge from the Project. For both Indigenous resident receptors (average and heavy consumer), baseline HQ values for inorganic mercury and / or methylmercury often were greater than the target HQ of 1, indicating potential health risks under existing conditions, which is reflected in the existing local fish consumption advisories from the Ontario Ministry of Environment, Conservation and Parks. However, Project-related contributions were calculated to be negligible, with Project-related HQ values below the target HQ of 0.2. It should be noted that the Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies report (Appendix T) focused only on exposure pathways of ingestion of fish and surface water. Therefore, the HHERA multi-media assessment of mercury focused on exposures from other media, and the HHERA multi-media HQs were combined with the HQs calculated in the Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies to estimate total mercury related HQs from the sources of exposure related to the Project site.

For inorganic mercury, as presented in Table 12.9-4, for the average consumer Indigenous resident (toddler), baseline and Project+Baseline HQs were below the applicable target HQ of 1 for these assessment cases, and Project-Alone HQs were below the applicable target HQ of 0.2. Therefore, Project-related risks are considered to be negligible for the average consumer from exposure to inorganic mercury.

For the heavy consumer (toddler), as presented in Table 12.9-5, predicted maximum HQs were equal to the target HQ of 1 for baseline and Project+Baseline and below the target HQ of 0.2 when accounting for Project-Alone contributions and considered negligible for construction. The maximum HQs were observed for the toddler lifestage (most sensitive lifestage for non-carcinogenic exposure to inorganic mercury) and the primary exposure pathway contributing to the HQs was ingestion of fish, accounting for approximately 96% of HQs for the heavy consumer toddler Indigenous resident. For inorganic mercury, a female adult (of child-bearing age) was also evaluated to represent sensitive populations for exposure to developmental toxicants. As presented in Table 12.9-6, for the adult female baseline and Project+Baseline HQs were below the target HQ of 1, and Project-Alone HQ values were below the target HQ of 0.2. As such, the Project is not expected to increase inorganic mercury-related health risks for the average consumer or heavy consumer Indigenous Resident living, working, and recreating in the LSA and RSA during construction.

As presented in Table 12.9-4 and Table 12.9-5, the human health multi-media assessment identified non-carcinogenic risks (i.e., HQs above the target HQ of 1.0) from exposure to methylmercury for both the average and heavy consumer Indigenous resident (toddler) for baseline and when accounting for Project+Baseline for the construction phase. When accounting for Project-Alone contributions, HQs were below the target HQ of 0.2 for construction and are considered negligible. This indicated that Project+Baseline HQs above the target HQ of 1 are associated with the background conditions (i.e., baseline) rather than the Project. For methylmercury, a female adult (of child-bearing age) was also evaluated to represent sensitive populations for exposure to developmental toxicants. As presented in Table 12.9-6, the baseline and Project+Baseline HQ for the adult female life stage was above the target HQ of 1 for the heavy consumer but lower than for the toddler heavy consumer (Table 12.9-4, Table 12.9-5). The baseline and Project+Baseline HQs for the average consumer were below 1.0. When accounting for Project-Alone contributions, maximum methylmercury HQ values for the adult female were below the target HQ of 0.2 for both heavy and average consumers. Therefore, Project-Alone HQs are considered negligible. Exposure to methylmercury via dietary consumption pathways, specifically fish ingestion, was the primary (i.e., greater than 95%) exposure pathway contributing to HQs. The Project is not expected to increase methylmercury-related human health risks for the average consumer or heavy consumer Indigenous Resident living, working, and recreating in the LSA and RSA during construction.

No risks were identified for selenium for the average or heavy consumer Indigenous resident based on HQs for baseline and Project+Baseline which were below the target HQ of 1.0 or Project-Alone, which were below the target HQ of 0.2. Therefore, the Project is not expected to increase selenium-related human health risks for the average consumer or heavy consumer Indigenous Resident living, working, and recreating in the LSA and RSA during construction.

Overall, multi-media environmental quality is influenced by a number of interrelated factors that both directly and indirectly affect downstream environmental conditions. The available evidence from upstream pVCs and HHERA results indicated that for the multi-media POPCs, health risks from Project activities are not anticipated during construction. While baseline (i.e., existing conditions) risks were identified for some POPCs, incremental risks from Project activities are negligible. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

While physical health is not expected to be directly affected by Project interactions with multi-media environmental quality during construction, it is important to acknowledge that Indigenous people in the region view health as a holistic balance including complex and connections to the environment and all living things. Potential effects to health associated with multi-media environmental quality should be interpreted in the context of the interconnectedness of physical, mental, emotional and spiritual health. It is possible that perception issues related to environmental quality may change or limit the consumption of traditional foods by local Indigenous communities during construction. Traditional food diets contain high levels of essential nutrients (Batal et al. 2021b; McCartan et al. 2020). Evidence suggests that traditional food diets promote greater cardiovascular health, have protective action against some cancers, autoimmune and thyroid diseases, support maintenance of bone and immune health and can decrease incidence of diabetes, obesity and other diet-related diseases (Batal et al 2021a; FNHA n.d.; Kuhnlein et al., 2001; Marushka et al. 2021). Traditional food practices are also beneficial to health via opportunities for physical activity (Samson and Pretty 2006). Additionally, traditional food systems contribute to the cultural identity, social cohesion, and nutritional wellness of Indigenous communities, all of which are intricately tied to each other and to their overall Indigenous health and community wellness (Earle 2011a). While not quantifiable in the same manner as food quality and nutrition, traditional food collection and consumption also plays an important role in spiritual and cultural wellness (Batal et al. 2021a; Samson and Pretty 2006).

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during construction. For example, as discussed in the CULRTP assessments (Sections 10 to 14), Great Bear Resources supports Indigenous-led monitoring and is currently funding a community-based Chukuni Watershed Aquatic Monitoring Program. Another program that will be provided to employees and their families is the Annual Fitness and Mental Health Benefit fund ($500 per annum) which will provide funding that can be used for purchasing equipment needed for harvesting (hunting, fishing, foraging) traditional foods. In addition, given the HHERA is based on predicted data, environmental quality (air, water, fish) monitoring programs are proposed in order to validate assumptions. Data sharing agreements with local Indigenous communities, and support of Indigenous environmental monitoring programs were also identified. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for multi-media environmental quality are presented in Section 7 of Appendix N-2.

Overall, direct effects on Indigenous health from changes to multi-media environmental quality as a result of Project activities during construction are not anticipated; however, mitigations and enhancements presented in Section 12.9.4 are required to minimize potential indirect effects related to perception of environmental quality to avoid disruption to traditional food practices.

12.9.3.3.3 Access and Availability of Water

Changes to access and availability of water as a result of Project activities is impacted by both groundwater and surface water quantity. It is noted that water quality was also considered in the HIA, through the assessment of changes to multi-media environmental quality.

As discussed in Section 7.5 (Groundwater), Project interactions which could potentially effect groundwater quantity (i.e., flows and levels) during construction include dewatering activities associated with excavations, mine development and construction of water management facilities. Excavations below the groundwater table will result in the underground facilities acting as local sinks for groundwater.

Further, management of contact water will result in changes in surface water catchment areas, and the development of facilities and stockpiling activities will have an effect on infiltration rates to groundwater. These activities are expected to result in a reduction in groundwater quantity and groundwater contributions to some surface watercourses and waterbodies within or adjacent to the PA during construction.

As discussed in Section 7.6 (Surface Water Flows and Levels), in addition to a reduction in groundwater contributions to surface water as described above, Project interactions which could potentially affect surface water flows and levels during construction include collection and treatment of Project contact water resulting in changes to surface water runoff quantities and patterns materially contributing to local water features within the LSA, primarily on and near the PA. Additionally, diversion of non-contact water for the establishment of fish habitat compensation measures and starter embankments for the TMF will interact with the watershed areas contributing flows to surface waterbodies and watercourses within the LSA. Reductions in flow are expected in waterbodies throughout the LSA and RSA during construction; however, these reductions are not expected to be observable. As discussed in Section 7.6 (Surface Water Flows and Levels), during construction, there will be permanent alteration to a number of very small unnamed waterbodies and watercourses within the PA. The effects to fish and fish habitat resulting from these permanent changes are proposed to be mitigated (Section 8 [Fish and Fish Habitat] and Appendix L-2).

Access and availability of water is influenced by a number of interrelated factors that both directly and indirectly affect upstream environmental and cultural conditions. Access and availability of water is inextricably linked to Indigenous traditions, culture and identify (McGregor 2008; Martinez-Cruz 2024). Changes to access and availability of water allows for cultural continuation and supports a sense of cultural identity, which can fortify community cohesion and improve individual mental health and wellbeing (NCCIH 2016). Perceived reduction or change in experience to access of water can result in avoidance of the use of waters. This may influence Indigenous health and wellness through changes to cultural ceremonies, traditions and identity linked to water. The link between access and availability of water, mental health, and community cohesion is further discussed through the assessment of mental wellness and personal behaviours.

The Project will result in changes to access and availability of water within the PA, LSA and RSA. There is no confirmed use of water within the PA by the local Indigenous communities, and changes to access and availability of water in the RSA and LSA are either not observable, or are being mitigated. However, the connection that Indigenous people have with water may result in indirect effects on Indigenous health and wellness for some individuals; no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Mitigations, as described in Section 7.5 and Section 7.6 (Groundwater and Surface Water Flows and Levels), are proposed, and will minimize changes to access and availability of water. Data sharing agreements with local Indigenous communities, and support of Indigenous environmental monitoring programs were identified as mitigation measures required to minimize perception issues surrounding Indigenous use of lands and waters. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for access and availability of water are presented in Section 7 of Appendix N-2.

It is noted that changes to groundwater and surface water quantity (i.e., flows and levels) can result in changes to aquatic habitats, which can impact both aquatic life species themselves and humans who rely on these species as traditional foods. These topics are assessed through access and availability of traditional foods and food security.

12.9.3.3.4 Access and Availability of Traditional Foods

Dust and vibration related to Project construction have the potential to affect wildlife, fish, and vegetation, and subsequently, the availability of traditional foods, affecting Indigenous people's health and wellness.

In terms of traditional foods availability, potential effects and interactions during construction identified within the linked biophysical pVCs and fVCs (Air Quality, Sound, Vibration, Water Quality, Vegetation Communities, Wild Rice, Moose, Other Wildlife, SAR, Fish and Fish Habitat and Migratory Birds) may influence a change in availability of traditional foods by altering ecosystems that support traditional harvesting activities. Specifically, water levels and flows within waterbodies in the PA may be altered by mine activities or related infrastructure and nearby waterbodies and waterways will receive treated effluent discharged from the Project. For wildlife, modeling indicates only marginal disturbance and habitat loss within the PA, with no expected population-level effects on any species, including moose and boreal caribou. For migratory birds, vegetation removal and ground-disturbing site preparation activities may alter habitat abundance, connectivity, and quality, while noise, dust, and water drawdown may further affect birds within the PA and immediately surrounding areas. For vegetation, site preparation and associated changes in groundwater conditions will lead to localized direct and indirect impacts on vegetation communities, which may also influence Indigenous availability of traditional food resources. For fish, site preparation will directly affect fish habitat and fish communities. Changes to upstream ecological conditions in the PA, and immediately surrounding areas, may lead to changes in availability of traditional foods which in turn, may affect Indigenous health (Earle 2011a). It has been well-established that traditional food systems, land-based practices, and community cohesion have the potential to influence Indigenous health and wellness.

Fish, wildlife, and plants species utilized for traditional food consumption by Indigenous communities in the region were identified through both confidential reports and publicly available resources (Chan et al. 2014; ANA 2024). According to these sources, commonly reported foods for traditional food consumption in the region include but are not limited to moose, birds including waterfowl (goose, ducks), fish (walleye, lake whitefish, northern pike), berries, and traditional plants. A more fulsome list of traditional food species commonly consumed by each Indigenous community is detailed in the HIA (Section 4.4 of Appendix N-2).

Many Indigenous communities understand that fish, wildlife, plants, and water are interconnected and interdependent, such that changes to one component of the environment may affect the health, availability, and use of traditional foods as part of a broader, living system. Therefore, changes in air and water quality could have the potential to indirectly affect Indigenous health via changes in availability of traditional foods. The HHERA (Appendix N-1) considered this potential effect through the evaluation of potential health risks to fish, wildlife, and plants due to POPC emissions associated with Project activities. The results of the HHERA ecological multi-media assessment demonstrated that air and / or water quality changes associated with Project activities were not expected to result in unacceptable risks to plants, mammals and birds, or aquatic communities, suggesting that the availability of traditional foods is not expected to be impacted.

In terms of traditional foods access, for some communities, traplines and harvesting may occur within the PA (for LSFN and RLEF) and LSA; therefore, construction-related disturbance could reduce access to traditional foods for those Indigenous communities who harvest within the PA (LSFN and RLEF). Access to harvesting areas is maintained within the LSA. These changes to access may affect Indigenous health (Earle 2011a), which is inherently linked to traditional food systems, land-based practices, and community cohesion.

Perceptions of contamination, whether from the Project or historical developments, can lead to avoidance of traditional land use practices, further disrupting access of traditional foods, even without any identified health risk from the Project (Waasegiizhig Nanaandawe'iyewigamig 2020). For example, in the Great Bear Project Community Health Survey, a few self-identified Indigenous respondents from Red Lake or Ear Falls indicated that they believe the Project may affect their fishing and foraging activities in areas near the Project (Attachment A of Appendix N-2). It is noted however, that according to the FNFNES, time constraints, absence of a hunter in the household, and lack of equipment and / or transportation were the top reported barriers to accessing traditional foods among First Nations households in Ontario (Chan et al. 2014). Overall, changes in access to traditional foods may influence health through disruptions in diet, cultural practices, community cohesion, and overall wellness during the construction phase (Batal et al. 2021b; Earle 2011a, 2011b; Salerno et al. 2021; Simpson et al. 2009). Perception of contamination, and participation in land-based practices as it relates to cultural continuity is further discussed in the assessment of mental wellness and personal behaviours.

Access and availability of traditional foods is influenced by a multitude of interrelated factors that both directly and indirectly affect upstream environmental, social, cultural and economic conditions. For Indigenous communities, Project related construction activities that lead to wildlife habitat alteration, vegetation removal, and sensory disturbance may limit access for Indigenous community members who previously harvested within the PA (LSFN and RLEF). Pre-existing sociocultural barriers to access of traditional foods, such as on-going effects of colonization, cost, time constraints, lack of traditional knowledge and skills (Chan et al. 2014), and perception of contamination (Waasegiizhig Nanaandawe'iyewigamig 2020) may be further influenced by Project development. Changes to wildlife distribution, plant harvesting areas and migratory bird habitat, and potential indirect changes to fish and aquatic systems may disrupt availability of traditional foods. These disruptions to availability of traditional foods may have implications for nutrition (Batal et al. 2021a, 2021b; Earle 2011a), physical activity (Earle 2011a), cultural continuity, and mental health (Batal et al. 2021a; Earle 2011a, 2011b; Salerno et al. 2021; Simpson et al. 2009). For example, studies have noted that disruptions to accessing the land and cultural practices can lead to mental stress for community members and reduced dietary and physical activity benefits (Salerno et al. 2021; Shandro et al. 2017).

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during construction (e.g., the Wild Rice Enhancement Project; the conducting of moose surveys; and the Fish Habitat Offset and Compensation Plan). While upstream pVCs and fVCs did not identify adverse effects to Indigenous people's health from Project activities per se, the measures proposed for upstream pVCs and fVCs are expected to continue mitigating potential effects from disruptions to access and availability of traditional foods during construction. In addition, data sharing agreements with local Indigenous communities, support of Indigenous environmental monitoring programs, and support for Indigenous-led education and training for land-based activities were also identified. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for access and availability of traditional foods are presented in Section 7 of Appendix N-2.

As described above, access to harvesting areas is maintained within the LSA, but temporary disturbances during construction could change the availability of resources. Therefore, as described in the CULRTP assessments (Sections 10 to 14), the Project is expected to temporarily disrupt access (LSFN and RLEF only), availability, and / or experience for at least one type of land-based practice (hunting and trapping or plant gathering) for each Indigenous community after the application of mitigation measures. As such, available information indicates that changes in access and availability of traditional foods (e.g., changes in harvesting patterns due to land disturbance and perception issues and ecosystem alteration) will likely occur as a result of Project activities during construction, and that this change may affect Indigenous health and wellness for some individuals (Earle 2011a, 2011b; Simpson et al. 2009; Waasegiizhig Nanaandawe'iyewigamig 2020); however, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

Changes in access and availability of traditional foods are also linked to social determinants of health such as economics (employment, income and education), food security, and mental wellness and personal behaviours.

12.9.3.3.5 Sensory Disturbances: Sound, Vibration and Light

The primary noise emissions from the Project are expected to originate from equipment and infrastructure such as stationary equipment and mobile equipment fleet operating at different areas of the mine, and ventilation systems. During the construction phase noise will be primarily sourced from the power generator, haulage routes with high truck traffic and primary drills. Vibration will be generated related to blasting activities.

Potential effects and interactions during construction identified within upstream Section 7.3 (Sound), Section 7.4 (Vibration) and Appendix G (Light) may influence a change in sensory disturbance, that lead to annoyance (Health Canada 2024c) or disrupt sense of place (Salerno et al. 2021). Noise modelling was carried out to predict the potential changes to baseline sound levels at 29 selected sound PORs, as outlined in the Section 7.3 (Sound). Predicted sound levels were compared to provincial and federal guidelines. In addition, the Project-related change in the sound environment and the related increase in the percentage of percent highly annoyed (%HA) were evaluated. Predicted sound levels at all of the identified PORs were predicted to be below the federal and provincial criteria after the application of mitigation measures as described in Section 7.3 (Sound). In addition, the change in %HA meets Health Canada limit of 6.5% (Health Canada 2023e) which means that changes to sound levels are not expected to trigger noise complaints from PORs, and effects associated with a higher %HA (i.e., annoyance) are not expected.

A mechanism will be established for the Project for receiving and responding to noise complaints in a timely manner during construction, operations and closure phases. A framework for a follow-up noise monitoring program for the Project is provided in Section 20 (Environmental Management and Follow-Up Program). Monitoring will be required as a condition of provincial approval(s).

Similarly, vibration from blasting was predicted to remain within Health Canada's air overpressure guidelines at all 29 PORs, after implementation of mitigations (e.g., blast management plan) described in Appendix E-3 and in the Section 7.4 (Vibration).

Although potential changes for underwater ground vibration and water overpressure were identified, changes to upstream conditions (i.e., fish and fish habitat) will be managed such that no residual effects to fish and fish habitat were identified.

Project-related artificial lighting during construction is required for safety and effective working. Light trespass was not predicted to be above the recommended thresholds (i.e., Commission Internationale d'Éclairage Lighting Zones) at any assessed PORs (Appendix G). Generally, the difference between existing and predicted skyglow was comparable to the seasonal variability seen between baseline measurement. The predictive light assessment (Appendix G) indicated that nuisance effects are not expected and should be manageable through use of responsible outdoor lighting practices.

Overall, with Project design and the application of mitigation measures identified in the Impact Statement, potential effects to Indigenous health and wellness from changes in sound, vibration, and light such as annoyance (Health Canada 2024c), disruptions to sense of place (Salerno et al. 2021), or sleep disturbance (WHO 2009; Candolin 2024; Cao et al. 2023; Chepesiuk 2009), are not anticipated. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

It is noted however, that mining activities may result in sensory disturbance (noise, visual and dust) which could impact sense of place and quality of experience during harvesting activities in the LSA, and immediately adjacent to the PA.

12.9.3.3.6 Economics (Employment, Income and Education)

Project activities during construction are anticipated to result in a temporary population increase of 1,000 workers during construction and 1,300 during peak construction. The Project will create temporary employment and contracting opportunities, providing increases in labour income and valuable work experience for members participating in the workforce. As described in the CWB assessments (Sections 10 to 14), these opportunities may enhance individual and household financial stability and contribute to the local and regional economy through increased consumer spending. Economic modelling for the Project, as described in Section 18 (Summary of Benefits), has estimated that annual direct, indirect and induced effects generated during the assessment period include on average $570 million per year, 3,430 persons employed in an average year, labour compensation averaging $280 million per year, and $190 million per year in government revenues on average.

During construction, economics can be influenced by factors such as cost of living and traditional economy. As stated in the CWB assessments (Sections 10 to 14), Indigenous people in the region already face elevated costs for food, fuel, and housing due to limited supply chains and regional market conditions. The Project is expected to impact the cost of living in the area, including in Red Lake and Ear Falls, contributing to existing pressures during peak construction or hiring periods. Project-related activity may temporarily increase demand for certain goods and services during construction in these communities, which is expected to result in localized affordability pressures for residents, particularly those on fixed or lower incomes. For LSFN, WFN and ANA, as reported in the CWB assessments, no measurable change in the cost of goods and services is anticipated on-reserve. However, construction activities, may also raise concerns about environmental disturbance near traditional harvesting areas, which could affect confidence in local traditional food and medicine sources. This may in turn change community reliance on market-based goods and services over time and affect household expenditures and perceived cost of living.

For local Indigenous communities, reduced confidence or access to traditional harvesting areas could also influence their participation in land-based livelihoods, affecting their participation in traditional economy. Due to the complexities associated with Indigenous people's health and changes to the environment and landscapes, potential effects associated with cost of living and / or traditional economy are also discussed in relation to access and availability of traditional foods and food security.

The demand for labour is expected to create more job opportunities, which can also influence access to health and social services in the region during construction. As presented in the CWB assessments (Sections 10 to 14), Project workforce accommodations are expected to be off-reserve, therefore, Project workers and relocated families in Red Lake and Ear Falls are anticipated to increase the demand for childcare, mental health support and education, which already face staff shortages and capacity constraints. Services may not be able to fully absorb the additional demand associated with population growth or increased service needs during construction; this is further discussed as part of access to health and social services. Education services may also be affected by the arrival of new families, as the Red Lake and Ear Falls school systems already face challenges with recruiting and retaining teachers due to limited housing and service infrastructure. Further, transportation barriers remain a challenge for Indigenous students traveling from more remote locations. For ANA, WFN and LSFN, no direct effects to service systems on-reserve are expected, but there is a potential for indirect strain on regional service systems, particularly for members who travel to other regional centres for services. Members who access these services may face longer wait times, reduced availability and delayed access due to the increased demand of regional services. This is a particular concern for elders and caregivers who face transportation, mobility, or financial barriers. This could result in deepened inequities in access and availability for populations already experiencing systemic barriers. Increased earnings during construction may also improve household stability and financial security for some families (and lessen strain on local services within the communities), but rotational work schedules and long periods of separation can strain relationships and caregiving capacity. Uneven income distribution and limited childcare options may also deepen existing stressors, heighten household / emotional stress and increase responsibilities for caregivers. Differences in income within households can create added strains and imbalances, affecting family dynamics.

As reported in the CWB assessments (Sections 10 to 14), Project construction is also expected to generate employment and training opportunities, improving income stability for some residents and their families. Broad regional benefits through employment and labour income are expected during construction. However, unequal access to jobs due to barriers such as childcare, transportation, or qualifications may reinforce existing inequities. Wage inequality between project workers and other residents could also contribute to uneven distribution of benefits and localized economic polarization. In general, the demand for labour is expected to increase local and regional employment levels and labour income, and the demand for goods and services are expected to create opportunities for local and regional businesses to participate through procurement and contracting, further generating employment opportunities.

Employment and income play a large role in shaping health outcomes, as financial stability determines an individual's ability to access the resources necessary for maintaining a healthy lifestyle (Darin-Mattson et al. 2017). Income is one of the most significant determinants of overall health and wellness, and financial insecurity contributes to increased rates of chronic disease, mental illness, and overall poorer health outcomes (CPHA n.d.).

Research further indicates that higher income levels and greater educational attainment are strongly associated with better health outcomes, highlighting the importance of supporting education initiatives with resource development (PHAC 2018). This is especially significant because conditions such as arthritis, asthma, diabetes, and obesity occur at higher rates among First Nations and Métis adults compared to non-Indigenous adults (PHAC 2018). Employment also plays an important role in supporting self-esteem and self-worth, which can in turn enhance mental health and reduce the prevalence of addictions (NCCIH 2020). Low self-rated mental health is more frequently reported among individuals with lower incomes, lower education attainment, and those working in unskilled occupations (PHAC 2018). Income and employment also are also linked to access to health care, but especially social services. Many social assistance programs, including mental health supports, are outside of or only partially covered by Canadian universal health care. Affordability can be one of the most significant barriers for accessing adequate mental health services, as not being able to afford to pay was one of the most frequently reported reasons for having unmet or partially met mental health needs (Statistics Canada 2019). It is also noted that while higher income can influence individual personal behaviours such as substance use or increased domestic violence (Ruddell and Ray 2018), education such as financial literacy can help support better health outcomes.

Overall, the economic opportunities (including employment, income and education) resulting from Project activities have the potential to support a range of health benefits through increased income to support individuals and their families, improvements in mental health through stable employment and wages, and disposable income that can be used for cultural practices and recreation and leisure. Regionally, the economic influx will help support local and regional businesses, and provides education, training and mentorship opportunities for Indigenous youth and adults. While the findings above are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF, it is noted that at the time of producing this report, ANA had not responded to requests for interviews; it is unknown if their community members will be seeking economic opportunities with the Project. Therefore, it is unknown if their community members will benefit from the Project even though they may be affected by certain economic indicators such as cost of living, traditional economy or access to regional health and social services. While increased income is one of the top determinants of health, it can also influence personal behaviours such as substance use, gambling and domestic violence. Existing economic conditions vary among the communities which can further influence existing barriers and vulnerabilities associated with employment, income and education. For individuals not employed in mining or a comparable high-paying industry, the higher cost of living can pose a considerable challenge.

While economic changes due to the Project is expected to result in a net positive benefit to Indigenous health overall, the implementation of carefully designed mitigations are key to mitigating harmful effects and enhancing the economic benefits of the Project. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for economics are presented in Section 7 of Appendix N-2. Great Bear Resources has indicated that commercial project agreements are in progress with LSFN, WFN and NWOMC to minimize adverse social impacts and maximize economic opportunities for Indigenous communities. While the specifics of these agreements are confidential, the agreements are assumed to provide economic benefit to on-reserve communities and off reserve band members.

To support economic development, Great Bear Resources plans to support community-driven economic development by partnering with local and Indigenous communities and prioritizing local hiring and procurement, as described in Section 18 (Summary of Benefits). Great Bear Resources has also committed to inclusive and culturally appropriate employment practices (e.g., equity-based hiring, Indigenous procurement policies, partnerships with Indigenous organizations, financial literacy support, etc.).

Overall, available information indicates that changes in economics will likely occur as a result of Project activities during construction. While a net positive effect is expected as a result of economic changes (e.g., economic opportunities and income stability), some adverse effects (e.g., cost of living, boom-bust cycle, uneven income distribution, personal behaviours) may affect Indigenous health and wellness for some individuals. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. While these findings are applicable to the local Indigenous communities, individual community benefits will depend on several factors including their ability and willingness to participate in economic opportunities (e.g., employment, Project agreements, local businesses) noting the pre-existing barriers that may impede participation in employment and other opportunities. Mitigation and enhancement measures for health are presented in Section 12.9.4.

12.9.3.3.7 Housing

The construction phase of the Project is anticipated to result in a temporary population increase of 1,000 workers during construction and 1,300 during peak construction. As stated in the CSIN and CWB assessments (Sections 10 to 14), the influx of non-local workforce associated with the Project during construction is expected to result in short-term population growth which may impact demand for housing and temporary accommodations. The Project on-site camp is designed to accommodate approximately 1,000 people on a temporary basis during construction. If on-site accommodations are not available at the time when workers are needed, particularly during early construction activities, or if non-local workers relocate with their families who will not be accommodated on-site, there may be short-term demand for off-site housing or other temporary accommodations (i.e., hotels, motels, lodges). The Project will aim to source workers locally where possible and minimize the need for off-site accommodations through the on-site work camp.

The CSIN and CWB assessments (Sections 10 to 14) concluded that no changes to housing during construction are anticipated on-reserve for LSFN, WFN and ANA due to distance from the Project, and because on-reserve housing is reserved for members of the Indigenous communities only. Population changes and housing pressures are anticipated to be limited to regional hubs in Kenora District including Red Lake and Ear Falls. During construction, the increased Project-related workforce may intensify existing regional housing availability and affordability pressures, and may increase demand for certain goods and services contributing to localized affordability pressures, particularly for renters, low- to moderate-income households, and individuals already experiencing housing precarity. This may exacerbate socio-economic divides by reinforcing existing barriers to secure and affordable housing for certain groups, including Indigenous people, women and youth. Contrarily, for those individuals employed by the Project, and their families, improved income stability is expected which may improve housing opportunities. However, unequal access to jobs due to barriers such as childcare, transportation, or qualifications may reinforce existing inequities.

Housing is influenced by a number of interrelated factors that both directly and indirectly affect upstream social and economic conditions. Access to housing of adequate condition is linked to better mental health outcomes, as it supports decreased stress, better sleep and nutrition and improved personal safety (CMHA 2014). The available evidence from upstream pVCs (Local and Regional Economy) and fVCs (Indigenous Peoples – CSIN and CWB assessments) indicated that no Project effects to population growth, housing availability and affordability, or cost of living are anticipated for LSFN, WFN or ANA communities on-reserve. The Project is anticipated to result in population growth in the region associated with the Project workforce which could intensify existing housing concerns for RLEF and the NWOMC. As such, mitigation measures were identified as part of the CSIN and CWB assessments (Section 10 to 14) to minimize potential increased need for housing. These mitigations, including the on-site camp accommodations, community financial support for housing, local hiring objectives, and education and training to support local hiring, are expected to help limit the extent of Project-related housing challenges. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for housing are presented in Section 7 of Appendix N-2.

Overall, no changes to housing are expected on-reserve, and given this upstream finding, a change in Indigenous health and wellness for LSFN, WFN and ANA is also not expected. While mitigation measures are expected to limit the extent of Project-related housing pressures in Kenora District including Red Lake and Ear Falls, given the existing precarity of the housing scenario, changes to housing may result from the Project with potential adverse effects to Indigenous health and wellness for some individuals; no measurable deviation from baseline population-level health resulting from Project activities is anticipated. These findings are applicable to NWOMC members living in Red Lake and Ear Falls and RLEF.

12.9.3.3.8 Access of Health and Social Services

Construction activities are anticipated to result in a temporary population influx of 1,000 workers to the region. As described in the CWB assessments (Sections 10 to 14), during construction, the Project workforce and any relocated families are expected to rely on community-based health, social and education services for non-emergency and specialized care. These systems already face staff shortages and capacity constraints, which may be compounded by population changes during construction. Local service providers have indicated that certain health and social programs such as elder care, home support, and community transportation, are already operating near or at capacity, particularly for vulnerable or aging members. Added demand for childcare, mental health support, and education could contribute to longer wait times and reduced access, particularly for Indigenous residents who may already face barriers to culturally appropriate or geographically accessible care. This includes Elders and caregivers who may face transportation, mobility, or financial barriers.

The Project is not expected to directly interact with service delivery systems on-reserve for LSFN, WFN and ANA due to the distance between the communities and the planned off-reserve Project workforce accommodations; however, regional service access may be affected, particularly for Indigenous individuals and families who travel off-reserve to access these services. As reported in the CWB assessments (Sections 10 to 14), while a variety of social services operate within LSFN, certain services are often still lacking in-community, such as emergency women’s shelters, or maternity and birthing services. For WFN, hospital services are not located within the community, and the closest major hospital (Red Lake Margaret Cochenour Memorial Hospital) is located approximately 108 km away.

Similarly, the closest centre offering specialized health, mental health, and social services for ANA is in the City of Kenora, although it is noted that the Mercury Care Home and Wellness Centre is currently being developed for ANA members. There are services dedicated to Métis that provide culturally specific mental health services and are tailored to Métis citizens, but access to these regional services within the RSA remains limited and may not be able to fully absorb additional demand associated with population growth needs during construction. In addition, education services may also be affected by the arrival of new families as increased enrollment may outpace available classroom space, staff capacity, or specialized programming, including supports for students with special needs or culturally relevant curriculum. Overall, the change in temporary or permanent population from the Project in the region during the construction phase, may contribute to a higher demand for these already limited health and social services.

Access to good quality health care allows individuals to prevent and treat disease and preserve or improve their health (Gulliford et al. 2002; WHO 2024). For people with chronic conditions, including mental health challenges, long waits for medical care can lower quality of life, delay effective treatment, and in some cases increase mortality risks (Ali et al. 2025). As described in the CWB assessments (Sections 10 to 14), while the change in access to health and social services may not affect on-reserve service delivery systems in LSFN, WFN and ANA, members of these communities currently access specialized care in the region. In addition, geographic remoteness of reserves is a major challenge for accessing adequate health and social care services (PDAC 2022) and creates a barrier for timely treatment. While equipped with some services, Red Lake and Ear Falls do not have the same level of service provision as larger population centres. For instance, in Red Lake there are currently no withdrawal management, residential addictions treatment facilities, or mental health centres providing psychiatric or psychological services, requiring members to travel to Kenora or Thunder Bay for these services (MNP LLP 2020). Also, while Red Lake has two shelters, only one is specifically for women experiencing domestic and sexual violence. Conditions are more challenging in Ear Falls, where residents must travel to Red Lake to access most social services. These challenges would affect RLEF and NWOMC members living in Red Lake and Ear Falls who rely on these services.

Geographic isolation combined with limited healthcare infrastructure can worsen existing health issues (Manifold 2024), particularly given that Indigenous populations in northern Ontario experience higher rates of chronic conditions such as diabetes and heart disease (Manifold 2024). This reiterates the need for adequate and appropriate health and social services, and the importance of access to these services. This is also reflected in the Great Bear Community Health Survey results for the Project (Attachment A of Appendix N-2), where about 83% of people in Red Lake and Ear Falls and nearby areas said that access to services is very important to their community.

Appropriate services and programs are particularly important for Indigenous women and girls during industrial development as there have been well documented evidence of negative outcomes, such as domestic violence, for this population. Health care-related services often fail to provide the support needed for victims of physical and sexual abuse or violence (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019). Project interactions and their resulting potential health effects for Indigenous women and girls are further discussed in the assessment of safety of Indigenous women and girls.

Further, access to health care is not equally or universally available to Indigenous people across Canada (NCCIH 2019).

While Project activities during construction can improve household financial security that can be put towards transportation to access specialized care, better insurance coverage for health and social supports, or access to childcare options, equitable health care for Indigenous people remains an issue nationally. Differences in funding, racism or discrimination when accessing care, and culturally unsafe care are challenges Indigenous people continue to face. Further, mental health disparities for Indigenous people are rooted in historical factors such as colonialism and adverse intergenerational impacts (Statistics Canada 2024a). As described in the CWB assessments (Sections 10 to 14), the added demand for health and social services during construction may deepen inequities in access and availability for populations already experiencing systemic barriers. With respect to the influx of workers into the area during construction, the potential for this population increase to put additional pressure on regional services depends in part on Project design and camp accommodations. Health service leaders have reported that worker accommodation arrangements can directly affect local health services (Oke and Wilson 2024).

Oke and Wilson (2024) found that projects with well-managed work camps, access to high-quality on-site medical clinics, or a workforce drawn from the local population or that is permanently settled in the community, were generally much less disruptive to regional health services. Without well-managed camps, their research identified that extractive industry projects can result in increased demand on emergency departments, primary care services, and healthcare staffing as the main sources of pressure on local health systems. These findings highlight the importance of effective camp management and the provision of on-site health services to reduce potential impacts on regional healthcare capacity.

During construction, regional changes to access to health and social services due to Project activities may result in adverse effects to Indigenous health for some individuals; however, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities, including regional effects for LSFN, WFN, ANA, and local effects to NWOMC and RLEF. Proactive planning and mitigation measures can help workers obtain appropriate levels of care in-camp to avoid straining regional systems and provide Indigenous community members the appropriate financial supports to access additional health and social services they may need. Mitigation measures and monitoring plans related to access to health and social services are expected to be protective of Indigenous health during construction. As discussed in Section 18 (Summary of Benefits), Great Bear Resources plans to develop local partnerships aligned with community-identified priorities to provide benefits to communities from the Project. Recent support from Great Bear Resources included funding for health care equipment, facility upgrades, recruitment efforts, and social service initiatives, including a $200,000 contribution to local health care. To further support Indigenous health and wellness, Great Bear Resources has committed to implementing other measures such as Telus telehealth or similar services for employees and immediate family members, medical management and response to track on-site medical responses and referrals for off-site health services, and develop an employee benefits program that includes medical, mental and dental services for employees and their families. This is in addition to an established Employee Assistance Program (EAP) that will be available to employees and their families to alleviate pressures on local health-supportive services (e.g., mental health, addiction counselling and prescriptions). This is expected to improve timely access to care and help minimize pressure on regional health and social services resulting from Project activities during construction.

Overall, available information indicates that changes in access to health and social services will likely occur as a result of Project activities during construction. Potential adverse effects for some individuals (e.g., strain on service delivery and inequitable care) may affect Indigenous health and wellness. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for access to health and social services are presented in Section 7 of Appendix N-2.

12.9.3.3.9 Food Security

Food security during the construction phase could be indirectly influenced by changes in multi-media environmental quality, access and availability of traditional foods, and economics.

As discussed in the assessment of multi-media environmental quality, the available evidence from upstream pVCs (Air Quality, Water Quality) and the HHERA (Appendix N-1) results indicated that health risks from Project activities are not anticipated during construction since incremental risks from Project were below the target HQ of 0.2 for all Project phases and considered negligible in comparison to baseline risks. While physical health is not expected to be directly affected by Project interactions with multi-media environmental quality during construction, it is important to acknowledge that Indigenous people in the region view health as a holistic balance including complex connections to the environment and all living things. Potential effects to health associated with multi-media environmental quality (as an input to food security) should be interpreted in the context of the interconnectedness of physical, mental, emotional and spiritual health. Despite the HHERA findings predicting negligible risks from Project activities, perception issues related to environmental quality may indirectly change or limit the consumption of traditional foods by local Indigenous communities during construction. Self-imposed limitations on traditional food consumption may impact food security associated with both a decreased diet supplementation with traditional foods and costs associated with increased reliance on market foods.

As described in the CWB assessments (Sections 10 to 14) and discussed in the assessment of access and availability of traditional foods, Indigenous people who previously accessed the PA and who access the LSA immediately adjacent to the PA for harvesting may experience changes in access and availability of hunted and trapped species, and impacts to quality of experience due to sensory disturbance during construction. Changes to access to land-based food and medicines, including reduced participation in traditional economy, may deepen existing food insecurity, limit cultural continuity, and contribute to adverse health outcomes, particularly where store-bought food is expensive or nutritionally inadequate.

As described in the CWB assessments (Sections 10 to 14), the increased workforce-related population may increase demand for certain goods and services during construction, contributing to localized affordability pressures for residents, particularly those on fixed or lower incomes. These affordability and income changes can reduce economic resources and contribute to sustained or worsening food security. However, for those individuals employed by the Project, and their families, improved income stability is expected which may improve food security. Unequal access to jobs, however, due to barriers such as childcare, transportation, or qualifications, may reinforce existing inequities.

Collectively, food security is influenced by a multitude of interrelated factors that both directly and indirectly affect upstream environmental, social, cultural and economic conditions.

Food security, which is often closely tied to an individual's socio-economic status, plays a crucial role in health because when people have sufficient financial resources, they can access a diverse range of nutritious foods, which can support better diet quality and reduce chronic disease risk (Ziso et al. 2022). Indigenous communities across Canada currently experience higher than average levels of food insecurity than the non-Indigenous population (Batal et al. 2021b; Tarasuk et al. 2019). Food security represents a public health concern in northwestern Ontario, with food insecurity in the Kenora-Rainy River Districts reported to be higher than provincial and regional averages (NWHU 2024). Given that the most prominent cause of food insecurity is poverty, the importance of distribution of additional economic supports in alleviating this disparity is critical. The available evidence from pVCs and fVCs suggests that food security could be positively affected by the Project via economic supports (income, employment, benefit agreements) that allow Indigenous families to have access to healthier and more diverse foods. However, food security may also be adversely impacted through perception issues and / or changes in access and availability (i.e., alterations to ecosystems, sensory disturbances in gathering/hunting areas) of some wildlife, fish and / or plants that may change or limit the consumption of traditional foods by local Indigenous communities and potentially exacerbate existing food insecurity concerns in the region.

Simultaneously, increased population during construction which may impact affordability due to increased demand for certain goods and services may add further stress for food insecure individuals. Access to traditional foods is an important strategy for addressing food security (Skinner et al. 2013; Banerji et al. 2023; SLFNHA 2019b), as traditional foods can be an affordable and high nutritional value source of food, alternative to high cost, low nutritional value market foods. Reduced use of traditional foods can increase reliance on market foods which can impact food security based on affordability and quality of the market foods attainable to an individual or household. Market foods in Northern Ontario are higher in cost than those in the rest of Ontario, and significantly more so in remote regions of northern Ontario in comparison to urban centres (SLFNHA 2024a; NWHU 2024). These high costs can result in reduced access to market foods in general, and / or reduced access to high nutritional value market foods (i.e., fresh produce) which are often more costly than foods with poorer nutritional value (i.e., processed foods).

Overall, for those Indigenous people employed by the Project and their families, Project activities are anticipated to improve food security through increased income allowing for access to adequate amounts of, and higher nutritional quality, foods. For Indigenous households not employed by the Project, Project activities that interact with cost of living may add additional strain to food security for some individuals; however, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Mitigations will be required to minimize potentially adverse effects related to perception to avoid disruption to traditional food practices and traditional economy (e.g., funding for Indigenous-led education and training for land-based activities), minimize effects to cost of living and maximum economic benefits (e.g., local hiring policies). While economic changes due to the Project may result in an overall benefit to Indigenous health, the implementation of carefully designed mitigations are key to mitigating adverse effects and enhancing the benefits of the Project. Great Bear Resources has indicated that commercial project agreements are in progress with LSFN, WFN and NWOMC to minimize adverse social effects and maximize economic opportunities for Indigenous communities. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for food security are presented in Section 7 of Appendix N-2.

12.9.3.3.10 Mental Wellness and Personal Behaviours

Mental wellness and personal behaviours during the construction phase is influenced by a multitude of interrelated factors that both directly and indirectly affect upstream environmental, social, cultural and economic conditions. Collectively, these conditions have the potential to affect Indigenous health at the individual and community level.

The available evidence suggests that Project activities may have a beneficial effect of mental wellness via economic support (e.g., income, employment and agreements) during construction. As discussed previously, economic opportunities can improve food security (Myrette and Riva 2021), and in some cases, reduce barriers (via economic benefit) to participation in traditional harvesting practices, by providing means of purchasing hunting, fishing and harvesting equipment (Chan et al. 2014). Economic development, coupled with environmental stewardship and self-determination, is a key determinant of Indigenous health (Loppie and Wein 2022). Therefore, providing opportunities for training, education, and employment for local Indigenous communities is an important way to enhance and support Indigenous health via mental wellness and personal behaviours.

Indigenous health via changes in mental wellness and personal behaviours, may also be indirectly influenced by Project activities during construction through potential changes to traditional food systems (Batal et al. 2021b), environmental dispossession and solastalgia (e.g., the feeling of loss and grief tied to sense of place.) (Ninomiya et al. 2023; Salerno et al. 2021; Tobias and Richmond 2014), family dynamics and relationships (Parker et al. 2018; Myrette and Riva 2021) and potential changes to access to health and social services (Parker et al. 2018; Wheatley 2024).

Some communities in the region (i.e., in the Sioux Lookout area) are experiencing pre-existing mental health and substance use challenges, with higher hospitalization rates for mental health and substance use compared to other local communities in northern Ontario (NWHU and Yusuf 2023; SLFNHA 2024b). In a confidential report prepared for NWOMC, while community members expressed that the Project may bring positive economic benefits (which can lead to beneficial influences on mental health outcomes), there was concern about an influx of workers and issues related to drugs and alcohol. While these issues are complex and may be attributed to a myriad of personal and social factors, research has shown that without effective mitigation strategies in place, resource development more broadly can affect mental wellness and personal behaviours through various pathways of effect, including those related to family dynamics (Parker et al. 2018) and substance use challenges (Aalhus et al. 2018; Gibson et al. 2017).

Notably, research has shown that positive mental health outcomes are strongly linked to active community participation and effective collaboration throughout project development and implementation (Salerno et al. 2021). Positive mental health outcomes can result from the creation of jobs themselves or secondary economic effects when there is investment into local community development, education and training, as well as culturally appropriate and community-specific mitigation measures (Salerno et al. 2021). In confidential reports, LSFN, WFN, and NWOMC expressed the desire for local hiring initiatives. Additionally, WFN and LSFN community members suggested that a method of building trust was to support economic prosperity outside of the mine.

A common theme that has emerged within publicly available reports, confidential reports, and various community engagement activities was the desire for investment in education and training for youth and children.

Existing mental health outcomes across Indigenous communities within the LSA are disproportionately affecting youth and young adults, including in the NWHU as a whole in Sioux Lookout area First Nations, which includes LSFN and WFN, in ANA, and in RLEF (NWHU and Yusuf 2023; SLFNHA 2024b; SLFNHA 2018; MNP LLP 2020; Mergler et al. 2019, 2023). Preserving culture through various mediums (e.g., language and knowledge transmission; supporting participation in land-based activities and learning) has been shown to have protective effects on mental health (Carrier et al. 2022; Lines et al. 2019; NCCIH 2016; Task Group on Mental Wellness 2021). Therefore, mitigation and enhancement measures that include mental health protective factors such as education and training initiatives that involve targeting youth, are important considerations for the Project.

As indicated in the sections above, Project activities during construction have the potential to cause changes to mental wellness and personal behaviours (via changes in employment and economics, family wellness, land-based practices, intergenerational trauma, substance use); although, these effects are highly subject to individual variability. As family, community, and relationships with each other are foundational to Indigenous health (Métis National Council 2025; SLFNHA 2016), Project-related changes to mental wellness and personal behaviours during construction may therefore result in a mix of both beneficial and adverse effects to Indigenous health.

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during construction. The implementation of carefully designed mitigation and enhancement measures are key to mitigating potential adverse effects and maximizing the benefits of the Project, such as an inclusive and local hiring strategy, prioritizing Indigenous hiring, education and training, employee benefits programs, supporting Indigenous procurement and business opportunities, and operation of a dry camp.

The likelihood of beneficial effects on mental wellness and personal behaviours outcomes is largely based on the planning, design and implementation of mitigation measures that improve the upstream conditions (environmental, social, economic, cultural) that influence Indigenous health and wellness. In general, beneficial mental health effects from major projects are associated with meaningful engagement and effective partnerships (Salerno et al. 2021). Given Indigenous communities generally within the RSA (e.g., Sioux Lookout area First Nations) may be currently experiencing higher rates of mental health challenges and substance use challenges than their Ontario counterparts, supporting initiatives that aim to mitigate potential Project effects and support mental health resiliency and healing outside of the mine, should be considered to support alleviating this disparity. Therefore, funding for Indigenous-led education and training for land-based activities and support of Indigenous environmental monitoring programs were also identified. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for mental wellness and personal behaviours are presented in Section 7 of Appendix N-2.

Overall, both beneficial (e.g., via economic development and increased material resources due to employment) and adverse (e.g., via environmental dispossession, negative health behaviours) changes to mental wellness and personal behaviours may affect Indigenous health and wellness for some individuals during construction, with potential effects being highly subject to individual variability. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Mitigations and enhancements presented in Section 12.9.4 are required to minimize adverse effects.

12.9.3.3.11 Actual and Perceived Public Safety (Accidents and Malfunctions)

The risk for accidents and malfunctions to occur is introduced due to the development of the Project; however, the nature of events that may occur will differ between construction and operations, being lower during construction.

The potential types of accidents and malfunctions that are most applicable to human health are those that would result in a spill, such as those related to dam, ditch, or pipeline failure. The residual risk rankings for the potential accident types that were assessed in Section 16 (Effects of Potential Malfunctions and Accidents), including those related to a spill, ranged from very low to low. Given that the likelihood of the scenarios had a rare (1/1,000 to 1/10,000 events per year) or unlikely (1/100 to 1/1,000 events per year) likelihood of occurrence, interactions between the Project and Indigenous health via changes to actual public safety are not anticipated at this time. This is assuming that the development and effective implementation of contingency planning and mitigation measures listed in Section 16 (Effects of Potential Malfunctions and Accidents) are carried out.

In terms of perception, perceived public safety due to accidents and malfunctions, including emotional and social stress, is influenced by a multitude of interrelated factors. The available evidence, including community feedback and primary and grey literature sources (Ninomiya et al. 2023; Salerno et al. 2021; Shandro et al. 2017), suggests that perceived changes in safety, even in the absence of direct incidents, may affect community health and wellness. This is largely due to the introduction of a potential risk of spill-related accidents or malfunctions as a result of Project development, even if the actual risk of such events is negligible.

Should an accident or malfunction occur, Indigenous health and wellness could be impacted both directly and indirectly at varying magnitudes for varying durations, depending on the nature of the event. Indirect interactions with Indigenous health and wellness may occur because the development and construction of the Project introduces the possibility (via new infrastructure) of anthropogenic accidents and malfunctions occurring in the vicinity of the Project relative to existing conditions. As such, indirect or perceived changes to public safety due to accidents and malfunctions could occur and may influence community health and wellness. These indirect or perceived influences relate primarily to concerns over environmental contamination and potential perceived disruptions in traditional land and resource use, which may in turn influence Indigenous health via changes in actual and perceived safety (accidents and malfunctions) including emotional and social stress factors.

It is acknowledged that there is inherent uncertainty associated with the potential effects of accident and malfunctions scenarios, making it difficult to fully characterize the potential health effects associated with the Project. Broader social and cultural factors, such as historical mistrust and pre-existing emotional and social stress factors associated with industrial development, may continue to influence and in some cases exacerbate, overall health effects for Indigenous communities.

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during construction. As discussed in Section 16 (Effects of Potential Malfunctions and Accidents), an emergency response plan for the Project will be implemented and will include the communication of plans as may be required for each type of accident and malfunction. Great Bear Resources has also developed a Community Grievance Procedure specific to the Great Bear Gold Project site.

With the design and application of contingency planning and mitigation measures, the resulting effects on Indigenous health via changes in actual and perceived safety, including emotional and social stress factors, are expected to be negligible for LSFN, WFN, NWOMC, and RLEF. Potential effects on Indigenous health (i.e., emotional and social stress) due to changes in the perception of safety during construction may occur for some individuals within the ANA community; largely due to historical mistrust and pre-existing emotional and social stress associated with industrial development. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. While upstream technical inputs did not identify adverse effects to Indigenous people's health from Project activities per se, the measures proposed for upstream technical disciplines are expected to continue mitigating potential effects from changes to actual and perceived public safety during construction. In addition, environmental data sharing agreements with local Indigenous communities, support of Indigenous environmental monitoring programs, and public safety communications were also identified as health measures to minimize adverse effects due to changes in perceived safety. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for perceived safety due to accidents and malfunctions are presented in Section 7 of Appendix N-2.

Overall, the potential for effects on Indigenous health during construction due to changes in actual and perceived public safety, including emotional and social stress, is largely dependent on Great Bear Resources' continued engagement and transparency with the local Indigenous communities and the efficacy of Project design, mitigation measures and emergency response planning.

12.9.3.3.12 Safety of Indigenous Women and Girls

Construction phase activities are anticipated to result in a temporary population increase of 1,000 workers during construction and 1,300 during peak construction. As stated in the CWB assessments (Sections 10 to 14), no direct interactions with public safety or gender-based violence are anticipated on-reserve for LSFN, WFN, ANA during construction. However, the Project will bring a temporary influx of non-local workers into the region, including in Red Lake and Ear Falls, which may elevate broader safety concerns, particularly among Indigenous women, girls, and 2SLGBTQQIA+ people. These concerns reflect ongoing systemic safety risks and the national crisis of Missing and Murdered Indigenous Women and Girls. The influx of new and transient workers may affect safety and the perception of safety, particularly for Indigenous women, girls, and 2SLGBTQQIA+ individuals.

Human trafficking and sexual exploitation risks were raised by local service providers, consistent with regional trends documented in the Final Report on Missing and Murdered Indigenous Women and Girls (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019). These concerns may not always be captured through quantitative data but are central to the lived experience and perceived safety in the community. The NCCIH (2020) reports that impacts such as domestic violence and sexual abuse *"differentially affect the health of Indigenous girls and women, a population already experiencing high rates of domestic abuse, sexually transmitted diseases and pregnancies."* For individuals and groups who already experience disproportionate vulnerability to gender-based violence, increased presence of non-local and transient workers may contribute to heightened fear or unease within the community. This may also intersect with broader historical and systemic factors that contribute to lower levels of trust in public safety systems among some Indigenous and vulnerable populations.

Even in the absence of actual incidents, perceived increases in risk can have adverse effects on mental wellness, personal security, and overall community cohesion.

For Indigenous health, there can be both direct and indirect effects on health and wellness in instances where the safety of Indigenous women, girls, and 2SLGBTQQIA+ individuals is compromised, whether in the community or in the workplace. There are direct impacts including the possibility of injury (through sexual assault and violence), death and / or mental health effects (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019). In addition, *"the systems and institutions that Indigenous people reach out to for health care-related support often fail to provide the support needed and, in doing so, often deepen these health concerns"* (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019). These incidents do not only affect the individual, but also their families and broader communities.

A study of Indigenous women employed in natural resource industries in Canada found that *"sexual harassment and misconduct is common in field operations"* and that *"there was a huge difference between what would be tolerated by management in corporate offices and on mine sites"*, specifically referring to incidents of both physical and verbal sexual harassment (Baruah and Biskupski-Mujanovic 2023). Study respondents suggested that development and enforcement of strict sexual harassment policies at mine camps and pre-arrival training for employees about what constitutes harassment and abuse is important (Baruah and Biskupski-Mujanovic 2023). Mitigating such incidents from occurring is the foundation of the calls to action that are listed in the Final Report on Missing and Murdered Indigenous Women and Girls. Five calls to action were specifically directed at extractive and development industries. In addition, IAAC commissioned a study in response to the National Inquiry (i.e., MMIWG) and provided further recommendations to mitigate adverse effects to Indigenous women, girls and 2SLGBTQQIA+ individuals (IAAC and Narratives Inc. n.d.). Collectively, these sources have informed the mitigations listed below in Section 12.9.4.

Overall, safety of Indigenous women and girls is influenced by a number of interrelated factors that both directly and indirectly affect upstream social and cultural conditions. Safety of Indigenous women and girls is directly linked to health as both violations of physical safety (e.g., through violence, harassment) and perceptions of safety can influence both physical and mental health and wellness. The available evidence from upstream social conditions (i.e., public safety and gender-based violence) and primary and grey literature, including the National Inquiry into MMIWG, indicated that health effects from Project activities (namely the influx of workers) are possible during construction, especially if incidents occur at camp and / or in community that compromise the safety of Indigenous women and girls. While baseline information highlighted that the issues surrounding the national crisis of MMIWG are not specific to a single region or project, they have the potential to be exacerbated with development in remote northern areas.

Mitigation measures and monitoring plans are expected to minimize risks to the safety of Indigenous women and girls during construction; however, they cannot completely eliminate the possibility of incidents occurring. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigation for safety of Indigenous women and girls are presented in Section 7 of Appendix N-2. Mitigations include site security (e.g., separate and locked accommodations for women at camp), mandatory cultural awareness training for employees, tracking incidents in the workplace and protective grievance processes for workers, among others.

It is noted that Kinross' Code of Business Conduct and Ethics (Kinross 2025) states that harassment will not be tolerated and Kinross will take disciplinary action against anyone found to be in violation. In community, mitigations include in collaboration with Indigenous communities and local law enforcement to discuss safety considerations regarding the influx of additional workforce into the area. Collectively, these mitigations are expected to help minimize the likelihood of incidents occurring at camp and in community. It is acknowledged that should incidents occur, the physical and mental health consequences for the affected individual(s), and their families, is substantial.

Overall, effects on Indigenous health from changes to safety of Indigenous women and girls as a result of Project activities during construction are possible if incidents were to occur. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Mitigations and enhancements presented in Section 12.9.4 are required to address potential effects by minimizing risks to safety of Indigenous women and girls both at camp and in community.

12.9.3.4 Operations Phase

The operations phase is anticipated to occur over a 26-year period. Several direct, indirect or perceived interactions may continue to influence Indigenous health identified during construction are expected to continue during operations. These relate primarily to confidence in land and resource use, access to traditional territories, Project workforce and ongoing reliance on regional services.

The source of the Project interactions during operations are associated with the operation of the mine and related infrastructure (e.g., generators), processing of ore and management of rock and tailings, and operation of a concrete batch plant, cemented rockfill plant, and paste plant. The potential interactions during operations are explored as contributions to the potential effect of an overall change in Indigenous health.

12.9.3.4.1 Air Quality

Potential changes to air quality are expected to continue during operations. NO_2 and DPM were also identified as POPCs during the operations phase and carried forward into the HHERA inhalation assessment (Appendix N-1). The results of the HHERA inhalation assessment for the operations phase are presented below, with full details in the HHERA (Appendix N-1). The results of the HHERA inhalation assessment are presented in Table 12.9-2 and Table 12.9-3 in the discussion of construction in Section 12.9.3.1 above, with full details provided in the HHERA (Appendix N-1).

As shown in Table 12.9-3, the HHERA inhalation assessment reported HQs above the target HQ of 1 for DPM only at the MPOI during the operations phase for Project Alone and Project+Baseline. Potential risks associated with short-term NO_2 exposure or chronic DPM exposure in air were negligible.

The MPOI represents a worst-case scenario; therefore, individuals are not likely to be exposed to concentrations that would result in HQs above the target HQ of 1 and result in potential risks to human health. The HHERA inhalation assessment reported that although HQs above the target HQ of 1 were identified at the MPOI, the frequency of these instances was low during operations (i.e., 0.15% at the MPOI), which equates to less than 24 hours (1 day) of HQs above the target in a year.

The findings for DPM during operations are similar to construction. Adverse risks to health for the Indigenous Resident based on short-term exposure are not expected as the maximum predicted 1-hour concentration of DPM for Project+Baseline (i.e., during operations) was 28.6 µg/m^3, which was below the critical effect and POD of 100 µg/m^3 for which the majority of DPM toxicological studies have observed increases in airway resistance (Mudway et al. 2004; Behndig et al. 2006, 2011; Riedl et al. 2012; Stenfors et al. 2004; as cited in Health Canada 2016). Potential risks to the Indigenous Resident from Project-related DPM exposure during operations were considered to be low given the predicted concentrations are below the POD of 100 µg/m^3, the predicted frequency of DPM concentrations above targets are low (less than 1 day / year), conservative assumptions were used in the air quality assessment, the assumption that all $PM_{2.5}$ vehicle combustion was related to DPM is conservative, and people are not expected to be at the MPOI for extended periods that would constitute risk.

As such, Project activities are not anticipated to pose risks to the Indigenous Resident from exposure to POPCs in air during operations. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. While physical health is not expected to be directly affected by Project interaction with air quality during operations, perception issues related to air quality may affect the amount of time spent outdoors by Indigenous communities during the 26-period of operations, including traditional land use practices. Mitigation measures and monitoring plans are expected to be protective of Indigenous health during operations. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for air quality are presented in Section 7 of Appendix N-2.

Overall, direct effects on Indigenous health from changes to air quality as a result of Project activities during operations are not anticipated; however, mitigations and enhancements presented in Section 12.9.4 are required to validate assumptions and promote Indigenous participation in environmental monitoring and data sovereignty.

12.9.3.4.2 Multi-media Environmental Quality

As stated in Section 7.2 (Air Quality), Project interactions which could potentially effect soil, surface water and traditional foods as a result of deposition from airborne emissions are the same as those expected for construction. As stated in Section 7.7 (Water Quality), Project interactions which could potentially affect surface water quality during operations include discharge of treated Project contact water, fugitive groundwater seepage, treatment and discharge of domestic sewage, and fugitive dust emissions and subsequent deposition on surface water features.

The results of the HHERA multi-media assessment for the operations phase are presented in Table 12.9-4, Table 12.9-5, Table 12.9-6 and Table 12.9-7 in Section 12.9.3.1 above, with full results provided in the HHERA (Appendix N-1). The results of the human health multi-media assessment for the operations phase resulted in the same conclusions described for construction, with HQs for operations calculated as essentially equal to or below HQs calculated for construction.

As presented in Table 12.9-4 and Table 12.9-5, non-carcinogenic risks (i.e., HQs above target HQ 1.0) were identified from exposure to inorganic arsenic for both the average and heavy consumer Indigenous resident (toddler) for baseline and Project+Baseline for operations, with surface water exposure as the primary contributing pathway (approximately 83% of the HQs for average consumer toddler Indigenous resident; approximately 62% of the HQs for heavy consumer toddler Indigenous resident [same as construction]).

However, when accounting for Project-Alone contributions, HQs were below the target HQ of 0.2 for operations and considered negligible. This indicated that Project+Baseline HQs above the target HQ of 1 are associated with the background conditions (i.e., baseline) rather than the Project, and the Project is not expected to increase arsenic-related human health risks for the average consumer or heavy consumer Indigenous resident living, working, and recreating in the LSA and RSA during construction. Carcinogenic effects from inorganic arsenic, as presented in Table 12.9-7, are the same as described for the construction phase wherein the calculated ILCR values for the composite receptor was below the target ILCR of 1.0E-05 (i.e., 1-in-100,000) for both the average and heavy consumer Indigenous resident for the operations phase and for the total 80-year lifetime composite. As such, unacceptable carcinogenic risks are not expected from the Project.

In the HHERA, multi-media assessment HQs for mercury (inorganic and methylmercury) were combined with the HQs calculated in the Mercury Bioaccumulation Study for Downstream English River to Wabigoon System Waterbodies (Appendix T) to estimate total mercury related HQs from the sources of exposure related to the Project site. These total HQs are presented in Table 12.9-4, Table 12.9-5 and Table 12.9-6. For inorganic mercury, as presented in Table 12.9-4, for the average consumer Indigenous resident (toddler) baseline and Project+Baseline HQs were below the applicable target HQ of 1 for these assessment cases, and Project-Alone HQs were below the applicable target HQ of 0.2. As such, risks for the average consumer were considered to be negligible during operations. For the heavy consumer Indigenous resident (toddler), as presented in Table 12.9-5, the HQ was above the target HQ of 1 for Project+Baseline for operations, driven by the ingestion of fish exposure pathway (accounting for approximately 96% of HQs; same as construction). However, when accounting for Project-Alone contributions, the HQ was below the target HQ of 0.2 for the heavy consumer for operations and considered negligible. As presented in Table 12.9-6, for the average and heavy consumer adult female baseline and Project+Baseline HQs were below or equal to the target HQ of 1, and Project-Alone HQ values were below the target HQs of 0.2 and considered negligible. The female adult was evaluated to represent sensitive populations for exposure to developmental toxicants. As such, the Project is not expected to increase inorganic mercury-related health risks for the average consumer or heavy consumer Indigenous Resident living, working, and recreating in the LSA and RSA during construction.

As presented in Table 12.9-4 and Table 12.9-5, non-carcinogenic risks (i.e., HQs above target HQ of 1.0) were identified from exposure to methylmercury for the average and heavy consumer Indigenous resident (toddler) for baseline and Project+Baseline for operations, with dietary consumption pathways, specifically fish ingestion as the primary exposure pathway contributing to HQs (i.e., >95%; same as construction). However, when accounting for Project-Alone contributions, HQs were below the target HQ of 0.2 for operations and considered negligible. As presented in Table 12.9-6, baseline and Project+Baseline HQs for the adult female life stage were below or equal to the target HQ of 1 for the average consumer and above the target HQ of 1 for the heavy consumer, but lower than HQs for the toddler (Table 12.9-4,Table 12.9-5). When accounting for Project-Alone contributions, methylmercury HQ values for the adult female were below the target HQ of 0.2. This indicated that Project+Baseline HQs above the target HQ of 1 are associated with the background conditions (i.e., baseline) rather than the Project, and the Project is not expected to increase methylmercury-related human health risks for the average consumer or heavy consumer Indigenous resident living, working, and recreating in the LSA and RSA during construction.

No risks were identified for selenium for the average or heavy consumer Indigenous resident based on HQs for baseline, Project+Baseline or Project-Alone for operations. Therefore, the Project is not expected to increase selenium-related human health risks for the average consumer or heavy consumer Indigenous Resident living, working, and recreating in the LSA and RSA during construction.

Consistent with the construction phase, for the multi-media POPCs, baseline (i.e., existing) conditions are driving risk for human health. The incremental Project risks for each phase are below the target HQ of 0.2 applicable for Project-Alone contributions, representing a negligible change from baseline risks. For carcinogenic effects of inorganic arsenic, ILCR values are below the target threshold of 1.0E-05 (i.e., 1-in-100,000). As such, Project activities are not anticipated to pose risks to the Indigenous Resident during operations. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

While physical health is not expected to be directly affected by Project interactions with multi-media environmental quality during operations, it is important to acknowledge that Indigenous people in the region view health as a holistic balance. It is possible that perception issues related to environmental quality may change or limit the consumption of traditional foods by local Indigenous communities during operations. Mitigation measures and monitoring plans are expected to be protective of Indigenous health during operations. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for multi-media environmental quality are presented in Section 7 of Appendix N-2.

As such, direct effects on Indigenous health from changes to multi-media environmental quality as a result of Project activities during operations are not anticipated; however, mitigations and enhancements presented in Section 12.9.4 are required to minimize potential indirect effects related to perception of environmental quality to avoid disruption to traditional food practices.

12.9.3.4.3 Access and Availability of Water

As stated in Section 7.5 (Groundwater), Project interactions which could potentially effect groundwater quantity are the same as those expected for construction. A reduction in groundwater levels from mine dewatering will reduce groundwater contributions to surface water, which will be reflected in some surface watercourses and waterbodies within or adjacent to the PA during operations.

As stated in Section 7.6 (Surface Water Flows and Levels), Project interactions which could potentially effect surface water flows and levels are the same as those expected for construction, with the additional activity water takings from the Chukuni River during operations. Reductions in flow in watercourses will continue and increase during the operations phase, but will continue to not be observable. The temporary reduction in flow is expected to cause a small change in water level in a portion of Dixie Creek; however, the reduction in average annual water level may by less than 5 centimetres [cm]) which is unlikely to be identifiable from natural variation. Changes are considered temporary and reversible as flows and water levels are restored after closure. Observable changes in surface water levels are not expected for other waterbodies or watercourses with the exception of the unnamed waterbodies and watercourses within the PA which will be permanently altered during construction.

On-going changes to access and availability of water during long-term operations may continue to reinforce community concerns regarding perceived environmental change.

This can result in avoidance of the use of local waters potentially leading to indirect effects on Indigenous health and wellness for some individuals through interruption of cultural ceremonies, traditions and identity linked to water. Potential adverse effects related to community cohesion, cultural continuity, mental health, intergenerational knowledge transfer, land-based healing, and ceremonial activities noted in construction are expected to continue in operations, particularly where the landscape remains altered or access to waters are perceived as reduced. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. The complex interaction between environmental quality, perception and possible avoidance is further discussed in relation to multi-media environmental quality and food security. Mitigations and enhancements presented in Section 7.5 and Section 7.6 (Groundwater and Surface Water Flows and Levels, respectively) are proposed and will minimize changes to access and availability of water. Data sharing agreements with local Indigenous communities, and support of Indigenous environmental monitoring programs were identified as mitigation measures required to minimize perception issues surrounding Indigenous use of lands and waters. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for access and availability of water are presented in Section 7 of Appendix N-2.

12.9.3.4.4 Access and Availability of Traditional Foods

During operations, similar interactions as the construction phase will continue, and potential effects to health via changes to access and availability of traditional foods for Indigenous people may occur. Project-related activities during operations may continue to disrupt access and / or availability of traditional foods, including changes in harvesting patterns due to land disturbance, perception issues and other barriers, as well as ecosystem alteration.

During the operations phase, access to areas within the PA will be restricted for safety and security reasons, however, access to land and resource areas within the LSA will remain unrestricted during Project operations. Therefore, changes to access of traditional foods for those Indigenous communities who harvest within the PA (LSFN and RLEF) may occur. Anticipated potential effects from Project activities also include direct and indirect changes to availability of plants and wildlife, respectively, as well as diminished quality of experience due to sensory disturbance in the LSA, immediately adjacent to the PA. Therefore, effects to Indigenous health identified for the construction phase due to changes to access and / or availability of traditional foods, may continue throughout the mine life.

In addition, operational activities could affect fish, wildlife, and plants due to potential changes in air and water quality and in turn, indirectly affect Indigenous health. The HHERA considered this potential effect pathway to assess potential effects on fish, wildlife, and plants due to POPC emissions associated with Project activities (Appendix N-1). The results of the HHERA (Appendix N-1) demonstrated that air and / or water quality changes associated with Project activities are not expected to result in unacceptable risks to plants, mammals and birds, or aquatic communities, suggesting that the availability of traditional foods is not expected to be impacted.

Mitigation measures and monitoring plans for the operations phase are expected to be protective of Indigenous health during operations. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for access and availability of traditional foods are presented in Section 7 of Appendix N-2.

As described in the CULRTP assessments (Sections 10 to 14), long-term operational activity may reinforce community concerns regarding environmental change and cultural continuity, particularly where the landscape remains altered or access to important cultural areas is perceived as reduced and may continue to influence overall health for Indigenous people.

Overall, available information indicates that changes in access and availability of traditional foods (e.g., changes in harvesting patterns and ecosystem alteration) will likely occur as a result of Project activities during operations, and this change may affect Indigenous health and wellness for some individuals (Earle 2011a, 2011b; Simpson et al. 2009; Waasegiizhig Nanaandawe'iyewigamig 2020);however, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Changes in access and availability of traditional foods are also linked to other health indicators including economics (employment, income and education), food security, and mental wellness and personal behaviours.

12.9.3.4.5 Sensory Disturbances: Sound, Vibration and Light

During the peak production and underground production operations modelling periods, sound levels predicted under the worst-case hour scenario (LAeq-1hr [A-weighted equivalent sound level], dBA) meet the provincial and federal guidelines at all PORs in the LSA and RSA, during daytime and evening / nighttime periods. In addition, the change in %HA is predicted to meet the Health Canada guideline (2023e) of 6.5% for the operations phase, which means that changes to sound levels are not expected to trigger noise complaints from PORs. Blasting operations are within applicable guidelines and there is no change to vibration at the PORs. Therefore, effects to Indigenous health during the operations phase due to due to sound (e.g., annoyance) and vibration are not anticipated. For light, the difference between existing and predicted skyglow during operations was comparable to the seasonal variability seen between baseline measurement. Therefore, potential effects to Indigenous health due to light (e.g., sleep disturbance) are not anticipated. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

Mining-related activities may result in sensory disturbance during the operations phase (noise, visual and dust) which could impact sense of place and quality of experience during harvesting activities in the LSA, and immediately adjacent to the PA.

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during operations, such as noise control measures, the blast management plan, and light control measures and best practices. In addition, a mechanism will be established for receiving and responding to noise complaints in a timely manner during all Project phases.

12.9.3.4.6 Economics (Employment, Income and Education)

During operations, Project-related employment and contracting opportunities will continue to provide increased income to individuals working for the Project and their families. Peak employment is anticipated to reach approximately 1,100 workers during operations when both the open pit and underground mines are active; however, the workforce is expected to decrease to approximately 700 workers during the underground mining-only operations (after approximately year 9).

Although no population growth or direct workforce is anticipated on-reserve for LSFN, WFN and ANA, Project operations are expected to affect the local and regional economy (including RLEF and NWOMC) through temporary job creation and increased regional spending during operations. As described in the CWB assessments (Sections 10 to 14), this is also anticipated to increase labour income, provide valuable work experience for Indigenous members participating in the workforce, and strengthen income stability. The workforce is expected to stabilize during operations; thus, most potential interactions identified during construction are likely to persist or evolve over time.

Income is a key determinant of health, and higher earnings during operations can reduce financial stress, enhance self-esteem, and support improved mental health, including a reduced prevalence of addictions (NCCIH 2020). Increased income may also alleviate community-level poverty and enable participation in cultural and traditional practices, which promote healthier lifestyles and reduce the risk of obesity-related conditions such as diabetes and cardiovascular disease (NCCIH 2020). However, income is not the sole economic influence on health. Income, education, and occupational skill levels are closely linked, and individuals with lower socio-economic status consistently experience higher rates of chronic conditions, including arthritis, asthma, diabetes, and obesity (PHAC 2018). Therefore, initiatives that support education and skills development during operations is key to increased employment opportunities, higher income over the long-term and better health. Increased consumer spending during operations can raise demand for goods and services, supporting improved health and social services and in turn, better health outcomes (NCCIH 2020). However, for some individuals, higher incomes may exacerbate substance use issues, potentially increasing risks of domestic violence, family disruption, and safety concerns for Indigenous women and girls (NCCIH 2020). Further, due to the expected demand for certain goods and services during operations, a temporary increase in the cost of living for communities that already face elevated costs for food, fuel and housing can contribute to localized affordability pressures.

During operations, potential effects to Indigenous health due to changes in economics (employment, income, education) from the Project are expected to be positive overall as steady employment and contracting opportunities could support income stability, local business activity and workforce skill development. However, higher income could also lead to negative health behaviours (e.g., substance use) for some individuals, and sustained operations may reinforce community concerns about affordability, service capacity, and long-term population change, as described in the CWB assessments (Sections 10 to 14). Further, for individuals not employed in mining or a comparable high-paying industry, the higher cost of living can pose a considerable challenge. While the findings above are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF, it is noted that at the time of producing this report, it is unknown if ANA members will be seeking economic opportunities with the Project.

The implementation of carefully designed mitigations and enhancements are key to mitigating adverse effects and enhancing the economic benefits of the Project. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for economics are presented in Section 7 of Appendix N-2. Great Bear Resources has indicated that commercial Project agreements are in progress with LSFN, WFN and NWOMC, which will continue to provide economic benefits to communities throughout operations. Great Bear Resources has also committed to support economic development and the ability for Indigenous people to gain economic benefit from the Project.

One key commitment that will influence the operations phase is the effort to increase the labour force and business capacity by supporting training and hiring of Indigenous people, particularly in the operations phase (Section 18). This and other commitments, including supporting equitable benefits (employment, training, income equality) for Indigenous women, retirement planning and support, an employee benefits program, and Indigenous-led education and training for land-based practices, have the potential to improve conditions related to Indigenous health.

Overall, available information indicates that changes in economics will likely occur as a result of Project activities during operations. While a net positive effect is expected as a result of economic changes (e.g., economic opportunities and income stability), some adverse effects (e.g., cost of living, boom-bust cycle, uneven income distribution, personal behaviours) may continue to affect Indigenous health and wellness for some individuals. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. Mitigations and enhancement measures for health are presented in Section 12.9.4.

12.9.3.4.7 Housing

The Project is expected to result in sustained population growth in the Red Lake and Ear Falls area due to a long-term workforce presence during operations. Peak employment is anticipated during operations (when LP Central pit and underground mines are active simultaneously) is 1,100 workers, which is less than peak construction employment. When only underground mining is underway, the workforce is expected to decrease to approximately 700 workers.

During operations, the on-site camp reduces to a capacity of 300 intended to house a portion of the workforce on a rotational basis. Operational staff are expected to be accommodated while on-shift. As the on-camp site is not intended to house workers while off rotation, some workers may acquire permanent off-site residences to use while off rotation. Some mine personnel will have fixed hours weekly rather than rotational shift work and will not be accommodated by the on-site camp, therefore these personnel will reside off-site permanently. Accommodations for occasional short-term contractors are expected to be met by the on-site camp. Non-local workforce related housing pressures expected during construction will continue in operations, with the demand for permanent housing being dependent on the proportion of the operations workforce that is sourced from the local population compared to non-local hires. No change to on-reserve housing for LSFN, WFN or ANA is anticipated during operations. The influx of workforce related population in Kenora, including Red Lake and Ear Falls, may result in increased demand for permanent housing and rental accommodations which can add additional strain to existing housing availability and affordability concerns. Given the existing limitations, even modest additional demand for housing and accommodations could intensify existing challenges.

As stated in the CWB assessments (Sections 10 to 14), affordability concerns related to increase demand for goods and services resultant from Project-related population growth noted in construction are anticipated to continue through operations. These affordability changes can reduce economic resources available for securing suitable housing. However, employment and income stability throughout operations may improve housing opportunities for individuals employed by the Project, and their families.

Mitigation measures were identified as part of the CSIN and CWB assessments (Section 10 to 14) to minimize potential increased need for housing during operations, as well as to minimize disruption to cost of living.

These mitigations are expected to limit the extent of housing and cost of living challenges. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for housing are presented in Section 7 of Appendix N-2.

Overall, during operations no changes to housing are expected on-reserve, and given this upstream finding, a change in Indigenous health and wellness for LSFN, WFN and ANA is also not expected. Given the existing precarity of the housing scenario in Kenora district including Red Lake and Ear Falls, while mitigation measures are expected to minimize effects, changes to housing may result from the Project with potential adverse effects to Indigenous health for some individuals; no measurable deviation from baseline population-level health resulting from Project activities is anticipated. These findings are applicable to NWOMC members living in Red Lake and Ear Falls and RLEF.

12.9.3.4.8 Access to Health and Social Services

The operations phase will result in sustained workforce presence in the region, potentially contributing to ongoing regional service demands. Peak employment is anticipated to reach approximately 1,100 workers during operations when both the open pit and underground mines are active; however, the workforce is expected to decrease to approximately 700 workers during underground mining operations.

While no population growth or direct workforce is expected on-reserve for LSFN, WFN and ANA, potential effects to regional health and social services are anticipated. The extended duration of activities during operations means that potential effects related to access to services identified during construction may persist or evolve over time during operations. As such, there may be both direct and indirect effects to Indigenous people's health for individuals that rely on regional health and social services, due to ongoing Project activity in the region. Existing barriers associated with timely access to health and social services within the region due to geographic location, capacity and staff constraints, and lack of childcare options to attend medical appointments, are expected to continue with the additional workforce during operations. These challenges can directly influence Indigenous people's health outcomes particularly in emergency medical or crisis (mental health) situations.

For Indigenous people living off-reserve in Red Lake and Ear Falls, or for Métis living within these communities, potential effects to Indigenous health related to access to services during operations is expected to continue even as the Project workforce stabilizes. While a portion of the workforce will reside in on-site accommodations, other workers and their families may relocate to nearby communities, placing ongoing pressure on existing service systems. Community members living on-reserve who travel to Red Lake and Ear Falls to access municipal, provincial, and non-profit health, social and emergency services may continue to be exposed to the potential regional service pressures. With respect to on-site camp accommodations, strong management strategies and the adequate provision of on-site medical services is critical to reduce the impact on regional healthcare services (Oke and Wilson 2024).

Both the CWB and CSIN assessments (Sections 10 to 14) acknowledge that steady employment and contracting opportunities during operations could support income stability and local business activity (including health and social services), community stability, encourage workforce retention and support incremental improvements in municipal revenues and location service delivery capacity over time. It is noted however, that despite some improvements, participation barriers may continue to limit equitable access for some residents.

During operations, potential effects to Indigenous health due to changes in access to health and social services is expected to be similar to construction and experienced primarily through access to regional services rather than direct changes within on-reserve communities. While there may be limited beneficial effects from Project-related changes that can improve service delivery over time (e.g., employment and employee benefits), adverse effects associated with regional constraints on the service delivery system or reinforcing systemic barriers related to access to services are expected due to added demand on services from the Project workforce. Therefore, community health will be shaped more by long-term adjustments in economic, social, and demographic conditions across Red Lake and Ear Falls and surrounding areas. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Great Bear Resources has committed to establish several initiatives that are expected to have several key social benefits, including supporting local initiatives that can contribute to better health outcomes for Indigenous people. Mitigation measures and monitoring plans are expected to be protective of Indigenous health during operations. These include medical management and response to track on-site medical responses and referrals for off-site health services, and an employee benefits program that includes coverage for health care including medical, mental and dental services for employees and their families. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for access to health and social services are presented in Section 7 of Appendix N-2.

Overall, available information indicates that changes in access to health and social services will likely occur as a result of Project activities during operations. While beneficial effects (e.g., employment and employee benefits) may occur for some individuals, potential adverse effects on the regional service system due to Project activities (e.g., further strain on capacity / service delivery and inequitable care) may affect Indigenous health and wellness; however, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. Mitigations and enhancement measures for health are presented in Section 12.9.4.

12.9.3.4.9 Food Security

Given that Indigenous people in the region view health as a holistic balance including complex and connections to the environment and all living things, potential effects to health associated with multi-media environmental quality and access and availability of traditional foods (as an input to food security) should be interpreted in the context of the interconnectedness of physical, mental, emotional and spiritual health. While HHERA (Appendix N-1) results indicate that incremental risks from Project were below the target HQ of 0.2 for all Project phases and considered negligible in comparison to baseline risks and physical health is not expected to be directly affected by Project interactions during operations, perception issues related to environmental quality may indirectly change or limit the consumption of traditional foods by local Indigenous communities during operations. Further, Indigenous people who previously accessed the PA and access the LSA immediately adjacent to the PA for traditional harvesting practices may experience changes in access and availability of hunting and trapped species and effects to quality of experience due to ongoing sensory disturbances related to Project activities; therefore, temporary or longer-term avoidance of certain areas may occur. Self-imposed limitations on traditional food consumption based on perception may impact food security associated with both a decreased diet supplementation with traditional foods and costs associated with increased reliance on market foods.

As stated in the CWB assessments (Sections 10 to 14), affordability concerns related to increase demand for goods and services resultant from Project-related population growth noted in construction are anticipated to continue through operations. Changes to traditional economy (i.e., reduced income from traditional economy and increased reliance on higher cost market goods) related to perceived changes to the environment are also expected to continue through operations. These affordability changes can reduce economic resources and strain food security particularly those on fixed or lower incomes. However, Project-related income and economic opportunities for Indigenous individuals and their families may improve food security. Unequal access to jobs, however, due to barriers such as childcare, transportation, or qualifications, may reinforce existing inequities during operations, continued from construction.

Overall, during operations it is expected that for those Indigenous people employed by the Project, Project activities are anticipated to improve food security through increased income allowing for access to adequate amounts of, and higher nutritional quality, foods. For Indigenous households not employed by the Project, Project activities may add additional strain to food security based on potential reduced participation in traditional food practices and traditional economy, and increased affordability pressure from rising costs of goods and services; however, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Mitigations will be required to minimize potentially adverse effects related to perception to avoid disruption to traditional food practices and traditional economy, minimize effects to cost of living and maximum economic benefits. Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for food security are presented in Section 7 of Appendix N-2.

12.9.3.4.10 Mental Wellness and Personal Behaviours

During operations, similar interactions as the construction phase are expected, and potential effects to Indigenous health via changes to mental wellness and personal behaviours may continue. Although no population growth or direct workforce is anticipated on-reserve for LSFN, WFN, and ANA, Project operations and the continuation of Project activities means that several pathways (both beneficial and adverse) identified during construction may persist or evolve over time, as the workforce is expected to stabilize during operations. It is expected that the mine workers will be working seven working days of 12-hour shifts, followed by seven days off, with a goal that the majority of workers will be from local communities. As a result, potential beneficial effects to mental wellness associated with economic benefit from the Project may continue for some individuals. These relate primarily to economic opportunities such as increased income, education, training and skills, which can improve food security (Myrette and Riva 2021), access to services (e.g., via employment and employee benefits for those employed by the Project), and in some cases, potentially reduce barriers to participation in traditional harvesting practices (e.g., via increased material resources) (Chan et al. 2014). Income is a key determinant of mental health (PHAC 2018; CAMH n.d.; PHAC 2024), and higher earnings during operations can reduce financial stress, enhance self-esteem, and support improved mental health, including a reduced prevalence of addictions (NCCIH 2020).

As described in the CWB assessments (Sections 10 to 14), stable employment and contracting opportunities could support income security and skill development for Indigenous people, assuming local hiring remains prominent and Indigenous people are employed throughout operations; though barriers to participation may continue to limit equitable access.

Great Bear Resources has indicated that commercial project agreements are in progress with LSFN, WFN and NWOMC to minimize adverse social impacts and maximize economic opportunities for Indigenous communities. While the specifics of these agreements are confidential, the agreements are assumed to provide economic benefit to on-reserve communities and off-reserve band members. Similar to construction, beneficial pathways of effect to health that relate primarily to economic development, temporary job creation and increased spending within the region, which may in turn, have secondary economic effects for the local communities, may continue during operations (Salerno et al. 2021).

Simultaneously, as described in the CWB assessments (Sections 10 to 14), long-term operations may reinforce community concerns about environmental change and cultural continuity, particularly where access to traditional or ceremonial areas is perceived as reduced. As a result, adverse effects due to changes in mental wellness and personal behaviours may also continue. These relate primarily to participation in traditional activities (including disruption of traditional food systems) environmental dispossession (Ninomiya et al. 2023) and solastalgia (i.e., the feeling of loss and grief tied to sense of place) (Salerno et al. 2021), confidence in land and resource use, housing availability, cost of living, and access to health and social services (for those not employed by the Project) (Myette and Riva 2021). In addition, higher income associated with steady employment during operations may deepen the current mental health and substance use issues within the community (SLFNHA 2024b), as problematic substance use can be related to resource development, through increased stress, access to disposable income, time away from traditional, community, and social practices (Aalhus et al. 2018; Myette and Riva 2021).

As described in the CWB assessments (Sections 10 to 14), family routines and caregiving roles may gradually adapt to rotational work patterns, but these adjustments could influence social cohesion, as daily habits, time on the land, and participation in community activities evolve. In the broader region, social cohesion may also shift as new families and workers relocate to nearby communities, potentially altering local demographics and social networks that Indigenous communities interact with.

Mitigation measures and monitoring plans are expected to be protective of Indigenous health during operations. The implementation of carefully designed mitigations and enhancements, such as education and training, prioritizing Indigenous hiring, community partnerships, and operation of a dry camp, are key to mitigating potentially adverse effects and maximizing the benefits of the Project. In addition, funding for Indigenous-led education and training for land-based activities and support of Indigenous environmental monitoring programs will support mental health resiliency through land-based learning (Carrier et al. 2022; Lines et al. 2019; NCCIH 2016; Task Group on Mental Wellness 2021). A list of mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for mental wellness and personal behaviours are presented in Section 7 of Appendix N-2.

Overall, both potential beneficial changes (e.g., via economic development and increased material resources due to steady employment) and adverse changes (e.g., via environmental dispossession, negative health behaviours) to mental wellness and personal behaviours continue to affect Indigenous health and wellness for some individuals during operations, with potential effects being highly subject to individual variability. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures.

These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. Mitigations and enhancements presented in Section 12.9.4 are required to minimize adverse effects.

12.9.3.4.11 Actual and Perceived Public Safety (Accidents and Malfunctions)

While the risk of accidents and malfunctions during the operations phase is limited and was assessed as very low to low (see Section 16), several indirect or perceived influences on public safety, including emotional and social stress, that were identified during construction may continue to affect health and wellness for some individuals within Indigenous communities during operations. Long-term operational activity occurring without accidents and malfunctions may alleviate some perception issues over time.

The risk of certain accident types will be introduced as mining and operational activities commence, such as the risk of TMF slope failure and pipeline failure. Project design and performance monitoring are key to safeguarding the Project against the risk of an accident or malfunction. The potential for credible accidents and malfunctions, their potential consequences, and detailed descriptions of contingency planning and mitigation strategies applicable are described in Section 16 (Effects of Potential Accidents and Malfunctions) and are expected to be protective of Indigenous health during operations.

Overall, with the design and operational safeguards, and with the application of contingency planning and mitigation measures, resulting effects on Indigenous health via changes in actual and perceived safety due to accidents and malfunctions are expected to be negligible for LSFN, WFN, NWOMC, and RLEF. Potential effects on Indigenous health, namely emotional and social stress, due to changes in the perception of safety during operations may occur for some individuals within the ANA community; largely due to historical mistrust and pre-existing emotional and social stress associated with industrial development. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. . Environmental data sharing agreements with local Indigenous communities, support of Indigenous environmental monitoring programs, and public safety communications were also identified as measures to minimize adverse effects due to changes in perceived safety. A list of mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for perceived safety due to accidents and malfunctions are presented in Section 7 of Appendix N-2.

12.9.3.4.12 Safety of Indigenous Women and Girls

The operations phase will result in sustained workforce presence in the region. Peak employment is anticipated to reach approximately 1,100 workers during operations when both the open pit and underground mines are active; however, the workforce is expected to decrease to approximately 700 workers during underground mining operations (approximately after year 9).

As stated in the CWB assessments (Sections 10 to 14), no direct interactions with public safety or gender-based violence are anticipated on-reserve in LSFN, WFN, and ANA during operations. However, the Project will sustain a temporary influx of non-local workers into the region, including in Red Lake and Ear Falls, which may continue to elevate broader safety concerns among Indigenous women, girls, and 2SLGBTQQIA+ people. Even in the absence of actual incidents during operations, perceived increases in risk can continue to have adverse effects on mental wellness, personal security, and overall community cohesion.

During operations, there can be direct and indirect effects on health in instances where the safety of Indigenous women, girls, and 2SLGBTQQIA+ individuals is compromised, whether in the community or in the workplace. Should incidents occur, they do not only affect the individual, but also their families and broader communities. The available evidence shows that health effects from Project activities (continued presence of workforce) are possible during operations, especially if incidents (e.g., violence, sexual harassment) occur at camp and / or in community that compromise the safety of Indigenous women and girls.

Mitigation measures and monitoring plans are expected to continue to minimize risks to the safety of Indigenous women and girls during operations; however, they cannot completely eliminate the possibility of incidents occurring. The mitigations identified for construction, are expected to be continued throughout the operational life of the mine, including measures to protect Indigenous women at camp and Indigenous woman and girls in community. However, it continues to be acknowledged that should incidents occur, the physical and mental health consequences for the affected individual(s), and their families, is substantial.

Overall, effects on Indigenous health from changes to safety of Indigenous women and girls as a result of Project activities during operations are possible if incidents were to occur. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated following implementation of mitigation measures. These findings are applicable to the local Indigenous communities (i.e., LSFN, WFN, ANA, NWOMC and RLEF). Mitigation and enhancement measures for health are presented in Section 12.9.4. Additional details, including specific mitigations for the safety of Indigenous women and girls are presented in Section 7 of Appendix N-2. These mitigations are required to address potential effects by minimizing risks to the safety of Indigenous women and girls both at camp and in community.

12.9.3.5 Closure Phase

The active closure phase is expected to occur over approximately three years following the end of operations. Similar mining and construction equipment are utilized during this period, but on a much smaller scale. Following the active closure period, there will be a passive closure period which includes occasional maintenance, limited use of mining and construction equipment, and a short final close-out and reclamation period where water treatment infrastructure will be removed. The potential interactions during closure are explored as contributions to the potential effect of an overall change in Indigenous health.

12.9.3.5.1 Air Quality

As discussed in Section 7.2 (Air Quality), air quality during closure may be influenced by emissions from the operation of equipment, material handling, and the use of unpaved surfaces associated with demolition and removal activities. The passive and final closure periods during the closure phase consist predominantly of monitoring activities, with occasional maintenance and limited equipment use, and accordingly, was not specifically assessed for effects to air quality.

As active closure uses similar mining and construction equipment but on a much smaller scale, the potential for air quality effects is adequately captured by the construction and operations phase assessments, and therefore was not quantitatively assessed, as detailed in Section 7.2 (Air Quality). Similarly, the HHERA inhalation assessment (Appendix N-1) evaluated the active closure phase as part of the assessment of construction effects; therefore, risk results (i.e., HQs, ILCRs and ALCMs) for the active closure phase were considered the same as the construction phase.

Notable sources of air parameter emissions were not expected after active closure. Given that potential adverse effects on Indigenous health were not expected during construction and operations, changes to air quality during active closure, passive closure, close-out, or post-closure, are also not expected. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF. It is also noted that when Project activities have ceased, perception issues related to air quality will diminish.

12.9.3.5.2 Multi-media Environmental Quality

As stated in Section 7.2 (Air Quality), Project interactions which could potentially effect soil, surface water and traditional foods as a result of deposition from airborne emissions are the same as those expected for construction, with interactions during closure associated with demolition and removal activities. As stated in Section 7.7 (Water Quality), Project interactions which could potentially effect surface water and subsequently traditional food quality during closure include discharges from contact water, fugitive groundwater seepage to surface water features, erosion and sedimentation from reclamation activities, and dust deposition on local water features.

The results of the HHERA multi-media assessment for the operations phase are presented in Table 12.9-4, Table 12.9-5, Table 12.9-6 and Table 12.9-7 in Section 12.9.3.1, with full results provided in the HHERA (Appendix N-1). The results of the human health multi-media assessment for closure and post-closure resulted in the same conclusions described previously for construction and operations. For the POPCs (inorganic arsenic, inorganic mercury, methylmercury, inorganic selenium), baseline (i.e., existing conditions) drive risk for human health. The incremental Project risks for each phase are below the target HQ of 0.2 applicable for Project-Alone contributions, representing a negligible change from baseline HQs. The ILCRs values are below the target ILCR of 1E-05 (i.e., 1-in-100,000) for carcinogenic effects of inorganic arsenic. This indicated that Project+Baseline HQs above the target HQ of 1 are associated with the background conditions (i.e., baseline) rather than the Project, and the Project is not expected to increase human health risks for the average consumer or heavy consumer Indigenous resident living, working, and recreating in the LSA and RSA during construction from exposure to inorganic arsenic, inorganic mercury, methylmercury, inorganic selenium during closure or post closure. Collectively, these HHERA findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

The *Mining Act* requires that a Closure Plan be certified to the Mine Rehabilitation Code, prior to disturbance associated with the mining project. The overall intent of the Closure Plan is to restore the Project to a naturalized condition. As described in the CWB assessments (Sections 10 to 14), confidence in land and water quality will remain a key determinant of recovery, influencing whether members resume harvesting and other traditional practices in reclaimed areas. Over the long term, reclamation and revegetation activities may gradually restore access to traditional lands and support cultural revitalization if trust in environmental outcomes is rebuilt. In this manner, concerns related to perception of environmental quality may diminish overtime.

12.9.3.5.3 Access and Availability of Water

As stated in Section 7.5 (Groundwater), groundwater levels will recover during the closure phase through passive and active filling of mine workings. After closure, groundwater will stabilize to levels similar to baseline.

As stated in Section 7.6 (Surface Water Levels and Flows), after closure the pre-development watershed areas will generally be restored although the changes to local topography will result in some localized reductions and increases. These changes will not be discernible from natural, seasonal water level fluctuations.

Interactions with the health of Indigenous people during closure are similar to those identified during construction and operations. As described in the CWB assessments (Sections 10 to 14), confidence in land and water quality will remain a key determinant of recovery, influencing whether members resume harvesting and other traditional practices in reclaimed areas. Under post-closure conditions, groundwater levels will be restored to levels similar to baseline and the pre-development watershed areas will generally be restored, with the exception of the permanent alterations to some waterbodies and watercourses within the PA. Over the long term, reclamation activities may gradually restore access to traditional lands and support cultural revitalization if trust in environmental outcomes is rebuilt. Mitigations and enhancements during the closure phase will minimize changes to access and availability of water and perception issues surrounding Indigenous use of lands and waters. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

12.9.3.5.4 Access and Availability of Traditional Foods

Interactions similar to those identified during the construction and operation phases will continue during closure activities for the Project community members in the PA, LSA, and RSA. Potential interactions with the Project that result in pathways to potential effects on access and availability of traditional foods will continue to have the potential to affect Indigenous health for some individuals.

The *Mining Act* requires that a Closure Plan be certified to the Mine Rehabilitation Code, prior to disturbance associated with the mining project. The overall intent of the Closure Plan is to restore the Project to a naturalized condition. In such a condition, the Project footprint would eventually provide wildlife habitat, and the potential for typical open space pursuits.
The re-establishment of vegetation communities during closure would allow wildlife to return to the PA and surrounding area. With the closure of the PA and subsequent site rehabilitation supporting the return of wildlife, there is the potential for the PA to be used again for harvesting for food and medicinal purposes. Restoration of harvesting opportunities also contributes to cultural continuity and land-based practices that underpin mental, emotional, and spiritual wellness for Indigenous communities.

As described in the CWB assessments (Sections 10 to 14), confidence in land and water quality will remain a key determinant of recovery, influencing whether members resume harvesting and other traditional practices in reclaimed areas. Over the long term, reclamation and revegetation activities may gradually restore access to traditional lands and support cultural revitalization if trust in environmental outcomes is rebuilt. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

12.9.3.5.5 Sensory Disturbances: Sound, Vibration and Light

Noise emissions are considerably less during the closure phase. After the active closure period, there will be limited equipment or materials movement, and sound, vibration and light levels are expected to revert to the near baseline conditions.

During the closure phase (active closure period), sound levels predicted under the worst-case hour scenario (LAeq-1hr, dBA) meet the provincial and federal guidelines at all modeled PORs, during daytime and evening / nighttime periods. The change in %HA is predicted to meet the Health Canada guideline of 6.5% for the closure phase, which means that changes to sound levels are not expected to trigger noise complaints from PORs. Therefore, effects to Indigenous health due to sound (e.g., annoyance) and vibration are not anticipated. Light emissions during the closure phase are anticipated to vary according to construction equipment requirements and are expected to be lower than those during the operations phase. Therefore, potential effects to Indigenous health due to light (e.g., sleep disturbance) are also not anticipated. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

12.9.3.5.6 Economics (Employment, Income and Education)

The closure phase will continue employment and contracting but at a substantial reduction from the operations phase. Project activities during the closure phase are expected to result in temporary and short-term population changes. As described in the CWB assessments (Sections 10 to 14), employment levels and labour income will decrease to pre-Project levels during the closure phase, after the active closure period.

While the Project workforce is not expected to reside on-reserve, local effects may be observed for members employed by the Project. Direct Project influence within Red Lake and Ear Falls that were expected during construction and operations, are anticipated to lessen as the workforce in this area declines during closure. As discussed in the CWB assessments (Sections 10 to 14), as employment opportunities decrease, some workers are expected to leave the region, reducing pressure on housing and easing affordability constraints within larger communities such as Red Lake and Ear Falls. Lower population and business activity may also reduce demand for goods and services in Red Lake and Ear Falls. While this may modestly ease cost-of-living pressures, it may also affect small or Indigenous-owned businesses that expanded during operations, contributing to localized economic decline or volatility. Direct interactions with closure activities are expected to be limited for LSFN, WFN and ANA, and no change in cost of goods and services is expected on-reserve for these communities.

With the expected changes in the local and regional economies during closure, potential benefits that were observed from having higher incomes and employment opportunities during construction and operations may return to baseline during the closure phase. Further, households that relied on Project-related income may also face financial stress and income instability during this transition, and limited alternative employment or training options may widen existing inequalities. As noted in the CWB assessments (Sections 10 to 14), these pressures can influence family dynamics and contribute to emotional strain, particularly for those with high care responsibilities or limited financial buffers. This may result in an eventual return to baseline conditions for Indigenous health, unless alternate employment is found or financial literacy training and support has enabled a more secure financial future.

Overall, effects to Indigenous health from changes in economics (employment, income and education) during closure will be largely dependent on the pre-closure transition planning (e.g., re-skilling, and financial literacy and planning) that occurred throughout operations. The loss of a large regional employer is known to have complex societal effects, typically attributed to boom-bust cycles of resource development. However, as effects to health are shaped more by long-term changes in the economic and social conditions within the region, mitigations can reduce barriers to new opportunities after the Project ends.

Mitigation and enhancement measures associated with the closure phase are designed to ease the transition to other employment opportunities in advance of mine closure.

Great Bear Resources proposes to address local priorities so that communities can benefit from the Project, including after the mine closes. With respect to economics, Great Bear Resources plans to support local initiatives that includes working with local suppliers to develop capacity and provide training opportunities, which may extend the benefits of the Project beyond the life of the mine. These initiatives are expected to have ongoing positive effects on the health of Indigenous people during and after closure.

12.9.3.5.7 Housing

As discussed in the CSIN and CWB assessments (Sections 10 to 14), closure activities will include the removal of the on-site work camp. As such, short-term contractors may rely on the limited hotel and motel capacity in the region during closure, adding pressure to existing availability concerns. For the portions of the closure workforce with long-term assignments, housing pressures expected during construction and operations will continue. As the workforce declines through the closure phase, the reduced population will lighten the pressure for housing and rental demand; however, this could result in adverse effects to vacancy rates, and property values. No changes to on-reserve housing for LSFN, WFN or ANA is anticipated during any Project phase.

As stated in the CSIN an CWB assessments (Sections 10 to 14), population reduction as the workforce leaves the region can improve affordability of goods and services but can result in negative effects to small or Indigenous-owned businesses that expanded during operations. Households that relied on Project-related income may face financial stress during this transition, and limited alternative employment or training options may widen existing inequalities, particularly for those with high care responsibilities or limited financial resiliency. Mitigations related to community financial support and social plans for closure will be required to minimize changes to housing resultant from income instability at Project closure.

Overall, no changes to housing are expected on-reserve, and given this upstream finding, a change in Indigenous health and wellness for LSFN, WFN and ANA is also not expected. During closure, regional social and economic conditions will undergo a period of transition. While mitigation plans for closure will limit the extent of changes to housing, given the existing precarity of the housing scenario in Kenora district including Red Lake and Ear Falls, continued changes to housing during closure may result from the Project with potential adverse effects to Indigenous health and wellness for some individuals. However, no measurable deviation from baseline population-level health resulting from Project activities is anticipated. These findings are applicable to NWOMC members living in Red Lake and Ear Falls and RLEF.

12.9.3.5.8 Access of Health and Social Services

The closure phase will result in a substantial reduction in the Project workforce. The withdrawal of a major employer in the region will introduce a period of social and economic adjustment. As employment opportunities decrease, some workers are expected to leave the region, reducing pressure on the health and social services. Less pressure on services can lead to lower wait times, increased capacity, additional assets available for mobile crisis response, and additional childcare options to attend treatment or counselling. This can lead to improved health outcomes for Indigenous people in the region; however, with the loss of economic opportunity from the Project, realized benefits may also diminish ultimately leading to a return to baseline conditions for access to health and social services.

The removal of steady employment and income for some Indigenous people and their families can result in added challenges during closure. In some cases, mine closure has been shown to coincide with higher reporting of stress, anxiety, depression and alcoholism (Shandro et al. 2011). Households that relied on Project-related income may face financial stress during the closure transition. Therefore, some individuals may seek health and social support services during this transition time, but likely to a lesser extent than the pressures of construction and operations workforces.

Overall, closure-phase Project interactions with Indigenous health related to access to health and social services are expected to be limited and generally improve capacity pressures relative to earlier phases. Since Indigenous health is a complex issue shaped more by long-term changes in the economic and social conditions in the region, and historical injustices associated with colonialism, pre-existing barriers to accessing quality, timely, and culturally appropriate care is expected to remain. Effects to Indigenous health from changes to access to health and social services will depend largely on the pre-closure transition planning (e.g., re-skilling, economic diversification supports, and similar). Mitigation measures and monitoring plans are expected to be protective of Indigenous health during closure.

Great Bear Resources proposes to address local priorities so that communities can benefit from the Project, including after the mine closes. With respect to health and social services, Great Bear Resources plans to support local initiatives that includes funding local and regional health and social services. These initiatives are expected to have ongoing beneficial effects on the health of Indigenous people during and after closure.

12.9.3.5.9 Food Security

The HHERA results indicate that health risks from Project activities are not anticipated during any Project phase given that incremental risks from Project were considered negligible in comparison to baseline risks, and physical health is not expected to be directly affected by Project interactions during closure. Perception issues expected during construction and operations related to environmental quality may continue during closure, but would be expected to diminish over time. Interactions similar to those identified during the construction and operation phases will continue in closure relation to access and availability of traditional foods. Changes to or avoidance of traditional food consumption based on perception during the closure phase may impact food security associated with both a decreased diet supplementation with traditional foods, and costs associated with increased reliance on market foods. With the re-establishment of vegetation communities during closure, wildlife are expected return to the PA and surrounding area. This leads to the possibility of a return of use of the PA for harvesting for food and medicinal purposes. As the availability and reliability of traditional food resources may improve, food security may improve for some individuals. Restoration of harvesting opportunities also contributes to cultural continuity and land-based practices that support mental, emotional, and spiritual wellness for Indigenous communities.

As stated in the CWB assessments (Sections 10 to 14), population reduction as the Project workforce leaves the region can improve affordability of goods and services potentially improving food security for some individuals. However, households that relied on Project-related income may face financial stress during this transition, and limited alternative employment or training options may widen existing inequalities, particularly for those with high care responsibilities or limited financial resiliency. This income instability can result in decreased food security.

Through closure activities there is expected improved access to lands and resource areas which can support traditional food consumption, with opportunities for increased income supplementation through traditional economy, thus improving food security. These findings are applicable to the local Indigenous communities, including LSFN, WFN, ANA, NWOMC and RLEF.

The *Mining Act* requires that a Closure Plan be certified to the Mine Rehabilitation Code, prior to disturbance associated with the mining project. The overall intent of the Closure Plan is to restore the Project to a naturalized condition. As described in the CWB assessments (Sections 10 to 14), confidence in land and water quality will remain a key determinant of recovery, influencing whether members resume harvesting and other traditional practices in reclaimed areas. Over the long term, reclamation and revegetation activities may support restoration of traditional practices if trust in environmental outcomes is rebuilt. Mitigations related to restoration of the Project to a naturalized condition, building and maintaining trust in environmental outcomes via Indigenous environmental monitoring, will maximize the potential for food security improvements associated with traditional food consumption. Mitigations such as a social plan for mine closure will act to minimize adverse effects from income instability at Project closure, and project agreements to maximize economic opportunities for Indigenous communities beyond the life of the Project will ease the transition through and beyond post-closure

12.9.3.5.10 Mental Wellness and Personal Behaviours

As described in the CWB assessments (Sections 10 to 14), the demobilization of the workforce and the end of Project-related employment could lead to temporary financial stress and loss of income stability for households during closure. This may contribute to emotional stress, particularly for caregivers or single-parent households, and could increase short-term inequalities within the community, and potentially worsen mental health outcomes. However, with transferrable skills development, and adequate education and training, including on financial literacy, income from Project-related economic benefits may continue to be realized during and after closure.

The CWB assessments (Section 10 to 14) reported that, at the same time, the conclusion of operations may reduce workforce-related safety concerns (e.g., harassment, substance use, or trafficking) and allow for gradual improvement in social stability and community cohesion. Confidence in land and water quality will remain a key determinant of recovery, influencing whether members resume harvesting and other traditional practices in reclaimed areas. Over the long term, reclamation and revegetation activities may gradually restore access to lands and support cultural revitalization if trust in environmental outcomes is rebuilt. This restoration and possible of improvement of access and availability of traditional lands and resources can lead to improvements to community cohesion and mental health for Indigenous people particularly given their connection to the environment, and the importance of traditional practices. In addition, the closure phase may alleviate any emotional or social stress factor that arose as a result of the construction and operation of the Project.

The CWB assessments (Sections 10 to 14) also stated that changes to community cohesion during closure will depend on the continuity of engagement and transparency from Great Bear Resources. Reduced communication or lack of clarity around long-term commitments could erode trust and reinforce perceptions of external dependency. Conversely, visible follow-through on training, diversification, legacy infrastructure programs, and continued community involvement, could strengthen relationships and enhance confidence in post-project transition.

Overall, both potential beneficial (e.g., via economic development and increased material resources due to steady employment) and adverse (e.g., via environmental dispossession, negative health behaviours) changes to mental wellness and personal behaviours may continue to affect Indigenous health and wellness for some individuals during closure. However, mental wellness and personal behaviours effects are highly subject to individual variability. Mitigation and enhancement measures associated with the closure phase are designed to ease the transition to other employment opportunities in advance of mine closure.

Great Bear Resources proposes to address local priorities so that communities can benefit from the Project, including after the mine closes. With respect to economics, Great Bear Resources plans to support local initiatives that includes working with local suppliers to develop capacity and provide training opportunities, which may extend the benefits of the Project beyond the life of the mine. These initiatives are expected to have ongoing beneficial effects on the health and mental wellness of Indigenous people during and after closure.

12.9.3.5.11 Actual and Perceived Public Safety (Accidents and Malfunctions)

The risks of certain credible scenarios identified for the construction and operations phases will continue into the closure phase, such as the risk of TMF slope failure and ditch failure. While the risk of certain accident types will be unique to the closure phase, such as the potential for pit lake overtopping, the risk of the assessed potential credible scenarios is expected to remain limited (very low or low).

The conclusion of operations may reduce safety concerns related to accidents and malfunctions, allow for gradual improvement in social stability, and as a result may improve safety perceptions and alleviate emotional and social stress; thereby diminishing potential effects on Indigenous health. As described in the CWB assessments (Sections 10 to 14), confidence in land and water quality will remain a key determinant of recovery, influencing whether Indigenous community members continue or reduce experiences of emotional or social stress. Mitigations such as environmental data sharing agreements and public safety communications will also act to minimize potential adverse effects from changes in perceptions of safety by supporting consistent communication and planning throughout closure.

12.9.3.5.12 Safety of Indigenous Women and Girls

The closure phase will result in a substantial reduction in the Project workforce. As described in the CWB assessments (Sections 10 to 14), employment levels will decrease to pre-Project levels during the closure phase, after the active closure period. The conclusion of operations may reduce workforce-related safety concerns (e.g., violence, harassment, trafficking), particularly for Indigenous women, girls and 2SLGBTQQIA+ individuals, and allow for gradual improvement in social stability and community health and safety. The improvement in both safety and perception of safety could improve the health and wellbeing of Indigenous women and girls in the region. However, it is important to note that the issues surrounding MMIWG are national in scale, existed before the Project, and will likely continue after the project. It is expected that mitigation measures are continued throughout active closure to continue to minimize risks to the safety of Indigenous women and girls.

12.9.4 Mitigation and Enhancement

Mitigation measures for Indigenous health consider both direct and indirect effects, and includes Project design measures, workforce policies, community partnerships, Indigenous engagement, regionally targeted supports as well as monitoring and adaptive management plans.

The goal of these measures is to reduce the scale / severity, duration, and likelihood of adverse residual effects on Indigenous health, including changes to the biophysical and social determinants of health for both Indigenous and non-Indigenous communities.

For Indigenous health, mitigation approaches reflect a combination of:

- Physical design measures (e.g., worker accommodations, site security and on-site medical facilities)
- Program and policy measures (e.g., hiring policies, workforce training, cultural awareness programming, employee supports and benefits, incident tracking and grievance reporting)
- Monitoring and adaptive management plans (including but not limited to, environmental quality monitoring inclusive of health parameters, and on-site medical and off-site referral monitoring)
- Community and service supports (e.g., partnerships with Indigenous service providers, coordination with local agencies, funding to expand health-focused community services and programs).

Table 12.9-8 outlines mitigation measures thematically, aligning with Project interactions and the biophysical and social determinants of health. These mitigation measures are anticipated to apply across all Project phases unless otherwise specified. Mitigation measures presented in Table 12.9-8 are not presented in any particular order (e.g., priority), rather they are listed alphabetically. For a description of which mitigations were relevant to each determinant of health, and a rationale for its inclusion and impact on the assessment, please see the HIA (Appendix N-12).

While the measures identified below are the key ones identified and developed for Indigenous health, many other measures identified in the CSIN, CULRTP and CWB assessments, as well as measures identified throughout the Impact Statement in the upstream pVC and fVC sections, are directly or indirectly relevant to Indigenous health, and the upstream conditions that influence health. Appended Table 12.1-1 includes mitigation measures applicable to the management of effects on pVCs and fVCs that are linked to Indigenous health. It includes relevant plans, policies, and measures from predictive reporting on linked pVCs and fVCs. These will be applied for effects management.

Table 12.9-8: Project Design, Mitigation, and Enhancement Measures for Indigenous Health

Potential Effect	Project Design, Mitigation and Enhancement Measures
Change in Health	Air Quality Monitoring: Air quality monitoring for the Project will include constituents and related health-based benchmarks (e.g., NO_2 and DPM [as PM2.5]) until assumptions are validated, to trigger action, if needed.
	Camp Operations and Services (health care): Provide emergency response and basic health services to the on-site workforce. On-site medical facilities and staff will be in place to address health services for emergencies, injuries, and other routine needs. Medical personnel will be trained on supports that are available through Employee Assistance Program (EAP), Telus telehealth (or similar service / provider), and local / regional providers to foster connected health care on and off-site. Information about these services and supports (available to employees and their immediate families), will be posted in a visible location at the medical facilities and accommodations. (1)
	Camp Operations and Services (site security): Site security will be maintained and consistent with other Ontario mining operations. Access will be limited to Great Bear Resources' workers and contractors, and approved visitors. Security guardhouses will be positioned where appropriate Cameras, routine patrols and other methods will be utilized to monitor and ensure site security. Workers will be housed in separate accommodations by gender with locked access (e.g., keys) for each room and a separate mining dry / change rooms. Ongoing monitoring will occur throughout the mine life and policies will be updated as required. (1)
	Camp Operations and Services (telehealth): Create access to Telus telehealth or similar provider for employees (and immediate family members) throughout the life of the Project, helping to alleviate pressures on local services. (1)
	Community Financial Support (Access to Services): Great Bear Resources will work collaboratively to fund programming through the Friendship Centre and community partners, including programming and supports to promote physical and mental health outcomes for Indigenous adults and youth. (1)
	Community Financial Support (Access to Services): Support local communities regarding access to social services and health care services in the region, including mental health and addiction services, and implement an adaptive management approach (as part of the Social Performance Plan) to address additional pressures resulting from the influx of workers and their families. (1)
	Community Financial Support (Change in Housing and Accommodations): Great Bear Resources will work collaboratively to support culturally appropriate housing initiatives led by Indigenous and municipal partners. This will include development of a housing strategy and plans for ongoing monitoring of housing capacity issues, and an adaptive management approach (as part of the Social Performance Plan) to address additional pressures imposed from the influx of workers and their families. (1,2)
	Social Closure Plan: Support consistent communication and planning throughout closure with emphasis on legacy, continuity, and shared decision-making. Develop a community transition plan in consultation with local Indigenous communities and groups so that decisions are made with integrity, based on cultural, spiritual and Indigenous well-being in mind. The plan will include collaborative planning, implement job-matching, retraining programs, financial literacy workshops, and economic diversification supports in anticipation of closure. (1)

Potential Effect	Project Design, Mitigation and Enhancement Measures
	Community Safety Enhancement: Work in collaboration with Indigenous communities and local law enforcement to discuss safety considerations regarding the influx of additional workforce into the area, including the possibility of increases in violent crime and / or sexual harassment in local communities.
	Education and Training (Project): Deliver mandatory Cultural Awareness training for employees and contractors (including supervisors and managers) on safety, harassment awareness and prevention, and MMIWG2S+ and human trafficking awareness training. (1)
	Education and Training (Project): Provide budgeting and financial literacy tools available to all employees through the EAP, including a combination of organized workshops during working hours and optional individual supports that employees and their families can access on their own time. (1)
	Education and Training (Region): Inclusive and Local Hiring Strategy (hiring policies): Partner with Indigenous training and employment organizations to support culturally appropriate recruitment and retention of Indigenous candidates, to support employment of Indigenous workers, provide training, priority hiring and work towards continuous improvement including training and employment opportunities for Indigenous women. (1)
	Employee Benefits Program: Benefits program will include coverage for health care, prescription drugs, dental and access to in-person and online mental health services for employees and their families.
	Environmental Data Sharing Agreements: GBR will share environmental monitoring data (air, water, fish) with Indigenous communities that request it on an annual basis and provide opportunities (including funds) to conduct their own reviews.
	Environmental Management Committee: Great Bear Resources will work with the environmental management committee(s) and interested Indigenous members throughout the duration of the Project (all phases), to facilitate ongoing communications, sharing and integration of Indigenous knowledge and environmental information, and share and evaluate Project approvals, adaptive management and monitoring plans, and address emerging issues and interests identified by Indigenous Nations. (1)
	Environmental Monitoring: Environmental monitoring programs for surface water and aquatics will include constituents and related health-based benchmarks as considered in the health assessment (such as arsenic, mercury, methylmercury and selenium). Aquatics sampling programs will also include ongoing sampling and testing of fish quality in species identified for human consumption (i.e., walleye / pickerel, lake whitefish, northern pike, trout) as captured.
	Exploration of a Community Health and Well-being Survey: Consider options for Indigenous-led survey and data collection on project related metrics and health indicators, funded by GBR. This program could be further developed as part of the Social Performance Plan.
	Indigenous Environmental Monitoring Programs: GBR is committed to involving Indigenous communities in environmental monitoring activities throughout all phases of the Project, including opportunities for participation in the collection and sharing of environmental monitoring information and results.

Potential Effect	Project Design, Mitigation and Enhancement Measures
	Indigenous Procurement (Local Procurement Policy): Help strengthen Indigenous participation in business opportunities by developing Project procurement policies that support Indigenous economic development and reconciliation.
	Medical Management and Response: Track on-site medical responses needed for employees (anonymously) and referrals for off-site health services. GBR will continue to work with local health care service providers if capacity issues should arise in relation to an influx of employee referrals.
	Project / Benefit Agreements: Economic benefits to Indigenous communities, based on collaborative engagement with local Indigenous communities.
	Public Safety Communications: Involve and consult with Indigenous communities in the development of communications approaches that will identify how important information will get disseminated, including as part of emergency response plans.
	Retirement Planning and Support: Offer a retirement pension plan, Registered Retirement Savings Plan matching or equivalent, to employees to help support longer term financial stability.
	Support for Indigenous-led Education and Training for Land-Based Activities: Support for Indigenous-led education and training for land-based activities (hunting, gathering, plant harvesting) in the region and promote skills and knowledge transmission among Indigenous communities, including Indigenous youth.
	Training and Tracking Incidents of Harassment and Violence in the Workplace: Provide mandatory training on the code of conduct and ethics, with a specific focus on unlawful discrimination, harassment, and workplace violence for all employees and contractors, including supervisors and managers. This training will include clear and specific examples of sexual and gender-based harassment and assault (verbal, physical) and outline steps for action if the perpetrator is a mine worker, supervisor or manager. These policies will also include incident tracking and review, a monitoring plan for policy effectiveness, and an adaptive management process.
	Workplace Incident Reporting (at Camp): Implement the Code of Conduct policy which provides clarity that employees reporting incidents will be protected against wrongful termination or other negative actions.

Notes:

1 Measure may also appear in CULRTP and CWB sub-sections within the Indigenous Peoples Sections 10 to 14.

2 The change in housing is expected to be regional and will not change on-reserve systems. Mitigation is relevant for off-reserve housing in the region, including Red Lake and Ear Falls.

DPM = diesel particulate matter; EAP = Employee Assistance Program; fVC = federal valued component; GBR = Great Bear Resources; HIA = Health Impact Assessment; MMIWG = Murdered Indigenous Women and Girls; MMIWG2S+ = Missing and Murdered Indigenous Women, Girls, Two-Spirit, Transgender, and Gender-Diverse+ peoples; NO_2 = nitrogen dioxide; $PM_{2.5}$ = particulate matter less than 2.5 micrometres; pVC = pathway valued component.

The HIA assumes that all mitigations and follow-up programs from the identified linked pVCs and fVCs, including those throughout the Indigenous Peoples Sections, are in place as planned.

12.9.5 GBA Plus Considerations

In accordance with Health Canada (2024a) guidance, the health assessment takes an equity approach to assessing potential effects by examining the potential distribution of effects across different sub-populations within the Indigenous communities.

The methodology for the GBA Plus approach used in the HIA and the assessment of Indigenous health is outlined in Section 2.4.3.3 of the HIA (Appendix N-2) and is summarized below.

Established best practices in HIA inherently includes consideration of ways that effects from projects, policies, or programmes may be experienced differently among diverse subgroups of the population. The assessment applied a GBA Plus approach by purposefully evaluating how potential health and wellness effects may be influenced by different identity factors and how these factors intersect with local context and lived experience. Where sufficient data were available to do so, the assessment quantitatively evaluated effects to unique subgroups (e.g., consideration of women and children in quantitative risk estimates). Where data were unavailable or insufficient for disaggregation, the HIA qualitatively discussed the potential for effects to be influenced by different identity factors such as gender, age and Indigenous identity.

Therefore, GBA Plus is embedded throughout the HIA (Appendix N-2) since evaluation of the distribution of effects across a community is standard HIA practice. In addition, GBA Plus considerations have been provided in the: discussions related to approach and methodology, baseline health profile, assessment of determinants of health, mitigation and enhancement measures, and the limitations and uncertainty.

The HIA applied a GBA Plus lens that treats Indigenous identity as a central identity factor, and the other factors described herein are discussed within this context. It is recognized that Indigenous identity intersects with the other GBA Plus subgroups that are discussed herein, and this concept is considered throughout the HIA (Appendix N-2). While Indigenous identity is considered broadly for the purposes of the GBA Plus analysis, it is recognized that Indigenous people are not a homogenous group and that First Nations and Métis communities have diverse identities, needs, and lived experiences, which are discussed throughout the HIA as appropriate (Appendix N-2).

Several GBA Plus identity factors were selected based on established best practices, a review of consultation and engagement records, public health data presented in the Baseline Health Profile (Attachment A of Appendix N-2), as well as the demographic and socio-economic information documented in the Socio-Economic Baseline Study (Appendix O-1). It is acknowledged that several additional identity factors, such as religion, ethnicity, geography, race, sexual orientation, and others, are also relevant within a GBA Plus framework. However, within the context of this Project and for the purposes of this assessment, Table 12.9-9 represent the primary subpopulations of analytical focus for the assessment of Indigenous health.

Table 12.9-9: Key GBA Plus Identity Factors Selected for the Assessment of Health

Identity Factor	Description and Subgroups
Gender [(1)]	**Description:** *"Gender refers to an individual's personal and social identity as a man, woman or non-binary person (a person who is not exclusively a man or a woman). Gender includes the following concepts: (i) gender identity, which refers to the gender that a person feels internally and individually; and (ii) gender expression, which refers to the way a person presents their gender, regardless of their gender identity, through body language, aesthetic choices or accessories (e.g., clothes, hairstyle and makeup), which may have traditionally been associated with a specific gender. A person's gender may differ from their sex at birth […]. A person's gender may change over time. Some people may not identify with a specific gender,"* (Statistics Canada 2022). • **Men+:** Individuals whose gender identity aligns with or is associated with masculine roles and social positioning, including cisgender, transgender, and gender-diverse people. • **Women+:** Individuals whose gender identity aligns with or is associated with feminine roles and social positioning, including cisgender, transgender, and gender-diverse people.
Age	**Description:** Age is a key demographic variable used to identify population groups (e.g., children, working-age adults, older adults / Elders) and is derived using the person's date of birth and the reference date (Statistics Canada 2022). • **Youth (children and infants):** Individuals in early developmental stages (individuals under 18 years of age) • **Young adults:** Individuals in transitional life stages typically associated with workforce entry, increased mobility, and evolving socio-economic determinants (individuals 15-29 years of age). • **Older adults and Elders**: Older adults and community-recognized Elders with increased susceptibility to health effects due to age-related physiological changes and cumulative lifetime exposures (individuals 65+ years of age).
Physical Ability	**Description:** The *Accessible Canada Act* defines disability as *"any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person's full and equal participation in society"* (Department of Justice 2022). This identity factor focuses on physical abilities such as those that influence strength, endurance, flexibility, balance, and coordination. • **Individuals with disabilities:** Persons with pre-existing mobility, sensory, cognitive, or functional limitations. • **Individuals with chronic health conditions:** Persons with pre-existing health conditions (e.g., cardiovascular, metabolic, or respiratory diseases).

Identity Factor	Description and Subgroups
Socio-economic Status	**Description:** Socio-economic status refers to an individual's level of income, wealth, education, and social standing, and is commonly used to describe a person's or group's economic and social position within society (PHAC 2018). • **Low-income individuals and households:** Populations with constrained material and financial resources where food security and housing needs may be difficult to meet. • **Individuals with low educational attainment or limited labour-market participation:** Populations with lower levels of education (e.g., without a high school diploma) and / or insufficient skill development.
Mental Ability	**Description:** The Accessible Canada Act defines disability as *"any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person's full and equal participation in society"* (Department of Justice 2022). This identity factor focuses on physical, cognitive, psychomotor, and sensory abilities. • **Individuals with pre-existing mental health conditions:** Persons with diagnosed or self-reported mental health challenges (e.g., anxiety, depression) • Individuals with concurrent substance use (e.g., alcohol, drugs) and mental health challenges: Populations experiencing co-occurring mental health and substance use disorders.

Notes:
GBA Plus = Gender-based Analysis Plus (sometimes referred to as GBA+)

1 The categories of men+ and women+ were used for analytical simplicity and were adopted from categories used in the census by Statistics Canada (2022a). These categories include cisgender and transgender persons, and non-binary persons are denoted by the + symbol.

A GBA Plus analysis was completed for each determinant of health in the HIA (Appendix N-2). Each identity factor was reviewed to determine whether potential effects, should they occur, were expected to be even or disproportionate to assess how Project-related changes to determinants of health may affect different population subgroups. This assessment drew on available demographic data, baseline health indicators, and evidence from primary and grey literature.

It is important to note that while this section identifies subgroups that have the potential to experience effects uniquely from changes to biophysical and social determinants of health, the analysis should be considered in the context of the potential effects assessment findings. For example, while the GBA Plus analysis for air quality identifies that individuals with pre-existing lung or heart conditions (such as asthma and Chronic Obstructive Pulmonary Disease) are at the highest risk of potential effects related to poor air quality, the results from the HHERA indicate that Project activities are not anticipated to pose risks to the Indigenous communities from exposure to POPCs in air. The analysis below identifies populations that could be disproportionately affected and also discusses the potential health effects, or lack thereof, as identified in the assessment.

12.9.5.1 Gender (Indigenous Women+)

Several of the biophysical and social determinants of health identified gender (Women+) as an important equity consideration in the HIA, and a key identity factor as part of the GBA Plus analysis. For example:

- In Indigenous culture, women are often considered to have a unique relationship to water and additional responsibilities for the care of water (McGregor 2008; Awume et al. 2020; Assembly of First Nations 2023). Given that permanent changes to some waterbodies will occur, the connection that Indigenous people, and specifically Indigenous women, have with water may result in indirect effects on Indigenous health and wellness for some individuals.
- Gender-specific differences in economics are expected to disproportionately affect Indigenous women and girls, and 2SLGBTQQIA+ individuals due to limited job or education / training opportunities, inadequate childcare options to pursue employment, or already face mental health challenges to pursue higher education or employment.
- With respect to housing as a determinant of health, research indicates that domestic violence is a leading cause of housing instability for women and children in Canadian municipalities (Fustic et al. 2019). Existing housing concerns in the region included the limited availability and limited access to transitional and emergency shelter services outside of major centres such as the City of Kenora, with few facilities available in smaller municipalities such as Red Lake. In an interview with the Executive Director of the Kenora Sexual Assault Centre, women experiencing domestic violence were identified as being particularly at risk of housing insecurity (Wesley 2025).
- Gender-specific differences in access to health and social services are expected to disproportionately affect Indigenous women as there are existing gaps in certain women-specific services including women's shelters or birthing centres. In addition, women often play caregiving roles and cannot always obtain childcare in order to attend appointments. Further, evidence indicates that health-care services often fail to provide the support needed for Indigenous women and girls who are victims of physical and sexual abuse or violence (National Inquiry into Missing and Murdered Indigenous Women and Girls 2019).
- NWHU data indicates that women (particularly youth and young adults) either match or outnumber male rates across mental illness and substance-related indicators (NWHU and Yusuf 2023). Research also typically shows higher rates of mood and anxiety disorders in women (CAMH n.d.).

12.9.5.2 Age (Indigenous youth, older adults and Elders)

Several of the biophysical and social determinants of health identified age (youth, older adults, Elders) as an important equity consideration in the HIA, and a key identity factor as part of the GBA Plus analysis. For example:

- For multi-media environmental quality, exposure or sensitivity to parameters in the environment may vary by life stage based on the parameter. For methylmercury and selenium, Health Canada recommends TRVs based on age (Health Canada 2025). Appropriate, age-specific TRVs were applied in the HHERA multi-media assessment.

- Youth (children and infants) and the elderly are more vulnerable to potential effects due to noise (e.g., sleep disturbance and speech comprehension) (WHO 2009). However, Health Canada (2023) guidelines for sound and vibration applicable to the Project are protective of vulnerable groups including children to account for such sensitivities.
- As income is an important determinant of health, non-working age individuals (youth, Elders) are less likely to experience financial opportunities via employment, business, or training / education opportunities. Older adults and Elders may also be disproportionately impacted through changes in cost of living and access to health services. Similarly for housing, there is a lack of independent or assisted living options and long-term care availability in the region which contributes to vulnerability among seniors. The 2016 Census for Red Lake shows that the demand for senior housing is projected to grow by 57% between 2016 and 2025 (Statistics Canada 2017). Seniors (i.e., older adults) were identified as being particularly at risk of housing insecurity in Kenora district (Wesley 2025), which would include anyone seeking seniors services in regional hubs.
- Age is also a consideration when it comes to accessing services, where youth and young adults specifically can struggle with mental health and need health and social service supports, particularly within the NWHU, as shown by notably higher rates of mental health challenges for individuals aged 10 to 24 from 2012 to 2021 compared to Ontario (NWHU and Yusuf 2023).

12.9.5.3 Physical Ability (Indigenous individuals with disabilities or chronic conditions)

Several of the biophysical and social determinants of health identified physical ability (individuals with disabilities and/or chronic health conditions) as an important equity consideration in the HIA, and a key identify factor part of the GBA Plus analysis. For example:

- Evidence suggests that individuals with physical health conditions (e.g., disabilities) may have unique challenges accessing employment, income and education given their health may prevent or limit the ability to pursue work or education / training (Employment and Social Development Canada 2022).
- For housing, individuals with disabilities were identified as being particularly at risk of housing insecurity in Kenora district (Wesley 2025).
- Evidence suggests that individuals with pre-existing health conditions requiring ongoing care may have unique challenges accessing health and social services given their health may prevent or limit the ability to make or attend appointments, or travel to get care. The additional demand from Project-related population growth in the region may contribute to longer wait times and reduced access to health services. A lack of access to healthcare for Indigenous populations has shown to lead to poor health outcomes, including lower life expectancies, higher rates of chronic diseases, later- stage diagnoses, increased mental health challenges, higher infant mortality, and greater risks from preventable conditions like obesity (PHAC 2018; CMA 2026).
- In relation to food security, based on the findings of the 2021 Canadian Income Survey, individuals with disabilities were found to be more likely to be food insecure than those individuals without disabilities (Statistics Canada 2024b).

- Individuals with physical disabilities may face barriers to accessing traditional foods. Finally, people with chronic physical health conditions (e.g., chronic pain) are much more likely to also experience mood disorders; although this relationship is bidirectional (i.e., people with a mood disorder are often at higher risk of developing a long-term medical condition) (CAMH n.d.).

12.9.5.4 Socio-economic status (low-income Indigenous individuals and households)

Several of the biophysical and social determinants of health identified socio-economic status (low-income individuals and households) as an important equity consideration in the HIA, and a key identity factor as part of the GBA Plus analysis. For example:

- Low-income individuals and households may be experiencing pre-existing barriers to access of traditional foods due to financial constraints, reduced harvesting capacity, limited access to equipment and transportation, and / or greater reliance on market-based foods (Shafiee et al. 2022; Chan et al. 2014).
- Low or fixed-income individuals and households (e.g., single parents) may also be more affected by Project-related increases in cost of living which can create local affordability pressures for housing or goods and services. Shift work employees who cannot access part-time opportunities for higher education may be limited to pursuing better employment opportunities. The Canadian Public Health Association reports that financial insecurity contributes to increased rates of chronic disease, mental illness, and overall poorer health outcomes (CPHA n.d).
- House insecurity particularly affects low-income households and seniors who pay 30% or more of their income in accommodations (MNP LLP 2020). As of 2023, the average Red Lake resident is spending 53% of their yearly income on housing (Statistics Canada 2023). Red Lake residents also have a higher portion of households in subsidized housing, 20.2% versus 11.7% nationally (Statistics Canada 2023).
- Poverty has been identified in literature as the driving factor for food insecurity (Banerji et al. 2023). Households received social assistance and households below the poverty line are more likely to be food insecure (Banerji et al. 2023, Domingo et al. 2020).
- Canadians in the lowest income group are more likely than those in the highest income group to report poor to fair mental health (CAMH n.d.; PHAC 2018). Similarly, unemployment is associated with higher risk of mental health challenges; although, this relationship is bidirectional (i.e., mental health can also reduce a person's ability to maintain a job) (PHAC 2024).
- Finally, low-income individuals and households may be at higher risk of experiencing safety issues such as domestic violence, and lower-income individuals may be less willing to report issues in the workplace.

12.9.5.5 Mental Ability (Indigenous individuals with mental health conditions)

Several of the social determinants of health identified mental ability (Individuals with pre-existing mental health conditions and / or Individuals with concurrent substance use and mental health challenges) as an important equity consideration in the HIA, and a key identity factor as part of the GBA Plus analysis. For example:

- Research shows that financial security is impacted by risk factors such as mental health (MNP LLP 2020). Underlying issues such as mental health status is expected to have an impact on economics, as mental health conditions may prevent individuals from finding or keeping employment or pursuing higher education, which can reduce financial stresses, enhance self-esteem, or promote healthier lifestyles (NCCIH 2020).
- Mental health status may result in disproportionate barriers to housing. The OPP and shelter staff both reported that mental health and substance use are drivers of homelessness and emergency housing use. The 2021 KDSB Homeless Enumeration Report indicated that 64.7% of respondents cited mental health, and 76.5% cited substance use, as contributing factors to their housing loss (Kenora District Services Board 2021).
- With respect to accessing services, Project-related population growth in the region may create a strain on regional services that are already at or near capacity. Added demand may contribute to longer wait times and reduced access, particularly for individuals who have pre-existing mental health conditions and require ongoing and regular mental health support. These challenges can directly influence Indigenous people's health outcomes particularly in emergency medical or crisis (mental health) situations.
- Intergenerational trauma has been reported in literature to contribute to food insecurity (Banerji et al. 2023). The National First Nations Regional Health Survey, reported that adults who attended or those with a parent or a grandparent who attended a residential school had a higher proportions of severe food insecurity than those who did not (16.4%, 16.2% respectively verses 6.9%) (Banerji et al. 2023).
- Individuals living with a mental illness are about twice as likely to also struggle with a substance use disorder compared with the broader population. In the same way, people with substance use disorders are up to three times more likely to have a mental illness. More than 15% of individuals with a substance use disorder also have a co-occurring mental health condition (CAMH n.d.).
- Finally, individuals with pre-existing mental health conditions may already be experiencing elevated baseline levels of stress and as such, may be more sensitive to changes (e.g., emotional and social stress) from changes to actual and perceived public safety due to accidents and malfunctions (Wong et al. 2024).

Also important to GBA Plus is the concept of intersectionality. Intersectionality is widely recognized as an analytical approach that describes how *"groups of people are not homogeneous, as they have multiple, and diverse intersecting factors that impact how they understand, […] shape their perspectives, ideologies, and experiences,"* (Women and Gender Equality Canada 2022). Intersectionality is key to GBA Plus as it recognizes that there are multiple factors that could influence how an individual or community could experience an effect, which individually may not put them at a disadvantage but combined can lead to higher vulnerability.

In addition to analysis of individual identity factors for each determinant of health, analysis of intersectionality was completed, as detailed in the HIA (Appendix N-2):

- Intersectional effects may occur for individuals who identify with, or are experiencing, a combination of any (or all) of the identified subgroups (i.e., gender, age, physical ability, socio-economic status, mental ability). It is also acknowledged that Indigenous identity intersects with all of the other GBA Plus identity factors discussed.

For example, in terms of access to health and social services, a low-income woman with pre-existing health conditions may experience more barriers (e.g., lack of childcare or money for transportation to attend medical appointments that have increasingly higher wait times) compared to either of those groups individually. Indigenous people also continue to face culturally unsafe care, or racism and discrimination when accessing care, which are rooted in historical factors such as colonialism (Statistics Canada 2024a).

- In addition, intersectional effects were also considered across the health determinants. For example, individuals who identify as women+, are within the youth or older adults age group, and are living in low-income households may experience overlapping effects related to housing, food security, access to health and social services, and economic conditions, where barriers or constraints in one determinant can interact with challenges in another. Similarly, youth with pre-existing chronic health conditions, disabilities, and / or mental health conditions may experience intersecting effects related to housing, food security, access to health and social services, and mental wellness and personal behaviours. These interactions highlight how combinations of gender, age, socio-economic status, physical ability, and mental ability can influence how individuals experience the determinants of health differently.

Additional details on intersectionality considerations for each health determinant are provided in the HIA (Appendix N-2). The results of the GBA Plus analysis were considered in the development of mitigation and enhancement measures for health, as detailed in the HIA (Appendix N-2).

12.9.6 Residual Effects after Mitigation

After implementation of mitigation and enhancement measures, assessment and characterization of potential residual effects on Indigenous health are assessed using the methodology outlined in Section 6. Further details on residual effect criteria ratings that are specific to Indigenous health are defined in Section 6 and in Section 12.3.3.

The appended Table 12.1-1 summarizes the results of the assessment for the linked pVC and fVC components. Detailed description on the methods, existing conditions, mitigation measures, and residual effects can be found in their respective sections.

Based on the assessment of these linked pVCs and fVCs, the effects to be considered as part of the assessment of residual effects on Indigenous health include:

- Air Quality
- Sound
- Vibration
- Groundwater
- Surface Water Flows and Levels
- Water Quality
- Vegetation Communities
- Moose
- Other Wildlife

- Species at Risk
- Migratory Birds
- Local and Regional Economy

There are other linked pVCs and fVCs, listed in Table 12.1-1 and Section 12.1, where no change is expected after mitigation measures have been applied. This includes Fish and Fish Habitat and Wild Rice. This means that predicted changes to their existing conditions due to Project activities will be fully mitigated or offset over the Project life cycle. Therefore, those linked effects are not considered in the residual effects assessment for Indigenous health.

12.9.6.1 Characterization of Residual Effects After Mitigation

The changes after mitigation and residual effects for linked pVCs and fVCs, and for the other assessments for the Indigenous Peoples fVC (e.g., CSIN, CULRTP and CWB) are discussed here based on their relevance to and influence on potential residual effects for Indigenous health. The findings from these assessments provided a foundation for identifying whether the change in upstream environmental, social, cultural and economic conditions was sufficient to influence downstream effects on Indigenous health. Overall, based on the findings of the linked pVCs and fVCs, residual effects were identified for CULRTP and CWB for the local Indigenous communities (LSFN, WFN, ANA, NWOMC and RLEF), and residual effects were identified for CSIN for NWOMC and RLEF. Building on this, the HIA assessed potential changes in biophysical and social determinants of health from Project activities to come to an overall understanding of the Project's effect on Indigenous health.

The potential effects assessment for health was conducted using Project information, technical modelling results, existing conditions data, primary and grey literature, government and agency resources, Indigenous knowledge and community-specific information. The key results regarding whether a specific determinant of health contributed to an overall change in Indigenous health, based on the potential effects assessment, are summarized in Table 12.9-10. Whether a determinant had the potential to contribute to a change in health, was based on the scale of effect (details provided in the HIA; Appendix N-2). The rating for scale of effect included four categories:

- **Negligible:** there is limited to no effect on Indigenous health expected as a result of Project activities for this determinant following implementation of mitigation measures.
- **Minor:** the effect on Indigenous health is expected to be minor; with no measurable deviation from baseline population-level health resulting from Project activities for this determinant following implementation of mitigation measures.
- **Moderate:** the effect on Indigenous health is expected to be moderate following implementation of mitigation measures; measurable deviation from baseline population-level health is possible due to Project activities for this determinant. If the effect is adverse, some support may be required to maintain baseline (current conditions).
- **Major:** the effect on Indigenous health is expected to be major following implementation of mitigation measures; measurable deviation from baseline population-level health is probable due to Project activities for this determinant, with a high degree of support required to mitigate adverse effects in order to maintain baseline levels and / or baseline levels are no longer attainable.

In Table 12.9-10, where a rating of negligible was identified for a determinant, that determinant was not expected to contribute to an overall change in health. Where a rating of minor was identified for a determinant, that determinant was expected to contribute to an overall change in health. Taking a conservative approach, where a rating of minor (i.e., a yes in the table below) was identified for any of the determinants of health, an assumption of potential residual effects for health overall was identified for that community. None of the determinants were characterized as moderate or major based on the findings of the HIA; for additional detail on residual effects approach in the HIA see Section 8.2 of Appendix N-2.

A summary of which determinants of health were predicted to contribute to an overall change in health, thereby indicating potential residual effects, is provided in Table 12.9-10. While the table below presents a high-level summary, the determination of whether residual effects exist or not for each Indigenous community was based on the collective evidence presented and the assessment completed in the HHERA (Appendix N-1) and HIA (Appendix N-2).

Based on the assessment findings, residual effects are identified for each Indigenous community based on an overall change in health (fVC Indigenous Peoples). An assessment of the significance of residual effects (change in health) for each Indigenous community is presented in Section 12.9.7.

Table 12.9-10: Identification of Residual Effects for Health (Indigenous Peoples)

Determinant of Health	Potential Effect Contributing to a Change in Health (after mitigation)? Yes / No [1,2]
	ANA
Air Quality	No
Multi-media Environmental Quality	No
Access and Availability of Water[7]	Yes
Access and Availability of Traditional Foods[7]	Yes
Sensory Disturbances (Sound, Vibration and Light)	No
Economics (Employment, Income and Education) [3]	Yes
Housing	No
Access to Health and Social Services	Yes [5]
Food Security	Yes
Mental Wellness and Personal Behaviours	Yes
Actual and Perceived Public Safety	Yes (perceived)
Safety of Indigenous Women and Girls	Yes
Residual Effect (Change in Health) Remaining after Mitigation? [6]	**Yes**

Notes:

1 Yes = the determinant contributes to an overall change in health for Indigenous Peoples (including perception issues and individual behaviours), with a rating of Minor: the effect on Indigenous health is expected to be minor; with no measurable deviation from baseline population-level health resulting from Project activities for this determinant following implementation of mitigation measures.

2 No = the determinant does not contribute to an overall change in health for Indigenous Peoples, with a rating of Negligible: there is limited to no effect on Indigenous health expected as a result of Project activities for this determinant following implementation of mitigation measures.

3 An overall net positive effect associated with economic changes is expected; however, cost of living (regional) and personal behaviour choices from higher incomes (for some individuals) are reflected here to maintain conservatism.

4 The change in housing is expected to be regional and will not change on-reserve systems; however, direct effects related to changes to housing is expected for Red Lake and Ear Falls (including NWOMC population living in these communities).

5 The change in access to health and social services is expected to be regional and will not change on-reserve systems; however, direct effects related to changes to access to services is expected for Red Lake and Ear Falls (including NWOMC population living in these communities), which will influence LSFN, WFN and ANA members who access services in Red Lake and Ear Falls. This finding aligns with the assessment of Community Well-Being.

6 Residual effects are assessed for adverse effects only and take into account implementation of the upstream pVC and fVC mitigations as well as health mitigations identified in Section 7.

7 The assessment of health does not only consider access to lands and resources, it focuses on a perceptions and personal behaviours indirectly influencing health.

ANA = Asubpeeschoseewagong Netum Anishinabek

12.9.7 Significance of Residual Effects

After implementation of mitigation and enhancement measures, an assessment and characterization of potential residual effects on Indigenous health is completed (Table 12.9-11) using the methodology outlined in Section 6 and detailed in Section 2.4.3 of Appendix N-2).

Changes to Indigenous health are directly and indirectly linked to Project activities, through a complex series of changes to upstream environmental, social, cultural and economic conditions, and through behavioural changes related to perceived risks and effects. While Project-related effects on Indigenous health at the population-level were not identified, effects on health and wellness for some individuals was identified via actual and perceived changes to access and availability of water and traditional foods, cost of living, housing, access to health and social services, food security, mental wellness and safety. Pre-existing systemic limitations may persist, particularly for Indigenous residents and vulnerable groups. However, a change to population-level health, resulting in measurable deviation from baseline, is not anticipated. Given the current barriers being experienced by Indigenous communities in the region, monitoring of population health and wellness over time in the context of Project activities, will support ongoing collaborative efforts between Great Bear Resources, and local and regional partners and help inform adaptive management measures, where applicable.

Table 12.9-11: Characterization of Adverse Residual Effects for Indigenous Health

Attribute	Category [1]	Rationale
	ANA	
Ecological or Social Context	Level I	Criteria may or may not be sensitive, and can support the predicted change with typical mitigation measures
Magnitude (Health)	Level I	Measurable Project-related changes in environmental exposures and / or social determinants of health are unlikely to result in a material adverse change in population-level health status of local Indigenous people.
Geographic Extent	Level II	Effect extends beyond the LSA but within the RSA.
Duration	Level II	Effect occurs over the medium term: more than three years but less than 32 years.
Frequency	Level II	Effect occurs intermittently or regularly.
Reversibility	Level II	Effect is partially reversible during the Project phases.
Timing	Level I	Effects do not occur during a sensitive period, or related effects are fully mitigated.

Notes:

1 Residual effects are identified for each community based on an overall change in health (fVC Indigenous Peoples).

ANA = Asubpeeschoseewagong Netum Anishinabek; fVC = federal valued component; LSA = Local Study Area;; pVC = pathway valued component; RSA = Regional Study Area

As shown in the table above, there is one or more attributes at Level I, and therefore the residual effect to health is not significant for ANA.

12.9.8 Confidence

The prediction confidence assignment reflects the information available through Project-specific TKLUS reports, publicly available data, understanding of the effectiveness of applicable mitigation measures, and outcomes of other pVCs and fVCs. Reliance on well-established methodologies, conservative modelling assumptions, calculated health risks, published peer-reviewed information, and community-specific data and Indigenous knowledge, all contributed to a higher level of confidence in the overall assessment of health. Conversely, limitations in the Indigenous knowledge (not provided by all communities) and baseline data for Indigenous health, limitations on the applicability of published information, and inherent limitations associated with predictive modelling contributed to a moderate level of confidence in the overall assessment of health.

The assessment is supported by both the findings of the HHERA and the HIA, which were informed by substantial primary and secondary information and robust analysis. However, as noted above, there are some instances where the information collected had limitations or lacked detail. Therefore, the overall confidence in residual effect and significance predictions for a change in health (fVC Indigenous Peoples) for LSFN, WFN, ANA, NWOMC and RLEF is considered to be moderate.

These limitations and uncertainties associated with the assessment of health overall, including those associated with the upstream inputs (pVCs and fVCs), collectively informed the confidence rating. The confidence rating also informed the development of mitigation and enhancement measures (Section 14.9.4), including monitoring for validation of assessment assumptions and other adaptive management frameworks, where applicable.

As additional information continues to be shared through Great Bear Resources' ongoing consultation with local Indigenous communities over the Project life, relevant information will be incorporated into Project planning as practical.

12.10 Impact on the Exercise or Practice of Rights

An assessment of potential impacts on the exercise or practice of rights is a complex undertaking with considerable potential for variation as each will be unique, tailored to the particular Indigenous rights-holding community, specific project, specific area or location, and timing. For this reason, a methodology to assess the impacts on the exercise of Rights from Great Bear Resources Project activities has been informed by the TISG (Section 12.4), IAAC's *Assessment of Potential Impacts on the Rights of Indigenous Peoples* guidance document and ongoing consultation with the Indigenous communities.

The TISG states the Impact Statement must:

- identify and describe the Treaty and Aboriginal rights of Indigenous Peoples potentially affected by the Project, including historic, regional, and community context, the geographic extent of traditional territory, the purpose and importance of the rights to the rights-bearing communities (e.g., the practices, customs, beliefs, worldviews, and livelihoods), and information on how rights have already been affected.
- document the Project's potential impacts on the exercise or practice of the rights of Indigenous Peoples or the rights arising from treaties overlapping the PA, as expressed by potentially impacted Indigenous Peoples;
- consider the severity of the impacts on the exercise of rights; and
- document the views of the potentially affected Indigenous Peoples and collaboratively find mutually agreeable solutions for concerns raised about impacts on the exercise of their rights.

In the guidance for assessment of potential impacts on the exercise or practice of Rights of Indigenous Peoples IAAC states "*if an Indigenous community is interested in doing so, they should lead the assessment of impacts on their rights as they are best placed to understand how their rights and relationship with the landscape may be impacted by the Project*". In the absence of this interest, baseline conditions as outlined in the TISG and a discussion of the assessment of the impact to the exercise or practice of Rights.

This assessment is not intended to limit or define Indigenous or Treaty Rights in any way, nor to bound the territories within which they exercise those rights. Instead, it reflects the Proponent's perspective, on how the Project may affect those rights based on information obtained through Indigenous engagement and review of publicly available information sources. The text is aligned with the TISG for the Project.

As previously stated in Sections 12.6.3 and 12.7.3 there is no identified current use of the PA by ANA community members, though there is current use of the LSA and RSA by ANA community members.

Based on this, there is a possibility of direct or indirect interactions between the Project and ANA's current use of lands and resources for traditional purposes within the LSA and RSA and therefore the potential of an impact on the exercise or practice of rights in the LSA and RSA.

12.10.1 Aboriginal, Treaty and ANA Rights

Indigenous Peoples in Canada hold two constitutionally protected rights:

- Aboriginal Rights: Rooted in pre-contact customs and traditions, including land use, hunting, fishing, trapping, and harvesting
- Treaty Rights: Established through agreements with the Crown, affirming rights to self-government, land access, and traditional practices. Treaty 3, which spans the RSA, protects these rights under Section 35 of the *Constitution Act*, 1982

ANA is Anishinaabeg, with familial and historical ties to northwestern Ontario. ANA has treaty rights defined under Treaty 3 (Figure 12.1-1), signed on October 3, 1873, at the Northwest Angle. Treaty 3 guarantees the continued right of the Anishinaabeg to fish, hunt, trap, and gather throughout the Treaty territory, except on lands "taken up" for settlement, mining, lumbering, or other purposes by the Government of the Dominion of Canada (CanLii, 2014). These rights are central to cultural identity, governance, community life, supporting intergenerational knowledge transfer, cultural practices, and food security.

The ability to exercise Treaty 3 rights depends upon the continued health of the land to support these practices. Members of ANA practice their rights in a variety of ways, including hunting large and small game, fishing in local lakes and rivers, trapping fur-bearing animals, and gathering plants, medicines, and wild rice. Cultural and spiritual practices, including ceremonies and the use of sacred sites, are also an important expression of rights. These activities support subsistence and health, as well as reinforce community cohesion, intergenerational knowledge transfer, and community well-being.

ANA are descendants of Anishinaabeg that inhabited the English-Wabigoon River system and surrounding area subsequently covered by Treaty 3. They participated in trapping, fishing, hunting, gathering, harvesting of wild rice, and were actively involved in the fur trade with the Hudson's Bay Company. In 1873, Chief Sah-katch-eway, along with other Chiefs of the Saulteaux of the Lake of the Woods, signed the Northwest Angle Treaty of 1873, which is known as Treaty 3 today. The Treaty 3 agreement outlined the rights and responsibilities of the Canadian state, along with those of the represented Indigenous Nations (Gauthier, n.d.). ANA continues to assert its treaty rights today under Treaty 3, advocating for both land protection and a fulfillment of the treaty's original promises (Grassy Narrows First Nation , 2025).

Under Treaty 3, 55,000 square miles (or approximately 142,450 square km) of territory spanning from the west of Thunder Bay, north of Sioux Lookout, and into the province of Manitoba was agreed to be shared between the Anishinaabeg Peoples and the British (Filice, 2025). Details regarding current governance structure and legal characteristics are provided in Section 12.6.2.2.

12.10.1.1 Historic, Regional and Community Context

Prior to the eighteenth century, European trade goods entered the region via intermediary groups like the Cree and Nakota, who carried these goods from Hudson's Bay Company (HBC) posts on Lake Winnipeg and the coast of Hudson's Bay. Moving further into the 1700s, direct trade was established when representatives of the Hudson's Bay Company, the Northwest Company and other fur trade enterprises began to establish posts in the region, including at Red Lake, Lac Seul and the confluence of the Chukuni and English rivers (Appendix Q-1; Taylor-Hollings 2017). The region's Anishinaabe families and communities supplied these posts by focusing their winter and spring activities to varying degrees on the trapping of furbearers. However, as fur traders and other newcomers entered the region in increasing numbers, Anishinaabeg in the region were also forced to manage ongoing changes stemming from the competitive dynamics of the fur trade, including the 1821 merger between the HBC and NWC, overexploitation of the region's fur and game species, and eventually the decline in fur prices during the twentieth century (Shkilnyk 1985). These pressures were further compounded by the substantial population loss and social disruption associated with the introduction of multiple epidemic diseases to the Anishinaabeg (Taylor-Hollings 2017).

By the latter half of the nineteenth century, the Government of Canada began efforts to establish regularized transportation routes linking more easterly parts of Ontario to the Red River region. The region's Anishinaabeg indicated that they expected compensation for this use of their lands, and they expressed their interest in developing a treaty (Filice 2025). Negotiations were initiated in 1871 and concluded in 1873 with the signing of Treaty #3. Chief Sahkatcheway of the Lac Seul and English River bands was among the Anishinaabe leaders who participated in these negotiations and signed the treaty at this time (Filice 2025). The Anishinaabe families whom he led were eventually assigned reserves at and split between Grassy Narrows and Wabauskang Lake (NationTalk 2008; Shkilnyk 1985; Vecsey 1987).

During the early twentieth century, the Anishinaabeg of the Grassy Narrows reserve maintained a land- and water-oriented "lifeway" that included trapping for the fur trade in winter and spring. Families travelled to HBC posts including those located in Oak Lake, Wilcox Lake and Ball Lake, until, in 1911, the HBC established a post at Grassy Narrows (Shkilnyk 1985; Vecsey 1987).

Through this period, arrival of newcomers to the region continued to increase, facilitated by completion of projects such as the Canadian Pacific Railway, along with its station at Kenora, in the late 1800s, and the more northerly Canadian National Railway, with stops in Quibell and McIntosh, in the early 1900s (Anderson 2020; NationTalk 2008; Shkilnyk 1985). Logging and mining in the region continued to expand, and the first pulp mill was operating in Dryden by 1913 (Johnston 2014; Shkilnyk 1985).

In 1918 and 1919, an epidemic swept through the residents of the Wabauskang reserve, who responded by relocating; some of the affected families relocated to Grassy Narrows (NationTalk 2008; Shkilnyk 1985; Vecsey 1987). In this time frame, residential schools were also established in the region; many of the children of the families at Grassy Narrows attended the McIntosh residential school or St. Mary's / St. Anthony's in Kenora (Shkilnyk 1985). Separation between Anishinaabe children and their families created deep cultural ruptures, and Anishinaabe cultural continuity was also challenged by policies under the *Indian Act*, which included the banning of traditional Anishinaabe ceremonial gatherings and activities (Taylor-Hollings 2017).

Construction of the first hydroelectric generating station on the English-Wabigoon River system began in 1929, with further hydroelectric facilities added in the 1950s.

The associated damming flooded areas that the people of Grassy Narrows had previously used for wild rice harvesting, as well as trapping of affected species, including muskrat (Brophy 2005; Free Grassy Narrows n.d.-a; Vecsey 1987).

Families at Grassy Narrows were able to maintain a land- and water-oriented economy that proved compatible with new employment opportunities at multiple fishing lodges established along the English-Wabigoon River system after World War II. Grassy Narrows families also found economic opportunity through the development of commercial fishing along English-Wabigoon River system in the 1950s (Vecsey 1987).

Still, their lifeway faced challenges in this time frame due to the establishment of a provincial government trapline registry that conflicted with traditional Anishinaabe approaches to stewarding and managing the areas traditionally used by various Grassy Narrows families (Chapeskie 1994; Taylor-Hollings 2017; Vecsey 1987). Increased interest on the part of the provincial government in the commercial value of wild rice also led to the assignment of licences for its harvesting to non-Indigenous individuals, despite long-established use and stewardship of wild rice lakes by the region's Anishinaabeg (Shkilnyk 1985; Vecsey 1987). Establishment of day schools on reserves reduced the need for children to be separated from their families, but the requirement to attend limited the ability of both parents to participate in trapping, altering traditional approaches to managing the associated tasks and often restricting women+ to the reserve, where they were less able to contribute to economic life (Vecsey 1987).

Starting in the early 1960s, the federal government worked to relocate the people of Grassy Narrows to a new site on the Grassy Narrows reserve that could be more easily accessed via a new logging road through the area (Free Grassy Narrows n.d.-a; Shkilnyk 1985; Vecsey 1987). They indicated that this location would facilitate the delivery of health, education and other services. However, the residents of Grassy Narrows were reluctant, as the move placed them further from their traditionally used trapline areas, as well as valued wild rice lakes and commercial fishing locations. Soils at the new site also were not conducive to maintaining gardens, which were a key element of household economies. Also, houses were placed too closely for cultural needs and preferences, and they were assigned without consideration for family and clan affiliations (Free Grassy Narrows n.d.-a; Vecsey 1987).

Community stresses induced by this move were compounded in 1970 when residents of Grassy Lake learned that, from 1962 to 1970, untreated mercury from the Dryden Chemicals Ltd. plant had been dumped into the English-Wabigoon River system upstream from Grassy Narrows (Free Grassy Narrows n.d.-a; Shkilnyk 1985; Vecsey 1987). Commercial fishing in the system was immediately banned, and recreational fishing at fishing lodges was also affected, though, due to the importance of fish in the diets of Grassy Narrows residents, some individuals continued to catch and eat fish from contaminated waters (Shkilnyk 1985; Vecsey 1987).

Sudden loss of employment in the commercial and recreational fishing industries changed a largely employed community to a largely unemployed one, and 90% of Grassy Narrow residents have since been found to suffer from the ongoing effects of mercury poisoning (Brophy 2005; CBC News 2021; Free Grassy Narrows n.d.-a; Shkilnyk 1985; Vecsey 1987

12.10.1.2 Previous Impacts to Exercise or Practice of Rights

From 1962 to 1970, the Dryden Chemicals pulp and paper mill (Reed Paper) dumped approximately 50,000 pounds (or 22,680 kilograms) of mercury (inorganic) into the English-Wabigoon River system upstream from ANA communities (LaDuke, 1999).

During this time, ANA families were also relocated again five miles (or approximately 8 km) northwest, to the current Grassy Narrows reserve site near the mainland area of Jones logging road (Vecsey, 1987). This relocation occurred after much of their traditional territory had been flooded for a hydroelectric development (Vecsey, 1987).

The inorganic mercury and raw sewage dumped into the Wabigoon River by the Dryden mill sped up the bacterial process that converts mercury into a more toxic version, known as methylmercury (Simpson, 2008). The methylmercury spread across the English-Wabigoon River system, bioaccumulating in fish, aquatic resources, water, and wildlife (Simpson, 2008).

As fish and aquatic resources are staple food sources and economic resources for the community, the mercury contamination has led to severe health and socioeconomic effects. Mercury levels in the river and fish have remained high despite the paper mill ceasing mercury use in the 1970s. Many residents still show symptoms and signs of mercury poisoning (Bettens, 2024). While the current Dryden mill (owned by Dryden Fibre Canada) does not release wastewater that contains mercury, a 2024 research report identified that the mill's effluent discharge is worsening the contamination problem (Branfireun, 2024). The study found that the current wastewater discharged contributes to higher productions of methylmercury in the Wabigoon River (Branfireun, 2024).

ANA advises that for countless generations prior to the mercury contamination fishing was a cornerstone of ANA's substance, livelihood, and way of life employing many in the sport and commercial fishing industry (Grassy Narrows Land Protection Team, Internal memo 2025). Most of the ANA community who worked in the fishing industry ate fish for lunch and again at dinner with their families. ANA fish consumption in the 1960's averaged 200 lbs a year and was made up mostly of walleye (Grassy Narrows Land Protection Team, Internal memo 2025). Fish consumption levels have dramatically been reduced compared to levels before the 1970's.

In 2015, a community referendum led to the creation of the Asubpeeschoseewagong Anishinabek Aaki Declaration, asserting their inherent sovereignty and right to self-determination. (Free Grassy Narrows 2018).

The ongoing struggle and resistance to industrial activity characterizes the ANA approach to governance and their relationship with the province and the federal Crown.

In June 2024, ANA filed a lawsuit against both the provincial and federal levels of government. The lawsuit alleges breaches of Treaty rights and constitutional duties by failing to protect the community and remedy the environmental and health harms from mercury and other contamination. It is the first comprehensive legal action by ANA in decades, and addresses not only mercury, but other industrial activity, including mining, dams, forestry and waste disposal (Loriggio, 2024; Law, 2024).

After years of advocacy, construction of a dedicated Mercury Care Home facility in Grassy Narrows began in 2025, funded by the federal government. The facility will provide in-patient care for those suffering from mercury poisoning, allowing affected community members to receive treatment close to home rather than relocating for care (Law, 2024).

ANA has stated a number of remediation objectives with respect to the English River and its tributaries. The primary objective being the reduction of mercury concentrations in fish traditionally consumed by Indigenous Peoples on the river system to levels safe for subsistence consumption and that fish species and population levels, manner of fish consumption, and fishing locations be restored.

For ANA this means reducing mercury concentrations in fish in the English River system to levels safe to consume 200 lbs annually of fish per person, the vast majority being walleye greater than 45 cm in length (Grassy Narrows Land Protection Team, Internal memo 2025).

The community has consistently stated that they face cumulative effects from past industrial activities including mercury deposition in the English River and Wabigoon watersheds, mining and, logging, and that further development including the GBP would exacerbate these ongoing issues (Asubpeeschoseewagong Netum Anishinabek, 2024). The ANA community continues to assert its sovereignty and self-determination. They have historically and consistently advocated for recognition of rights over their lands, challenging provincial government industrial-related decisions that affect their territory without their informed consent.

12.10.1.3 Purpose and Importance of Rights for Asubpeeschoseewagong Netum Anishinabek

As Anishinaabeg, the families and communities that gave rise to Asubpeeschoseewagong Netum Anishinabek (ANA) followed a mobile lifeway strategically positioning themselves to access key resources as they came into season. These resources included large and small game, as well as fish; many kinds of vegetation, including an array of berries, were harvested for food and medicine, as well as various other applications, including tools and shelters.

The right to practice fishing and eat fish is integral to ANA's self-determination and that the right to fish is a Treaty right recognized and protected by the Constitution (Grassy Narrows Land Protection Team, Internal memo 2025). ANA advises that Indigenous fishing and fishing rights are different and not the same as the rights of the non-Indigenous population or other subsistence fishers, and that eating fish is an integral part of Indigenous Peoples lifestyle and culture and not a dietary choice that can be completely eliminated. ANA advises that fish consumption by ANA is becoming very popular and that younger members of ANA are learning to fish and eat what they catch as part of the community's commitment of restoring its cultural practices. Fishing has many benefits for ANA's wellbeing, way of life and nutrition (Grassy Narrows Land Protection Team, Internal memo 2025).

The fall harvest of wild rice, or manoomin, provided an important source of sustenance that could be stored for use over the winter and beyond. It was complemented by the sustenance provided by the region's freshwater fish resources across all seasons.

Large ungulates such as moose also played a central role as a valued source of food, hides and other materials (Free Grassy Narrows n.d.-a).

Travel relied on a network of land-based trails and water-based travel ways. Portages played particularly important roles in this network, serving as focal points for efficient land-based travel between waterways and waterbodies. Activities like hunting and fishing were carried out in the course of travel, as well as during stays at locations where concentrations of resources allowed families and communities to gather together, exchange news, conduct ceremonies, and engage in harvesting activities (Grassy Narrows Land Protection Team, Internal memo 2025).

Trade between Anishinaabeg, as well as with neighbouring Indigenous groups, was another important means of building and maintaining connections
(Simpson, DaSilva, Riffel, & Sellers 2009).

12.10.2 Project-related Assessment Impact on Rights

Through the impact assessment process presented (Section 12.3), assessment criteria are identified, existing conditions described followed by the description of Project interactions, and potential effects over the Project phases (construction, operation and closure). Mitigation measures based on design, policy, best industry practice, regulatory requirements, and consultation are identified and the residual effects are acknowledged. Through a pre-defined set of attributes, the significance of these residual effects are assessed.

Based on available consultation information from ANA (section 12.4), key issues incorporated into the impact assessment include:

- Changes to water and effects to fish including potential changes in mercury levels, and potential health risks
- Changes to the land and effects to wildlife, fish and vegetation;
- Changes in access to culturally important areas and the quality of experience.
- Increased cost of living due to the change in population;
- Access to health and mental health support services;
- Access to traditional food sources; potential effects to water, wildlife, fish, and vegetation that will affect the health and well-being of the community members; and
- Change to overall community identity and community cohesion.

Using the information collected to characterize existing conditions with respect to the exercise or practice of Rights, likely potential effects on criteria relevant to the assessment of impacts on the exercise of Rights were identified. Where a potential effect was identified mitigation measures to reduce, avoid, and minimize negative potential effects, and enhance positive potential effects were considered and the resulting residual effect characterized.

Project-related changes that may affect ANA's ability to exercise or practice rights builds on the impact assessment by considering the acknowledged residual effects after mitigation measures are applied. For the ANA this includes:

- Change in availability, and quality of experience related to traditional terrestrial wildlife harvesting (hunting and trapping) (section 12.6.6.1.1)
- Change in quality of experience related to traditional habitation, cultural, and spiritual sites and areas (section 12.6.6.1.2)
- Change in community well-being (section 12.6.7)
- Change in health (section 12.9)

These residual effects after mitigation are assessed as being not significant through the assessment process (refer to section 12.3 regarding method to determine significance), however, a change in the existing conditions is acknowledged due to the Project that may affect ANA's exercise or practice of rights.

Based on the available information from ANA, and the impact assessment, these residual effects after mitigation are carried into the assessment on the impact to exercise or practice rights.

Potential changes to fVC fish and fish habitat assessed in Section 8 determined that the implementation of off-setting and compensation developed in collaboration with Indigenous communities will fully mitigate the loss of fish habitat such that no residual effects remain. Linked to this with respect to changes in water quality, following the implementation of Project design mitigation measures including water treatment and seepage capture, there are no predicted concentrations greater than guidelines in all assessed waterbodies as a result of the Project (Section 7.7).

The assessment on Indigenous Peoples also considered changes in availability, access to, and quality of experience related to traditional aquatic harvesting (fishing) (section 12.6.6) and no residual effect occurs after mitigation.

To assess the potential impact to rights of Indigenous Peoples as recognized and affirmed in Section 35 of the *Constitution Act, 1982*, IAAC provides guidance (IAAC 2025) on a methodology. IAAC acknowledges that an assessment of impacts on rights is complex “with considerable potential for variation” and the methodology presented in the guidance document is intended to be flexible and adaptable, based on context.

Residual effects characteristics as they relate to ecological and social context, geographic extent, duration, frequency and reversibility have been determined in the preceding sections and are forwarded for consideration with respect to impact on the exercise or practice of rights. For the Great Bear Resources Project, criteria have been developed to determine the level of severity (i.e., magnitude) of an adverse impact (if any) to the exercise or practice of rights at the population (i.e., community) level. The level of severity of impacts on the exercise or practice of rights are characterizes as being either low, moderate or high. This is summarized in Table 12.10-1.

IAAC guidance includes consideration of cumulative effects as part of the impact to rights. Cumulative impacts on the exercise or practice of rights (if applicable) are assessed in Section 15.

Table 12.10-1: Summary of Impact on Exercise or Practice of Rights – Description of Severity Levels

Severity Level	Description of level
Low	• Cultural well-being - Negligible to small Project-related change on the community's ability to continue customs, traditions and practices integral to the community's culture • Impact inequity - The effects would be temporary and would allow intergenerational transfer of knowledge and exercise of rights to continue into the future. Potential benefits resulting from the project would flow between all segments of the community. • Health - The Project is not likely to cause environmental effects on traditional foods (including species of cultural importance to traditional diets), that would result in a population-level change in health. • Collaborative Management and Governance - there is a high level of cooperation between Great Bear Resources and Indigenous community; or agreements between the Indigenous community and Great Bear Resources are, or will be, in place; or Great Bear Resources undertakes repeated outreach efforts, but the community remains unresponsive. This also includes participation in the proposed mitigation measures of establishing Community Liaison and Environmental Management Committees and environmental monitors from the community.
Moderate	• Cultural well-being - Measurable Project-related chang that will result in a material adverse change in the community's ability to continue customs, traditions and practices integral to the community's culture. • Impact inequity - Transfer of knowledge between generations may be interrupted for a moderate period of time by the project. Impacts may be reversed within one generation. Some benefits may accrue to sub-groups. • Health - The Project may cause environmental effects on traditional foods (including species of cultural importance to traditional diets) possibly resulting in a population-level change in health. • Collaborative Management and Governance - Indigenous community has expressed concern about effects of the Project. The community has stated that some effects remain after mitigation and / or accommodation.
High	• Cultural well-being - Measurable Project-related chang that will result in a substantive adverse change in the community's ability to continue customs, traditions and practices integral to the community's culture. • Impact Inequity - Sub-groups of the population will be disproportionately effected by the project and experience little to no benefit. Intergenerational transfer of knowledge would be interrupted for an extended time period and may not be reversed either in whole or part. • Health - The Project will cause extensive environmental effects on traditional foods (including species of cultural importance to traditional diets), resulting in a population-level change in health. • Collaborative Management and Governance - The project would likely prevent or restrict use of areas of title. The project may cause interference in traditional land management and governance regime.

ANA claims its members exercise their Rights through hunting and trapping in the LSA, but not within the PA. As expressed in Section 12.6.6 potential effects on the availability of hunted and trapped species and quality of experience are expected to be confined to the LSA in areas immediately adjacent to the PA, and may occur over the medium term, primarily due to sensory disturbances that could alter wildlife behavior near the PA. The effects are expected to be reversed after the medium term. While habitat for all species remains available in the RSA and no Project features are anticipated to jeopardize furbearer populations, the exercise or practice of Rights may require increased effort to harvest wildlife. However, Project effects on the availability of hunted and trapped species and quality of experience are not expected to prevent traditional practices including the transfer of intergenerational knowledge, and would not occur during sensitive periods, with recovery anticipated after the medium term.

No confirmed current use of the PA relating to traditional habitation, cultural, or spiritual sites has been identified by ANA. However, in the LSA, ANA has identified current use areas of cultural and spiritual importance around fishing areas, wild rice harvesting areas, and the canoe transportation route along Chukuni River. Access and availability of traditional habitation, cultural, or spiritual sites or areas in the LSA and RSA will not be directly affected by the Project. Available campsites, cultural and spiritual sites and areas and other habitation sites in the LSA and RSA currently used by ANA will remain accessible to ANA. However, ANA visiting traditional habitation, cultural and spiritual sites and areas in the LSA may be indirectly affected by changes in the quality of experience. This is due to sensory disturbances where ANA access traditional habitation, cultural and spiritual sites and areas in the LSA.

These Project-related changes may increase the effort necessary but will not reduce the ability of ANA to practice cultural activities (including intergenerational transfer of knowledge) while visiting and using traditional habitation, cultural, and spiritual sites and areas over the medium term.

No direct residual effects to ANA community well-being are expected as a result of the Project. Project-related disturbances and activities near waterbodies may influence animal movement patterns and harvesting conditions, affecting how ANA members access and engage in traditional practices adjacent to the PA. Even where direct physical disturbance is limited, perceived risks of contamination could lead to voluntary avoidance of areas historically used for medicinal plant gathering, fishing, or trapping. These concerns are compounded by historical experiences of contamination and ongoing mistrust in environmental protection, meaning residual effects cannot be fully mitigated through technical measures alone. The intergenerational disruption contributes to a higher level of significance for these effects, even in the absence of measurable environmental change.

12.10.3 Overall Impact on Exercise or Practice of Rights of ANA

It is anticipated that residual effects linked to the exercise of Rights are limited to the LSA and associated with sensory disturbance in areas immediately adjacent to the PA. No critical habitat for traditional use has been identified in the PA nor are negative effects on access in the LSA expected. The exercise of Rights and quality of experience in the LSA may require an increase in effort necessary for traditional terrestrial wildlife harvesting but not reduce the ability to practice these traditional activities nor are they eliminated. However, it is acknowledged that the Project may contribute to ongoing avoidance of traditional land use areas, reduced opportunities for land-based healing and cultural continuity, and diminished transmission of knowledge.

Further, downstream residual effects associated with avoidance of traditional foods due to perception issues may affect some individuals; however, measurable Project-related changes in environmental exposures and / or social determinants of health are unlikely to result in an adverse change in population-level health status of local Indigenous people.

Negative residual effects associated with sensory disturbance do not extend beyond the medium term, are not expected within areas of preferred or exclusive use and are expected to recover during Project phases. Sub-groups are resilient enough to sustain impacts and maintain exercise of rights.

The impact on the exercise or practice of Treaty Rights for ANA at the population-level is considered to be low severity and that proposed mitigation measures allow for the exercise of Rights to continue in the same or similar manner.

Attached Table 12.1-1: Summary of Linked pVC and fVC Key Mitigation and Changes After Mitigation

Table 12.1-1: Summary of Linked pVC and fVC Key Mitigation and Changes After Mitigation

Federal Valued Components (fVCs)		
Key Mitigation measures	**Adverse Residual Effects Predicted after Mitigation**	**Change considered for Indigenous Peoples**
Fish and Fish Habitat (Section 8.0)		
In collaboration with Indigenous communities, development and implement of Fish Habitat Offset and Compensation plan, including habitat diversion plans, and fish relocation from affected watercourses.	With the implementation of proposed mitigation and measures in the Fish Habitat Offset and Compensation Plan (FHOCP): • There are no residual effects on fish habitat predicted • Adverse residual effects to fish communities, including those of Indigenous community concern, are not predicted • There are no predicted residual effects to fish health as the changes to water quality will be effectively mitigated by the implementation of the integrated water management and treatment system as contact water released to the environment will meet the WQG PAL.	Change after mitigation linked to: • none
Migratory Birds (Section 9.0)		
Great Bear Resources will implement progressive rehabilitation during operations and closure to replace (where feasible) lost migratory bird habitat Buffers will also be implemented around sensitive habitats. The upland areas around wetlands (e.g., Unnamed Waterbody 6) should be protected for 120 m from the wetland. The 120 m buffer is season-dependent and should be greater than 250 m during the nesting season (April to July for waterbirds	With the implementation of mitigation measures and expected offset via restoration during closure, the residual effect on migratory birds from changes related to the Project are primarily be constrained to the PA but could extend into the LSA: • Change in the abundance of habitat is not significant • Change to connectivity and quality of habitat is not significant • Change to migratory birds density and population is not significant • Change in the risk of mortality for migratory birds is not significant • Change to the abundance of habitat of migratory bird SAR is not significant.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health

Attached Table 12.1-1: Summary of Linked pVC and fVC Key Mitigation and Changes After Mitigation (continued)

Pathway Valued Components (pVCs)		
Key Mitigation measures	**Changes after Mitigation Predicted**	**Adverse Change after Mitigation with Pathways to Indigenous Peoples**
Air Quality (Section 7.2)		
Mitigation measures include the implementation of a dust management plan, a blasting plan to control emissions of particulate matter and nitrogen oxides, an ambient air quality monitoring plan, and limiting vehicle speeds on-site will provide for active management of emissions from the Project.	The modelled cumulative concentrations for all criteria for all averaging periods are below the respective Ambient Air Quality Criteria during the construction phase, operations phase and closure phase at the extent of the leased claims boundary and at all points of reception in the LSA.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Sound (Section 7.3)		
Mitigation measures include various design features aimed at reducing sound levels, use of enclosures and exhausts for diesel and natural gas generators, use of suitable mufflers on all motorized equipment, regular maintenance of equipment, and the development of a noise management plan.	Sound levels at all of the identified PORs are predicted to be below the federal and provincial criteria after application of mitigation measures. The change in percent highly annoyed meets the Health Canada limit of 6.5%, which means that changes to sound levels are not expected to trigger noise complaints from PORs.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Vibration (Section 7.4)		
Mitigation will include the development and implementation of a blast management plan to guide blasting activities while minimizing vibration levels.	The predicted change to air overpressure and peak particle vibration are well below the provincial limits for all PORs and Fisheries and Oceans Canada (DFO) requirements related to vibration for protection of fish will be met.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Visual Environment (Appendix O-3)		
None required with planned design and operations measures	A viewshed analysis (Appendix O-3) was conducted to determine the most pronounced visual aesthetics impact on the surrounding area. This assessment included the proposed stockpiles (mine rock stockpile, low grade ore and overburden stockpiles), tailings management facility dams and headframe designs, all based on anticipated maximum heights and extents to maintain a conservative approach. The analysis concluded that visibility of Project facilities will be very restricted, even at their largest scale, typically limited to distant views during later operational stages.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health

Pathway Valued Components (pVCs)		
Key Mitigation measures	**Changes after Mitigation Predicted**	**Adverse Change after Mitigation with Pathways to Indigenous Peoples**
Groundwater (Section 7.5)		
Mitigation measures include limiting the area of disturbance and operating an integrated water management system during construction, operation, and active closure to collect and control contact water, which will be reused in processing to reduce freshwater demand. Water treatment ponds will be lined or placed where seepage can be contained, and grouting will seal exploration drillholes and major fractures to limit underground inflows. A sheetpile or grout wall will also be installed to maintain open pit stability and reduce dewatering effects on Dixie Creek. During closure, the LP Central pit, VMF, and underground workings will be actively filled with redirected site runoff and water from the Chukuni River to accelerate groundwater recovery to baseline conditions.	After implementation of the proposed mitigation measures, there is a reduction of groundwater flows and levels during the construction and operations phases that is mitigated during closure. After the filling of the underground, LP Central pit and Viggo management facility (VMF) with water, groundwater flows and levels will recover to near baseline conditions.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Surface Water Flows and Levels (Section 7.6)		
Mitigation measures will include collecting contact water across the Project, treatment of contact water and effluent prior to release, the development and implementation of a dust management plan to minimize dust emissions	There is a reduction of surface water flows and levels within the PA and parts of the LSA after implementation of the proposed mitigation measures, during the construction and operations and closure phases that is partially mitigated by closure-related activities. Some local hydrology changes are permanent, resulting from landscape changes from development. Estimated changes to flow and water level in the Chukuni River and further downstream are not observable during any Project phase.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health

Pathway Valued Components (pVCs)		
Key Mitigation measures	**Changes after Mitigation Predicted**	**Adverse Change after Mitigation with Pathways to Indigenous Peoples**
Water Quality (Section 7.7)		
None required with planned design and operation measures	Observable changes in water quality from baseline conditions are constrained to the LSA during all Project phases. In the operations phase, predicted concentrations for all modelled parameters are well below the identified water quality guidelines for protection of aquatic life (WQG PAL), or equivalent to baseline conditions where baseline concentrations are greater than these guidelines (arsenic and phosphorus), with the exception for cobalt concentrations at a node in Unnamed Watercourse 1. During the closure phase (and post-closure), all modelled parameters are predicted to be less than WQG PAL, or equivalent to baseline conditions where baseline concentrations are greater than WQG PAL (arsenic and phosphorus).	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Vegetation Communities (Section 7.8)		
Proposed design and mitigation measures, include minimizing the Project footprint, targeted management of invasive species and restoration and revegetation where feasible during operations and closure	With the implementation of the proposed design and mitigation measures, direct changes to vegetation communities after mitigation are expected to be localized to the PA. Indirect effects are expected to be confined to the PA and its immediate surroundings. Restoration and revegetation efforts during closure are anticipated to support the recovery of vegetation communities, with long-term positive outcomes for ecosystem function and diversity, although re-establishment is a long-term process.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Wild Rice (Manoomin) (Section 7.9)		
Great Bear Resources Project has funded a study by Northern Bioscience and Harris Ecological Consulting, upon the request of LSFN and WFN. The purpose of this study is to help address the loss of historic wild rice (Manoomin) production on Wabauskang Lake. Potential effects on wild rice are anticipated because of an overprint at Unnamed Waterbody 1 by Project infrastructure. The enhancement study is anticipated to offset potential effects on wild rice as a result of the Project. The wild rice enhancement location, on WFN reserve, has been recommended by the WFN and supported by LSFN.	The zone of changes to Wild Rice is predicted to be within Unnamed Waterbody 1, with mitigation proposed through an offset as part of the Wild Enhancement Project at the WFN reserve.	Change after mitigation linked to: • none

Pathway Valued Components (pVCs)		
Key Mitigation measures	**Changes after Mitigation Predicted**	**Adverse Change after Mitigation with Pathways to Indigenous Peoples**
The study will develop potential enhancement options for implementation in 2026. In addition to habitat restoration, the project will incorporate education and knowledge-sharing on sustainable harvesting practices, supporting long-term stewardship by community members. This collaborative initiative could support broader wild rice revitalization projects in the future and could be shared with other Indigenous communities in the local area if there is interest, advancing the understanding, and recovery of this culturally and ecologically important plant. Together, these efforts will support a more holistic understanding of Wild Rice habitats, cultural values, and their continued importance to the region.		
Moose (Section 7.10)		
None required with planned Project design and operations.	The removal of the PA results in a fractional change to habitat abundance and connectivity. No critical habitat types are eliminated at the regional scale, and overall habitat diversity and connectivity are maintained within the RSA. With the implementation of the proposed design and mitigation measures, changes to the abundance of Moose habitat are not expected after closure. There will be a change in the risk of mortality as wildlife - vehicle collisions are possible when roads and vehicular traffic are present. This will be limited after the active closure period and removed post-closure. Indirect effects to Moose during the construction, operations and closure phases, may extend into the LSA but cease after closure activities end.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Other Wildlife (Section 7.11)		
None required with planned Project design and operations.	Habitat for other wildlife will be reduced within the PA from vegetation removal required for Project development, but habitat losses are low at a regional scale. The closure phase will directly increase functional other wildlife habitat which will continue to increase post-closure. There will be a change in the risk of mortality due to wildlife - vehicle collisions, which are possible when roads and vehicular traffic are present.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health

Pathway Valued Components (pVCs)		
Key Mitigation measures	**Changes after Mitigation Predicted**	**Adverse Change after Mitigation with Pathways to Indigenous Peoples**
	This will be limited after the active closure period and removed post-closure. Indirect effects to other wildlife during the construction, operations and closure phases, may extend into the LSA but cease after closure activities end.	
Species at Risk (SAR) (Section 7.12)		
None required with planned Project design and operations.	Direct habitat losses will occur within the PA during construction, but no critical SAR habitats will be eliminated, and overall habitat diversity will be maintained within the RSA. Therefore, there are no effects on the relative abundance of habitat after mitigation. There will be a change in the risk of mortality due to wildlife - vehicle collisions, which are possible when roads and vehicular traffic are present. This will be limited after the active closure period and removed post-closure. Indirect effects to SAR during the construction, operations and closure phases, may extend into the LSA but cease after closure activities end.	Change after mitigation linked to: • current use of lands and resources for traditional purposes • health
Land and Resource Use (Section 7.13)		
None required with planned Project design and operations.	Public access to the PA will be prohibited from the onset of the construction phase until following active closure so that construction, operations and closure activities can be carried out safely. In addition, sensory disturbance may potentially cause wildlife and recreational users to avoid the immediate area.	Change after mitigation linked to: • none
Cultural Heritage (Section 7.14)		
A Cultural Heritage Impact Assessment (CHIA) will be prepared for identified CHVI locations (e.g., CHR3) prior to construction. The conservation guidance from CHIA mitigates potential effects to be implemented early in the Project construction	The zone of changes to Wild Rice is predicted to be within Unnamed Waterbody 1, with mitigation proposed through and offset as part of the Wild Enhancement Project at the at the WFN reserve. Note: Indigenous physical and cultural heritage differs from the pVCs of archaeology and cultural heritage as it encompasses both tangible heritage, such as physical places of heritage value, and intangible heritage, such as the customs, practices and teachings that convey cultural knowledge of heritage value.	Change after mitigation linked to: • none For Indigenous interests change after mitigation linked to: • current use of land and resources for traditional purposes • physical and cultural heritage sites, structures or things

Pathway Valued Components (pVCs)		
Key Mitigation measures	**Changes after Mitigation Predicted**	**Adverse Change after Mitigation with Pathways to Indigenous Peoples**
Archaeology (Section 7.15)		
Completion of archaeological assessments in accordance with the Ontario Heritage Act and MCM standards and guidelines by licensed archaeologist with Indigenous participation. Identified resources with Cultural Heritage Value or Interest (CHVI) will have mitigation measures developed and implemented (avoidance, protection in place, or excavation / documentation). A Chance Find Procedure in place for unanticipated discoveries during construction, ensuring immediate work stoppage, notification of authorities and Indigenous communities, and appropriate mitigation as required.	With the proposed design and mitigation measures, no changes to the terrestrial archaeological sites or areas of marine archaeological potential are expected.	Change after mitigation linked to: • none
Local and Regional Economy (Section 7.16)		
None required with planned Project design and operations	The Project will have a net positive effect on the local and regional economy through employment and labour income, opportunities and income for local and regional businesses, and increased revenues to local and regional municipalities. The zone of changes is dominantly within the RSA. The remainder of the potential direct, indirect and induced economic effects are expected to occur in the rest of Ontario and Canada.	Change after mitigation linked to: • none

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