Crawford Nickel Project
Impact Statement

Chapter 22 Assessment of Potential Effects on Social Conditions

Prepared for:
Canada Nickel Company

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Acronyms and Abbreviations

2SLGBTQQIA+	two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, and all other sexual orientations and genders
AADT	Annual Average Daily Traffic
ANSI	Area of Natural and Scientific Interest
ATV	all-terrain vehicle
BHA	bait harvest areas
BMA	Bear Management Area
CDSSAB	Cochrane District Social Services Administration Board
CMHA-CT	Canadian Mental Health Association of Cochrane-Timiskaming
CMHC	Canada Mortgage and Housing Corporation
CNWA	*Canadian Navigable Waters Act*
CSI	Crime Severity Index
dBA	a-weighted decibel
DFO	Fisheries and Oceans Canada
DSB1	District School Board Ontario North East
ECE	Early Childhood Educator
EFAP	Employee Family Assistance Program
FMU	Forest Management Unit
FMZ	Fisheries Management Zone
FRL	Forest Resource Licence
FTE	full-time equivalent
GBA Plus	Gender-Based Analysis Plus

GIS	geographic information system
HMSP	Health and Medical Services Plan
IA	Impact Assessment
IAA	*Impact Assessment Act,* 2019
kV	kilovolt
LSA	Local Study Area
m^3	cubic metre
MECP	Ministry of the Environment, Conservation and Parks
MNRF	Ministry of Natural Resources and Forestry
MNR	Ministry of Natural Resources (formerly Ministry of Natural Resources and Forestry [MNRF])
MTO	Ministry of Transportation
NAPS	Nishnawbe Aski Police Service
NPP	Navigable Protection Program
OAHS	Ontario Aboriginal Housing Services
OFSC	Ontario Federation of Snowmobile Clubs
ONSA/DVTC	Ontario Network of Sexual Assault/Domestic Violence Treatment Centres
ONTC	Ontario Northland Transportation Commission
ONWA	Ontario Native Women's Association
OP	Official Plan
OPP	Ontario Provincial Police
O.Reg.	Ontario Regulation
PA	Project Area
PHU	Porcupine Health Unit

ROW	Right-of-Way
RSA	Regional Study Area
SPA	Source Protection Area
SFL	Sustainable Forest Licence
TEDC	Timmins Economic Development Corporation
TIS Guidelines	Tailored Impact Statement Guidelines
TMF	Tailings Management Facility
TPS	Timmins Police Service
VC	Valued Component
WMU	Wildlife Management Unit

Glossary of Technical Terms

Access Road	A road that affords access into and out of a construction or operation area.
Aggregate	A quarry mineral that is used solely for construction purposes or as a constituent of concrete other than manufacturing of cement and includes sand, gravel, clay crushed stone, and crushed rock.
Baseline Conditions	Pre-project environmental conditions.
Commercial Fishery	A commercial fishery is one where fish are harvested under the authority of a licence for the purpose of sale, trade, or barter.
Core Housing Need	Housing that falls below indicator thresholds for housing adequacy, affordability, or suitability, and would have to spend 30% or more of its total before-tax income to pay the median rent of alternative local housing that is acceptable.
Crime Severity Index	A measure of the level of crime severity in a jurisdiction and includes all Criminal Code violations, including traffic and drug violations. More serious crimes have a greater impact on changes in the index.
Crown Land	Land belonging to the Province of Ontario.
Furbearer	An animal of species or type declared by regulation to be a furbearing animal.
Housing Starts	An economic indicator that reflects the number of residential housing projects that have been started over a specific length of time (single-family houses, townhouses/condos, apartment buildings with 5 or more units).
Gender Based Analysis Plus (GBA Plus)	An analytic tool used to assess the different positive and negative impacts projects can have on groups of people with distinct characteristics who live in the geographic area of interest (LSA, RSA, province/territory, etc.).
Lease	A type of land tenure under the *Mining Act*, 1990 that gives the holder rights over a designated piece of land for mining and production purposes.
Mineral Rights	The rights to minerals located in, or under the land. Also referred to as mining rights.

Mining Claim	A parcel of land, including land and water, on which a mining claim is registered under the *Mining Act,* 1990.
Patent Land	Means (a) the lands and mining rights patented under or by authority of a statute, regulation or order in council, respecting mines, minerals, or mining, (b) lands or mining rights that are located, registered as a mining claim or used or intended to be used for mining purposes, and (c) surface rights granted solely for mining purposes.
Point-in-Time Count	A tool used to count the number of people experiencing homelessness on a given day/night.
Protected Area	A protected area is defined to protect natural and cultural features, maintain biodiversity and provide opportunities for compatible recreation.
Receptor	A human, plant, bird or animal, or environmental component that could come to harm when exposed to a hazard.
Sport Fish	Fish species that are targeted by recreational anglers and desired in Indigenous fisheries (e.g., pike)
Surface Rights	Every right in land other than mining rights.
Traditional Knowledge	Encompasses traditional land and resource use knowledge.
Traditional Land and Resource Use	An Indigenous Nation's use of land, water and resources, within a traditional territory, lands, or occupancy area.
Unpatented	When referring to land or mining rights, means land or mining rights for which a patent, lease, licence of occupation or any other form of Crown grant is not in effect.
Watercourse	Any flowing water including rivers, streams, and overland flow paths.
Wildlife	An animal that belongs to a species that is wild by nature and includes game wildlife and specially protected wildlife as defined under the *Fish and Wildlife Conservation Act,* 1997.

22 Assessment of Potential Effects on Social Conditions

Social Conditions was selected as a Valued Component (VC) because construction, operations, and decommissioning and closure of the Crawford Nickel Project ('the Project') could increase demand for community services and infrastructure and affect land and resource use activities. These activities, and an increase in population related to the increased presence of the non-local Project workforce, could affect the capacity of community services and infrastructure. They could also affect the ability of local residents to use the land in the Project Area (PA), including recreation, hunting, fishing, and navigation. The Project also has the potential to result in positive effects through hiring practices or if upgrades to existing infrastructure are made to address increased demand caused by the Project. An assessment of these effects, including identification of appropriate mitigation measures to avoid or reduce these effects,

For this assessment, 'social conditions' includes services, infrastructure, and land and resource use. Community services and infrastructure include housing and accommodations, transportation, and local services and infrastructure (water, sewer, power, solid waste, education, recreation, safety, and health care). Land and resource use includes activities and associated infrastructure related to the use of land and resources, including waterways for recreational, commercial, and navigational purposes.

The Tailored Impact Statement Guidelines (TIS Guidelines) (Appendix A.1 of the Impact Statement) include community well-being under social conditions; however, the information requested is largely duplicated in Health Conditions. To avoid repetition, all aspects of social health and community well-being, including baseline information and effects assessment, are found in Chapter 21 (Assessment of Potential Effects on Health).

It should also be noted that potential effects of the Project on the social conditions of Indigenous Nations living on-reserve are assessed in Chapters 25 to 28 (Effects on Indigenous Interests). This chapter addresses the potential effects on the social conditions of members of Indigenous nations living in the communities within the spatial boundaries that have been defined for this VC.

The Social Conditions VC is linked to other VCs, including:

- Atmospheric Environment (Chapter 12) and Acoustic Environment (Chapter 13), whereby Project-related fugitive dust emissions and changes to lighting, noise, and vibration levels may cause a disturbance to land and resource users.
- Surface Water (Chapter 15), whereby changes to surface water quantity may affect navigation and water-based activities.
- Vegetation, Riparian and Wetland Environments (Chapter 16), whereby changes to vegetation due to the removal or alteration of vegetation communities may affect vegetation-based resource activities (i.e., harvesting timber, gathering firewood).
- Fish and Fish Habitat (Chapter 17), whereby changes to fish and fish habitat may affect recreational fishing activities, guide outfitting and commercial bait harvesting.

- Birds and Bird Habitats (Chapter 18) and Wildlife and Wildlife Habitat (Chapter 19), whereby changes in bird and wildlife abundance, distribution and health may affect hunting/outfitting, and trapping activities.
- Health (Chapter 21), whereby changes in the conditions of vegetation, fish, bird and wildlife harvested as country foods may affect the health of human consumers during recreational or commercially based land and resource use.
- Economic Conditions (Chapter 23), whereby information on the workforce and available supply of labour, as well as mitigation and management measures for economic conditions is critical for the assessment of effects on social conditions.
- Indigenous Interests (Chapters 25-28), whereby concerns expressed by Indigenous nations are considered in the assessment of effects on social conditions.

22.1 Scope of Assessment

Services and infrastructure, for the purposes of this assessment, includes housing and temporary accommodations, utilities, health, emergency services, education and childcare, and transportation. These services and infrastructure are used by residents and may be operated and maintained by municipal, provincial and/or federal government authorities.

Land and resource use considers effects on access, ownership, land tenure and use of resources (e.g., minerals, forestry), designated lands and protected areas, outdoor recreation/tourism, use of seasonal cabins including use and safety at Big Water Campgrounds, recreational fishing, commercial baitfish harvesting, hunting/outfitting, and trapping.

22.1.1 Regulatory and Policy Setting

There are several federal and provincial regulatory requirements that may apply to the Project, including environmental assessment and other environmental permitting obligations.

22.1.1.1 Federal Guidance

The Project is being assessed in accordance with the *Impact Assessment Act,* 2019 (IAA), which requires that it include a description of the baseline for the environmental, health, social, and economic conditions related to the project. The IAA also requires a consideration of Gender-Based Analysis Plus (GBA Plus) through the disaggregation of baseline data, where possible. Consideration of GBA plus within the assessment has been informed through Guidance: Gender-Based Analysis Plus in Impact Assessment (IAAC 2021).

As it relates to recreational activities, the *Canadian Navigable Waters Act*, 1985 applies to activities that may alter navigable waters or inhibit the ability for waterways to be navigable.

22.1.1.2 Provincial and Local Guidance

22.1.1.2.1 Land and Resources Use

The activities considered in this assessment are undertaken within the regulatory and legal framework governing both the use of Crown land and resources (e.g., *Public Lands Act,* 1990*; Crown Forest Sustainability Act*; 1994; *Aggregate Resources Act,* 1990) and recreational and commercial fish and wildlife harvesting (e.g., *Fish and Wildlife Conservation Act,* 1997).

The Project and associated potential effects overlap with several provincial and municipal jurisdictions and management units within the Regional Study Area (RSA), including:

- City of Timmins, Town of Smooth Rock Falls, Cochrane, Iroquois Falls, and Cochrane District (unorganized area)
- Cochrane District Social Services Administration Board (CDSSAB)
- Abitibi River Forest Management Unit 110, Romeo Malette Forest Management Unit 930, Timiskaming Forest Management Unit 280
- Wildlife Management Units (#24, #26, #27, #28, #29, #30, #31)
- Northeast Bait Management Zone
- Fisheries Management Zone (FMZ) 8
- Mattagami Region Conservation Authority
- Porcupine and Larder Lake Mining Divisions

Thes management plans and the associated policies (e.g., City of Timmins Official Plan) implemented in these jurisdictions contribute to the framework used to assess potential effects to the social environment as it relates to land a resource use.

22.1.2 The Influence of Consultation and Engagement on the Assessment

Canada Nickel Company (Canada Nickel) has engaged with potentially affected Indigenous nations, regulators, the public, and stakeholders. Table 22.1 provides a summary of the topics, key information including Indigenous knowledge, and concerns that Canada Nickel identified as part of their engagement efforts that relate to the Project, as well as a summary of the influence that the outcomes of this engagement had on the assessment.

This information was considered when evaluating whether Canada Nickel's planned mitigation will effectively manage the identified potential interactions, or whether additional or refined mitigation is warranted.

Questions and concerns regarding services and infrastructure were raised during Environmental Committee Meetings, Workforce Committee Meetings, public engagement meetings, and email. Meetings were also held with the Project Socio-Economic Committee (formerly the Community Contributions and Local Procurement Committee), which was formed by Canada Nickel with social, economic, and municipal representatives from the Project's surrounding communities. The Committee's mandate is to identify and discuss potential social, economic, and health impacts related to the Project in order to jointly define and implement potential solutions.

Throughout the various consultation activities, concerns have been expressed related to infrastructure development in northern Ontario, housing and homelessness, rental availability, and the potential effects of the Project-related influx of new temporary residents to the area. Comments were also received regarding the current and future need for physicians, capacity of childcare and schools in the region, use of emergency services, and the potential effects of the Project on transportation and road infrastructure, and how that may impact emergency services.

With respect to land and resource use, questions and concerns raised during engagement related to mine access from local roads and the potential impacts to local snowmobile club trails.

Table 22.1 Summary of Key Information, Indigenous Knowledge, and Concerns for the Project Related to Social Conditions

Topic	Key Information, Indigenous Knowledge, and Concerns	Influence on the Assessment	Where Information is Addressed in the Impact Statement
Transportation Infrastructure	• Members of the public and other stakeholders expressed concern about the potential social impacts of an influx of workers on transportation infrastructure. • Flying Post First Nation, Matachewan First Nation, and Mattagami First Nation expressed concern regarding a lack of reliable transportation options (e.g., busses) in the region and the need for roadwork on and leading to their communities. Matachewan First Nation shared that members often rely on carpooling to get to towns or places of employment. • Flying Post First Nation expressed concern regarding impacts to infrastructure used by the community (roads, traffic). • Matachewan First Nation expressed concern about increased traffic related to the Project.	• Contributed to understanding of existing conditions for transportation infrastructure, as well as the development of mitigation and management measures and supported scope of issues assessed. • Canada Nickel will prepare a Traffic Management Plan. The Traffic Management Plan will be developed during ongoing planning and engineering design to address traffic staging in order to reduce delays. • Potential effects on change in demand for transportation infrastructure was carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).	• Chapter 22 (Assessment of Potential Effects on Social Conditions), Sections 22.2, 22.4.4, 22.4.4.2, 22.4.4.3. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).
Land Use Designations and Construction of Third-Party Infrastructure (Transmission Line, Rail Line, Highway 655 realignment)	• Matachewan First Nation expressed concerns regarding effects to current and future use of lands and resources, including from construction of the rail line, transmission line, and highway relocation. • Flying Post First Nation expressed concern regarding impacts to infrastructure (roads, traffic). • Taykwa Tagamou Nation expressed concern that the transmission line corridors have opened up its Traditional Territory to outside users; snowmobilers (adding noise), potentially scaring off wildlife for harvest; hunters and coyotes travel along transmission line corridors, act as additional competition for wildlife; added pressures impact ability to engage in traditional land use practices. • Mattagami First Nation expressed concern over loss of freedom of movement from industrial development in its traditional territory which has affected ability to access lands for harvesting. • Mattagami First Nation expressed concern regarding the relocation of Highway 655 as it may impact important areas and spiritual values, increase road usage, and cause potential increase in wildlife mortality.	• Contributed to an understanding of existing conditions for infrastructure in the region as well as the development of mitigation and management measures. • A description of ancillary components and infrastructure is provided in Chapter 3. • Potential effects on change in land use designations, including the construction and operation of infrastructure ancillary to the Project (relocated Highway 655, rail spur, and relocated 500 kilovolt transmission line) was carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests). • The proposed locations of the corridors for facilities and infrastructure ancillary to the Project are outside of the care and control of Canada Nickel. These ancillary components will be built and/or operated by others but are included in the activities considered in the assessment of effects since they are required for the operation of the mine. Concerns expressed by Indigenous nations regarding ancillary components will be communicated by Canada Nickel to the third-parties responsible for their construction and/or operation.	• Chapter 3 (Project Description) • Chapter 22 (Assessment of Potential Effects on Social Conditions), Sections 22.1.6, 22.4.5, • 22.4.5.1 and 22.4.5.2. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).
Housing and Accommodation Availability	• Members of the public and other stakeholders expressed concern about impacts on housing, lack of available housing, and need for low-income housing for workers (acquiring and accommodating a sufficient workforce). • Flying Post First Nation, Matachewan First Nation, Mattagami First Nation, and Taykwa Tagamou First Nation expressed concern about the lack of affordable and accessible housing in the region and the effects of increased demand from temporary workers. • Flying Post First Nation, Matachewan First Nation, and Mattagami First Nation reported that their communities could use assistance for housing Elders and other members of their communities that may require additional considerations or accommodations, such as for mobility issues.	• Contributed to an understanding of existing conditions for housing, as well as the development of mitigation and management measures and supported scope of issues assessed. • Potential effects on change in housing availability and accessibility was carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests). • Canada Nickel is exploring options with third party partners to help promote new accommodations in the region; however, an agreement had not been reached at the time of writing.	• Chapter 22 (Assessment of Potential Effects on Social Conditions), Sections 22.1.6, 22.4.3, 22.4.3.2 and 22.4.3.3. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).

Topic	Key Information, Indigenous Knowledge, and Concerns	Influence on the Assessment	Where Information is Addressed in the Impact Statement
Health and Medical Services	• Members of the public and/or stakeholders expressed concern about potential social impacts of an influx of workers to the area on community safety, childcare access, health care access, social services, and infrastructure, especially pertaining to vulnerable populations. Commentors recommend need for prevention and mitigation measures and early engagement with service providers on the need to increase capacity. • Taykwa Tagamou Nation expressed concern over health care in the region (i.e., long wait times and the biased treatment of Indigenous peoples), and increased demand related to the Project. • Flying Post First Nation expressed concerns regarding lack of dedicated health centre for mental and chronic health issues, and safety and security of members. • Apitipi Anicinapek Nation, Flying Post First Nation, Mattagami First Nation, Métis Nation of Ontario – Region 3, and Taykwa Tagamou Nation expressed concerns about potential impacts to local community health services and infrastructure including women's shelters, health facilities, mental health and addictions facilities, emergency services, and childcare. • Flying Post First Nation, Matachewan First Nation, and Mattagami First Nation expressed there is limited access to medical services as each community has a small clinic but no hospitals. The Nations added that the Timmins and District Hospital is unreliable due to doctor shortages and now members are travelling further for medical care. The Nations expressed frustration and concern with the level of service and quality of care available at hospitals in the region. • Mattagami First Nation highlighted the First Nations Mental Health Wellness Continuum and the importance of this framework to First Nations. • Flying Post First Nation expressed that there are few mental health support facilities in the communities and recommends those facilities be opened. • Taykwa Tagamou Nation expressed concerns regarding: - Lack of options for members requiring obstetrical care. The Nation's members have to travel far distances to access these services in Timmins, Sudbury, or elsewhere in Ontario. - Increased rates of substance abuse associated with increased mining activities.	• Contributed to an understanding of existing conditions for health and medical services, including consideration of effects on sub-populations. • Considered in the development of mitigation and management measures and the Health and Medical Services Plan (HMSP) to manage occupational and non-occupations injuries and illness. This will include provision of medical care at the Project site through the on-site presence of first responders, nurses, and a dedicated vehicle for transportation of workers in emergency situations. Canada Nickel will also make available an on-line physician 24 hours/day. The HMSP will also include procedures to manage communicable diseases and access to an Employee Family Assistance Program (EFAP). • Potential effects on health and medical services were carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).	• Chapter 22 (Assessment of Potential Effects on Social Conditions), Sections 22.1.6, 22.4.2, 22.4.3, 22.4.2.2, 22.4.2.3 • 22.4.3.2 and 22.4.3.3. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).
Police Services	• Taykwa Tagamou Nation expressed concerns regarding: - Access to police services on reserve, noting that the current police force is not big enough to meet the needs of the community. - Experiencing issues with workers from various projects in the region. • The need to hire more conservation officers due to an influx of Project workers. • How members of the community will be kept safe when there is an increase of workers in the area.	• Contributed to an understanding of existing conditions for police and emergency response services, including consideration of effects on sub-populations. • Considered in the development of mitigation and management measures and supported scope of issues assessed. • Canada Nickle has or will be developing several policies, procedures, and training programs (e.g., Cultural Awareness Training) to support positive relationships between the Project's workforce and the local communities. • Potential effects on police and emergency response services were carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).	• Chapter 22, (Assessment of Potential Effects on Social Conditions), Sections 22.2, 22.4.2. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).

Topic	Key Information, Indigenous Knowledge, and Concerns	Influence on the Assessment	Where Information is Addressed in the Impact Statement
Recreational and/ or Traditional Land and Resource Use, Cultural Activities	• Members of the public and other stakeholders expressed concern about impacts to recreational trails (e.g., snowmobile trails). • Members of the public and other stakeholders expressed concern about the recreational experience for campers and seasonal businesses such as Big Water Campgrounds. Need to provide information about the extent of noise, vibrations, air quality, and water quality changes at Big Water Campgrounds (if any) and any similar receptors identified. Encouraged to engage the business owner(s) and interested seasonal campers on the analysis. • Flying Post First Nation, Matachewan First Nation, and Mattagami First Nation expressed concerns about potential Project impacts to the Mattagami River as it is important for cultural practices, ceremonies, and harvesting. • Matachewan First Nation expressed concerns regarding an overall reduction in abundance and availability of animals observed in Timmins area since settlement. • Flying Post First Nation expressed concerns that stockpiles will be visible by land users affecting quality of life and the ability to enjoy the land as it was prior to the Project. • Flying Post First Nation expressed concerns from increase in recreational sturgeon fishers in the area (e.g., Bromley Lake) and conflicts with efforts to protect the species. • Flying Post First Nation , Matachewan First Nation, Mattagami First Nation, and Taykwa Tagamou First Nation expressed concerns regarding potential impacts to hunting, trapping, fishing, and plant gathering practices due to increased presence of non-Indigenous harvesters or land users, including: - Change in access to preferred areas - Change in necessary conditions (solitude, connection to land) - Potential impacts on food security - Potential impacts on ability to share and transmit knowledge to current and future generations - Potential impacts on species protection efforts (e.g., overfishing, change in wildlife behaviour, quantity, quality). - Increased competition and/or conflict with other land users • Métis Nation of Ontario - Region 3 emphasized that Métis rights and ways of life are strongly linked to lands and resources, and expressed concern that the increased legal restrictions on lands created by the Project will reduce the area Métis citizens have to express those rights.	• Informed engagement plans. • Contributed to the understanding of existing land and resource uses in the Local Study Area (informed baseline conditions), the development of mitigation and management measures, and supported scope of issues assessed. • Potential effects on change in recreation was carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests). • Informed the assessments of potential effects on the Chapter 12 Atmospheric Environment, Chapter 13 Acoustic Environment in, Chapter 14 Groundwater, and Chapter 15 Surface Water.	• Chapter 22, (Assessment of Potential Effects on Social Conditions), Sections 22.2, 22.4.6, 22.4.6.2 and 22.4.6.3. • Chapters 12 (Atmospheric Environment), 13 Acoustic Environment, 14 Groundwater, 15 Surface Water • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).

Topic	Key Information, Indigenous Knowledge, and Concerns	Influence on the Assessment	Where Information is Addressed in the Impact Statement
Social and Economic Benefits of the Project	• Members of the public and/or stakeholder groups, and Flying Post First Nation, Matachewan First Nation, Mattagami First Nation, Taykwa Tagamou First Nation and Métis Nation of Ontario - Region 3 commented about the economic viability and budget for all phases of the Project, particularly during decommissioning. Commented about local and international nickel and electric vehicle supply chains, as well as information on how employee compensation compares to local, national and industry averages. • Members of the public and/or stakeholder groups recommend that Canada Nickel provide details on any commitments to enhance positive socio-economic outcomes for local communities (e.g., employment, educational opportunities). • Apitipi Anicinapek Nation, Flying Post First Nation, Matachewan First Nation, Mattagami First Nation, and Taykwa Tagamou First Nation provided recommendations relative to the social and economic benefits of the Project (e.g. employment, education and training opportunities; Indigenous business contracting, revenue sharing, etc.).	• Informed the engagement plans and/or development of impact benefit agreements with the Indigenous nations. • Contributed to the development of mitigation and management measures. • Canada Nickel recognizes the unique role that industry can play in supporting Indigenous peoples, including supporting equitable access to jobs, training, and education opportunities. Canada Nickel will therefore place a focus on regional and Indigenous employment when seeking to fill workforce requirements for construction and operation. • A description of the social and economic benefits of the Project is provided in Chapter 4 (Project Purpose and Need). • The new mining opportunity that this Project provides to the Cochrane District mining camp area, along with the additional mining supply, partnerships, and employment it will generate, while relying on existing infrastructure, workforce, and services, is in line with the Growth Plan for Northern Ontario, 2011 released under the *Places to Grow Act*. • The Project is expected to generate hundreds of direct employment opportunities and support many indirect employment opportunities in northern Ontario. The Project will also contribute to the generation of government revenues through taxes and royalties. • Potential positive social and economic benefits of the Project were carried forward for the social conditions assessment and informed the assessment of effects on Indigenous interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests). • Canada Nickel's responses to mitigation recommendations made by the Indigenous nations are provided in Chapters 25 to 28.	• Chapter 4 (Project Purpose and Need). • Chapter 22 (Assessment of Potential Effects on Social Conditions), Section 22.4.1.19. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).
Engagement with and Effects on Sub-Populations	• Public and/or stakeholder recommendations that women, youth, Elders, and 2SLGBTQQIA+ people be included in engagement. • Flying Post First Nation, Matachewan First Nation, and Mattagami First Nation expressed that a lack of reliable or adequate childcare services in their community affects members living both on and off-reserve and their ability to secure employment on projects in the region. • Flying Post First Nation, Matachewan First Nation, and Mattagami First Nation expressed concern regarding existing issues of human trafficking in their communities and in the broader region.	• Informed the engagement plans. • Contributed to the development of mitigation and management measures and supported scope of issues assessed. • Potential effects on sub-populations were carried forward for the social conditions assessment and informed the assessment of effects on Indigenous Interests in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).	• Chapter 22 (Assessment of Potential Effects on Social Conditions), Section 22.4.8. • Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).

Where made available by Indigenous nations through engagement, information gathering, and voluntary information sharing, Indigenous knowledge has been considered and incorporated into the Impact Statement, as applicable. Refer to Chapter 7 (Description of Engagement with Indigenous Peoples) for detailed methods regarding the incorporation of Indigenous knowledge into the Impact Statement.

22.1.2.1 Indigenous Nations Engagement

Engagement with Indigenous nations contributed to the understanding of existing land and resource uses in the area, informed baseline conditions, and supported the scope of issues assessed (e.g., water use, hunting and trapping, fisheries, and waterbodies/navigation). In terms of Indigenous harvesting or land use activities, a review of the Traditional Land Use information from Indigenous nations confirmed that members engage, or have engaged, in the following (Chapter 7 of the Impact Statement):

- Apitipi Anicinapek Nation – hunting, plant, and wildlife harvesting, trapping, snaring, and fishing (Apitipi Anicinapek Nation, Tamarack Environmental Associates Inc. 2024).
- Flying Post First Nation – recreational waterbody use (i.e., swimming), harvesting fish species, ceremonial importance of surface waters, sources of clean drinking water, hunting, and trapping (Taggart, Firelight Research Inc, Flying Post First Nation 2023).
- Matachewan First Nation – harvesting fish species, source of drinking water, hunting, and trapping (Taggart, Firelight Research Inc, Matachewan First Nation 2023).
- Mattagami First Nation – harvesting fish species, use of waterway as navigation route, source of drinking water, hunting (Taggart, Firelight Research Inc. Mattagami First Nation 2023).
- Métis Nation of Ontario – Region 3 – traditional species of importance hunted and/or trapped, bird species of importance, and other species of cultural importance, fish species and waterbodies of importance, and traditional harvested plant species (Métis Nation of Ontario – Region 3 2024).
- Taykwa Tagamou Nation – harvesting fish species, spring water sources, hunting and gathering, trapping (Shared Value Solutions 2023).

22.1.3 Potential Effects, Pathways and Measurable Parameters

Project-related effects to be assessed for Social Conditions are identified in Table 22.2 and have been determined by the TIS Guidelines (Appendix A.1 of the Impact Statement). For each effect in Table 22.2, effect pathways and indicators/measurable parameters have been identified to facilitate the quantitative and qualitative measurement of change in Project-specific and cumulative effects potentially caused by the Project.

Where possible, the assessment of potential effects on services and infrastructure used measurable parameters that are quantifiable (e.g., vacancy rates and housing stock). However, not all effects pathways can be quantified (e.g., suitability of housing). Therefore, some effects were predicted qualitatively through use of scientific literature, professional judgment, and project experience.

Measurable parameters facilitate the qualitative or quantitative measurement of potential Project and cumulative effects and provide a means to characterize potential effects to land and resource use. Measurable parameters used in qualitative analyses are defined in the absence of metrics or standards to support quantitative analyses. The selection of effects included in the assessment of environmental effects on land and resource use was based on regulatory requirements (Section 22.1.1), and key issues and concerns identified during the engagement process (Section 22.1.2).

Table 22.2 Potential Effects, Effect Pathways and Measurable Parameters for Social Conditions

Potential Effect	Effect Pathway	Measurable Parameter(s) and Units of Measurement
Services and Infrastructure		
Change in demand for services and infrastructure	• Demand for services and infrastructure may be affected by Project activities and Project-related population increase. • Project activities and the Project's mobile workforce could place demands on community services, such as health, emergency and policing services, childcare, and utilities (including waste disposal).	• Resident and transient population (number of persons) • Project workforce (average and peak number) • Parameters based on affected services and infrastructure (e.g., wastewater treatment capacity, crime statistics, emergency services call volumes, student enrolment)
Change in accommodation availability	• The Project's mobile workforce could draw on temporary accommodations (e.g., hotels, motels, or campgrounds).	• Availability of accommodations (vacancy rates, housing stock) • Project workforce (average and peak number) • Cost of housing ($) • Core housing need • Availability of housing supports
Change in demand for transportation infrastructure	• Transportation of Project construction materials, equipment, and workers could place increased demands on transportation infrastructure.	• Road volume (Annual Average Daily Traffic [AADT]) • Aircraft movements

Potential Effect	Effect Pathway	Measurable Parameter(s) and Units of Measurement
Land and Resource Use		
Change in land use designations and private property	• Project activities may not be compatible with applicable land use plans and zoning. • Project may result in land disturbance effects.	• Conflict with land use designations/zoning • Disturbances affecting established park area plans • Number of private properties affected by Project • Change/restriction of designated land use (ha)
Change in recreation	• Project activities may affect parks or trails that provide recreation and natural heritage conservation value. • Project presence may impair recreational/tourism use activities, visual aesthetics. • There is potential for Project activities to remove or interfere with a navigable waterway.	• Number of areas/sites in proximity • Qualitative recreational use • Change in area (ha) of current recreational use • Qualitative navigable water use • Linear extent of navigable waterway affected (km)
Change in resource use	• Project activities may affect resource use activities (i.e., agriculture, forestry, mining). • Project activities may disrupt resource harvesting activities (e.g., hunting, trapping, bait fishing).	• Number of resource use sites in proximity • Area (ha) of overlapping resource use affected • Area withdrawn from commercial resource harvesting (hunting, trapping, bait fishing) • Change/restriction or disruption affecting resource use (ha) • Sensory disturbance to harvesting

22.1.4 Boundaries

22.1.4.1 Spatial Boundaries

The PA encompasses the Project footprint and is the anticipated area of physical disturbance associated with the construction, operations, and decommissioning and closure of the Project. The PA includes the Open Pit, Stockpiles, and Impoundment Facility, Tailings Management Facility (TMF), two ore Processing Plants, and other mine-related infrastructure, as well as a new rail spur line and the relocation of Highway 655 and an existing 500 kilovolt (kV) transmission line. The extent of the PA for the Project is shown on Figure 22.1.

Services and Infrastructure

The **Local Study Area (LSA)** for services and infrastructure encompasses the area in which Project-related effects (direct or indirect) were predicted or measured with a level of confidence appropriate for the assessment. The LSA is defined as the area beyond the PA where project effects may extend. The LSA is intended to capture effects of the specific components being assessed and includes those communities with the greatest potential to experience effects (positive or adverse) of direct Project demand for services and infrastructure. Effects on services and infrastructure are therefore most likely to occur within those communities where Project workers reside and/or use services and infrastructure. The LSA also includes the Statistics Canada subdivisions for four municipalities: the City of Timmins and the Towns of Cochrane, Iroquois Falls, and Smooth Rock Falls. The extent of the LSA for services and infrastructure is shown on Figure 22.1.

The **Regional Study Area (RSA)** for Services and Infrastructure includes the area within which cumulative effects on the VC are likely to occur, depending on the location of other past, present, or reasonably foreseeable future projects or activities. The RSA for services and infrastructure is the same as the LSA, which encompasses a sufficiently broad area for assessing cumulative effects and is shown on Figure 22.1.

For services and infrastructure, the study area is referred to as LSA/RSA.

Land and Resource Use

A separate LSA and RSA was established for land and resource use. To capture the potential effects of the Project on land and resource use, the LSA includes a 1.5-kilometre (km) buffer around the PA along Highway 655, encompassing Big Water Lake, and along a rail spur line to the point it connects to the provincial rail network at the location of the existing Kidd Metallurgical Site, within the geographic townships of Crawford, Carnegie, Kidd, Lucas, Beck, Nesbitt, Wark and Prosser. A small portion of the Project extent lies within the municipal boundaries of the City of Timmins.

The LSA for land and resource use includes the area where effects on land and resource use are likely to be most prevalent. The extent of the LSA for land and resource use is shown on Figure 22.2. To capture the potential effects of the Project on land and resource use, the RSA corresponds to an area in the Cochrane District in northeastern Ontario, bounded by the City of Timmins, and the Towns of Cochrane, Iroquois Falls, and Smooth Rock Falls. The extent of the RSA for land and resource use is shown on Figure 22.2.

22.1.4.2 Temporal Boundaries

The temporal boundary of the assessment includes all Project phases from the start of construction through to the end of closure. Based on the current Project schedule, the Project phases include:

- Construction (Year -3 to Year -1)
- Operations
  - Operations phase 1 (Year 1 to Year 5): 60 kilotonnes (kt/d) milling capacity with ore extraction
  - Operations phase 2 (Year 5 to Year 30): 120 kt/d milling capacity with ore extraction
  - Operations phase 3 (Year 30 to Year 41): 120 kt/d milling capacity with no ore extraction
- Decommissioning and closure
  - Active closure (Year 41 to Year 46)
  - Passive closure (Year 46+)

22.1.5 Residual Effects Characterization

Table 22.3 Characterization of Residual Effects on Social Conditions

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
Direction	The long-term trend of the residual effect	**Positive –** a residual effect that moves measurable parameters in a direction beneficial to social conditions relative to baseline. **Adverse –** a residual effect that moves measurable parameters in a direction detrimental to social conditions relative to baseline. **Neutral –** no net change in measurable parameters for the social conditions relative to baseline.
Magnitude	The amount of change in measurable parameters or the VC relative to existing conditions	**Services and Infrastructure** **Negligible –** no measurable change in the effect can be noted. **Low –** capacity of services and infrastructure will be at or near to baseline conditions **Moderate –** demand for services and infrastructure approaches current capacity, standard or threshold but will not result in a reduction in standards of service. **High –** demand for services and infrastructure exceeds current capacity, standard or thresholds that result in a reduction in standards of service. **Land and Resource Use** **No Measurable Change –** no measurable change in land and resource use **Low –** a small measurable change in land and resource use, but land and resource use activities can take place at or near current levels **Moderate –** measurable change in land and resource use that is greater than low, but less than high, which can take place at or near current levels

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
		High – measurable change in land and resource use, such that land and resource use activities cannot take place at or near current levels
Geographic Extent	The geographic area in which a residual effect occurs	**PA –** residual effects are restricted to the PA **LSA* –** residual effects extend into the LSA **RSA* –** residual effects extend into the RSA *combined LSA/RSA for services and infrastructure
Timing	Considers when the residual effect is expected to occur, where relevant to the VC	**No sensitivity –** Seasonal aspects (i.e., timing) do not affect VC (services and infrastructure or land and resource use) **Moderate sensitivity** – Seasonal aspects (i.e., timing) may affect VC (services and infrastructure or land and resource use) **High sensitivity** – Seasonal aspects (i.e., timing) affect VC (services and infrastructure or land and resource use)
Duration	The time required until the measurable parameter or the VC returns to its existing condition, or the residual effect can no longer be measured or otherwise perceived	**Short-term –** the residual effect is restricted to no more than the duration of the construction phase (<3 years) **Medium-term –**the residual effect extends through the operations phase of the Project (3-41 years) **Long-term –** the residual effect extends beyond the life of the project (>41 years)
Frequency	Identifies how often the residual effect occurs and how often during the project or in a specific phase	**Single event** – effect occurs once **Multiple irregular event** – occurs at no set schedule **Multiple regular event** – occurs at regular intervals **Continuous** – occurs continuously
Reversibility	Pertains to whether a measurable parameter or the VC can return to its existing condition after the project activity ceases	**Reversible** – the residual effect is likely to be reversed after activity completion and reclamation **Irreversible** – the residual effect is unlikely to be reversed

22.1.6 Significance Definition

The Impact Statement must characterize the extent of significance of any residual adverse federal effect, which includes residual adverse effects within federal jurisdiction and any adverse direct or incidental effects as defined in section 2 of the *Impact Assessment Act*. The removal of waterbodies considered to be navigable and/or have uncertain navigability are associated with federal decisions under the *CNWA* that will cause adverse environmental effects to navigation, and therefore a change in navigable waters is considered an effect within federal jurisdiction for which a determination of the extent of significance is required. As such, the extent to which residual adverse effects on navigable waters are considered significant is presented below.

A residual adverse effect of high significance on navigable waters is one that, following the application of avoidance and mitigation measures, is likely to create a change or disruption that interferes with navigation on a scheduled waterway to a point where activities cannot continue at or near current levels where compensation is not possible.

A residual adverse effect of moderate significance on navigable waters is one that, following the application of avoidance and mitigation measures, is likely to create a change or disruption that interferes with navigation on a non-scheduled waterway to a point where activities cannot continue at or near current levels and where compensation is possible.

A residual adverse effect of negligible/low significance on navigable waters is one that, following the application of avoidance and mitigation measures, is not likely to interfere with navigation to a point where activities cannot continue at or near current levels.

22.2 Existing Social Conditions

Existing conditions for services and infrastructure and land and resource use for the Project are presented in detail in the Social and Economic Conditions Baseline Report provided in Appendix B.9 of the Impact Statement. The existing conditions and the methods used to characterize baseline conditions are summarized in the subsections below.

22.2.1 Methods

22.2.1.1 Services and Infrastructure

As described in the Social and Economic Conditions Baseline Report provided in Appendix B.9 of the Impact Statement, existing socio-economic conditions of the LSA and RSA were established to provide an understanding of the communities most likely to be affected by the Project and to support the assessment of potential Project effects on services and infrastructure.

This section of the baseline report examines services and infrastructure (housing and temporary accommodations, utilities, health services and infrastructures, emergency services, education and childcare services and infrastructure, and transportation services and infrastructure) with an emphasis on those services and infrastructure that could come under pressure from the Project.

The data collection focused on information that will facilitate the assessment of the positive and adverse effects of the Project, and which make a meaningful contribution to the assessment. For example, information on existing conditions includes descriptive information on both services and infrastructure, and the capacity and ability to absorb additional demand. Baseline data collection focused on the compilation of information required to describe current and anticipated social conditions within communities near the Project.

The main sources considered for information on services and infrastructure baseline are:

- the most recently published statistical information from the Statistics Canada Census of the Population and the Canada Mortgage and Housing Corporation (CMHC)
- secondary studies, plans, and documentation relevant to one or more of the socio-economic topics discussed
- information obtained through discussions with municipal authorities
- socio-economic studies prepared by Indigenous nations (see Chapters 25-28)
- local media (news articles and websites)

Baseline data came primarily from secondary sources. As required, telephone and email correspondence were conducted with key informants from local service agencies to confirm secondary data and collect primary data. As part of the consultation process, Canada Nickel established a Socio-Economic Committee comprised of local social, economic, and municipal representatives. The Project's Socio-Economic Committee, described in Section 22.1.2, also provided information with respect to services and infrastructure and Project-related concerns.

As required by the TIS Guidelines (Appendix A.1 of the Impact Statement), baseline information is presented for sub-populations and sub-groups of the LSA and RSA population who may experience disproportionate effects from the Project, where such information is available. This baseline information will contribute to an analysis of disproportionate effects through Gender-Based Analysis Plus (GBA Plus). Sub-populations and sub-groups may include women, Indigenous nations, visible minorities, persons with disabilities, youth, and older adults, among others, and groups who demonstrate any intersection of those characteristics.

To obtain information regarding the sub-populations and sub-groups that may be disproportionately affected by the Project, results of Project engagement and comments from stakeholders on Project documents were reviewed. Concerns and issues brought forward by members of vulnerable groups were documented and have informed the description of existing socio-economic conditions. They will also be carried through the assessment.

Canada Nickel has used engagement methods that are inclusive and will contribute to the analysis GBA Plus. Canada Nickel has and will continue to identify and engage with organizations that may work with and/or represent under-represented, potentially impacted populations. Examples include organizations that provide supportive housing, shelter, and related services and organizations that represent visible minority groups; and organizations that work with or advocate for those experiencing homeless, low-income households, and other vulnerable populations. Canada Nickel has and will continue to share

Project information with these organizations and work to identify issues, interests, and concerns with respect to the Project; seek feedback on potential means of limiting adverse effects and enhancing beneficial effects on vulnerable sub-populations; and seek qualitative and quantitative information on vulnerable sub-populations.

Disaggregated data, where available, have been used to describe baseline conditions for diverse or distinct subgroups to support the GBA Plus analysis of effects, as described in guidance from the Impact Assessment Agency of Canada. Both qualitative and quantitative data have been used to describe baseline conditions across diverse or distinct subgroups, where GBA Plus factors may be relevant to the understanding of effects. For example, quantitative data have been disaggregated, where available, to describe the population demographics of the LSA/RSA. Qualitative data have been included to describe challenges regarding access to housing, health care, and childcare experienced by distinct subgroups. The complete description of baseline conditions is available in the Social and Economic Conditions Baseline Report (Appendix B.9 of the Impact Statement).

Data limitations for services and infrastructure are related to the availability of current baseline data, including Statistics Canada census data, for which the most recently available data was the 2021 Census. More robust information about community services and infrastructure tends to be available for larger communities within the LSA/RSA than for communities with smaller populations.

22.2.1.2 Land and Resource Use

The desktop baseline analysis for land and resource use consisted of secondary research, which involved a review of existing publicly available information (i.e., maps, reports studies, public databases, government data), on-line sources and geographic information system (GIS) data warehouses, other literature and previous environmental assessments.

Topics addressed in establishing the land and resource use baseline included development plans/zoning by-laws, parks and protected areas, recreation/tourism, agriculture, forestry, mining claims/aggregates, hunting, outfitting, and trapping, fishing (commercial and sport), and navigation use. Information gathered and data collected were mapped, where applicable, and characterized.

Land and resource use metrics were generated through GIS analysis. Geospatial data were plotted using GIS software to determine the spatial distribution, and nature of overlapping land-uses with the PA. Data that supported the assessment of land and resource use that was organized by administrative boundaries was transformed into the LSA/RSA using GIS spatial analysis. Parcel fabric polygon data obtained from a private third party was used for GIS analysis of Crown land.

Limitations for the land and resource use analysis relate to the availability of data, including that of ownership status (e.g. lack of property identifiers). Certain data, such as confidential identifier information (e.g., permit holders, licence holders) may not be available for inclusion due to privacy and/or publication limitations.

Engagement undertaken with government representatives, stakeholders and Indigenous nations, and Traditional Knowledge Land Use studies undertaken by Indigenous nations for the Project contributed to the further understanding of land and resource use activities.

In support of the GBA Plus analysis, identity factors were selected to be considered for the assessment. Identify factors for land and resource use include Indigeneity. Indigeneity was selected as a factor for the assessment as the Project is in the Traditional Territories of several Indigenous nations. As Indigenous nation members rely on the uninterrupted use of, and access to, their sacred and culturally important sites (includes harvesting sites) and landscape features for nation members' physical and mental health, well-being, cultural identity, and cultural practices, they may experience effects from the Project differently than other populations.

22.2.2 Overview of Services and Infrastructure

22.2.2.1 Housing and Temporary Accommodations

In 2021, there were 23,839 occupied private dwellings in the LSA/RSA (Statistics Canada 2022). The majority (75.0 percent [%]) of occupied private dwellings were located in Timmins. Most (74.8%) homes in the LSA/RSA were owned in 2021, rather than rented (Statistics Canada 2022).

High construction costs attributed partly to the cost of transporting materials and a shortage of trained tradespeople, have resulted in a decrease in housing starts and northern Ontario having a limited supply of new housing (CMHC 2021).

Home ownership remains relatively affordable in northern Ontario, including Timmins, compared to the rest of the province (The Advocacy Centre for Tenants Ontario and Advocacy North 2021). In 2021, the average price of a home in the LSA/RSA, according to Statistics Canada, was $195,775. This is up from an average price of $165,955 in 2016 (Statistics Canada 2022). Average rents in northern Ontario urban centres are also lower than average for the province (The Advocacy Centre for Tenants Ontario and Advocacy North 2021). While the number of rental units in Timmins increased slightly between 2020 and 2022, the vacancy rate decreased from 5.5% in October 2020 to 3.9% in October 2022 (CMHC 2023).

Results of a housing needs assessment indicate that there is sufficient supply of home ownership housing (as opposed to rentals) in the District of Cochrane (Housing Services Corporation and CDSSAB 2019). Single detached homes made up the largest share of the current housing supply in the District in 2019 however, there is a lack of smaller housing options, for which demand is increasing (Housing Services Corporation and CDSSAB 2019).

There is an inadequate supply of housing for individuals with physical disabilities and those with mental health concerns. (Housing Services Corporation and CDSSAB 2019). Seniors are also challenged to find adequate housing because and many units are not designed to accommodate the needs of seniors and tenants with mobility issues. While all communities in the LSA/RSA had lower instances of core housing need (housing that falls below indicator thresholds for housing adequacy, affordability, or suitability, and would have to spend 30% or more of its total before-tax income to pay the median rent of alternative local

housing that is acceptable) than the provincial average, inadequate housing is an issue in northern Ontario (Statistics Canada 2022).

In summary, the District of Cochrane sees a need for a greater supply of affordable housing options, including transitional housing, supportive housing, social housing units, and affordable private rental and homeownership accommodations.

Municipalities are taking steps to increase the supply of appropriate housing. For instance, the Town of Smooth Rock Falls is encouraging lot development through its Municipal Property Acquisition and Sale Program, which reimburses purchasers by up to 90% below market value after the home is built (Town of Smooth Rock Falls 2024). The Town's Waterfront 20-year Master Plan highlights the development of 140 acres of waterfront land through the construction of 435 residential units. Some lots will begin to be serviced in 2024 (Town of Smooth Rock Falls 2023a).

The City of Timmins is exploring the cost of expanding two existing subdivisions, which could generate up to 150 new homes. The City has also been increasing land for new residential development through the demolition of derelict properties (City of Timmins 2024). As part of its strategy to expand the community, the Town of Cochrane is working on a plan to sell residential lots for as low as $10 (Lentz-McGrath 2024a). Municipal authorities state that the Town has a surplus of lots available that can be easily serviced, and they are hoping the plan will encourage regional employers to relocate their workforces to the Town of Cochrane (Lentz-McGrath 2024a).

Recognizing the need for more affordable housing in Timmins, the City Council created a Housing Task Force in 2022 to be led by the Timmins Economic Development Corporation (TEDC 2021; Grech 2023a). The purpose of the Task Force is to identify challenges to affordable housing and to explore and develop strategies to address the City's current and future housing needs.

In July 2023, the Government of Canada and the Province of Ontario announced an investment of nearly $2 million to help create six supportive housing units that will support youth aged 16 to 21 in Timmins. An old school was acquired by the North Eastern Ontario Family and Children's Services to be transformed into four one-bedroom apartments, a barrier-free/accessible one-bedroom apartment and a three-bedroom unit. This project will provide supportive housing, on-site services, and help teens successfully transition to independent living in their home community (North Eastern Ontario Family and Children's Services 2023).

22.2.2.1.1 Indigenous Housing

Ontario Aboriginal Housing Services (OAHS) is a corporation with a mandate to provide safe and affordable housing to urban and rural First Nation, Inuit, and Métis people living off-Reserve in Ontario. OAHS provides a variety of housing options along the housing continuum starting at rent geared-to-income units and currently ending with assisted homeownership and home repair assistance. Rents are set at rates ranging from 25% of gross income (core need) to 80% of market (affordable) (OAHS 2021). OAHS is the largest Indigenous non-profit housing provider in Ontario with 2,700 homes throughout the province (Grech 2023b). In 2020, CDSSAB and OAHS established a partnership to reduce

homelessness, increase options for housing Indigenous populations, and reduce housing waitlist managed by CDSSAB (CDSSAB 2021a).

In September 2023, the Timmins City Council donated 2.9 ha of City-owned land to OAHS so it can build two three-storey 62-unit affordable housing complexes for a total of 124 units. Construction on the housing complexes is expected to begin in July 2026 (Grech 2023b).

The Timmins Native Non-Profit Housing Corporation aims to provide quality affordable housing to families of Indigenous descent in Timmins. It is overseen by a volunteer Board of Directors and managed by two staff: an Operations Coordinator and an Administrative Clerk. The Timmins Native Non-Profit Housing Corporation is funded by the Government of Canada through the CMHC. It manages 36 housing units made up of two-, three- and four-bedroom units. There are 20 individual and semi-detached units and 16 row housing units in Timmins (Timmins Native Non-Profit Housing Corporation 2015).

Through Indigenous Services Canada, the Government of Canada provides funding to First Nations for housing in their communities. A description of on-reserve housing in each community is provided in Chapters 25-28.

22.2.2.1.2 Temporary Accommodations

As of October 2023, there are 30 hotels, motels, bed and breakfasts, and inns in the LSA/RSA with a total of 1,418 rooms (TripAdvisor 2023). The communities of Timmins and Cochrane have the highest number of temporary accommodations (15 and 12, respectively), with limited options in Iroquois Falls and Smooth Rock Falls. There are also a number of outfitters, campgrounds, and RV parks (Tourism Timmins 2023; Town of Cochrane 2024). Other project specific temporary accommodations occur (or have occurred) within the area based on the short-term needs of specific projects and activities, such as the former Atco camp built along Highway 655 during the construction of the Detour Gold mine that houses 100-200 workers.

The communities in the LSA/RSA belong to the Northeastern Ontario Tourism Region, which had a temporary accommodation occupancy rate of 59.5% from January to July 2023. This is a 1.5% decrease from the same period in 2022, which had an occupancy rate of 58% (CBRE Ltd. 2023).

22.2.2.1.3 Social Housing

Homelessness has existed in the District of Cochrane for many years. It was exacerbated by the Covid-19 pandemic and is currently at critical levels (CDSSAB 2021a). According to a point-in-time count (a tool used to count the number of people experiencing homelessness on a given day/night) of those without a permanent home in the Cochrane District completed in April 2021 found that 142 (58.6%) of the 242 people counted were experiencing chronic homelessness. In June 2023, of the 276 people counted as homeless, 100 (36.2%) were chronically homeless. This refers to those who have been without a home for six months out of the past year (CDSSAB 2021b).

There is evidence that homelessness in the District of Cochrane is more likely to be experienced by members of vulnerable groups, such as youth, seniors, Indigenous peoples, visible minorities, persons

with disabilities, and low-income families (Housing Services Corporation and CDSSAB 2019; CDSSAB 2021a, b). A disproportionate number of youth and Indigenous peoples in the District of Cochrane are experiencing, or are at risk, of homelessness. It has been suggested that this is part of the legacy of residential school abuses and the discrimination encountered when seeking rental housing. According to the results of a survey completed during the April 2021 point-in-time count of homelessness, people of Indigenous ancestry are over-represented among the population of unhoused residents (CDSSAB 2021b).

The CDSSAB is responsible for the administration and funding of social housing and homelessness programs in the District of Cochrane (CDSSAB 2022a). The CDSSAB acknowledges that the supply of subsidized and/or financially assisted housing in the District of Cochrane is not keeping up with the demand. The number of individuals and families on the waitlist for subsidized housing units demonstrates the need for more affordable housing options (Housing Services Corporation and CDSSAB 2019).

There is also a limited supply of supportive and transitional housing in the District of Cochrane and the number of people accessing these supports is increasing (Housing Services Corporation and CDSSAB 2019). Results from a housing needs assessment for the District of Cochrane indicate that additional emergency shelter beds or transitional housing units are needed. In addition to this requirement, there is an insufficient supply of emergency housing for men, youth, and victims of family violence (Housing Services Corporation and CDSSAB 2019). There are four supportive and transitional housing options in the LSA/RSA (Living Space 2023).

A new multi-family affordable housing complex is under construction in Iroquois Falls that will feature about 150 mixed-use units, public recreation green space and a playground, an early childhood education space and an Indigenous culture centre. A modular housing factory is also under development in Iroquois Falls which will have the capacity to build up to 300 modular homes each year. As part of this plan, the operating company, Due North Homes, will build a subdivision with 150 new homes in Iroquois Falls (CBC News 2022).

22.2.2.2 Utilities

Water distribution and treatment services in the LSA/RSA, including sewage treatment, are provided by the towns and communities of Cochrane, Timmins, Iroquois Falls, and Smooth Rock Falls. All the facilities are operating below their capacity, with the exception of the Whitney and Tisdale Wastewater Treatment Plant in Timmins, which is operating slightly beyond its capacity of 20,457 cubic metres per day (m^3/day).

The Deloro Landfill Site is located in Deloro Township, within the limits of the City of Timmins, Ontario. The site is approved for the use and operation of a 40-hectare (ha) landfill site within a total area of 375.2 ha. The Fournier Landfill is owned and operated by the Town of Cochrane. An expansion has been proposed so that it will accommodate the waste disposal needs until 2044 (Ontario 2023a). The Nellie Lake Landfill is operated by the Town of Iroquois Falls. It was developed with a proposed capacity of 315,000 m^3 (Ontario 2021a). The Smooth Rock Falls landfill was recently proposed to be expanded to 172,500 m^3 (Smooth Rock Falls 2018).

22.2.2.3 Health Services and Infrastructure

22.2.2.3.1 Health Facilities

Ontario Health has six health regions to lead the local health systems, fund health care providers, and monitor health care performance (Ontario Health 2023). The Porcupine Health Unit (PHU) is a public health unit serving Cochrane District. Its head office is in Timmins, and it has a staff of 120 in nine offices throughout the region (PHU 2023). Data for the North East Region indicate that in 2022, it had 723 family medicine physicians, up 1.1% from 2018 when it had 715. In 2022, the North East Region had 124 physicians per 100,000 population compared to 115 physicians per 100,000 population in the province (CIHI 2022). There were 455 specialists in the North East Region in 2022, an increase of 1.8% from 2018. In 2022, there were 78 specialists per 100,000 population in the North East Region versus 118 per 100,000 population in the province (CIHI 2022).

Despite these data, there appears to be a shortage of family doctors in the Cochrane District (The Daily Press 2022). The Northern Ontario School of Medicine has suggested that the city will need to recruit 17 new physicians to replace the larger practices that closed since 2020 (The Daily Press 2022).

Some recent initiatives have been established to recruit doctors to Northern Ontario communities, including Frontier Spirit Physician Recruitment, a not-for-profit corporation created by the municipalities of Cochrane, Iroquois Falls, and Matheson. It consists of representatives from each of the three municipalities, a representative from two family health teams, as well as three skills-based individuals (Lentz-McGrath 2024b).

The Timmins and District Hospital is located within Timmins and serves the Cochrane District, as well as the Temiskaming, Sudbury, and Algoma Districts (Timmins and District Hospital 2023a). The 184-bed hospital has 850 staff and 74 physicians and offers services ranging from medical, surgical, critical care, maternity, newborn, pediatric, long-term care, and mental health services.

The Lady Minto Hospital in Cochrane provides in-patient, complex ongoing care, emergency, outpatient, ambulatory care, general surgery, and long-term care. It has 25 acute, eight continuing care, and 37 long term care beds. Cochrane and Iroquois Falls are members of the Matheson, Iroquois Falls, and Cochrane Groups network of three hospitals, consisting of both emergency and long-term care services.

The Anson General Hospital in Iroquois Falls is a 34-bed hospital: 19 acute and 15 continuing care beds. Visiting speciality clinics provided for: general surgery, internal medicine, urology, gynecology, neurology. Through the PHU, Iroquois Falls is also provided with regularly scheduled clinical appointments which offer the same range of routine and emergency care services (MICS Group of Health Services 2021).

Smooth Rock Falls Hospital has one full-time physician and three part-time physicians. Emergency services are available 24-hours per day, including patient medical, palliative care, chronic care, long-term care, laboratory, and radiology services (Town of Smooth Rock Falls 2022). The Falls Medical Clinic focuses on family and community health by appointment only and provides care for minor illnesses and injuries. There is a full-time nurse on staff at the Smooth Rock Falls PHU.

22.2.2.3.2 Mental Health and Addictions Services and Infrastructure

The Canadian Mental Health Association Cochrane-Timiskaming (CMHA-CT) branch provides supports and services to people dealing with mental health challenges. It provides addictions services, including individualized assessment and treatment planning, referral to in-patient substance abuse programs, family support and education, among other services. The Timmins CMHA-CT branch location offers walk-in/call-in mental health and addictions clinics (CMHA-CT 2023).

The Timmins and District Hospital provides addictions services, including the Addiction Medicine Consult Service and the Community Withdrawal Management Service to provide treatment for substance and/or opioid use disorders and for acute withdrawal. The Timmins and District Hospital has two inpatient acute withdrawal management beds, providing a location where people can safely withdraw from substances with medical support (Timmins and District Hospital 2023b).

The Cochrane District Detox Centre in Smooth Rock Falls provides detoxification services, as well as physical and psychological stabilization to individuals struggling with substance abuse. The Centre is housed in the Mattagami Centre and has 27 beds, six of which are designated for women only (HSRFH 2021).

Women and children seeking aid from domestic violence and abuse can access provincial aid, including emergency shelter, by calling the provincial Crisis Line, Assaulted Women's Hotline, Victim Support Line, or Fem'Aide (francophone) telephone numbers (MCCSS 2023). The Ontario Network of Sexual Assault/Domestic Violence Treatment Centres (ONSA/DVTC) operates 37 facilities within the province, though none within the RSA. The nearest ONSA/DVTC facility to the RSA is in North Bay, 373 km south of Cochrane.

The Timmins & Area Women in Crisis centre assists women experiencing violence and abuse and offers services for Indigenous women (TAWC 2018).

22.2.2.3.3 Indigenous Health

Community-led health programs and services for First Nations, Inuit, and Métis communities in Ontario include Aboriginal Health Access Centres, which are Indigenous community-led, primary health care organizations. They provide a combination of traditional healing, primary care, cultural programs, health promotion programs, community development initiatives, and social support services to First Nations, Métis, and Inuit communities in rural, northern, and urban locations (North East Healthline 2023).

There are several Aboriginal Health Access Centres in the LSA/RSA, including:

- Misiway Milopemahtesewin Community Health Centre (Timmins)
- Timmins Native Friendship Centre (Timmins)
- Aboriginal Peoples' Alliance Northern Ontario (Cochrane)
- Métis Nation of Ontario (MNO) - Healing and Wellness (Cochrane)
- Sweetgrass Health Centre (Cochrane)
- Taykwa Tagamou First Nation - Health Centre (Cochrane)
- Mushkegowuk Health (Timmins)

The CMHA-CT has an Indigenous Committee that acts as an advisory body to consider the needs of Indigenous Peoples in CMHA-CT decision making and to improve the health outcomes for Indigenous residents in the area.

Indigenous women facing domestic or family abuse in Ontario can seek counselling and assistance through several help lines, including Talk4Healing, Hope for Wellness 24/7 Help Line, and NAN Hope helpline.

The Ontario Native Women's Association (ONWA) operates a facility in Timmins which offers services for Indigenous women, including trauma-informed care, family violence services, and community health outreach (ONWA n.d.).

More detail on health services and infrastructure in Indigenous nations can be found in Chapters 25-28 (Indigenous Interests) of the Impact Statement.

22.2.2.3.4 Senior Services and Long-term Care Homes

Services for seniors within the LSA/RSA can be sought online through Home and Community Care Support Services North East (Ontario 2023c). There are five provincially listed long-term care homes within the LSA/RSA; two in Timmins, and one each in Cochrane, Smooth Rock Falls, and Iroquois Falls (Ontario 2023d). There are an additional two private long-term care homes in Timmins (Autumnwood 2023; Chartwell 2023).

Golden Manor in Timmins is currently being redeveloped to replace the existing 177-bed long-term care facility The new building will have 192 beds and will be more accessible. It is expected to be complete in May 2026 (Timmins 2023).

There are also plans to build a six-storey long-term care home in the Town of Cochrane. The facility would have approximately 270 beds and would include a medical clinic, diagnostics centre, pharmacy, and retail stores. Construction is expected to start in 2024 and be complete in 2026 (Arangio 2023).

22.2.2.4 Emergency Services

The City of Timmins is served by the Timmins Fire Department, which includes one primary fire station and six volunteer fire stations throughout the community. This department employs 28 full-time firefighters and a number of volunteer members and provides service to several surrounding areas (Timmins 2018a).

The Cochrane Volunteer Fire Department provides emergency services to Cochrane and includes 38 trained members. Iroquois Falls is served by one volunteer fire department. The Smooth Rock Falls Fire Department is staffed by volunteer firefighters and has a fleet consisting of two pumper trucks, a rescue van, a side-by-side all-terrain vehicle (ATV), and a pickup truck.

All communities in the LSA/RSA are within the Ontario Provincial Police (OPP) Force – North East Region. Timmins in the only community within the LSA/RSA with its own municipal police force. The Timmins Police Service (TPS) is composed of 146 staff members, divided between 82 sworn police officers and 61 civilian staff members/auxiliaries (TPS n.d.). The TPS is approved for 96 officers but at its peak, it had 88 officers (Hoggitt 2023). Cochrane, Iroquois Falls, and Smooth Rock Falls are part of the James Bay Detachment of the OPP.

Crime severity index (CSI) is a measure of the level of crime severity in a jurisdiction and includes all Criminal Code violations, including traffic and drug violations (Statistics Canada 2023b). The CSI for Timmins decreased by 8.4% in 2022 (e.g., the most recently available data) to 148.5, from 162.1 in 2021, which recorded the highest CSI from 2018-2022 (Statistics Canada 2023b). In 2021 (the most recently available data; OPP 2023), the total number of violent crimes in the James Bay detachment was 707, an increase of 13.1% from 2020.

The Nishnawbe Aski Police Service (NAPS) is the largest Indigenous police service in Canada and provides service to more than 60% of Ontario through its Northeast Region, Northwest Region, and Central Region (NAPS 2023). The Northeast Regional Office is located in Cochrane, with detachments in numerous surrounding Indigenous nations. The Northeast Region is overseen by a Regional Commander, under whom is a Staff Sergeant responsible for up to 13 sergeants, 49 constables, and numerous administrative staff. In 2022, approximately 14 of the officer positions were vacant due to staff shortages, and an additional 13 were vacant due to leave. From March 2021 to March 2022, there were 11,863 calls for service and 4,419 charges laid (NAPS 2023).

The District of Cochrane provides direct delivery of 20 ambulances across the communities of Cochrane, Iroquois Falls, Smooth Rock Falls, and Black River-Matheson through Cochrane District Social Services Administration Board (CDSSAB 2022a; CDSSAB 2022c). There are 92 full-, part-time, and contracted paramedics employed by CDSSAB in the LSA/RSA.

In 2021, there were 20,403 calls for ambulance service across the District of Cochrane, which includes Timmins, Cochrane, Iroquois Falls, Smooth Rock Falls as well as 11 other communities (TPS 2021). The average response time in 2021 was seven minutes and eight seconds, which increased in 2022 (the most recently available data) to seven minutes and 27 seconds (MOH 2022).

The District of Cochrane has seen a progressive increase in total ambulance call numbers from 2018 to 2022 (the most recently available data; CDSSAB 2022b). Smooth Rock Falls is the only community within the LSA/RSA that has experienced a decrease (-14%) in ambulance calls from 2018 to 2022. Cochrane is the community with the largest change in the number of calls (+43%).

22.2.2.5 Education and Childcare

There are four school boards which administer education across the LSA/RSA communities: District School Board Ontario North East (DSB1), Northeastern Catholic School Board, Conseil Scolaire Catholique de District des Grandes Rivières, and Conseil Scolaire Public de Nord Est de L'Ontario.

In the 2021-22 school year, there were 44 elementary and secondary schools in the LSA/RSA communities. Between the 2017-2018 and 2021-2022 academic years, the total enrolment in the four school districts in the LSA/RSA increased 6.6%, from 16,947 to 18,060 (Government of Ontario 2023a).

For decades, Northern Ontario schools have been experiencing a decline in student enrolment (White 2023). However, some northern school districts are now experiencing modest increases in the student population because of newcomers to Canada who are settling in the region. This has created a need for more teachers and renovations to some schools (White 2023).

There are 44 universities and colleges across Northern Ontario (NOL n.d.), with several located within the LSA/RSA. There are two adult based education centres in the District of Cochrane which provide literacy, numeracy, and essential skills for further adult education and training; Adult Learning Centre and Centre D'alphabétisation au Pied de la Lettre.

There are 14 childcare centres in the LSA/RSA. In addition to private childcare centres, some of the school districts in the District of Cochrane have partnered with licensed childcare operators to provide before and after school care and early learning school readiness programs at several schools throughout the District of Cochrane (DSB1 n.d.).

The Timmins Native Friendship Centre has been operating the Oppekehawaso Wekamik program since 2005, which offers childcare for children 0-12 years of age. It is staffed by Registered Early Childhood Educators (ECEs), Early Childhood Education Assistants, and a Resource Teacher and it is licensed for 76 children (Timmins Native Friendship Centre 2023).

In 2023, the Mayor of Timmins spoke on childcare during the 2023 State of the City Address (Timmins 2023). They indicated that there is a shortage of ECEs in the region, with an estimated 80 ECEs required to meet the present demand. The mayor discussed the need for provincial recruitment and retention strategies for ECEs, as well as the possibility of developing regions-specific strategies. According to the Director of Children's Services for the CDSSAB, as of July 2023, 96% of available childcare spaces in the District had been filled and some spaces had been closed due to a lack of early childhood educators (S. Costello, pers. comm. 2023).

In October 2023, the Ontario Minister of Education announced that 189 new licensed childcare spaces will be created in the District of Cochrane. These additional spaces would represent an 11.7% increase in

the number available within the District of Cochrane (Ontario 2023b). There are staffing concerns associated with this increase, however; the current capacity of childcare centres in the CDSSAB requires 110 educators, and the additional 189 childcare spaces opening in the District of Cochrane will require an additional 56 educators (CTV News 2023d).

22.2.2.6 Transportation

The Victor M. Power Airport in Timmins is the largest municipal airport in the LSA/RSA. It serves more than 200,000 passengers annually. Between 2020 and 2022, aircraft movements at the Timmins airport increased from 13,866 to 16,863 (Statistics Canada 2023). There is speculation that the airport terminal may need to be expanded if there is an increase in the movement of mine workers in and out of the area (Stoffman 2023). A Master Plan is being developed for the airport that will act as a blueprint for future airport operations and development. The plan will address airport infrastructure needs, identify economic opportunities, and provide guidelines for development in the short (5 years), medium (10 years) and long (20 years) term (TEDC 2021).

The Cochrane Airport is located 5 km north of Cochrane and has one runway. It serves private charters, air cargo, and medevac flights (CYCN 2023). The Iroquois Falls Airport is a small aerodrome located 9 km west of Iroquois Falls. It is in the process of being renovated, including development of a new industrial park (Iroquois Falls 2023c).

Ontario Northland Transportation Commission (ONTC) is a provincial agency operating bus and railway services in northern Ontario. There are ONTC stations in Timmins, Cochrane, Iroquois Falls, and Smooth Rock Falls. However, only the Cochrane Railway Station is connected to the passenger railway system; the other stations are only serviced by ONTC bus service. The Cochrane Railway Station is also the southernmost stop of the Polar Bear Express, a passenger train operated by ONTC in Northern Ontario.

The ONTC is presently working on increasing passenger rail service in Northern Ontario with the Northlander Passenger Train, which will connect Toronto to several Northern Ontario communities, including Timmins, before terminating in Cochrane, where it will connect to the Polar Bear Express line. The ONTC also operates a freight rail system in Northern Ontario, including providing service to Timmins, Iroquois Falls, and Cochrane (ONTC 2023).

Highway 655 runs north south through the PA connecting to Highway 11, the Trans-Canada Highway located north of the PA, to Highway 101 located south of the PA. The PA is readily accessible from both Timmins and South Porcupine from the south, as well as the communities of Smooth Rock Falls and Cochrane to the north on Highway 11.

Highway 655 is a two-lane highway with a design speed of 110 kilometres per hour (km/hour) and is posted with a regulatory speed limit of 90 km/hr. The Annual Average Daily Traffic (AADT) for Highway 655, north of Kidd Creek Mine Road and Highway 11 is 1,200. Forecast AADT for 2030 is 1,300 vehicles per day. The Level of Service for Highway 655 is ‘A’.

22.2.3 Overview of Land and Resource Use

22.2.3.1 Land Use Designations and Private Property

Parts of the Project are located on provincial Crown lands, and reservations to the Crown exists on privately held lands. The Project RSA consists of lands made up of patented[1] lands (i.e., privately owned), provincial parks, conservation reserves, and First Nation Reserves, totaling 312,327 ha. Unpatented[2] Crown land in the RSA totals 688,253 ha. These lands are located within surveyed municipal boundaries and unorganized areas in the Cochrane District community planning area of northeastern Ontario (Figure 22.3). The PA is comprised mostly of privately held surface rights. The Project is defined by a combination of 162 mining patents and 161 mining claims. Canada Nickel holds or is in the process of acquiring a 100% interest in the mining rights under the future mine infrastructures and is working with landowners to obtain surface rights in the PA.

The PA is not located near any federal lands. The closest lands under federal jurisdiction are Taykwa Tagamou Nation's Reserve lands located approximately 37 km away (straight line) from the Project site (14 km southeast of Cochrane). The New Post 69A Reserve totals 116 ha in the RSA.

There are one residential and four camp/cottage properties near the PA.

The Project is in the geographic townships of Crawford, Carnegie, Kidd, Lucas, Beck, Nesbitt, Wark and Prosser within the Cochrane District in northeastern Ontario (Figure 22.4). The Project RSA encompasses the City of Timmins, Town of Cochrane, Town of Iroquois Falls, and Town of Smooth Rock Falls. The following municipal Official Plans (OPs) and Zoning By-laws apply to the Project:

- City of Timmins Official Plan – Only a small portion of the PA, the southern portion associated with the Highway 655 re-alignment and rail spur line falls within the City of Timmins Official Plan area.
- City of Timmins Zoning By-law No. 2011-7100 – Outside of the urban portion of Timmins, lands within the PA (only the southern portion) are zoned primarily as "RD-RU Rural" and "EA-IM – Mining (Class III)". Numerous Crown Land Parcels are included in the municipal boundary.

There are no provincial parks, conservation reserves, Areas of Natural and Scientific Interest (ANSI) sites, or provincially significant wetlands in the PA. There are five Provincial Parks in the RSA (Figure 22.5). No provincial parks are in the LSA. There are five Conservation Reserves in the RSA (Ontario GeoHub 2023b). Five ANSIs occur within the RSA. There are six provincially significant wetlands in the RSA, and one provincially significant wetland in the LSA, Kraft Creek/Murphy Creek. There are four Conservation

[1] Patented land from mining land tenure and non-mining tenure was used as a proxy approximation for private land. Patented land represents land transferred from the Crown into private ownership. Fee simple represents the broadest private property interest in law.

[2] Assumed unpatented Crown land refers to what is left over after removing patent land, First Nation Reserve, provincial parks, and conservation reserves. It is an estimate only as a separate Crown land data set is not available.

Areas within the Mattagami Region Conservation Authority (Mattagami Region Conservation Authority 2023). All are concentrated in and around the City of Timmins.

Land use designations for Crown land are established by the Crown Land Use Policy Atlas (MNRF 2023a). Crown lands within the land and resource use LSA, including the PA, are designated as 'General Use', which encourages mineral exploration and development activities. Other recreation activities related to Crown land recreation, hunting, sport fishing and road use are permitted/managed by the MNRF in these areas (MNRF 2023a).

22.2.3.2 Outdoor Recreation/Tourism

22.2.3.2.1 Recreation Activities

Tourism opportunities in Northeastern Ontario (Tourism Region 13a) are numerous and diverse. Existing tourism offerings include licensed guide-outfitters, licensed fishing guides, cabins, lodges, resorts, scenic touring, and cultural/historical attractions and sites. Visitors to Northeastern Ontario in 2021 participated in numerous outdoor activities, including boating/canoeing, golfing, fishing, hunting, ATVing, cycling, hiking, camping, visiting beaches, and wildlife/bird watching (Ministry Tourism, Culture and Sport 2021). Winter activities include snowmobiling, downhill skiing, cross-country skiing, and snowshoeing (The Seven Northeastern Ontario Canada n.d.).

Three trails cross through the PA, associated with the Arctic Riders and Timmins Snowmobile Clubs, and Polar Bear Riders Trail 'A' (Figure 22.6). The total intersect length is approximately 10 km. Five trails cross through the LSA for a total intersect length of approximately 45 km, including the three trails referenced above plus the Ontario Federation of Snowmobile Clubs (OFSC) official trail and Polar Bear Riders Snowmobile Club. An additional 36 trails (e.g., canoe, hiking, cross-country ski, ATV), identified through baseline studies (see Appendix B.9 of the Impact Assessment), cross through the RSA totalling a linear distance of approximately 1,460 km (Ontario GeoHub 2023c). ATV trails in the RSA includes a loop trail from Cochrane that is part of the Gateway to the North ATV route (Adventure North Ontario 2023b).

The Town of Cochrane offers a gateway to Greenwater Provincial Park. Abitibi Campground offers campsites along the Abitibi River. Good Time Outfitters offers a drive-in and fly-in hunting and fishing destination at their lodge on Silver Queen Lake (Tourism Cochrane 2023).

The Timmins area offers numerous recreational areas from provincial parks to private campgrounds and Recreation Vehicle sites. Boating, canoeing, kayaking, and fishing are available on the many lakes and rivers in the area. Located east of Highway 655 north of Timmins, Big Water Campgrounds is open from May 15th to October 15th, and offers 300 campsites, with both serviced and un-serviced lots. Additional amenities include walking and running trails, ATV trails, two beaches, two boat launches, and opportunities for fishing, canoeing, and kayaking on Big Water Lake (Big Water Campgrounds Inc. 2023).

The Project RSA encompasses Fisheries Management Zone (FMZ) 8 (MNRF 2023b). Fish species found in FMZ 8 that have seasons and limits include trout and salmon combined (including splake), brook trout, lake sturgeon, lake trout, lake whitefish, largemouth and smallmouth bass (combined), northern pike, rainbow trout, sunfish, and walleye and sauger or any combination, and yellow perch (Government of

Ontario 2023c). Six spawning areas have been identified in the RSA, including the Mattagami River, for brook trout, lake trout, lake whitefish, smallmouth bass, walleye, and white sucker. One spawning area falls within the LSA near Bigwater Lake, for brook trout. Fish species that are stocked in FMZ 8 waterbodies consist of aurora trout, brook trout, lake trout, rainbow trout, and splake (MNRF 2023c).

Preliminary evaluation of the potential for navigable watercourses within the PA, LSA and RSA was conducted. The Government of Ontario identifies the canoeing and kayaking season as being from May to October with the peak season between July and August (Government of Ontario 2024a, b). Although navigation was not observed as part of other baseline field studies, navigation is possible throughout the entire open water season, or high-water season only, with obstacles on the following watercourses/ waterbodies: Mattagami River, Trapper's Creek, Jocko Creek, Esker Lakes, North Driftwood River, Prosser Lake, and West Buskegau River. Several lakes (Martin Lake, Gerry Lake, Jack Lake, Davis Lake, and Zed Lake) in the LSA are connected by tributaries of Jocko Creek that are overlapped by the PA.

22.2.3.3 Resource Use

22.2.3.3.1 Land and Water

There are 5.6 ha of agricultural land within the LSA, but no agricultural properties within the PA (Figure 22.7). The RSA includes 13,878 ha of agricultural land.

The RSA overlaps with one Source Protection Area (SPA), the Mattagami Region SPA. This SPA is for the City of Timmins sole municipal drinking water source, the Mattagami River. Residents in areas without access to the municipal drinking water supply obtain drinking water by other means (e.g., private wells). There are three recorded wells located within the PA, one of which is abandoned, and the other two wells are registered as commercial and domestic supply wells. An additional five unrecorded water supply wells have also been identified – one drilled well and four suspected surface water supply (Chapter 14 of the Impact Statement). There are 61 Ministry of Environment, Conservation and Parks (MECP) water well records for water supply wells located outside of the PA but within the LSA/RSA, of which 38 are associated with a water supply well. There are two active Permits to Take Water within the LSA/RSA, one for a water supply well and for dewatering from a mine sump, and the other for dewatering of groundwater and surface water at a quarry (MECP 2023b).

22.2.3.3.2 Mining and Aggregate

The Cochrane District contains numerous mining claims, including mining claims and patent claims (Ontario Ministry of Mines 2022). Lease and patent lands comprising mining and surface rights total 938 ha in the PA and 4,064 ha in the LSA. Patent lands with mining rights only in the PA total 7,088 ha; lease and patent lands in the LSA with mining rights only totals 13,301 ha. Lease lands within the LSA with surface rights only totals 509 ha. There are 2,780 ha of active operational claims in the PA, and 9,803 ha of operational claims in the LSA.

The PA consists primarily of patented mining claims with surface and mining rights, mineral leases with surface and mining rights, and operational cell mining claims with mining rights only (Figure 22.8). The PA encompasses 24 ha of lease land and 8,002 ha of patent land. Most of the Project mining facilities will be

located on patent mining lands, although some infrastructure may be located on unpatented lands (e.g., provincial Crown lands).

Within the LSA, there is one active mine, the Hoyle Pond Mine (gold). In addition, four other base metal and gold mines are in the RSA beyond the LSA: Kidd Creek Mine, Bell Creek Mine, Hollinger Mine, and Timmins West Mine.

There are 57 active aggregate sites in the RSA and one active aggregate site is in the LSA (along Highway 655. In the Smooth Rock Falls Area, there are five sand and gravel deposits, three of which are the most important natural aggregate deposits in the area (Ontario Geological Survey 1984). In the central part of the City of Timmins, there are five substantial sand and gravel deposits (Ontario Geological Survey 1983a). Four areas with substantial sand and gravel deposits were noted in the eastern part of the City of Timmins (Ontario Geological Survey 1983b). Within the broader Cochrane District (unorganized), there are some 333 authorized aggregate sites, consisting of licensed and permitted pits and quarries (Figure 22.8). There is one active aggregate pit operating in the PA, the Carnegie Pit.

22.2.3.3.3 Forestry

Most of the RSA is located within Abitibi River Forest Management Unit (FMU) 110. The FMU area within the PA, LSA and RSA totals 11,785 ha, 34,162 ha, and 807,326 ha respectively (Figure 22.9). The current licensee for this FMU is Abitibi River Forest Management Inc., held under the Abitibi River Forest Sustainable Forest License (SFL) No. 551832 (Ontario Ministry of Natural Resources and Forestry 2023; Ontario GeoHub 2023d; Abitibi River Forest Management Inc. 2022). Crown managed productive forest in FMU 110 constitutes 69% or 2.1 million ha of the land area in the Abitibi River Forest, while non-productive Crown Forest consists of 275,925 ha. A substantial part of the forest in the RSA is comprised of private land which is not managed under the FMP. Crown timber on private land is managed by MNR Districts under the Management of Crown Trees on Patent Land program and is excluded from the Forest Management Plan. Currently there are 4,575 ha of Crown timber on patent land, of which 824 ha is forested.

Abitibi River Forest Management Inc. current plan shows no proposed forest harvest areas within the PA in FMU 110 (Figure 22.10). Blocks of proposed harvest areas are situated in the LSA south and southeast of the Project, east of Highway 655 and along the existing railway line from Kidd Creek. Additional areas identified as Forecast Depletion (Harvest) Areas (areas not yet harvested under the previous plan) occur within the LSA southeast of Big Water Lake along the existing railway line from Kidd Creek. Most of the proposed harvest areas within FMU 110 are situated east of the PA in the RSA. Segments of existing roads that may be used for forestry exist in the PA west of existing Highway 655 and in the LSA at Kidd Creek (Figure 22.10).

A portion of the Romeo Malette Forest (FMU 930) encompasses the area west of Timmins in the Project RSA (Figure 22.9). The current licensee is GreenFirst Forest Products (QC) Inc., held under SFL No. 550398 (Ontario GeoHub 2023d; RYAM Forest Management 2018). Crown managed productive forest in FMU 930 consists of 498,526 ha or 93% of the land area in the Romeo Malette Forest; non-productive forest constitutes approximately 35,531 ha. Patent land (3%), largely made up of mining claims and is concentrated to the east of the Romeo Malette Forest along highways (e.g., Highway 655).

The total managed Crown productive forest land area on the Timiskaming Forest (FMU 280) is approximately 1.0 million ha or 85% of the land area; non-productive forest constitutes 74,456 ha. A portion of FMU 280 overlaps with the RSA.

22.2.3.3.4 Hunting/Outfitting and Trapping

In Ontario, big game species hunted through a licence includes white-tailed deer, moose, elk, American black bear, northern grey wolf, coyote, wild turkey, small game and furbearers, bullfrogs, and game birds. Migratory game birds hunted include waterfowl, common snipe, woodcock, and mourning dove (Government of Ontario 2023b). The regulated hunting season generally begins in early September, though specific hunting seasons vary by species and Wildlife Management Units (WMUs). Methods of hunting also vary depending on game hunted and season (Government of Ontario 2023b).

The Project RSA encompasses portions of seven WMUs in Northeastern Ontario – #24, 26, #27, #28, #29, #30, and #31. The LSA encompasses two WMUs – #29 and #30; the PA includes one WMU – #30 (Figure 22.11). WMUs #24, #26 and #27 fall within Cervid Ecological Zone A (with woodland caribou and low densities of moose and white-tailed deer). Tourist operators offering moose hunting services provide those services in the WMU where they have moose licence tags. Tourist operators providing American black bear hunting services are required to be licensed for a particular Bear Management Area (BMA). There are 43 BMAs in the Project RSA; three in the LSA (Figure 22.11). Two BMAs (e.g., CC-30-015, TI-30-048) are within the PA (Ontario GeoHub 2023f). The Social and Economic Conditions Baseline Report provides information on hunting activity and harvests by WMU (Appendix B.9 of the Impact Statement). There is one tourist operator business in the RSA, Good Time Outfitters, operating out of Cochrane. This operator offers hunting services in two BMAs and has four camps, all of which are located to the north of the RSA (Northern Ontario Tourist Outfitters Association 2024).

Trapping occurs within WMUs #24, #26, #27, #28, #29, #30, and #31 (see Figure 22.11). There are 90 traplines (all or partial) within the Project RSA and nine within the LSA (Ontario GeoHub 2023g). Five trapping areas cross the PA. Trapping harvest activity of furbearers is not broken down by WMUs. Furbearer species trapped include beaver, North American river otter, bobcat/lynx, American mink, muskrat, fisher and American marten, coloured fox, wolf, coyote, opossum and racoon, arctic fox, red squirrel, weasel, and skunk (Government of Ontario 2023e).

22.2.3.3.5 Commercial Fishing

The Project RSA overlaps 148 bait harvest block areas, of which 16 are overlapped by the LSA (Figure 22.12; Ontario GeoHub 2023h). Nine bait harvest block areas fall within the PA. Permitted baitfish species include darters, minnows, sculpins, sticklebacks, suckers, central mudminnow, lake herring (cisco), and trout perch. Crayfish, subject to certain restrictions, and northern leopard frogs may be captured and used as bait (Government of Ontario 2023d). During fish surveys conducted in 2021, 2022, and 2023, fourteen baitfish species were recorded in the PA and LSA including shiners, stickleback, minnow, dace, darters, perch, and sucker (Appendix B.8.2 of the Impact Statement [2021-2023 Fish and Fish Habitat Baseline]). Watercourses and waterbodies where baitfish species were found in and adjacent to the PA include an unnamed pond, unnamed streams and tributaries to the North Driftwood River, Gerry Lake, an unnamed stream and tributary to the West Buskegau River, and the West Buskegau River (Wood Canada Limited 2022). There are no other commercial fisheries other than baitfish in the RSA.

22.2.3.4 Indigenous Land Use

The PA, LSA, and RSA for land and resource use are located close or within the traditional territories of Apitipi Anicinapek Nation, Flying Post First Nation, Matachewan First Nation, Mattagami First Nation, Métis Nation of Ontario – Region 3, and Taykwa Tagamou Nation. The Indigenous nations each prepared traditional land use and occupancy studies for the Project documenting Indigenous land use within each nation's Traditional Territory. The LSA, encompassing the PA and surrounding territories, provides nation members with various food and resources (e.g., fish, plants, water, wildlife) that are utilized for ceremonial purposes (e.g., springs, surface water), harvesting (e.g., gathering, fishing, hunting, snaring, trapping) and use (e.g., drinking water, swimming, travel route). A more detailed description of Indigenous nations traditional land and resource use is provided in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests).

Indigenous nation members report harvesting for a variety of fish species, including walleye, pickerel, northern pike, perch, sturgeon, bass, sauger, pike, whitefish, lingcod, perch, sturgeon, minnow, speckled trout, and lake trout from lakes and rivers systems in the area (Shared Value Solutions 2023; Taggart, Firelight Research Inc, FPFN 2023; Taggart, Firelight Research Inc, MGFN 2023; and Taggart, Firelight Research Inc, MTFN 2023).

Indigenous nation members also reported harvesting a variety of large and small game, including moose, American black bear, duck, spruce grouse, ruffed grouse (partridge), rabbit, and beaver in the area (Shared Value Solutions 2023; Taggart, Firelight Research Inc, FPFN 2023; Taggart, Firelight Research Inc, MGFN 2023; and Taggart, Firelight Research Inc, MTFN 2023).

Use of springs and surface water use was identified by Indigenous nation members in the area (Shared Value Solutions 2023; Taggart, Firelight Research Inc, FPFN 2023; Taggart, Firelight Research Inc, MGFN 2023; and Taggart, Firelight Research Inc, MTFN 2023). The Groundhog River was identified as an important waterbody to Flying Post First Nation members for recreation purposes (e.g., swimming) (Taggart, Firelight Research Inc, Flying Post First Nation 2023).

Traditional species of importance to Métis Nation of Ontario – Region 3 that are hunted and/or trapped by its members include American marten, beaver, fisher, American mink, fox, grey fox, muskrat, squirrel, North American river otter, weasel, rabbit, wolf, coyote, lynx, wolverine, American black bear, cougar, moose, boreal caribou, deer, white-tailed deer, geese, duck, grouse/partridge, and crane. Bird species of importance include Canada warbler, common nighthawk, eastern whip-poor-will, olive-sided flycatcher, and yellow rail. Other species of cultural importance include snowshoe hare, little brown myotis, bald eagle, and osprey. Fish species of importance include bait fish (dace, shiners), sauger, bass, mooneye, goldeye, splake, northern pike/jackfish, sucker, brook trout, burbot, perch, catfish, lake sturgeon, pickerel/walleye, lake trout, and lake whitefish. Fish habitat, potential spawning grounds and important waterbodies were identified in the West Buskegau River, North Driftwood River, Jocko Creek Watershed, and Smooth Rock Falls. Traditional harvested plant species include moss, fungi, reindeer lichen, blueberries, raspberries, gooseberries, Labrador tea, tamarack, and mushrooms (Métis Nation of Ontario 2024).

22.2.4 GBA Plus Summary

As required by the TIS Guidelines (Appendix A.1 of the Impact Statement), the assessment of Social Conditions considers the potential effects on sub-populations and sub-groups of the LSA/RSA population who may experience disproportionate effects from the Project. For this assessment, these include women, Indigenous nations, low-income families, visible minorities, persons with disabilities, youth, and older adults.

As described in the existing conditions for services and infrastructure, access to suitable housing presents the greatest challenge for members of vulnerable groups in the LSA/RSA. Data suggests that while the average purchase price of a house and average monthly rent within LSA/RSA communities is lower than provincial averages, affordability is still an issue for sub-populations of the population. Single detached homes account for the largest share of the current housing supply in the Cochrane District and there is a recognized need for more diversified housing stock, including smaller housing options, affordable housing options, including transitional housing, supportive housing, social housing units, and rental units.

There is an inadequate supply of housing for individuals with physical disabilities and those with mental health concerns. As a result, members of these populations in the District of Cochrane are increasingly challenged to find and maintain appropriate housing without the specialized supports they require (Housing Services Corporation and CDSSAB 2019). Seniors are challenged to find suitable housing because of the high percentage of older housing that requires major repairs in the District. For seniors, it becomes more difficult to remain in their own home due to mobility and health challenges, and many units are not designed to accommodate the needs of seniors and tenants with mobility issues.

There is evidence that homelessness in the District of Cochrane is likely to be experienced by members of vulnerable groups, such as youth, seniors, Indigenous peoples, visible minorities, persons with disabilities, and low-income families, more often than other members of the population (Housing Services Corporation and CDSSAB 2019; CDSSAB 2021a, b). A disproportionate number of youth and Indigenous peoples in the District are experiencing, or are at risk, of homelessness. According to the results of a

survey completed during the April 2021 point-in-time count of homelessness, people of Indigenous ancestry are over-represented among the population of residents with no home (CDSSAB 2021b).

There is a limited supply of supportive and transitional housing in the District of Cochrane and the number of people accessing these supports is increasing (Housing Services Corporation and CDSSAB 2019). There is also an insufficient supply of emergency housing for men, youth, and victims of family violence (Housing Services Corporation and CDSSAB 2019).

22.3 Project Interactions with Social Conditions

Table 22.4 identifies, for each potential effect, the physical activities that might interact with the VC and result in the identified effect. These interactions are indicated by a check mark (✓)and are discussed in detail in Section 22.4, in the context of effects pathways, standard and Project-specific mitigation/enhancement, and residual effects.

Table 22.4 Project Interactions with Social Conditions

Physical Activities	Effects					
	Change in demand for services and infrastructure	Change in accommodation availability	Change in demand for transportation infrastructure	Change in land use designations and private property	Change in recreation	Change in resource use
Construction						
Mobilization of construction equipment and materials on site.	–	–	✓	✓	✓	✓
Vegetation clearing, including the removal and disposal of trees, brush, shrubs, and other foliage.	–	–	–	✓	✓	✓
Stripping, including the removal of topsoil and other organic materials, as well as storing of some materials for use in reclamation.	–	–	–	✓	✓	✓
Grading of overburden to be used as fill.	–	–	–	✓	✓	✓
Handling and use of explosives, including blasting.	–	–	–	✓	✓	✓
Excavating and pre-stripping of mine rock from the Open Pit and surrounding area.	–	–	–	✓	✓	✓
Development of the Impoundment Facility for storage of rock, clay, sand, and till.	–	–	–	✓	✓	✓
Preparation of construction surfaces, including hauling reclaimed graded material and crushed mine rock to construction locations.	–	–	–	✓	✓	✓
Construction of water management systems to collect, manage, treat and discharge contact water from mine components to the receiving waterbodies via collection ponds, ditches, and water treatment plants.	✓	–	–	✓	✓	✓
Construction of minor water diversions around perimeter of the mine site to collect and divert flows.	–	–	–	✓	✓	✓
Dewatering of natural water bodies within the Project Area.	–	–	–	✓	✓	✓
Waste management, including collection and temporary storage.	✓	–	–	✓	✓	✓

Physical Activities	Effects					
	Change in demand for services and infrastructure	Change in accommodation availability	Change in demand for transportation infrastructure	Change in land use designations and private property	Change in recreation	Change in resource use
Construction of mine infrastructure, including crusher facilities, process plant and Tailings Management Facility, as well as the potable water well, and ancillary infrastructure (e.g., offices, workshop, fuel farm, magazine storage and explosives pad).	✓	–	–	✓	✓	✓
Construction of internal haul roads and internal access roads, including water crossings.	–	–	✓	✓	✓	✓
Construction of power supply and distribution systems.	✓	–	–	✓	✓	✓
Construction of temporary Highway 655 by-pass and overpass.	–	–	✓	✓	✓	✓
Construction of the rail spur.	–	–	✓	✓	✓	✓
Vehicle operation within the Project Area.	–	–	✓	✓	✓	✓
Employment and expenditures[1].	✓	✓	✓	✓	✓	✓
Operations (Mining and Processing)						
Construction of Project infrastructure, including the expansion of ore processing components.	–	–	–	✓	✓	✓
Relocation and decommissioning of Highway 655 and associated infrastructure.	–	–	✓	✓	✓	✓
Relocation of 500 kV transmission line.	✓	–	–	✓	✓	✓
Construction of the North Driftwood Diversion Channel.	–	–	–	✓	✓	✓
Handling and use of explosives including blasting.	–	–	✓	✓	✓	✓
Ore extraction in the Main Zone and East Zone of the Open Pit, including drilling, loading and hauling of mine rock from the pits.	–	–	–	✓	✓	✓

Physical Activities	Effects					
	Change in demand for services and infrastructure	Change in accommodation availability	Change in demand for transportation infrastructure	Change in land use designations and private property	Change in recreation	Change in resource use
Maintenance and management of mine rock stockpiles, overburden, and Tailings Management Facility.	–	–	–	✓	✓	✓
Ore processing, including conveyor, crushing and processing activities with and between the stockpiles, crusher facilities and process plant.	–	–	–	–	–	–
Operation of water management systems, including the collection, management, treatment and discharge of contact water from mine components to the receiving waterbodies via collection ponds, ditches and water treatment plants.	✓	–	–	–	–	✓
Transportation of Ore via the rail spur line.	–	–	✓	✓	✓	✓
Waste management, including collection and temporary storage.	✓	–	–	✓	✓	✓
Vehicle operation within the Project Area.	–	–	✓	✓	✓	✓
Progressive reclamation of disturbed areas.	–	–	–	✓	✓	✓
Employment and expenditures[1].	✓	✓	✓	✓	✓	✓
Decommissioning and Closure						
Pit flooding through the creation of channels from the collection ponds towards the Open Pit.	–	–	–	✓	✓	✓
Water management, including groundwater and surface water.	✓	–	–	✓	✓	✓
Decommissioning, dismantling and/or disposal of buildings and mine infrastructure.	✓	–	–	✓	✓	✓
Removal of power lines and electrical equipment.	✓	–	–	✓	✓	✓
Decommissioning of potable water and sewage systems.	✓	–	–	✓	✓	✓
Vehicle operation within the Project Area.	–	–	✓	✓	✓	✓

Physical Activities	Effects					
	Change in demand for services and infrastructure	Change in accommodation availability	Change in demand for transportation infrastructure	Change in land use designations and private property	Change in recreation	Change in resource use
Reclamation, including the placement of overburden, seeding and re-grading.	–	–	–	✓	✓	✓
Monitoring and maintenance.	–	–	–	✓	✓	✓
Employment and expenditures[1].	✓	✓	✓	✓	✓	✓

Notes:
✓ = Potential interaction
– = No interaction
1. Project employment and expenditures are generated by most Project activities and are the main drivers of many potential socio-economic effects. Rather than acknowledging this by placing a checkmark against each of these activities, 'employment and expenditures' is listed as a separate item under each phase of the Project.

The main Project interactions with services and infrastructure during construction and operations are a result of employment and expenditures because labour requirements may cause an increase in the local population, which may result in additional demands on services and infrastructure, including housing, health and emergency services and infrastructure, utilities, as well as education, recreation, and transportation services and infrastructure. These interactions are addressed in subsequent sections.

Construction of Project power supply and distribution systems, relocation of the 500 kV transmission line, waste management, including collection, temporary storage, and hauling of solid hazardous and non-hazardous waste to offsite facilities, and construction of water management systems and water treatment plants may lead to additional use of local power, waste management, and water systems. Construction of internal haul roads and internal access roads, construction of the temporary Highway 655 by-pass and overpass and construction of the rail spur will facilitate the movement of Project-related vehicles and materials, and this may create additional demands on local highways and rail systems. The relocation of Highway 655 and construction of related transportation infrastructure may cause some temporary delays to local highway traffic.

During decommissioning and closure, there will be a reduction in Project-related effects on services and infrastructure as workers move away from the LSA/RSA due to diminishing employment. Therefore, effects during the decommissioning and closure phase have not been carried through the assessment for services and infrastructure.

The main Project interactions with land and resource use during construction and operation relate to the potential to degrade land, cause disturbance and nuisance effects (e.g., construction noise, dust) and restrict access. Project clearing, Project presence and site activities may also affect the viability of, restrict access to, or cause loss of areas used for, recreation and resource use. Project activities may lead to direct loss of, or loss of access to, recreation areas and may disrupt recreational enjoyment due to sensory disturbance (e.g., noise, visual aesthetics). Project activities may also result in disturbance effects on resource use, which considers the reduction in wildlife harvesting success as a result of sensory disturbance (e.g., noise, visual), increased pressure on the resource (e.g., hunting, trapping and bait fishing), and direct effects on those wildlife species used. Decommissioning and closure activities have the potential to temporarily disrupt land use and disrupt or intrude on recreation activities, but may ultimately result in the restoration of access, and temporarily disrupt or intrude on local resource use activities (during active closure). Rehabilitation activities may ultimately restore desired end land uses for the site as much as possible with prior uses compatible with the surroundings.

The following activities or components are not anticipated to interact with land designations, recreation, and resource use:

- Ore processing and crushing facilities will not affect land and resource use during operations other than noise generated because there will be no further ground disturbance once operational.
- Water management will not affect land use once operational. Once established, no further ground disturbance will occur.

22.4 Assessment of Residual Effects on Social Conditions

22.4.1 Analytical Assessment Techniques

The assessment of social conditions provides an analysis of the effects that the Project is anticipated to have on services and infrastructure and land and resource use within the LSA and RSA.

22.4.1.1 Services and Infrastructure

The assessment of services and infrastructure involves both quantitative and qualitative methods. Potential effects are estimated by calculating additional demand associated with population change and/or direct project requirements (e.g., Project demand for landfills as a result of waste generated onsite) based on appropriate ratios for each measurable parameter (e.g., students per educator, police officers per 1,000 residents, sewer and wastewater capacity). This additional demand is then compared to available capacity, in consideration of local or provincial standards.

The assessment of effects on health care services and infrastructure considers measurable parameters, such as available health practitioners per 100,000 population, and compares these to local and provincial standards. It also considers trends in the use of health care services and infrastructure and available capacity in comparison to the anticipated needs created by the Project.

Potential change in housing availability is based on a comparison of the total available housing in the LSA/RSA with the forecast demand resulting from the in-migration of temporary and permanent workforce (plus dependents) employed on the Project, and other Project-related population increase. The assessment of housing availability is based on current rental and real estate market indicator trends and qualitative data.

Potential effects on daily road traffic volume are assessed by estimating the change in volume associated with the Project (i.e., traffic related to Project activity and that resulting from Project-related population increase) at peak periods during Project operations. This change is compared to existing traffic volume and the capacity of the existing road network to absorb the additional demand.

As described in Section 22.2.1.1, both qualitative and quantitative data have been used to describe baseline conditions across diverse or distinct subgroups, where GBA Plus factors have the potential to be relevant to the understanding of effects. Sub-populations and sub-groups that have the potential to be affected by the Project likely include women, Indigenous nations, visible minorities, persons with disabilities, youth, and older adults. The assessment considers how these groups may be disproportionately affected by the Project with respect to services and infrastructure.

Since the demands on services and infrastructure created during construction will likely continue into the operations phase, the discussion of residual effects on services and infrastructure during these phases has been combined.

22.4.1.2 Land and Resource Use

Land and resource use has been included within the social conditions VC for assessment because of its contribution to the quality of life and the livelihoods of local stakeholders. The assessment considers baseline information collected and the issues raised through engagement with stakeholders and residents. This assessment considers the potential effects of Project activities that could result on a change in designated land uses, resources land uses, and recreational land uses.

Consideration of the *CNWA,* 1985 is included under land and resource use, identifying where regulatory agency approval will be required prior to the building of works that substantially interfere with navigation. Navigable waters were assessed based on whether navigation was possible (see the Navigable Waters Assessment [Appendix C.9 of the Impact Statement]). Watercourses and waterbodies potentially affected by the Project were classified for potential navigational use. Existing data collected during baseline hydrology and fish habitat assessments, aerial imagery, and stream order were considered. Screening criteria were utilized to determine likelihood of navigability (e.g. unlikely, uncertain, likely).

The assessment of potential Project-related effects on land and resource use activities considers the relationship between land and resource use and biophysical and other socio-economic components. For example, residual effects on wildlife species and their habitats are important considerations for commercial harvesting and recreational hunting activities.

A summary of potential effects is presented for each Project phase, mitigation proposed and anticipated residual effects following implementation of mitigation measures. Spatial analysis was used to determine the reduction of land available for land and resource use associated with the Project.

22.4.2 Change in Demand for Services and Infrastructure

22.4.2.1 Project Pathways

Effects on local services and infrastructure can result from a Project-related population increase during construction and operations, which would place additional demands on existing services and infrastructure, including health, emergency, education, recreation, and utilities. For instance, health care and emergency services may be required by Project workers, and/or because of Project-related accidents or malfunctions, increasing the potential need for medical, first responder, and fire department services. The Project workforce and activities may also draw on the existing water and wastewater systems and waste management infrastructure in the LSA/RSA communities.

Policing services can be affected by interactions between Project workers and residents and by increased disposable income. Demands on local policing may increase if Project-related income is spent on illicit activities, or if it increases income differentials and hence tensions among community residents.

While it is unlikely that Project construction workers from outside the LSA/RSA will bring their families to settle in local communities for short-term construction work, it is possible that workers will bring families to communities near the Project for the approximately 40-year operations phase. If workers have school-aged children, this may place additional demands on schools and daycares in the LSA/RSA.

The presence of the Project workforce during construction and operations may result in positive effects on services and infrastructure because the workforce will contribute economically to the LSA/RSA (through property and income taxes) representing a potential expansion of municipal tax bases. This in turn may help pay for service providers to re-size appropriately for the increased population.

22.4.2.2 Mitigation Measures

The following mitigation measures have been incorporated into the design of the Project and/or are proposed to avoid or reduce Project-related effects on services and infrastructure:

- Canada Nickel is participating in the initiative “Equal by 30”, which aims to increase benefits to women and to accelerate gender equality and diversity to close the gender gap by 2030.
- Canada Nickel has made, and will continue to make, contributions to support social, economic, health, and other activities/programs for local communities, including Indigenous communities through its Community Contributions Program. The Program will include a local procurement policy, as well as a sponsorship and donation strategy adapted to Canada Nickel’s guiding principles and the needs of the communities.
- Canada Nickel is committed to hire from local communities and the region, pending the availability of qualified applicants.
- Canada Nickel will engage with local municipalities on the availability of housing to inform the housing strategy for the area that encourages and provides opportunities for workers to move permanently into the area.
- Canada Nickel is in regular communication with local training/education institutions regarding existing, upcoming, and potential course and training offerings, and how this aligns with Canada Nickel's anticipated needs. Canada Nickel continues to explore education, training opportunities and will develop hiring practices that encourages the employment and retention of qualified Indigenous peoples and local community members, including opportunities targeted towards youth.
- Canada Nickel will explore opportunities to support training, education, and scholarship programs that improve employment opportunities, including participation in and contribution to local training networks, which are targeted at diverse groups such as Indigenous nations, local youth, and various relevant subgroups, such as the Indigenous Skills and Employment Training Program.
- The work schedule and crew rotations will be adapted when practical to decrease the number of non-local workers requiring accommodations at any one time.
- Canada Nickel will develop a Health and Medical Services Plan (HMSP) to manage occupational and non-occupations injuries and illness. This will include provision of medical care at the Project site through the onsite presence of medical personnel. Canada Nickel will also make available an on-line physician 24 hours/day. The HMSP will also include procedures to manage communicable diseases and access to an Employee Family Assistance Program (EFAP).

- Canada Nickel has developed an internal Whistleblower Program for employee feedback and communication of concerns, as well as an external feedback mechanism to capture Project-related comments and concerns from community members.
- Canada Nickel will provide security at the Project site.
- Canada Nickel has or will be developing several policies, procedures, and training programs which will mitigate adverse effects on services and infrastructure. These are:
  - Health and Safety Policy
  - Local Procurement Policy
  - Code of Business Conduct and Ethics
  - Workplace Violence, Harassment and Discrimination Policy
  - Diversity and Inclusion
  - Fit for Duty, including Drug and Alcohol Policy
  - Cultural Awareness Training

22.4.2.3 Project Residual Effects

Canada Nickel anticipates that workers will commute daily from existing residences in communities located within approximately a one-hour drive of the Project site, with the possibility that some workers may choose to drive further distances based on their personal preference or circumstances. Though Canada Nickel wishes to hire primarily from local and Indigenous nations, workers from outside of the region may be required to meet the workforce demand of the Project.

As described in Section 22.2.2.3.1, Project workers may place additional demands on local health services if they require health care due to illness or workplace injuries. While data suggest that the number of family medicine physicians and specialists increased slightly in the North East Region between 2018 and 2022, local knowledge (i.e., news articles and results of engagement) indicates that there are many families in the Cochrane District without a family doctor (CIHI 2022; The Daily Press 2022), similar to other areas of the Province. However, efforts are underway to recruit new doctors to the District of Cochrane (Lentz-McGrath 2024b).

To reduce adverse effects on local health care services and facilities, Canada Nickel will prepare a HMSP, which will outline the services available to employees, as well as polices and training to promote and encourage healthy behaviours. A medical room and first aid stations will be provided on-site, and medical services will be provided through the on-site presence of medical personnel. Canada Nickel will employ a doctor in the LSA/RSA who will see workers for occupational related illnesses and emergencies. Twenty-four-hour medical services will be available through virtual doctors to assist employees with non-occupational-related illnesses. The Project HMSP will also provide information on on-site injury/illness prevention and management, and communicable disease management. It is expected that for conditions that require long-term care, non-local workers will continue to use the services of family physicians or specialists located in their home communities.

Total ambulance calls have generally been increasing in the District of Cochrane since 2018 (CDSSAB 2022b), however, medical personnel will treat employees on-site as appropriate to reduce Project-related demands on ambulance services. Demands on other local emergency services, including police and fire protection, will be managed through Project planning and management strategies, including incorporating design mitigation measures and preparing safety and environmental management plans in accordance with applicable requirements and industry best practices. Canada Nickel will have discussions with emergency services personnel in advance of construction and operation, which will inform Project and emergency services planning. There will be fire prevention equipment on-site and fire prevention measures will be outlined in the Project Emergency Preparedness and Response Plan (EPRP). Project personnel will also be trained in fuel handling, equipment maintenance, and fire prevention and response measures.

Crime statistics indicate that crime levels have been increasing in some communities in the LSA/RSA and decreasing in others. For instance, the CSI for Timmins decreased by 8.4% in 2022 to 148.5, from 162.1 in 2021 while the James Bay Detachment, which provides policing services to Cochrane, Iroquois Falls, and Smooth Rock Falls saw an increase in violent crimes of 13.1% during the same time period (Statistics Canada 2023b). Security services at the Project site will reduce demands on local police services, since the presence of on-site security officers will reduce the risk of crimes (e.g., trespassing, vandalism) at the Project site which may require police assistance. Community safety is further assessed in Chapter 21 (Assessment of Potential Effects on Health) of the Impact Statement.

With respect to local utilities, water and wastewater systems are operating within their capacities, except for the Whitney and Tisdale Wastewater Treatment Plant in Timmins, which is operating slightly beyond its capacity (Section 22.2.2.2). Canada Nickel will reduce effects on local utilities through Project design. For instance, domestic sewage during the operations phase will be treated by an appropriately sized, technically acceptable method, such as an on-site sewage treatment system. Domestic sewage waste will be limited because there will not be a Project accommodation complex at the Project site. Primary and secondary collection ponds will provide water for mine operations. These will be designed with sufficient capacity to support the retention and treatment of contact water, and to provide water for processing operations.

Potable water for the Project will be supplied by groundwater sourced from water wells located within the PA. The fresh water will be treated to meet provincial drinking water standards. The Project's potable water system will not draw from any municipal water supply.

There are four landfills within the District of Cochrane and plans are being developed to expand the capacities of two of them. Canada Nickel will implement a Waste Management Plan for the Project to manage and reduce Project-related waste. Non-hazardous solid wastes will be recycled, reused, or collected in a central secure area onsite and then disposed of in a licensed waste receiver facility. Hazardous liquid and solid waste will be collected in a secure, enclosed location and transported off-site to a licensed hazardous waste facility.

Power to the site will be provided by a future 230 kV transmission line that is being designed, constructed and operated by a third-party as part of an independent transmission expansion project that is expected to promote stronger electricity reliability for northern communities and Indigenous nations that will connect

the Porcupine Substation in Timmins. The line is anticipated to be sufficient to supply the Project with the necessary operating power. This is not anticipated to impact local power availability and may encourage greater availability through new or improved infrastructure to meet increased demand.

It is unlikely that non-local construction workers will bring families with them for Project work because the construction phase will only last about three years. Therefore, it is not expected that schools in the LSA/RSA will see increased demand during the Project construction phase. During the approximately 40-year operations phase, workers could bring families to live in the LSA/RSA. Schools in northern Ontario have experienced declining enrollment for decades; however, some schools have seen modest increases since 2022. Given their history, it is likely that there is spare capacity at LSA/RSA schools to accommodate families of operations employees.

With respect to pre-school and daycare services and infrastructure, the District of Cochrane is experiencing a shortage of early childhood educators (ECEs), which is making it challenging for families to acquire childcare. Should Project employees move to the LSA/RSA with young children, childcare services could see additional demand. The childcare shortage could also present a barrier to residents with children, particularly women, seeking Project employment. Having acknowledged the lack of childcare availability in the District, the Ontario Minister of Education has announced the creation of 189 new childcare spaces and the Mayor of Timmins has addressed the need for an ECE recruitment and retention strategy (Ontario 2023b; Timmins 2023).

Recreation opportunities appear to be in good supply throughout the District of Cochrane. Due to the nature of shift work and work rotations, Project construction workers are unlikely to have time to use local recreation facilities and will likely return to their home communities during off-time. Non-local workers who choose to relocate to the LSA/RSA during operations may use sport and leisure amenities, but they are unlikely to place demands on these services and infrastructure beyond their capacity.

With the application of mitigation and management measures, including hiring from local communities where possible, provision of a company doctor and virtual health services, and Project design for utilities, the Project's 'adverse' residual effects on demand for services and infrastructure is expected to occur in the LSA/RSA in the 'short-' to 'medium-term', be 'low' in magnitude, 'reversible', and 'continuous' throughout construction and operations.

Despite mitigation and management measures, members of vulnerable groups may still experience differential effects on services and infrastructure. The Project is committed to reducing these differential effects to the extent possible. A community feedback tool or process will be implemented to receive and address community concerns and complaints with the aim of reducing adverse effects of the Project on sub-populations and sub-groups.

The presence of the Project in these communities may create positive effects if it leads to financial support for recognized needed improvements to services and infrastructure. Amenities, such as recreation and sport facilities, may benefit from an increase in the number of users as a result of the Project. Also, tax revenue from operations and increased local spend, within the LSA/RSA will contribute economically to the LSA/RSA. This may lead to an expansion of municipal tax bases and investment in local services and infrastructure.

22.4.3 Change in Accommodation Availability

22.4.3.1 Project Pathways

An increase in population within the LSA and RSA is expected as a result of the Project, which has potential to place additional demands on local availability of housing and temporary accommodations.

During construction, which will last approximately three years, the number of employees hired will reach a maximum of nearly 2,000 workers during the peak construction period. Project operations will directly employ an average of 1,250 workers during phase 1 (Year 1-5), 850 people per year during phase 2 (Year 5-30) and 300 during phase 3 (Year 30-41). The number of operations workers will peak at 1,371 during phase 2.

It is likely that non-local workers will live in temporary or short-term rental accommodations during construction and return to their home communities during their off time. During operations, which will last approximately 41 years, non-local workers will likely move into the LSA/RSA communities with their families and seek permanent housing.

22.4.3.2 Mitigation Measures

The following mitigation measures have been incorporated into the design of the Project and/or are proposed to avoid or reduce Project-related effects to accommodation availability:

- Canada Nickel is committed to hire first from local communities and the region, pending the availability of qualified applicants.
- Canada Nickel will engage with local municipalities on the availability of housing to inform the housing strategy for the area that encourages and provides opportunities for workers to move permanently into the area.
- Canada Nickel is in regular communication with local training/education institutions regarding existing, upcoming, and potential course and training offerings, and how this aligns with Canada Nickel's anticipated needs. Canada Nickel continues to explore education, training opportunities and will develop hiring practices that encourages the employment and retention of qualified Indigenous peoples and local community members, including opportunities targeted towards youth.
- Canada Nickel will explore opportunities to support training, education, and scholarship programs that improve employment opportunities, including participation in and contribution to local training networks, which are targeted at diverse groups such as Indigenous nations, local youth, and various relevant subgroups, such as the Indigenous Skills and Employment Training Program.
- Canada Nickel will undertake a detailed Project accommodation study based on workforce requirements and develop an Accommodations Management Plan.

- Canada Nickel is committed to, and has been engaged in, on-going discussions with third parties, including Indigenous nations, to explore opportunities for the provision of accommodations in the region to support offsetting the house needs during construction and operations.
- Canada Nickel will communicate Project needs to local accommodation providers, including hotel, motel, and bed-and-breakfast accommodation providers to help secure rooms for construction workers.
- The work schedule and crew rotations will be adapted when practical to decrease the number of non-local workers requiring accommodations at any one time.

22.4.3.3 Project Residual Effects

An accommodations complex (or similar) is not proposed to be developed as part of the Project due to the close proximity of local communities. Canada Nickel anticipates that resident workers who obtain Project employment will commute daily from existing communities/residences, which are located within approximately one hour drive of the Project site, with the possibility that some workers may choose to drive further distances based on their personal preference or circumstances.

The Project will have a peak workforce of 1,998 full-time equivalents (FTEs) and an average of 708 FTEs over the life of the mine. Shift rotations during construction were not available at the time of writing, but during operations, it is expected that there will be four rotating crews that work 12-hours shifts and on average 42-hours a week. At a peak of 1,371 employees during operations, divided by four crews, each crew will have up to 343 workers.

It is estimated that there will be a deficit in required labour for the mining industry, and that the use of mobile workers will be required to fulfill this void. By 2037, it is estimated that there will be a potential shortfall of 23% to 30% of vacancy rates in the mining industry within the LSA. However, it is also estimated that approximately 30% of the current mining workforce will be retired by 2027, leaving a 44% vacancy rate of positions needing replacements.

While estimates of local and regional employment are provided, the degree to which residents of the LSA/RSA secure employment with the Project depends on numerous considerations, including existing levels of educational attainment, labour force conditions, and the extent to which local workers wish to participate in the Project. The extent to which contractors draw on labour from outside the LSA/RSA to complete Project work also affects levels of Project-related local and regional employment.

Based on the composition of similarly sized past mining and construction projects, it is reasonable to expect that the local labour component would not exceed 20% of the Project labour force. Therefore, the peak construction labour force of approximately 2,000 persons could be comprised of 400 local residents and 1,600 non-local workers. During operations, the peak labour force of nearly 1,400, could include 280 local residents and 1,120 employees from outside of the LSA/RSA. Considering typical work rotations for similarly sized mining and construction projects, it is likely that 75% of the labour force during construction and operations will be on-site at any one time.

A report detailing workforce projections for the region was completed in 2017 and may not represent the labour capacity that will be available at the time of Project construction (FNETB 2018 a, b, c). As an example, it did not consider the Project, nor did it account for potential forthcoming mine closures in the current area that have since occurred. As such, the availability of labour to supply the demands of the Project will differ from what is provided in these reports based on the current mining activity in the LSA and RSA.

Canada Nickel will aim to increase the percentage of the local workforce and reduce the requirement to hire workers from outside the region by providing training opportunities to local residents. Canada Nickel is working with NORCAT to develop courses that will be administered by Northern College, which will include apprenticeship programs as well as specialized training for vehicle operation. This program will be run multiple times to provide an opportunity to equip locals with the skills needed to work on the Project. Further, Canada Nickel will develop a Diversity and Inclusion Policy, which does not discriminate against employees or contractors of the company based on race, ethnicity, physical/mental capabilities, sexual orientation, or Indigeneity, and requires employees to adhere to respectful workplace practices.

As described in the Economic Impact Assessment Report (Appendix C.10 of the Impact Statement), there are nine metal mines within northeastern Ontario in various life phases, including nearing the end of their operational life. Therefore, there could be several hundred persons with mining experience and skills who will become available in the future and may choose to work on the Project.

As of October 2023, there are 30 hotels, motels, bed and breakfasts, and inns in the LSA/RSA with a total of 1,418 rooms (TripAdvisor 2023). The communities of Timmins and Cochrane have the highest number of temporary accommodations (15 and 12, respectively), with limited options in Iroquois Falls and Smooth Rock Falls. The peak labour force will be required during summer months when tourism will also be at its peak. The Northeastern Ontario Tourism Region had a temporary accommodation occupancy rate of 59.5% from January to July 2023 (CBRE Ltd. 2023). As a result, the number of available temporary accommodations spaces in the LSA/RSA will not likely be sufficient to accommodate the non-local workers.

Results of a housing needs assessment indicate that there is sufficient supply of owned homes (as opposed to rentals) in the District of Cochrane (Housing Services Corporation and CDSSAB 2019). As described in the Social and Economic Conditions Report (Appendix B.9 of the Impact Statement), active residential listings for the Timmins, Cochrane, and Timiskaming Districts at the end of October 2023 were 23.9% higher than they were in October 2022. In addition, housing sales have been decreasing across Northeastern Ontario, with the biggest decline happening in Timmins (CREA 2023). However, members of the Project's Socio-Economic Committee, which is comprised of members of the Cochrane District, including representatives for service providers and municipal governments, have suggested that the supply of owned housing as described in the housing needs assessment does not represent the current condition of housing in the region. The committee stated that the existing stock of home ownership housing is not adequate to meet the current demand.

According to members of the Socio-Economic Committee and relevant literature, certain sub-populations, including seniors, youth, and low-income families, are not accommodated well by existing housing in the LSA/RSA and may be disproportionately affected by the Project's potential demand on housing

availability (Advocacy Centre for Tenants Ontario and Advocacy North 2021; Housing Services Corporation and CDSSAB 2019). For instance, there is a shortage of rental housing in the area, as indicated by the declining vacancy rate in Timmins, which fell from 5.5% to 3.9% between October 2020 and October 2022 (CMHC 2023). In addition, while rent in the LSA/RSA is low compared to other parts of Ontario, average rent increased 4.6% between 2016 and 2021 (Statistics Canada 2022) and over 20% of renters in Timmins live in subsidized rentals, which is higher than the provincial average of 15% (Advocacy Centre for Tenants Ontario and Advocacy North 2021). A disproportionate number of Indigenous peoples in the District of Cochrane are experiencing homelessness and are over-represented among the population of residents with no home (CDSSAB 2021b). The newly formed Housing Task Force is developing strategies to address housing needs and eliminate homelessness by increasing transitional housing units.

Steps are also being taken throughout the District of Cochrane to increase the supply of appropriate housing. For instance, the Town of Smooth Rock Falls is encouraging lot development through its Municipal Property Acquisition and Sale Program and is developing its waterfront with the construction of 435 residential units (Town of Smooth Rock Falls and JLR 2022). Timmins is hoping to expand two subdivisions by adding 150 new homes and The Town of Cochrane is working on a plan to sell residential lots for as low as $10 (City of Timmins 2024; Lentz-McGrath 2024a).

To manage adverse effects on accommodation availability, Canada Nickel will implement hiring practices to employ locally to the extent possible. It will work with education institutions to provide training in skills that will better prepare LSA/RSA residents for Project employment. Canada Nickel will encourage non-local Project construction workers to share rooms at temporary accommodations, including hotels and motels, as well as rental units. Canada Nickel will communicate Project requirements for accommodation to local service providers so they may prepare for periods of increased demand. Northeastern Ontario has experience hosting mining projects and their workforces. In addition, Canada Nickel has plans to undertake an accommodations study and is exploring options to provide housing through third party partners to provide accommodations for Project workers. This study may provide insight into additional mitigation and management measures for Project accommodation. Historically, independent accommodation providers in the region have followed the trends of demand and have had the capacity to provide accommodations for temporary workers when required for large projects. The same is expected in the case of the Project.

There is evidence that mine operations workers in northern Ontario will commute to their hometowns even for long-term work, such as Project operations. Canada Nickel will encourage home sharing for those operations workers who do not bring families to the LSA/RSA. It will also communicate Project activities and accommodations requirements to municipal authorities.

With the application of mitigation and management measures, including hiring from local communities where possible and planned work rotations, the Project's adverse residual effects on accommodation availability is expected to occur in the LSA/RSA in the short- to medium-term, be reversible, and continuous throughout construction and operations.

As previously stated, some past and existing mining projects in the region have had their workforce accommodations developed by independent accommodations providers. Canada Nickel is engaging with

third parties, including Indigenous nations, which may result in an agreement for the provision of Project accommodations. Should these discussions lead to the development of workforce accommodations for the Project, effects on accommodation availability in the LSA/RSA are predicted to be moderate.

Despite mitigation and management measures, members of vulnerable groups may still experience differential effects on accommodation availability. The Project has mitigation and management plans in place to reduce these differential effects to the extent possible. A community feedback tool or process will be implemented to receive and address community concerns and complaints with the aim of reducing adverse effects of the Project on sub-populations.

The presence of the Project in these communities may create positive effects if potential demands on accommodations result in efforts to increase the stock of permanent and temporary housing throughout LSA/RSA communities.

22.4.4 Change in Demand for Transportation Infrastructure

22.4.4.1 Project Pathways

The transportation of Project goods, services, and workers will lead to additional use of existing transportation infrastructure. Greater traffic volumes along local road networks could increase travel times and affect the condition of roadways.

Project construction and operations may have effects on transportation infrastructure. Full development of the mine will require the realignment of Highway 655, which is scheduled for completion following the start of operations. At present, Highway 655 bisects the location of the proposed Open Pit and a realignment is required to access the ore body. To facilitate extraction, approximately 26 km of Highway 655 will be realigned to the west of the mine to divert Highway 655 traffic around the mine site. Once realigned, the existing section of Highway 655 will be decommissioned.

During construction, a temporary bypass and a road overpass will be constructed east of the current Highway 655 alignment, to allow the installation of a conveyor from the Primary Crusher (east of the Highway) to the Process Plant (west of the Highway), as well as the passage of mine vehicles from one side to the other without using Highway 655. Once construction is complete, the traffic will use the existing highway alignment until such time that Highway 655 is permanently relocated to the west of the existing alignment. Once relocated to the west of the mine, this new stretch of highway will be conveyed to the Province for long-term maintenance and operation by the to Ministry of Transportation (MTO).

The movement of Project-related materials by rail will increase demand on the local rail system, which includes an existing spur line that services the existing Kidd Mine. Rail traffic will be operated by ONTC.

22.4.4.2 Mitigation Measures

The following mitigation measures have been incorporated into the design of the Project and/or are proposed to avoid or reduce Project-related effects on transportation infrastructure:

- Canada Nickel will prepare a Traffic Management Plan. The Traffic Management Plan will be developed during ongoing planning and engineering to address traffic staging in order to reduce delays.
- Canada Nickel is committed to mitigation and enhancement measures to address the change in demand for transportation Infrastructure as result of the Project. These include, but are not limited to, the following:
  - Project vehicles will be driven by licensed and trained drivers who will use approved routes. All drivers will be required to have training in incident response and management.
  - Highway laws will be obeyed, including seasonal weight restrictions, speed limits, traffic signage and requirements for permit for oversized loads.
  - Design and build the Highway 655 realignment according to Ministry of Transportation (MTO) standards.
  - Canada Nickel will explore providing a bus service to employees from nearby communities to the mine site.
  - Speed limits will be posted and monitored onsite access roads. Canada Nickel will follow up with contractors on any reports of transport trucks travelling at excessive speeds along the transport route.

22.4.4.3 Project Residual Effects

The Project is expected to result in an increase in vehicles along Highway 655 and through the LSA/RSA communities as employees travel to and from the Project site.

Table 22.4 summarizes the estimated average and maximum weekly car and bus return trips associated with construction and operations of the Project (see the Traffic Impact Study [Appendix C.8 of the Impact Statement]). Project related vehicle numbers may be adjusted as planning progresses. The Traffic Impact Study was submitted to the MTO for review and discussion and will be further refined in consultation with MTO as part of the Class EA for Provincial Transportation Facilities and Municipal Expressways process to address comments raised regarding design details of the road infrastructure.

Table 22.4 Projected Average Weekly Car and Bus Return Trips at Project Site

Trip Type	Average	Build-out Year (2028)	Build-out Year + 5 (2033)	Operations Year 6 (2034)	Build-out Year + 10 (2038)
Weekly Car Return Trips	353	415	525	570	500
Weekly Bus Return Trips	94	125	145	162	121

Roadway use is projected to peak in 2034, during Year 6 of operations, when the Project will generate an estimated 146 car and bus trips each day, of which 21 trips will occur during peak traffic hours (Appendix C.8 of the Impact Statement).

The Traffic Impact Study (Appendix C.8 of the Impact Statement) considered the effects of traffic along Highway 655 at the intersection of Highway 655 and the existing site access road near the end of construction, and at the intersection of the realigned Highway 655 and the new site access road during operations. In each of these scenarios, considering the volume of existing traffic and the volume of Project generated traffic, the Highway and the intersection are expected to operate at a Level of Service A and within the existing capacity.

To mitigate traffic disruptions during Project construction, Canada Nickel will implement standard traffic management and control procedures. A Traffic Management Plan will be developed during ongoing planning and engineering design and will address traffic staging to reduce delays. As with other community services and infrastructure, Canada Nickel will continue to communicate with local communities and service providers with respect to scheduling so they may prepare for potential increased demands related to transportation. During operations, changes in travel time along the realigned section of Highway 655 are expected to be negligible (i.e., increase of less than 5 minutes) based on the traffic operations analysis results.

An approximately 20 km rail line is proposed to be constructed to connect the Project site to the regional rail network, to allow for transport of freight to and from the Project site. The frequency of rail traffic to and from the Project site is estimated at between one or two round-trip per day to one round-trip every two days. A logistics study is currently underway, which will refine the estimate of rail use frequency. The movement of Project materials will only occur on the Project rail spur and additional demands on the local rail service, will be nominal if any.

With the implementation of a Traffic Management Plan and considering the use of an overpass during the realignment of Highway 655, which will limit any traffic delays or congestion, the Project's adverse residual effects on demand for transportation infrastructure is expected to occur in the LSA/RSA in the short- to medium-term, be low in magnitude, reversible, and continuous throughout construction and operations. There is no evidence to suggest that members of vulnerable groups will experience differential effects with respect to demand for transportation infrastructure.

22.4.5 Change in Land Use Designations and Private Property

22.4.5.1 Project Pathways

Construction

Project clearing and construction activities within the PA have the potential to change land use and development through the loss of area and the restriction of access to designated lands including limited provincial Crown lands. Clearing and construction activities within the PA and movement along access roads can affect land use, including sensitive receptors such as remote cabins within the LSA, due to nuisance disturbance (e.g., noise and dust) and visible Project components. Noise sources within the PA are anticipated to be typical of construction activities and will include some temporary noise disturbances (e.g., movement of equipment, excavated materials). Operation of heavy equipment during construction can affect the occupants of remote cabins in the vicinity of the PA. Access issues will be addressed through traffic control measures.

Construction of a new rail spur (approx. 25 km) is required to facilitate the transport of materials to and from the mine. It will run from the process plant in a southerly direction along the eastern side of the realigned Highway 655. Full development of the Main Zone of the Open Pit will require the realignment of Highway 655 to facilitate extraction. Approximately 26 km of Highway 655 will be realigned to the west of the mine to divert highway traffic around the mine site. A small portion of the PA, the southern portion associated with the Highway 655 re-alignment and rail spur line, falls within the City of Timmins Official Plan area.

Project clearing and construction activities at the Project site will disturb land. Project development will include the relocation of an existing 500 kV alternating current transmission line that generally runs along the west side of Highway 655. The existing transmission line will be relocated within a similar corridor as for the proposed realignment of Highway 655 on the west side of the PA. The segment of transmission line to be relocated is approximately 29 km in length. The transmission line will be situated on a 100 m (approximate) wide right-of-way (ROW). Clearing for the new transmission line ROW segment within the PA will involve approximately 290 ha of land.

Operations

The operation of the Open Pit mine will progressively result in additional ground disturbance. Storage of ore stockpiles, overburden, and mine rock at the site has the potential to change land use within the PA. The presence of the stockpiles, overburden and mine rock can affect land use through visual disturbance effects. Project operations can affect sensitive receptors such as remote cabins (i.e., if they are occupied) due to noise from truck hauling of ore along the PA access roads and other vehicle movement along realigned Highway 655.

Electrical power at the Project is expected to be supplied from a future 230 kV transmission line anticipated to follow along the proposed realigned Highway 655 to a new switching station near the process plant.

Decommissioning and Closure

The decommissioning and closure phase will allow for restoration of affected land use areas to the extent feasible to achieve desired end land uses that are compatible with previous conditions.

22.4.5.2 Mitigation Measures

The following mitigation measures have been incorporated into the design of the Project and/or are proposed to avoid or reduce Project-related effects on land use designations and private property for the Project:

- The Project footprint (i.e., Project Area) will be limited to the extent possible.
- Canada Nickel will progressively backfill portions of the mined-out pit with tailings during operations to reduce the footprint of the TMF at surface.

- Canada Nickel will use existing roads, trails and Right of Way to access the Project Area, to the extent practical. Canada Nickel will develop internal access routes in compliance with provisions of the Mining Act.
- Canada Nickel will implement air quality and noise mitigation measures as described in Chapter 12 of the Impact Statement (Assessment of Potential Effects on the Atmospheric Environment) and Chapter 13 of the Impact Statement (Assessment of Potential Effects on the Acoustic Environment).
- Canada Nickel will maintain access to the Lower Sturgeon Dam Road and Camp 40 Road during all Project phases for various parties (e.g., Ontario Power Generation, Indigenous nations.
- Canada Nickel will implement traffic control measures which may include gating approaches to Project access roads and/or gated fencing to restrict public access to the Project Area.
- Canada Nickel will obtain an entrance permit from Ministry of Transportation (MTO) for operation of the mine.
- Canada Nickel will install signage around the Project Area to alert land users of the presence of the Project and its facilities.
- Canada Nickel will engage with municipal authorities and provincial Crown land use permit holders to address potential conflict, disturbance, or access restrictions to municipal and Crown land use areas.
- Canada Nickel will undertake rehabilitation activities in consideration of desired end land uses that are achievable in the preparation of the Mine Development Closure Plan (refer to Appendix F of the Impact Statement for the Conceptual Closure Plan) under the provisions of the Mining Act for the Project site.

22.4.5.3 Project Residual Effects

Construction

The PA for the Project site (i.e., 11,785 ha) occupies approximately 34.5% of the total LSA land area and approximately 1.2% of the RSA. The Project site is subject to numerous patent mining claim, mineral lease, and unpatented mining claims. The Project is defined by a combination of 162 mining patents and 161 mining claims. Canada Nickel holds or is in the process of acquiring a 100% interest in the mining lands that comprise the Project.

The PA for the Project site intersects with approximately 11,334 ha of patented (private) land. The PA is comprised mostly of privately held surface rights. Canada Nickel is currently working with landowners to obtain these surface rights. The PA also comprises 450 ha (4%) of assumed provincial Crown land[3] (i.e., unpatented). In addition, reservations to the Crown exist on privately held lands. Crown lands within the land and resource use LSA, including the PA, are designated as General Use. This designation permits

[3] For this assessment, where no Property Identification Number and associated property parcel fabric are recorded in the PA, these lands are assumed to be Crown land. Through engagement with the Ministry of Natural Resources (MNR) in Ontario, this assumption was determined to be acceptable for the purpose of this assessment.

mineral exploration and development activities. In addition, Crown land recreation, hunting, sport fishing and road use activities in these areas are permitted and managed by the MNRF. No conflict with mineral resources development policy is anticipated at this site subject to full consideration of Ontario's mining policy. A small portion of the southern PA associated with the Highway 655 re-alignment and rail spur line falls within the City of Timmins Official Plan area. As a result, Canada Nickel will engage with the City of Timmins on any requirements for amendments to the applicable Official Plan and Zoning By-law.

The Project site does not overlap with other existing Crown lands (e.g., provincial parks, First Nation Reserve lands). Given the small area of provincial Crown land (unpatented Crown land) affected by the PA (450 ha for the Project site), Project effects on Crown land are predicted to be of 'low' magnitude.

Access to the Project site will be via the development of internal access roads via the former Right of Way (ROW) for Highway 655. Access restrictions to the Mine site will be put in place for the period of construction. Traffic control measures will be developed to address access accommodation plans and logistics, and to reduce adverse effects during construction. Access to the Lower Sturgeon Dam Road and Camp 40 Road between the PA and the Mattagami River will be maintained for various parties (e.g., Ontario Power Generation, Indigenous nations) throughout all phases of the Project.

Full development of the Main Zone of the Open Pit requires the realignment of Highway 655, which is scheduled for completion following the start of operations. At present, Highway 655 bisects the location of the proposed Open Pit and a realignment is required to access the ore body. To facilitate extraction, approximately 26 km of Highway 655 will be realigned to the west of the mine to divert Highway 655 traffic around the mine site. Once realigned, the existing section of Highway 655 will be decommissioned.

An existing 500 kV transmission line (owned by Hydro One) along the west side of existing Highway 655 bisects the location of the proposed Open Pit. Approximately 29 km of the transmission line will need to be relocated along a similar corridor as the proposed realignment of Highway 655.

There are 12 sensitive receptors (e.g., residence, camps/cottages, campground, overnight Indigenous habitation locations) plus one addition receptor on the Mattagami River (e.g., fishing, navigation) within and adjacent to the PA and LSA, including along the realigned segments of the 500 kV transmission line corridor/Highway 655 ROW, and existing rail corridor (see Acoustic Environment Figure 13.6 for receptor locations [Chapter 13 of the Impact Statement]). Project activities will restrict access and use at sensitive receptors and properties. The Project construction and Highway 655 realignment will result in noise emissions but will be limited in magnitude ('low' to 'moderate') and mitigated through well managed noise mitigation and administrative control measures, including obtaining agreements with property owners within the restricted area to either remove buildings, prevent development of seasonal or permanent housing, or acquire affected property. Noise levels are expected to increase compared to baseline conditions but will still be within the applicable federal and provincial limits for identified sensitive receptors (e.g., residence, camps/cottages) in the PA/LSA. Nuisance effects associated with vibration levels from construction activities and equipment (e.g., excavator, compactor, bulldozer) at the site are also predicted to be compliant with blasting limits for identified receptors. See Chapter 13 (Assessment of Potential Effects on the Acoustic Environment) of the Impact Statement for further information on noise and vibration.

The transmission line and Highway 655 segments will be constructed to limit possible disturbances and annoyance effects associated with noise generation. Most of the terrain is easily accessible; therefore, tower construction is expected to occur from the ground. In rare cases, where specific tower locations are inaccessible by ground vehicles, some helicopter usage would occur (over a single day) for erection of the towers. Noise generation due to transmission line construction is expected to be short-term.

Overall, construction phase residual effects on land use designations and private property are anticipated to be ‘adverse’, ‘low’ magnitude (‘low’ to ‘moderate’ for noise and vibration), limited to the PA/LSA, with no sensitivity with respect to timing, ‘short-term’ in duration, ‘irregular’ in frequency, and ‘reversible’ upon Project decommissioning and closure.

Operations

During operations, no additional effects on land use designation and private property will occur beyond the ones that had already occurred during construction.

Noise emissions from Project operations will be like those from construction activities, including emissions from the Process Plant rail concentrate shipments. The predicted noise levels will be within the applicable limits for all identified receptors. Nuisance effects associated with vibration levels from operations activities (e.g., blasting) at the Project site are predicted to be below the vibration target level (i.e., 10 millimetres per second [mm/s]) for all receptors (Chapter 13 of the Impact Statement).

Audible noise generated from the use of access roads at the site, along realigned Highway 655, and the rail spur line will be limited to the PA and LSA. In consideration of the identified sensitive receptors affected during operations, the predicted sound levels from the highway realignment and rail spur operation are below both Health Canada and MTO guidelines (Chapter 13 of the Impact Statement) and are anticipated to have a low effect on land use within the LSA, overall.

Access roads restrictions implemented during the construction phase will continue during operations at the site including internal access roads. Traffic control measures will be developed to address access accommodation plans and logistics during Project operations. Canada Nickel will also obtain an entrance permit from MTO for operation of the mine.

The residual effects, overall, for the mine operations on land use designations and private property are anticipated to be ‘adverse’, ‘low’ magnitude (‘low’ to ‘moderate’ for noise and vibration), limited to the PA/LSA, of no sensitivity with respect to timing, ‘medium-term’ in duration, ‘continuous’ in frequency, and ‘reversible’ upon Project decommissioning and closure.

Decommissioning and Closure

During decommissioning and closure activities, no new interactions with designated lands, including those associated with access, are anticipated. Rehabilitation activities will be conducted to achieve desired end land uses for the site, including a pit lake. Closure activities will aim to promote the reestablishment of vegetation to promote a natural appearance and animal habitats on site. The site may conditionally be open to the public after final closure. There will likely be some restrictions in place due to

the remaining formed pit lake and reclaimed overburden and ore stockpile areas due to safety concerns. Recreational activities (e.g., snowmobiling) and resource uses, such as hunting and trapping, may be permitted in the future where safe to do Future uses will be discussed with Indigenous nations and stakeholders.

Overall Summary

With the implementation of mitigation measures, residual effects from the Project on land use designations and private property are anticipated to be of 'low' magnitude. Canada Nickel is the process of acquiring total interest in mining lands comprising the Project and is working with landowners to acquire surface rights. The Project site does not change other existing land use designations. Given the small area of assumed provincial Crown land (unpatented Crown land) affected by the PA (an estimated 450 ha for the PA), Project disturbance is predicted to be of 'low' magnitude. Project activities will restrict access and use at sensitive receptors and properties. Noise levels at the Project site are predicted to have 'low' to 'moderate' magnitude residual effects but will be below the applicable federal and provincial noise criteria. Canada Nickel will consider acquiring the properties where there are noise exceedances as a mitigation administrative control measure. Access to area in the PA and LSA will be affected by construction activities and restrictions will extend to the operations phase. There is no sensitivity with respect to timing of construction activities as the effects on land use and property are not restricted to specific seasons. The Project is not expected to affect protected areas under Ontario's Protected Areas framework or First Nation Reserve lands. Project effects on unpatented provincial Crown land are expected to be 'short-term' and 'irregular' in frequency for the construction phase, 'medium-term' ('long-term' for visual), and continuous in frequency occurring during operations, and 'reversible' upon Project decommissioning and closure (except for the pit lake).

22.4.6 Change in Recreation

22.4.6.1 Project Pathways

There is a variety of outdoor recreational land use and water-based activities in the LSA, and to a lesser extent within the PA, which can be affected by the Project. Recreational use (e.g., snowmobiling) could be affected adjacent to the PA and within the LSA. Informal recreational activities that could be affected include recreational hiking, cross-country skiing, ATV use, and sport fishing.

Potential Project pathway effects on hunting and commercial bait fishing are discussed in Section 22.4.7.

Construction

Project construction at the Project site will reduce the available land base for various recreational activities. Clearing and construction activities, including the creation of access to the site, can affect the use of lands for outdoor recreation through change in access to recreational areas within the PA. Areas (i.e., trails) in the PA used for recreational purposes, such as snowmobiling, will be removed. Access to the PA will be restricted during construction as most of the PA is private land with very little Crown land. Access issues will be addressed through traffic control measures as well as community engagement and collaboration with stakeholders (e.g., snowmobile club trail relocation).

Recreational users in the LSA may also be affected by sensory disturbance (e.g., noise, visual) resulting from construction activities, including Project-related transportation within the LSA (e.g., movement of trucks, equipment, bulk materials, supplies, and personnel within the LSA) potentially affecting the quality of the outdoor recreation experience. Population increase associated with the construction phase can increase competition for resources, which may also affect the quality of the outdoor recreation experience being sought by recreational users.

Project clearing and construction activities at the Project site within the PA also includes a 500 kV transmission line that will be relocated on a new ROW corridor along with a realigned segment of existing Highway 655 and the rail spur line on the west side of the site.

Fish habitat will be lost because of the placement of materials or structures in water during construction. Loss of fish habitat that cannot be avoided will be addressed through Department of Fisheries and Oceans Canada (DFO) authorizations and the implementation of a Fisheries Offset Plan. Changes to fish habitat may also occur because of the potential changes in water characteristics (e.g., physical changes, extraction of surface water, changes in riparian vegetation, changes in flow) during construction (Chapter 17 of the Impact Statement).

Navigation on non-scheduled navigable waterways where navigation is possible (e.g., canoe/kayak) is protected under the *Canadian Navigable Waters Act* (CNWA). None of the watercourses in the PA or LSA are on the CNWA Schedule of navigable waters. In general, navigation is possible in the PA on the mainstems of the North Driftwood River, and within the LSA on Jocko Creek, West Buskegau River, and a chain of lakes flowing into the North Driftwood River (i.e., Martin Lake, Gerry Lake, Jack Lake, and Davis Lake). Project activities that could directly affect navigation include the construction of mine components, infrastructure realignments, and infilling of navigable watercourses. Loss of or alteration of access to or through navigable waters within the PA will occur during construction.

Operations

Operations of the Project could also affect recreational use and visual aesthetic values through Project presence (e.g., recreational user's quality of experience due to operation activities at the site) and restricted access to recreational use areas.

During operations, noise emitted from the mine and mobile vehicles and equipment will result in a change in noise levels due to ongoing mining activities and the use of the existing and realigned road network from vehicle (truck) traffic and the rail spur line. Access restriction to the PA will continue throughout operations. This will restrict access to recreational areas in and adjacent to the PA.

Operation of the Project could affect the recreational experience due, for example to sensory disturbance of campers and seasonal businesses at Big Water Campgrounds within the LSA. Sensory disturbances may result from increased noise and vibration levels, increased dust emissions, and increased vehicle (truck) traffic and rail car traffic on the existing rail spur line.

Access to, or through, waterways in the PA will be restricted during operations. This includes use of the existing alignment of the North Driftwood River. Watercourses may be used to access other areas for recreational use. Changes to navigation could therefore alter access to these areas and the practice of recreational activities.

The presence of the stockpiles, overburden and mine rock and continued Project-related traffic can continue to affect recreational use in the LSA (e.g., snowmobiling) through visual disturbance effects.

Changes to fish and fish habitat as noted for construction will continue during operations (Chapter 17 of the Impact Statement).

Decommissioning and Closure

During decommissioning and closure, mined land at the site will be restored and reincorporated into the land base. Rehabilitation will be undertaken to achieve desired end land uses. Within the PA, access restrictions will remain in place during decommissioning and closure and from the presence of the permanent pit lake. The pit lake will have a boulder fence installed around the perimeter. Sensory disturbance from rehabilitation activities to recreational land users are expected to continue throughout the active closure period of the decommissioning and closure phase. Most access restrictions will be lifted after closure measures are implemented. It is anticipated that recreational activities (e.g., hiking, snowmobiling) could be permitted where feasible.

22.4.6.2 Mitigation Measures

The following mitigation measures have been incorporated into the design of the Project and/or are proposed to avoid or reduce Project-related effects on recreational land use:

- Where possible in accessible areas (e.g., along cleared rights-of-way), Canada Nickel will leave trees and other vegetation in place to buffer views of Project components.
- Canada Nickel will provide in-kind support to local snowmobile club(s) for the loss of a snowmobile trail and associated warming hut or re-establish a snowmobile trail bypass around the Project Area.
- Canada Nickel will maintain screening (e.g., vegetation screening), where feasible, on adjacent snowmobile trails to the Project Area to reduce the potential for sensory disturbance to snowmobile trail users, where practical.
- Canada Nickel will realign the North Driftwood River to maintain navigation from a series of chain lakes west of the Tailings Management Facility to downstream of the Project Area in the North Driftwood River.
- Canada Nickel will install signage around the perimeter of the Project Area to alert local land and resource users, including boaters, of the presence of the Project and its facilities.

- Canada Nickel will limit project lighting to that which is necessary for safe and efficient Project activities. Canada Nickel will design the exterior lighting systems for Project operations to include directional lighting to limit light trespass and to avoid glare. Downward directed, full cutoff luminaires will be incorporated into the Project lighting plan (where practical) and portable lighting will be positioned to limit visibility outside the Project Area.
- Canada Nickel will select and install air quality and noise mitigation measures described in Chapter 12 of the Impact Statement (Assessment of Potential Effects on the Atmospheric Environment) and Chapter 13 of the Impact Statement (Assessment of Potential Effects on the Acoustic Environment).
- Canada Nickel will prohibit Project personnel from hunting, fishing, and bringing firearms and fishing gear to the site while working to limit competition for wildlife and fish species.
- Canada Nickel will post warning signs on the site access roads to discourage unauthorized access due to safety concerns.
- Canada Nickel will implement traffic control measures, which may include gating approaches to Project access roads and/or gated fencing to restrict public access to the Project Area.
- Canada Nickel will engage with local recreational users (e.g., anglers) and Ministry of Natural Resources (MNR) Regional Officials to address to the extent possible the potential conflict, disturbance, or access restrictions to recreational use areas in the Project Area, and availability of recreational resources.
- Canada Nickel will communicate Project activities, locations and timing throughout construction, operations, and decommissioning and closure to affected land and recreational users, interest groups, and local authorities via email, newsletter, or posting on Canada Nickels website or other appropriate means.
- Canada Nickel will consider desired end land and resource uses in the preparation of the Mine Development Closure Plan (refer to Appendix F of the Impact Statement for the Conceptual Closure Plan) as part of Project rehabilitation.
- Transport Canada, Navigation Protection Program approvals under the CNWA will be required for the construction of permanent works affecting navigation in non-scheduled waterbodies or waterways (e.g., North Driftwood River). Where applicable, Canada Nickel will follow provisions of the Prohibited Activities Exemption process (section 24) for certain types of activities (i.e., depositing materials into a navigable water, lowering water levels so that navigation is impossible) related to the Project, if applicable.
- Canada Nickel will submit the locations of the waterbodies or waterways affected by the Project to Transport Canada for review related to effects on navigation. Conditions specified in approvals and other directives for an exemption will apply to the Project.

Mitigation measures identified in other VCs (Atmospheric Environment [Chapter 12], Acoustic Environment [Chapter 13], Surface Water [Chapter 15], Fish and Fish Habitat [Chapter 17], Birds and Bird Habitats [Chapter 18], and Wildlife and Wildlife Habitat [Chapter 19]) will also reduce the potential effects on a change in recreation.

22.4.6.3 Project Residual Effects

Construction

The Project site is surrounded by vegetated land, forest cover, scattered lakes, and watercourses. Participation in outdoor activities in the surrounding area is anticipated from both residents and visitors to the region. Adverse changes in the access to and availability of recreational areas are expected during Project construction. Direct residual effects will primarily occur in the PA (i.e., 11,785 ha), where access will be restricted, resulting in a shift of recreational users to other areas of the LSA (i.e., 34,163 ha). For safety and security reasons, informal recreational activities will be restricted within the PA. Access restrictions will be put in place for the period of construction.

Traffic control measures will be developed to address access accommodation plans and logistics and reduce adverse effects during construction. Signage and/or fencing will be installed around Project facilities to increase public safety, and the local community will be informed of the start of construction activities. Access to the Lower Sturgeon Dam Road and to Camp 40 Road will be maintained so that various parties (e.g., Ontario Power Generation, Indigenous nations) retain access to these areas.

Project construction is predicted to result in changes to the outdoor recreational experience in the LSA. Sensory and visual disturbance from physical works and activities may affect nearby user's quality of experience. The areas surrounding the PA are used for outdoor recreation activities. Local recreational opportunities may be adversely affected. Sensory and visual disturbances will be reduced through the implementation of mitigation to reduce noise and light emissions where feasible. There are alternative lands within the LSA available for recreational use. The PA would not likely be considered prime recreational land.

Project activities are expected to restrict access and receptor use and increase noise levels compared to baseline conditions. The predicted sound levels at sensitive receptors are expected to be moderate in magnitude but below the applicable federal and provincial noise levels for identified receptors (e.g., residence, camps/cottages) in the PA/LSA. Low level frequency noise effects are not expected at these receptors because the predicted sound levels are within the MECP guideline limits (Chapter 13 of the Impact Statement). Canada Nickel will consider acquiring the properties where there are exceedances as a mitigation administrative control measure.

Access to waterbodies located within the PA will be removed through construction. Fish habitat that is altered or lost will be offset by creating new habitat in the North Driftwood Diversion Channel and through other offsetting measures. Currently, areas in proximity to the PA are connected by the Lower Sturgeon Dam Road and Camp 40 Road, as well as numerous resource/recreational roads managed by MNR. These roads provide access to the North Driftwood River, Jocko Creek, West Buskegau River, and Gerry and Martin Lake, which may be used for fishing by recreational anglers and Indigenous people (Chapter 17 of the Impact Statement).

The Project will overlap with waterways/waterbodies within the PA that could be considered navigable waters (e.g., canoe/kayak). The linear distance of watercourses and waterbodies overlapped by the PA includes approximately 15 km that are likely navigable (i.e., North Driftwood River) and an additional 25 km of watercourse where navigation is uncertain (i.e., lower tributaries to the North Driftwood and West Buskegau Rivers). Alterations to the navigable waters will occur within the PA, with the loss of watercourses occurring where navigation is uncertain. While lower reaches of some higher order tributaries of the North Driftwood River and West Buskegau River will be infilled to accommodate project components, the North Driftwood River channel realignment works will provide a revised navigation route so that the North Driftwood River remains navigable around the Project. This channel realignment will maintain navigation between the lakes outside the PA and the North Driftwood River (Appendix C.9 of the Impact Statement). The changes to navigation predicted to occur are anticipated to be 'adverse', 'moderate', 'long-term', and extend into the LSA/RSA. Canada Nickel will obtain Transport Canada's Navigation Protection approvals, as required.

The presence of construction workers is predicted to result in increased demand for outdoor recreation within the LSA, which could affect the quality of the outdoor recreation experience by other recreationalists. However, because Project construction workers will work long hours, there will be limited time during a workday to recreate (e.g., fishing). Construction workers will also be prohibited from bringing fishing gear while working at the sites to limit competition for fish species of value to recreational users.

Snowmobile Trail

An east-west snowmobile trail in the PA used for recreational purposes and associated warming hut will be lost due to mine development. The area surrounding the PA are used for snowmobiling activities. Project construction is predicted to result in changes to the snowmobiling recreational experience in the LSA. Sensory and visual disturbance from physical works and activities may affect nearby user's quality of experience. Local recreational opportunities may be adversely affected. Residual effects to recreational use such as snowmobiling will be reduced through the relocation of the snowmobile trail.

The route for the 500 kV transmission line corridor will follow along the realigned ROW for Highway 655 along the west side of the PA. Snowmobile usage along Highway 655 is possible in the winter, although there are no plans to design the corridor for this purpose. This recreational activity may be disturbed by nuisance effects (e.g., noise) during construction, but this disruption is expected to be 'short-term' and 'irregular' in frequency.

Summary

The residual effects on recreation (i.e., snowmobiling, navigation) due to construction activities are expected to be 'adverse', 'low' to 'moderate' in magnitude ('low' to 'moderate' for noise), limited to the PA and LSA, 'moderate' to high sensitivity with respect to timing, 'short-term' in duration, 'irregular' in frequency, and 'reversible' upon Project decommissioning and closure ('irreversible' for navigation).

Operations

The Project site will be progressively developed with the development of the ultimate footprint. The Project extent will increase during operations; however, the residual effects described for the construction phase will continue throughout operations. Areas of ground disturbance are anticipated to increase during operations at the site.

The noise assessment results indicate that nighttime equivalent sound levels from the Project will be below noise emission limits for all applicable receptors (e.g., residence, camps/cottages; Chapter 13 of the Impact Statement). Noise-related sleep disturbances at these receptors are therefore not predicted during operations. Canada Nickel will consider acquiring the properties where there are exceedances.

Access roads restrictions implemented during the construction phase will continue during operations at the Project site. Traffic control measures will be developed to address access accommodation plans and logistics during Project operations.

During operations, waterbodies located within the PA will not be accessible. Fish habitat that is altered or lost during construction (e.g., portions of the North Driftwood River) will be compensated through an Offsetting Plan (Chapter 17 of the Impact Statement). The North Driftwood River channel realignment works will provide a revised navigation route so that the North Driftwood River remains navigable around the Project. This channel realignment will maintain navigation between the lakes outside the PA and the North Driftwood River during operations.

Visual effects could be an issue at the Project site given the proximity to the North Driftwood and West Buskegau Rivers and land and water-based activities, along the realigned Highway 655, and other existing linear ROWs. The Project will have some visibility as the landscape of the LSA has generally variable topographical relief. For the most part, the Project is expected to be visible only to receptor sites in the immediate vicinity, limited to surrounding environments only. Visualizations were modelled based on preliminary engineering data and available LiDAR information. Viewpoints from Davis and Martin Lakes are likely to see portions of the Process Plant buildings, West Stockpile area, East Stockpile area, and the TMF. Portions of the rock impoundment facility will be visible while traveling along the portion of the realigned Highway 655 to the southwest and from the existing Highway 655, northwest of the site. Portions of the West Stockpile area and Process Plant buildings will also be visible from the realigned Highway 655. Portions of the East Stockpile area will also likely be visible from the adjacent 115 kV transmission line ROW. The Project's presence will result in some visual disturbance and will be long-term in duration (i.e., from site reclamation).

The presence of the West and East Stockpile areas, TMF, Impoundment Facility, and the view of Process Plant buildings at the Project site could result in some visual disturbance to recreational users along existing/realigned transmission line ROWs, from Davis and Martin Lakes, from the confluence of Jocko Creek/Mattagami River (e.g., canoeing/kayaking), and those travelling along existing/realigned Highway 655. Visual disturbance will be limited to the surrounding environments at the mine site and from the existing/realigned Highway 655. Based on modelled visualizations, the mine site will be barely visible from Jocko Creek/Mattagami River.

Worker presence could also result in increased demand for outdoor recreation within the LSA, therefore affecting the quality of the outdoor recreation experience. The work schedules for Project operations workers (24 hours per day, seven days per week) will limit time available during workday for recreating locally outside of working hours. Workers will also be prohibited from fishing gear to the site during working hours to limit competition for fish species of value.

Snowmobile Trail

Canada Nickel will engage and work with the local snowmobile clubs to re-establish the removed snowmobile trail outside of the PA during operations, north of the Impoundment Facility, or potentially on the realigned transmission line corridor. Approval from the transmission line owner would likely be required for snowmobile trail relocation.

Big Water Campgrounds

Project-related emissions of particulate matter (i.e., dust) are predicted to meet regulatory requirements for areas adjacent to the PA and within the LSA. Air and water quality effects at Big Water Campgrounds in the LSA, are not anticipated. No changes to water quality at Big Water Lake Campgrounds are anticipated from the Project as Big Water Lake is in a different watershed from the mine site. Air quality effects are addressed in Chapter 12 (Assessment of Potential Effects on the Atmospheric Environment) and surface water quality effects are addressed in Chapter 15 (Assessment of Potential Effects on Surface Water) of the Impact Statement. Potential atmospheric acid deposition/acid loading into the lake at Big Water Campgrounds is anticipated to have incremental effects in the LSA (Appendix C.1 of the Impact Statement).

Concerns have been expressed related to the recreational experience for campers and seasonal businesses at Big Water Campgrounds. The predicted sound levels for daytime and evening, and nighttime (i.e., 19 A-weighted decibels [dBA]) are all below the MECP noise target limits. A vibration level of 0.1 millimetres per second (mm/s) is predicted for Big Water Campgrounds. Predicted increases in Project-related noise and vibration will comply with applicable regulations for the assessed reception point with application of mitigation measures and administrative controls (e.g., acquiring property). Vibration levels of 0.1 to 3.5 mm/s are anticipated for areas adjacent to the PA, to a target level of 10 mm/s. Sensory disturbance to users due to Project-related emissions (e.g., noise, and vibration) in the LSA, including within Big Water Campgrounds, are anticipated but are expected to comply with applicable regulations.

Other potential interactions during Project operations activities relate to ongoing noise and potential safety issues associated with increased vehicle traffic and truck usage along Highway 655 in the LSA. Increased traffic on Highway 655 has the potential to indirectly affect recreational users of Big Water Campgrounds, although project related effects in this regard are predicted to be limited. To mitigate potential traffic safety issues, a Traffic Management Plan will be developed during ongoing planning and engineering design to address traffic staging and vehicle movements (e.g., workforce scheduling, use of an employee shuttle bus) to and from the mine site. Rail car movements along the rail spur line are not anticipated to affect traffic safety at Big Water Campgrounds nor result in noise exceedances (see Chapter 13 (Assessment of Effects to Acoustic Environment).

Summary

The residual effects for recreation during operations are expected to be ‘low’ to ‘moderate’ in magnitude (‘low’ to ‘moderate’ for noise and vibration) given ‘low’ effects to Big Water Campgrounds, restricted access and change to snowmobiling and recreation experience in the PA, and change to navigable waters (‘moderate’), limited to the PA and LSA, ‘medium-‘ to ‘long-term’ in duration, ‘continuous’ in frequency, and ‘reversible’ upon Project decommissioning and closure (‘irreversible’ for navigable waters).

Decommissioning and Closure

Following the operations phase, the site will be restored to a condition that will provide opportunities for other land uses, such as recreational uses. Rehabilitation activities will be conducted to achieve desired end land uses for the site, including the Open Pit/formed pit lake itself which could ultimately become a fishing location.

Potential residual effects identified during operations to fish and fish habitat at the Project site will cease for decommissioning and closure (Chapter 17 of the Impact Statement).

A Closure Plan will be developed and implemented to re-establish a land use that is of value for wildlife and/or humans (Appendix F of the Impact Statement). Decommissioning and closure activities may cause disruption (e.g., through sensory and/or nuisance effects) but may ultimately restore access for recreational activities. It is the intent that closure activities will promote the reestablishment of vegetation (i.e., a natural appearance) and animal habitats on site. The site could be open to the public after final closure, although there will likely be some restrictions in place due to the remaining pit and rock piles (e.g., due to safety concerns).

Overall Summary

With the implementation of mitigation measures, residual effects from the Project on recreation are anticipated to be ‘low’ (snowmobiling, Big Water Campgrounds) to ‘moderate’ (navigation) in magnitude for each Project phase. Project activities are expected to restrict access and receptor use and increase noise levels compared to baseline conditions. Noise and vibration levels for the Project are predicted to have ‘low’ to ‘moderate’ magnitude residual effects but will be below the applicable federal and provincial noise criteria. Canada Nickel will consider acquiring the properties where there are noise exceedances as a mitigation administrative control measure. Access to recreational areas will be restricted directly in the PA (11,785 ha); however, alternative recreational areas are available throughout the LSA (34,163 ha) and beyond. As there are numerous recreational opportunities available in the region, it is predicted that recreational activities will be able to continue at or near current levels. Effects to navigation are predicted to occur during construction and operations of the Project and are ‘moderate’ in magnitude. Seasonal aspects (i.e., timing) are considered in the context of recreational activities, including snowmobiling/ canoeing, since many recreational activities are seasonal. Residual effects are expected to be ‘short-’ to ‘medium-’ to ‘long-term’, ‘irregular’ to ‘continuous’ (occurring throughout the life of the Project), reversible following Project decommissioning and closure (except for the permanent Open Pit) because closure activities will include consideration of desired end uses such as recreation, and irreversible for navigable waters in the PA.

Indigenous nation members may experience differential effects on use of land and resources (e.g., access for recreational/subsistence hunting or fishing) as compared to the general population. Refer to Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests) for consideration of potential effects on Indigenous interests.

22.4.7 Change in Resource Use

22.4.7.1 Project Pathways

Construction

Site clearing and access restrictions would result in the loss of commercial resource use activities within the PA. These include hunting, trapping and bait harvesting.

Construction activity and access in the area, including Project-related transportation within the LSA (i.e., movement of trucks, equipment, bulk materials, supplies, and personnel within the LSA) can result in sensory disturbance (e.g., noise, visual) to harvesting activities and affect the presence of wildlife species. This could result in the reduction of harvesting success due to disruption of wildlife. The presence of construction workers could increase the competition for species harvested by local hunters, bait fishers, and trappers. Construction workers will be prohibited from bringing hunting and fishing gear while working at the sites to limit competition for wildlife and fish species of value to resource users. Workers would also need to obtain the necessary licence from MNR for hunting wildlife species (some of which are only allowed a certain number of licenses). The Project could also create undesired access to these resources, which could affect the resource or the experience of hunters, bait fishers and trappers using an area.

Timber areas within the PA would be cleared as part of site preparation, as well as through the construction of mine facilities, TMF, linear facilities, and realignments (i.e., 500 kV transmission line, Highway 655). These activities would remove timber from Private patented land and Crown land from future forest management activity. The clearing of a ROW and construction of a realigned 500 kV transmission line corridor/Highway 655 ROW at the Project site has the potential to adversely affect hunting, trapping, and bait fishing from temporary nuisances (e.g., noise and traffic) and activity-related disturbances as noted above. Land clearing for the PA will remove a small portion of timber from Patented land and Crown land forest area in FMU 110 (i.e., Abitibi River Forest) for the life of the Project.

Changes to the availability of bait fish resources, may occur because of the placement of materials or structures in water during construction. This could involve the placement of new Project components at the site and the realignment of a natural waterway. Areas within the PA that support bait fish species are the North Driftwood River and mostly unnamed streams and tributaries which may be partially offset through the North Driftwood Diversion Channel.

The creation of a new cleared ROW may potentially reestablish hunter or trapper access that previously existed. A realignment in access may be viewed as either a benefit to some resource users or a hindrance by creating undesired access to big game animals or furbearers. Access along the realigned corridor/ROW during construction could lead to incidents of vandalism with respect to, for example, hunting stations or trapping equipment.

Prior to the start of construction, Canada Nickel will obtain the required land tenure within the PA. No Project components will be constructed on mining claims/leases held by other parties. The PA does not overlap with any active aggregate pits. One active aggregate pit, the Labelle Pit with a licensed area of 65 ha, is in the LSA within the Carnegie Township. Canada Nickel is seeking to obtain all surface and mineral rights to the PA, including for the aggregate sources. The Project would not conflict with resource extraction activities from the aggregate pit within the LSA. No other potential effects on aggregate sources outside the PA are anticipated.

Operations

Disturbance effects on commercial resource use activities in the PA and LSA will persist through the operations phase. Changes to bait fish resources as noted for Project construction will continue during operations (Chapter 17 of the Impact Statement).

As with construction, potential project pathways for affecting hunting and trapping are direct disturbance of hunting and trapping activities due to Project-related noise and activities and potential for increased pressure on wildlife resources from the influx of Project workers.

Disturbance effects on hunting and trapping related to access will be like those identified for Project construction. Sensory disturbance (e.g., noise, visual) from access to the area and use of the road network can affect the presence of wildlife. This could result in the reduction of harvesting success due to disruption of animals and furbearers, which could lead to greater pressure on game resources. Worker presence could increase the competition for species harvested by local hunters and trappers. The Project could also create additional access to these resources, which could affect the resource or the experience of hunters and trappers using a particular area. The stockpiles of ore, overburden and mine rock at the Project site could be visible to resource users operating in the area.

The power transmission line corridor/Highway 655 ROW realignment at the Project site will serve to maintain and provide access to areas beyond the LSA during operations. The relocated corridor/ROW may provide increased hunting opportunities in designated hunting areas, resulting in a benefit to hunting activity. Trappers may benefit from being able to travel along the realigned corridor/ROW to set new traps thereby accessing previously unexploited areas and wildlife. The presence of the relocated transmission line corridor/Highway ROW could result in incidents of vandalism (e.g., equipment or stations) or affect a resource user's quality of experience on the land. Potential Project pathways for affecting bait fishing during operations are like those identified for Project construction.

Decommissioning and Closure

Rehabilitation activities within the PA will result in sensory disturbance (e.g., noise, visual) to resource users engaged in hunting and trapping and bait fishing activities, which will continue through the decommissioning and closure phase. The presence of workers could result in an increase in competition for species harvested by hunters and trappers and fishers.

During decommissioning and closure activities, access to some areas within the PA will be restricted, including the permanent pit lake; however, rehabilitation activities will allow for natural reforestation of other affected land. Once reclamation activities are complete, the area lost outside the permanent pit lake will be restored within the PA and will be reincorporated into the land base as part of ongoing maintenance at the Project site allowing for the possible conditional resumption of resource land use activities. Resource uses, such as hunting and trapping, may be permitted in the future where safe to do so. Future uses will be discussed with Indigenous nations and stakeholders as part of the Mine Development Closure Plan.

22.4.7.2 Mitigation Measures

The following mitigation measures have been incorporated into the design of the Project and/or are proposed to avoid or reduce Project-related effects on resource use:

- The Project footprint will be limited to the extent possible (i.e., Project Area) including site clearing and disturbance associated with access routes and realigned transmission line corridor/Highway 655 Right of Way.
- Canada Nickel will use existing access roads and trails will be used to the extent possible. Canada Nickel will develop internal access routes in compliance with provisions of the Mining Act, 1990.
- Canada Nickel will install signage around the Project Area to alert local resource users of the presence of Project facilities and activities.
- Canada Nickel will prohibit Project personnel from hunting, fishing, and bringing firearms and fishing gear to the site while working to limit competition for wildlife and fish species.
- Canada Nickel will communicate the schedule of Project activities throughout the construction, operations, and decommissioning and closure phases to potentially affected tenure holders, commercial hunters, trappers, and bait harvesters and Ministry of Natural Resources (MNR) Regional Officials via email, newsletter, or posting on Canada Nickels website or other appropriate means.
- Canada Nickel will engage with local resource users (commercial hunters, trappers, bait harvesters) and Ministry of Natural Resources (MNR) Regional Officials to address to the extent possible the potential conflict, disturbance, or access restrictions to commercial hunting, trapping, and bait fishing areas in the Project Area, and availability of wildlife and bait fish resources.
- Canada Nickel will seek a Release of Tree Reservation under the Public Lands Act to remove trees on patent lands which have timber rights reserved to the Crown.

- Canada Nickel will complete timber clearing and removal in accordance with a Forest Resource Licence (FRL) from the Ministry of Natural Resources (MNR) in accordance with the Crown Forest Sustainability Act, 1994.
- Canada Nickel will obtain necessary patent mining claims, mineral leases, and unpatented mining claims (provincial Crown lands) in areas that are overlapped by the Project.

22.4.7.3 Project Residual Effects

Construction

Project clearing and construction activities will lead to a loss of area for resource harvesting in the PA. The loss of area will vary for hunting, trapping, and affected bait fish harvesting areas. Much of the area lost will be off-limits until Project decommissioning and closure, except for the Open Pit and TMF, which will remain permanently inaccessible. Table 22.5 lists the harvesting tenures (i.e., bait harvest areas, traplines, bear management areas) overlapped by the PA and LSA and, the proportion of each tenure area that will be lost due to access restrictions.

Table 22.5 Total and Relative Tenure and Allocation Areas by PA and LSA

Resource Area	Total Area (ha)	Area Overlapped by PA (ha)	Area of PA as Proportion of Total Area (%)	Area Overlapped by LSA (ha)	Area of LSA as Proportion of Total Area (%)
Bait Harvest Areas					
CO0015	2,068	758	37	1,578	76
CO0016	4,899	3,202	65	4,304	88
CO0043	10,000	4,496	45	7,316	73
CO0044	7,224	772	11	1,922	27
CO0051	10,000	0	0	14	0
CO0052	10,000	7	0	489	5
TI0007	9,263	1,796	19	5,171	56
TI0008	9,382	548	6	1,662	18
TI0015	4,627	167	4	1,054	23
TI0017	4,690	0	0	346	7
TI0019	9,281	37	0	2,691	29
TI0026	9,291	0	0	3,600	39
TI0027	9,281	0	0	3,317	36
TI0028	9,332	0	0	437	5
TI0042	2,325	0	0	202	9
TI0045	9,369	0	0	55	1
Bear Management Areas					
CC-30-015	69,228	3,102	4	5,015	7
TI-30-048	41,465	1,041	2	886	2

Resource Area	Total Area (ha)	Area Overlapped by PA (ha)	Area of PA as Proportion of Total Area (%)	Area Overlapped by LSA (ha)	Area of LSA as Proportion of Total Area (%)
TI-29-008	25,656	0	0	3,582	14
Trapline Areas					
CC041	17,996	2,826	16	5,665	31
CC069	37,027	239	1	2,224	6
TI027	20,530	37	0	6,013	29
TI033	10,590	0	0	56	0
TI035	25,682	8,646	34	14,419	56
TI036	15,289	0	0	2,844	19
TI040	10,191	35	0	1,480	14
TI041	14,686	0	0	711	5
TI048	11,398	0	0	749	7
Note: numbers are approximate.					

Patent (private) land makes up approximately 97% of the bait harvest areas (BHAs) overlapped in the PA; the remaining 3% consists of Crown land. The Project will result in the restricted access to and loss of areas for bait harvesting for tenure holders in the PA. The removal of area from nine bait harvest areas (BHAs) in the PA represents an approximate 17% reduction of the total area for the identified BHAs. Watercourses and waterbodies that support baitfish species in the PA include unnamed streams and tributaries to the North Driftwood River and unnamed stream and tributary to the West Buskegau River. The restriction in use of these streams in PA may also indirectly affect resource users in the LSA who have used this area to access other creeks, streams, and ponds beyond the LSA. The potential residual effect is expected to reduce the ability to undertake bait harvesting, limited to the PA, and is anticipated to be moderate in magnitude.

Project construction may result in temporary sensory disturbance (e.g., construction noise, visual) and nuisance effects (e.g., traffic) displacing big game or furbearers and reducing harvesting success rates in proximity to the Project in the LSA. A series of internal access roads will facilitate access to various Project components. The realigned Highway 655, which will be shifted to the west of the PA, will serve to maintain access to areas in the LSA, including areas connected by the Lower Sturgeon Dam Road and Camp 40 Road.

The Project site is located within two bear management areas, CC-30-015 and TI-30-048, encompassing 4,143 ha. There is potential for disturbance to hunting during construction activities. This would only occur during the period when hunters are active (i.e., May 1 to June 15 and August 15 to October 31; Government of Ontario 2023b). During construction, Project-related noise has the potential to disturb wildlife resources of interest to hunters in the LSA because of habitat avoidance and/or a change in habitat use around the site (Chapter 19 of the Impact Statement). The removal of area from two bear management areas in the PA represents an approximate 4% reduction in the total area for the identified bear management areas. The restriction in use of the PA may also indirectly affect resource users in the

LSA who have used this area to access wildlife resources beyond the LSA. As the PA will only overlap a small proportion of two bear management areas, the anticipated effects are low.

The remoteness and quality of the hunting experience, which are valued by clientele, may be affected by construction activities and the presence of construction workers in the PA. Project activities could therefore result in a decrease in interest in hunting services in two identified BMAs, particularly if undisturbed or undeveloped areas are available elsewhere in the LSA and beyond. The residual effects on resource user experience during construction in the PA will be low magnitude (given the small area of BMAs affected).

The Project site is within WMU 30. Clearing and construction activities may temporarily displace furbearers from areas in proximity to the PA due to sensory disturbance (e.g., noise), and therefore disrupt trapping activity. During construction, potential disturbance effects on trapping activity in the LSA will be like that for other resource users, including changes to the availability of wildlife resources of interest to trappers, due to wildlife disturbance and mortality risk (Chapter 19 of the Impact Statement). Positive effects could occur for some harvesters because of improved access to resource or trapping areas. As the LSAA will overlap a larger proportion of five trapline areas, anticipated effects are ‘moderate’.

Project clearing and construction activities may result in temporary sensory disturbance effects (e.g., construction noise, visible Project components) related to availability of resources of interest to commercial bait fishers in the LSA. The restriction of access to resources could also affect bait fishers using a waterbody. Indirect effects associated with the restriction of access within the PA could extend into the LSA. This would apply to recreational users who have previously used access routes to get to other waterbodies outside of the LSA quickly and easily.

Analysis of the noise assessment results indicate that the predicted sound level of short-term construction activities will be below the mitigation noise level targets for sensitive receptors, including overnight Indigenous habitation locations and an Indigenous site. Noise effects are not expected at these sensitive receptors because the predicted sound levels are below the federal and provincial target levels (Chapter 13 of the Impact Statement).

The construction phase of the Project will not affect provincial forest land and privately held land at the Project site as there are no planned harvesting areas within the PA prior to 2032 within FMU 110. As such, no effects to commercial forestry are anticipated currently (Abitibi River Forest Management Inc. 2022). Access to other planned harvest areas within the LSA will be via existing access roads. Construction and operations activities for the Project will be restricted to the PA, as much as possible, to reduce disturbances to other adjacent commercial forest land. Effects on tenures and areas used for forest management beyond the PA and in the LSA is not anticipated.

Canada Nickel will obtain the necessary patents and mining leases covering the PA and as a result, Project components will be constructed within the area for which Canada Nickel holds the necessary surface and/or mineral rights, including for aggregate sources. No residual adverse effects on surface and mineral rights are anticipated.

Overall, the residual effects on resource use from construction are expected to be ‘adverse’, ‘low’ to ‘moderate’ in magnitude (‘low’ to ‘moderate’ for noise-related effects), limited to the PA and LSA, with no sensitivity for timing, ‘short-term’ in duration, ‘irregular’ in frequency, and ‘reversible’ upon Project decommissioning and closure.

Operations

During Project operations, the loss of harvesting areas, disturbance effects (e.g., noise, visual), access restrictions implemented during the construction phase and use of the existing realigned Highway 655 will continue because of the presence of the Project. Traffic control measures will be developed to address access accommodation plans and logistics during mine operation (e.g., gates, gated fences).

Commercial hunting and trapping resource users may continue to experience residual adverse effects related to the availability of big game and furbearers of interest in the LSA (e.g., effects from habitat avoidance due to disturbance and wildlife mortality risk; Chapter 19 of the Impact Statement), and sensory disturbance to land and resource users related to Project and worker presence. A potential residual effect will be the ongoing mine operation. The residual effects on commercial hunting and trapping are characterized as low to moderate, given the overall proportion of hunting and trapping areas affected in the LSA.

During operations, disturbance to commercial bait fisheries initiated during construction will continue. The restriction in use of the PA may also indirectly affect resource users in the LSA who have used this area to access other creeks, streams, and ponds beyond the LSA. The residual effects are anticipated to be moderate.

The noise assessment results indicate that nighttime equivalent sound levels from the Project will be below noise emission limits for sensitive receptors, including at Indigenous sites and overnight Indigenous habitation locations. No noise-related sleep disturbances at these receptors are predicted from operations during the daytime or nighttime (Chapter 13 of the Impact Statement).

Visual effects from the presence of the west and east stockpiles, waste rock impoundment, and TMF could be an issue to resource users operating and travelling in the area. Portions of the West and East Stockpiles, rock impoundment facility, and TMF at the Project site will be visually apparent and could result in a visual disturbance to some resource users of the North Driftwood and West Buskegau Rivers in the LSA, and those travelling along the existing/realigned Highway 655 and existing 115 kV transmission line ROW. The extent of visual disturbance from the Project will be limited to the surrounding environments at the mine site. Based on modelled visualizations, components of the Project site may be visible to varying extents from certain vantage points.

Overall, the residual effects on resource use during operations are expected to be low to moderate in magnitude (low to moderate for noise), limited to the PA and LSA, with no sensitivity with respect to timing, medium-term in duration (long-term for visual), continuous in frequency, and reversible upon Project decommissioning and closure.

Decommissioning and Closure

During Project decommissioning and closure, no new residual effects on areas or access for hunting and trapping are expected. Decommissioning and closure activities will require a small workforce, less than during operations, resulting in less pressure on resources. Project decommissioning and closure can result in disturbance effects on hunters and trappers related to the availability of big game and furbearers of interest in the LSA, and sensory disturbance to land and resource users.

Depending on the end use of the sites, once rehabilitation and closure activities are completed, some areas may become accessible again for commercial harvest activities (e.g., hunting, trapping), except for such permanent mine components as the Open Pit area (formed pit lake). The rehabilitated PA will likely have a mixture of accessible and inaccessible areas and hence be similar in nature to existing conditions on site. During Project decommissioning and closure, no new residual effects on watercourses or waterbodies fished for commercial bait are expected.

Active decommissioning and closure activities will occur approximately five years after the end of operations. Most of the PA will be rehabilitated and the land base at the end of decommissioning and closure activities will be returned to a state compatible with pre-development conditions and surrounding land uses. No further residual effect is anticipated.

Overall Summary

As Canada Nickel will obtain the necessary patents and mining leases covering the PA and Project components will be constructed within the area for which Canada Nickel holds the surface and mineral rights, including for aggregate sources, no residual adverse effects on surface and mineral rights are anticipated. Noise levels at the Project site are predicted to have low to moderate magnitude residual effects. Noise effects are not expected at sensitive receptors including at Indigenous sites and overnight Indigenous habitation locations because the predicted sound levels are below the federal and provincial target levels. The loss of area due to the Project will vary for each affected tenured harvest area (i.e., bear management area, trapline, and bait harvesting area). The residual effects are anticipated to be low (for BMAs) to moderate (for bait fishing, trapping) in magnitude, as usage and harvest levels for bait fishing and trapping are somewhat unknown. Physical Project disturbance on hunting represents approximately 0.5% of the total area for hunting in the RSA (i.e., BMAs) and an overlap of trapping activities representing approximately 1.2% of the total area of trapping in the RSA. The related change in the affected resource land base represents a small area overall. There are 16 bait block areas within the LSA where watercourses or waterbodies are commercially bait fished or have bait fish species, including the West Buskegau River. The restriction in use of the PA will potentially result in an adverse indirect effect to resource users in the LSA who have used this area to access other areas beyond the LSA. Because there are numerous opportunities to hunt, trap and bait fish outside of the LSA, it is predicted that hunting, trapping, and bait fishing activities will be able to continue at or near current levels.

There are no planned forest harvesting areas within the PA prior to 2032; thus, no effects to commercial forestry are anticipated currently.

Seasonal aspects are unlikely to alter residual effects on resource use as the effects will be the same regardless of the season, occurring year-round. Residual effects related to hunting, trapping, and bait fishing will be 'short-term' (for construction noise) to 'medium-term' (for sensory disturbance) and 'long-term' for visual, 'irregular' to 'continuous' in frequency, and 'reversible' following Project decommissioning and closure (except for permanent Open Pit [formed pit lake]).

22.4.8 Summary of Effects on Sub-Populations Identified Through Gender-Based Analysis Plus

Sections 22.4.2, 22.4.3, and 22.4.4, identify seniors, youth, women, members of Indigenous nations, and low-income families as those sub-populations in the LSA/RSA who may experience disproportionate effects on infrastructure and services. These groups are particularly challenged when it comes to access to childcare and appropriate housing.

In 2023, it was reported that the District of Cochrane had a shortage of ECEs, with an estimated 80 ECEs required to meet the present demand. As of July 2023, 96% of available childcare spaces in the District had been filled and some spaces had been closed due to a lack of early childhood educators. Local strategies to recruit and retain ECEs and the planned opening of nearly 200 new childcare spaces in the District should increase access to childcare for residents and reduce the magnitude of disproportionate effects on vulnerable groups.

Additional Project-related demands on accommodation availability could further affect the access to suitable housing options for members of identified sub-populations. By communicating Project needs to temporary accommodation providers in the LSA/RSA and by making efforts to train and hire members of LSA/RSA communities, Canada Nickel will reduce the magnitude of potential adverse effects on members of sub-populations. This will be addressed further in the Accommodations Plan for the Project. Plans by municipalities to increase the supply of transitional housing and develop subdivisions in the District of Cochrane will also reduce adverse effects.

Canada Nickel will implement a number of other mitigation measures to manage disproportionate effects including:

- Canada Nickel will develop and implement a Code of Conduct and Ethics and respectful workplace policies will be developed and implemented, and cultural awareness training will be provided for all Project personnel that includes local and cross-cultural awareness.
- To manage Project-related demands on police services and to enhance the safety of women in the community and at the site, Canada Nickel will provide security at the site and implement several workplace policies which will limit adverse behaviours in the community.
- Canada Nickel will develop the following policies, procedures, and training:
  - Code of Conduct and Ethics
  - Diversity and Inclusion
  - Cultural Awareness Training
  - Canada Nickel will provide security at the Project site.

- Canada Nickel has and will continue to participate in events centred around raising awareness in underrepresented groups of opportunities in mining and encouraging engagement in local training programs already tailored to managing diverse, unique needs and access requirements.
- Canada Nickel has and will continue to engage local Indigenous nations and has established agreements to support present and future engagement and participation in the Project. Additional Indigenous nations will be included in negotiations for long-term agreements (e.g., Impact Benefit Agreement, Mutual Support Agreements as well as additional agreements, as appropriate).
- Canada Nickel will increase flexibility in work schedules to enable the continued participation of Indigenous employees in traditional and cultural activities.
- Canada Nickel has developed an internal Whistleblower Program for employee feedback and communication of concerns, as well as an external feedback mechanism to capture Project-related comments and concerns from community members.
- Canada Nickel will develop a Diversity and Inclusion Policy, which encompasses respectful workplace behaviours for diverse groups such as Indigenous nations, local youth, seniors, 2SLGBTQQIA+, visible minorities, persons with disabilities and members of the GBA Plus community. Such a policy and subsequent training consist of awareness training for non-Indigenous employees to foster a respectful working relationship with Indigenous employees and contractors.
- Canada Nickel is participating in the initiative “Equal by 30”, which aims to increase benefits to women and to accelerate gender equality and diversity to close the gender gap by 2030.
- Canada Nickel will participate in initiatives aimed at addressing wage inequality among Indigenous populations through working with organizations such as Keepers of the Circle.

The current and historical use in the LSA and RSA by Indigenous nation members is described in Chapters 25-28 (Assessment of Potential Effects on Indigenous Interests). Due to the location of the PA in First Nation Traditional Territories, some effects (e.g., access for recreational/subsistence harvesting) may affect Indigenous peoples disproportionately in comparison with general population.

22.4.9 Summary of Project Residual Effects

Table 22.6 summarizes Project residual effects on social conditions.

Table 22.6 Project Residual Effects on Social Conditions

Residual Effect	Residual Effects Characterization							
	Project Phase	Direction	Magnitude	Geographic Extent	Timing	Duration	Frequency	Reversibility
Change in demand for services and infrastructure	C/O	A	L	LSA/RSA	NS	ST-MT	C	R
Change in accommodation availability	C/O	A	M	LSA/RSA	NS	ST-MT	C	R
Change in demand for transportation infrastructure	C/O	A	L	LSA/RSA	NS	ST-MT	C	R
Change in land use designations and private property	C/O/D	A	L	LSA	NS	ST-LT	IR/C	R/I
Change in recreation	C/O/D	A	L-M	LSA	MS-HS	ST-LT	IR/C	R/I
Change in resource use	C/O/D	A	L-M	LSA	NS	ST-LT	IR/C	R/I

Key:
See Table 22.3 for detailed definitions.

Project Phase
C: Construction
O: Operations
D: Decommissioning and Closure

Direction:
P: Positive
A: Adverse
N: Neutral

Magnitude:
N: Negligible
L: Low
M: Moderate
H: High

Geographic Extent:
PA: Project Area
LSA: Local Study Area
RSA: Regional Study Area

Timing:
NS: No sensitivity
MS: Moderate sensitivity
HS: High sensitivity

Duration:
ST: Short-term
MT: Medium-term
LT: Long-term

Frequency:
S: Single event
IR: Irregular event
R: Regular event
C: Continuous

Reversibility:
R: Reversible
I: Irreversible

N/A: Not applicable

22.4.9.1 Summary of Adverse Residual Effects

With the application of mitigation measures, including hiring from local communities where possible, provision of a company doctor and virtual health services, Project design for utilities, planned work rotations, and implementation of a Traffic Management Plan, the Project's 'adverse' residual effects on services and infrastructure (change in demand on services and infrastructure, change in accommodation availability, and change in demand for transportation infrastructure) are expected to occur in the LSA/RSA in the 'short-' to 'medium-term', be 'reversible', and 'continuous' throughout construction and operations. Effects on services and infrastructure and transportation infrastructure are predicted to be 'low' magnitude and effects on accommodation availability are predicted to be 'moderate to high' magnitude. Canada Nickel is exploring opportunities with Indigenous partners and local entrepreneurs to foster the development of workforce accommodations. In addition, surrounding communities have developed plans to increase housing availabilities that will further mitigate effects of the Project on housing should those projects proceed.

The residual effect on land use will be 'low' in magnitude ('low' to 'moderate' for noise and vibration) for each Project phase. Project activities will restrict access and use at sensitive receptors and properties. Noise and vibration levels for the Project are predicted to be below the applicable federal and provincial noise criteria. Canada Nickel will consider acquiring the properties where there are noise exceedances as a mitigation administrative control measure. The Project is not expected to affect parks and protected areas or First Nation Reserve lands. There is no sensitivity with respect to timing of construction activities as the effects on land use and property are not restricted to specific seasons. The residual effect is limited to the PA and LSA, 'short-' to 'medium-term' in duration, 'irregular' to 'continuous' in frequency, and 'reversible' upon Project decommissioning and closure (except for the pit lake).

The residual effects from the Project on recreation are anticipated to be 'low' to 'moderate' in magnitude, given effects to Big Water Campgrounds ('low'), restricted access and change to snowmobiling and recreation experience in the PA ('low'), and change in navigation in the PA ('moderate'). As with land use, Project activities will restrict access and use at sensitive receptors and properties. Noise and vibration residual effects are predicted to be 'low' to 'moderate' magnitude for each Project phase. However, noise levels at the Project site are predicted to be below the applicable federal and provincial noise criteria. Canada Nickel will consider acquiring the properties where there are noise exceedances as a mitigation administrative control measure.

The Project is predicted to result in the removal of an east-west snowmobile trail and associated warming hut in the PA. Canada Nickel will provide in-kind support to local snowmobile club(s) for the loss of a snowmobile trail and associated warming hut in establishing a snowmobile trail bypass around the PA. No other snowmobile trails will be affected.

Sensory disturbance to recreational users due to Project-related emissions (e.g., noise, and vibration) within Big Water Campgrounds, are anticipated but are expected to comply with applicable regulations. No air and water quality effects are anticipated at Big Water Campgrounds. Potential atmospheric acid deposition/acid loading into the lake at Big Water Campground is anticipated to be incremental. Increased traffic on Highway 655 has the potential to indirectly affect recreational users of Big Water Campgrounds. Traffic safety issues on Highway 655 will be mitigated through the implementation of a Traffic

Management Plan. Rail car movements along the rail spur line are not anticipated to affect traffic safety at Big Water Campgrounds.

Seasonal aspects with respect to recreation activities, including recreational canoeing, were considered because recreational activities are affected by timing. The Project's adverse residual effects on recreation are expected to be medium to long-term, irregular to continuous (occurring throughout the life of the Project), reversible following Project decommissioning and closure (except for the pit lake) and irreversible for navigable waters.

The residual effect on resource use will be 'low' to 'moderate' in magnitude ('low' to 'moderate' for noise and vibration) for each Project phase:

- Noise effects are not expected at sensitive receptors including at Indigenous sites and overnight Indigenous habitation locations because the predicted sound levels are below the federal and provincial target levels.
- The presence of a construction workforce could lead to increased competition for bait fish resources that are of interest to harvesters in the LSA. However, workers will be prohibited from bringing fishing gear to the sites to limit competition for bait fish species of value to resource users.
- The loss of area in the PA will vary for each affected bear management area and trapline area. The residual environmental effect is expected to reduce the ability to undertake hunting and trapping in these areas. The related change in the affected land base represents a small area overall in relation to numerous other areas in which commercial hunting (i.e., BMAs), and trapping activities can occur in the RSA. Indirect effects associated with the restriction of access within the PA could extend into the LSA. This would apply to recreational users who have previously used the PA to get to other areas outside of the LSA quickly and easily. The residual effects are 'low' (for BMAs) to 'moderate' (for trapping) in magnitude, 'irregular' to 'continuous' in frequency, and 'short-' to 'medium-term' in duration. The residual effects to trapping and bait fishing are of moderate magnitude as the actual harvest levels and usage are somewhat unknown. There are several watercourses and waterbodies within the PA and LSA (adjacent) that have commercial bait fish species, including: an unnamed pond, unnamed streams and tributaries to the North Driftwood River, an unnamed stream and tributary to West Buskegau River, and West Buskegau River. Access to commercial bait fish waterbodies within the PA will be disrupted during construction and subsequently removed. As with hunting and trapping, the loss of commercial bait harvesting areas overall varies. The residual environmental effect is expected to reduce the ability to undertake commercial bait harvesting, limited to the PA, and is 'moderate' in magnitude, subject to somewhat unknown usage levels. The residual effect is 'short-' to 'medium-term' in duration, 'irregular' to 'continuous' in frequency, and 'reversible' upon Project decommissioning and closure (except for the pit lake).
- Seasonal aspects are unlikely to alter residual environmental effects on resource use as the effects will be the same regardless of the season, occurring year-round.

22.4.9.2 Summary of Positive Residual Effects

The Project may support improved access to local services and infrastructure if upgrades occur as a result of Project-related demands (e.g., recreation facilities). The presence of the Project may create positive effects in LSA/RSA communities if potential demands on accommodations result in efforts to increase the stock of permanent and temporary housing. The Project workforce will contribute economically to the LSA/RSA (through property and income taxes) representing a potential expansion of municipal tax bases. This in turn may help pay for service providers to re-size appropriately for the increased population.

The presence of the realigned transmission line through the PA, along with the joining at the north and south to the existing corridor, may serve to maintain positive effects in the LSA by the provision of the same kind of replacement access along the realigned ROW corridor for land and resource use activities (e.g., snowmobiling).

22.4.10 Significance of Adverse Federal Effects

22.4.10.1 Changes to Navigation

The changes to navigation predicted to occur are anticipated to be adverse, moderate in magnitude, continuous, extend into the LSA/RSA, long-term, and irreversible. The linear distance of watercourses and waterbodies overlapped by the PA where navigation is described as ‘likely’ is approximately 15 km, which is limited to the North Driftwood River (i.e., portion to be realigned). An additional approximately 25 km of watercourse where navigation is “uncertain” (i.e., where characteristics of the watercourse suggest navigation is possible but there is no evidence of past or present navigation) are also located within the PA. Additional field validation and discussion with Transport Canada is required to confirm these watercourses where navigation is uncertain.

Residual effects on navigable waters include the direct loss or alteration of navigable waters for recreational use within the PA. There are no scheduled waterways affected by the Project, with the closest directly connected scheduled waterway being the Moose River (via West Buskegau River to the Abitibi River to the Moose River and the Kwetabohigan Rapids) approximately 107 km downstream of the PA. The removal of watercourses where navigation was characterized as ‘uncertain’ within the PA will occur during construction. The watercourses include the downstream reaches of tributaries to the North Driftwood and west Buskegau Rivers. However, navigation along the North Driftwood River, which is identified as a watercourse where navigation is ‘likely’, will be maintained throughout the Project. Alterations to the alignment of this watercourse will occur during operations; however, the revised channel alignment will be designed so that the North Driftwood River remains navigable around the Project, and to maintain navigation between the lakes outside the PA and the North Driftwood River during operation. As other navigable watercourses are available in the LSA/RSA, it is predicted that this recreational activity will be able to continue at or near current levels.

Approval under the CNWA is anticipated to be required for the realignment of the North Driftwood River as a major works (dam and diversion), and for the construction of outfalls in the North Driftwood and West Buskegau Rivers as minor works. An exemption may be required for infilling of any watercourses confirmed to be likely navigable, which will be confirmed through further discussions with Transport Canada.

As such, acknowledging the loss of 'uncertain' navigable waters, and alterations to the North Driftwood River, with mitigation measures described above, Project residual effects to non-scheduled navigable waters are predicted to be of moderate significance.

22.5 Potential Effects on Federal Lands

There are no federal lands within the LSA; however, federal lands within the RSA for land and resource use consist of Reserve Lands. The closest lands under federal jurisdiction are the Taykwa Tagamou Nation Reserve lands located approximately 37 km away (straight line) from the Project site (14 km southeast of Cochrane). The Project is not expected to adversely affect land and resource use on federal lands (e.g., First Nation Reserves). In terms of visibility, the Project mine site is unlikely to be visible from First Nation Reserves. Mitigation measures for land and resource use are provided in Section 22.4 for these various components. No additional mitigation measures beyond those identified are specifically required for federal lands.

22.6 Prediction Confidence

22.6.1 Services and Infrastructure

With the proposed mitigation measures, implementation of normal planning procedures by the relevant authorities, and liaison between the proponent and local authorities, the residual effects on services and infrastructure has been determined with a moderate level of confidence.

The prediction confidence in the conclusions for Project residual effects is based on uncertainty regarding the extent to which Project employment will be realized by local residents and if plans by municipalities increase the capacity of services and infrastructure, such as increasing the stock of housing in the LSA/RSA and the number of staffed childcare placements, are achieved by Project construction and/or operations.

In regard to accommodations, the conclusion of a moderate effect is based on the expected increase in accommodations by third parties or independent accommodations providers, However, in the event that Canada Nickel's discussions with third parties do not result in the development of Project workforce accommodations, the effects on accommodation availability are predicted to be high.

22.6.2 Land and Resource Use

The level of confidence in the predictions for Project-related residual effects on land and resource use is moderate. The prediction confidence is based on information collected as part of desktop data compilation and understanding of current baseline conditions, GIS data analyses, understanding of Project activities, locations and described interactions, the known effectiveness of mitigation measures, and experience of the assessment team. While some of the desktop data were limited in terms of availability (e.g., Crown land, intensity of recreational usage) or record (e.g., bait harvest block, trapping, and bear management areas in support of harvest evaluation), the environmental effects mechanisms are well-understood. Many of the effects analyzed were supported through quantification. Many of the mitigation measures identified in the following Sections 22.4.6.2 and 22.4.7.2 are standard practice and have been implemented in previous mining projects.

22.7 Assumptions

In some instances, data limitations necessitated that a conservative approach be taken to accommodate uncertainty for the effects assessment. Conservative assumptions were made with respect to effects on land and resource use associated with effects on outfitting and navigational use to account for data limitations. Land and resource use activities were assumed to occur within the LSA and RSA, even if information collected through consultation did not specifically identify these activities or site-specific uses.

In terms of gaps or limitations in the data for existing conditions, GIS data is only available regarding the number of buildings in the LSA/RSA but not their type or occupancy status. Patented (private) land data was limited to the use of mining land tenure and non-mining tenure as a private land proxy approximation. Limitations for the land and resource use analysis includes that of Crown land ownership (e.g. lack of property identifiers). Unpatented Crown land is assumed to be Crown land after patent land, First Nation Reserve, provincial park, and conservation reserves are removed, and is an estimate only as a separate Crown land data set is unavailable. Certain other data, such as confidential identifier information (e.g., permit holders, licence holders) were not readily available for inclusion due to privacy and/or publication limitations.

22.8 Follow-up and Monitoring

22.8.1 Services and Infrastructure

Dedicated follow-up and monitoring activities are not anticipated for services and infrastructure (including accommodations availability and transportation infrastructure. Government departments, public agencies, and private-sector companies that deliver services and infrastructure monitor the ongoing demand for such services as part of their normal planning practices. Project information and predicted demands on services and infrastructure will be communicated to responsible authorities to assist with their planning. A community feedback tool will also be developed and implemented to receive and address community suggestions, concerns, and complaints.

22.8.2 Land and Resource Use

Dedicated follow-up and monitoring activities are not anticipated for the land and resource use VC

Land and resource use activities within the RSA are the subject of ongoing planning, management, regulatory enforcement, and monitoring by the federal, provincial, and municipal governments. This includes the monitoring and collection of information on, for example, municipal land use, hunting, trapping, and fishing activity and development for the purposes of licensing, enforcement, and resource management. Canada Nickel has provided, and will continue to provide, Project information to relevant agencies and organizations.

22.9 References

Adventure North Ontario. 2023b. Gateway to the North ATV. Available at: https://aventurenord.ca/en/routes/gateway-to-the-north-atv/. Accessed August 24, 2023.

Apitipi Anicinapek Nation. 2024. Apitipi Anicinapek Nation Indigenous Knowledge, Land Use and Occupancy Study for Canada Nickel Company Crawford Nickel Project. 2023-2024. Prepared by Tamarack Environmental Associates Inc. with Apitipi Anicinapek Nation.

Arangio, S. 2023. 'The red tape is gone': Cochrane looks to expand. Article, CTV News Northern Ontario, September 30, 2023. Available at: https://northernontario.ctvnews.ca/the-red-tape-is-gone-cochrane-looks-to-expand-1.6584399

ARFMI (Abitibi River Forest Management Inc.). 2022. Abitibi River Forest Management Plan 2022-2032. Publish Start Date March 17, 2022. Available at: https://nrip.mnr.gov.on.ca/s/published-submission?language=en_US&recordId=a0z3g000000zIvfAAE. Accessed August 28, 2023.

Ausenco (Ausenco Engineering Canada ULC). 2023. Crawford Nickel Sulphide Project NI 43-101 Technical Report and Feasibility Study. Retrieved November 24, 2023 from https://canadanickel.com/wp-content/uploads/2023/11/Crawford-NI-43-101-FINAL-REPORT_Nov24_R2.pdf

Big Water Campgrounds Inc. 2023. Big Water Campgrounds Facilities & Adventure. Available at: https://bigwatercampground.ca/contact-us/. Accessed November 23, 2023.

Canada Nickel (Canada Nickel Company). 2022. Detailed Project Description Crawford Nickel Project. Available at: https://iaac-aeic.gc.ca/050/documents/p83857/145854E.pdf.

CBC News. 2022. Northern Ontario town plans to build 300 modular homes per year with new factory. Article, CBC News, December 20, 2022. Available at: https://www.cbc.ca/news/canada/sudbury/iroquois-falls-modular-homes-1.6692217

CBRE Ltd. 2023. Tourism research statistics. Available at https://www.ontario.ca/page/tourism-research-statistics

CDSSAB (Cochrane District Social Services Administration Board). 2021a. 10-Year Housing Plan Update – 2021 Progress Report. Available at: https://www.cdssab.on.ca/images/support//HS/cochrane-10-year-housing-plan---2021-progress-report-final.pdf

CDSSAB. 2021b. Point-in-Time Count 2021 2getherWeCount! Presented to CDSSAB Board of Directors, November 18, 2021. Available at: https://www.cdssab.on.ca/images/support//HS/Point_In_Time_2021/PiT_Count_Report_November_2021-FInal_November_5_2021.pdf

CDSSAB. 2022a. September 21 Board Meeting Package. Available at https://www.cdssab.on.ca/board/meetings#23-97-agenda-schedule

CDSSAB. 2022b. Overview. Available at: https://www.cdssab.on.ca/services/housing/overview

CDSSAB. 2022c. Emergency Medical Services FAQ). Available at https://www.cdssab.on.ca/services/emergency-medical-services-ems/faq

CIHI (Canadian Institute for Health Information). 2022. Supply, Distribution and Migration of Physicians in Canada, 2022. Available at: https://www.cihi.ca/en/physicians

City of Timmins. 2009. City of Timmins Planning Area Official Plan By-law No. 2009-6755. Prepared by Tunnock Consultants Ltd. and the City of Timmins Planning Division. Timmins, ON.

City of Timmins. 2011. City of Timmins Zoning By-law 2011-7100. Prepared by Tunnock Consultants Ltd. and the City of Timmins Planning Division. Timmins, ON.

City of Timmins. 2024. Mayor's State of the City 2024. Available at: https://www.timmins.ca/our_services/city_hall/mayor_and_council/mayor_s_state_of_the_city_2024

CMHA-CT (Canadian Mental Health Association – Cochrane-Timiskaming). 2023. CMHA Programs and Services. Available at: https://cmhact.ca/programs-services/

CMHC (Canada Mortgage and Housing Corporation). 2021. Research Insight – North at Home: Understanding housing conditions in Northern Ontario. Available at: https://assets.cmhc-schl.gc.ca/sites/cmhc/professional/housing-markets-data-and-research/housing-research/research-reports/housing-needs/research-insights/2021/north-home-understand-housing-conditions-north-on-en.pdf?rev=278295f4-1890-4888-9d23-76e10241c28a

CMHC. 2023. Housing Market Information Portal. Available at: https://www03.cmhc-schl.gc.ca/hmip-pimh/en#Profile/3556027/4/Timmins%20(CY)%20(Ontario)

CTV News. 2023d. CTV News Northern Ontario - Province hands out $8M for daycare spaces in Timmins. Available at https://northernontario.ctvnews.ca/province-hands-out-8m-for-daycare-spaces-in-timmins-1.6596259

CYCN (Cochrane Airport). 2023. About us. Available at https://cycn.ca/about/

DSB1 (District School Board Ontario North East). n.d. Child Care Centres. Available at https://www.dsb1.ca/apps/pages/index.jsp?uREC_ID=1126996&type=d&pREC_ID=1383451

FarmNorth. 2023. Cochrane. Available at: http://www.farmnorth.com/District.aspx?district_id=2&name=Cochrane. Accessed August 28, 2023.

Flying Post First Nation. 2023a. Flying Post First Nation Knowledge and Use Study for Canada Nickel Company's Crawford Nickel Project. July 2023. Prepared by Jonathan Taggart and Fireflight Research Inc. with Flying Post First Nation.

Flying Post First Nation. 2023b. Flying Post First Nation Socio-economic Study for Canada Nickel Company's Crawford Nickel Sulfide Project. August 2023. Prepared by Fireflight Research Inc. with Flying Post First Nation.

FNETB (Far Northeast Training Board). 2018a. Local Labour Market Forecast 2016-2036 Part One. Prepared by the Far Northeast Training Board.

FNETB. 2018b. Local Labour Market Forecast 2016-2036 Part Two. Prepared by the Far Northeast Training Board.

FNETB. 2018c. Mining sector employment and hiring forecast 2017-2027. Prepared by the Far Northeast Training Board.

Government of Ontario, Ministry of Education. 2023a. Data Catalogue, Ontario Public Schools Enrolment. Available at: https://data.ontario.ca/dataset/ontario-public-schools-enrolment

Government of Ontario. 2023b. Ministry of Natural Resources and Forestry – Hunting. Available at: https://www.ontario.ca/page/hunting. Accessed August 24, 2023.

Government of Ontario. 2023c. Fishing Ontario – Recreational Fishing Regulations. Available at: https://www.ontario.ca/document/ontario-fishing-regulations-summary. Accessed August 24, 2023.

Government of Ontario. 2023d. Sustainable Bait Management in Ontario. Available at: https://www.ontario.ca/page/sustainable-bait-management-ontario. Accessed August 24, 2023.

Government of Ontario. 2023e. Ontario Trapping Regulations Summary. Available at: https://files.ontario.ca/mnrf-ontario-trapping-regulations-summary-en-2023-06-19.pdf. Accessed August 25, 2023.

Government of Ontario. 2024a. Beginner's guide to canoeing in Ontario. Accessed May 2024 from: https://www.destinationontario.com/en-ca/articles/beginners-guide-canoeing-ontario

Government of Ontario. 2024b. Beginner's guide to kayaking in Ontario. Accessed May 2024 from: https://www.destinationontario.com/en-ca/articles/beginners-guide-kayaking-ontario

Grech, R. 2023a. Taskforce presents blueprint for more affordable housing in Timmins. Article, The Daily Press, September 15, 2023. Available at: https://www.timminspress.com/news/local-news/taskforce-presents-blueprint-for-more-affordable-housing-in-timmins

Grech, R. 2023b. City donates land for 124-unit affordable housing development. Article, September 27, 2023, The Timmins Daily Press. Available at: https://www.timminspress.com/news/local-news/city-donates-land-for-124-unit-affordable-housing-development

Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: NOISE. Health Environments and Consumer Safety Branch, Ottawa, Ontario. Available at: https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-3-2023-eng.pdf.

Hoggitt, M. 2023. 3 officers leaving Timmins Police for OPP. Article, Timmins Today, October 13, 2023. Available at: https://www.timminstoday.com/local-news/3-officers-leaving-timmins-police-for-opp-7676088

Housing Services Corporation and CDSSAB. 2019. 2019 Community Profile- Housing Needs Assessment, District of Cochrane, Informing the Update to the 10 Year- Housing Plan. Available at: https://www.cdssab.on.ca/images/support//HS/Community_Profile_Needs_Assessment_Study__FINAL_Dec_10_2019.pdf

HSRFH (Hôpital de Smooth Rock Falls Hospital). 2021. Detox Centre. Available at: https://www.srfhosp.ca/detox-centre/

Iroquois Falls. 2023a. Discover Iroquois Falls. Available at: https://www.iroquoisfalls.com/discover-iroquois-falls. Accessed August 24, 2023.

Iroquois Falls. 2023b. Snowmobile Maps. Available at: https://www.iroquoisfalls.com/files/images/SNOWMAPFINAL2019.pdf. Accessed August 24, 2023.

Iroquois Falls. 2023c. Airport & Aviation Business Opportunities. Available at https://www.iroquoisfalls.com/airport

Lentz-McGrath. 2024a. Cochrane developing in-depth planning process for $10 lots. Article, Northern Ontario Business, January 2, 2024. Available at: https://www.northernontariobusiness.com/industry-news/design-build/cochrane-developing-in-depth-planning-process-for-10-lots-8010849

Lentz-McGrath, M. 2024b. Highway 11 municipalities team up for doctor recruitment. Article, Timmins Today, February 14, 2024. Available at: https://www.timminstoday.com/local-news/highway-11-municipalities-team-up-for-doctor-recruitment-8306609

Living Space. 2023. Services. Available at: https://livingspacehub.org/services/

Matachewan First Nation. 2023a. Matachewan First Nation Knowledge and Use Study for Canada Nickel Company's Crawford Nickel Project. July 2023. Prepared by Jonathan Taggart and Fireflight Research Inc. with Matachewan First Nation.

Matachewan First Nation. 2023b. Matachewan First Nation Socio-economic Study for Canada Nickel Company's Crawford Nickel Sulfide Project. August 2023. Prepared by Firelight Research Inc. with Matachewan First Nation.

Mattagami First Nation. 2023a. Mattagami First Nation Knowledge and Use Study for Canada Nickel Company's Crawford Nickel Project. August 2023. Prepared by Jonathan Taggart and Firelight Research Inc. with Mattagami First Nation.

Mattagami Region Conservation Authority. 2023. About the MRCA – Our Watershed. Available at: https://mattagamiregion.ca/our-watershed/. Accessed August 23, 2023.

MCCSS (Ministry of Children, Community and Social Services). 2023. Get help if you are experiencing violence. Available at https://www.ontario.ca/page/get-help-if-you-are-experiencing-violence#section-0

MECP. 2023b. Source Protection Information Atlas. Available at: https://www.lioapplications.lrc.gov.on.ca/SourceWaterProtection/index.html?viewer=SourceWaterProtection.SWPViewer&locale=en-CA. Accessed November 14, 2023.

Métis Nation of Ontario – Region 3. 2024. Métis Nation of Ontario Region 3 Impact Study: Crawford Nickel Mine Project. Calliou Group. June 2024. Report on File.

MICS Group of Health Services. 2021. Anson General Hospital. Available at: https://www.micsgroup.com/about-mics/anson-general-hospital/

Ministry of Tourism, Culture and Sport. 2021. Regional Tourism Profiles – Regional Tourism Profile: Region 13a. Available at: https://data.ontario.ca/en/dataset/regional-tourism-profiles. Accessed August 24, 2023.

MNRF (Ministry of Natural Resources and Forestry). 2022. Hunting black bear with a licensed bear operator. Available at: https://www.ontario.ca/page/hunt-black-bear-licensed-bear-operator. Accessed August 25, 2023.

MNRF. 2023a. Crown Land Use Policy Atlas. Available at: https://www.ontario.ca/page/crown-land-use-policy-atlas. Accessed August 25, 2023.

MNRF. 2023b. Fisheries Management Zone 8 (FMZ 8). Available at: https://www.ontario.ca/document/ontario-fishing-regulations-summary/fisheries-management-zone-8. Accessed August 24, 2023.

MNRF. 2023c. Ontario's Fish Stocking Program – Fish ON-Line. Available at: https://www.ontario.ca/page/ontarios-fish-stocking-program. Accessed September 12, 2023.

MNRF. 2023i. Tourist outfitters and hunting. Available at: https://www.ontario.ca/page/tourist-outfitters-and-hunting. Accessed August 25, 2023.

MNRF. 2023j. Trapper Harvests (1993-2021). Available at: https://data.ontario.ca/dataset/trapper-harvests. Accessed August 30, 2023.

MOH (Ministry of Health). 2022. Ontario Emergency Health Services. Land Ambulance Program. Available at https://www.health.gov.on.ca/en/pro/programs/emergency_health/land/responsetime.aspx/service_qa.html

NAPS (Nishnawbe Aski Police Service). 2023. Annual Report 2021-2022. Available at https://issuu.com/nishnawbeaskipoliceservice/docs/annual-report-2021-2022

NOL (Northern Ontario Local). n.d. Universities & Colleges in Northern Ontario. Available at https://www.northernontariolocal.ca/l/on/universities-colleges

North Eastern Ontario Family and Children's Services. 2023. Canada and Ontario Invest Nearly $2 Million in Supportive Housing for Timmins. Available at: https://www.neofacs.org/canada-and-ontario-invest-nearly-2-million-in-supportive-housing-for-timmins/

NorthEast Healthline. 2023. Health Centres and Programs for Indigenous Peoples – North East. Available at: https://www.northeasthealthline.ca/listServicesDetailed.aspx?id=10071

NOTO (Northern Ontario Tourist Outfitters Association). 2024. Ontario's Wilderness Region (James Bay Frontier) – Good Time Outfitters. Available at: https://noto.ca/vacationers/resorts-accommodations/plan-your-vacation/ontarios-wilderness-region/. Accessed August 2024.

NRCan. n.d. Equal by 30. Available at: https://www.equalby30.org/. Accessed September 11, 2024.

OGS (Ontario Geological Survey). 1983a. Aggregate Resources Inventory of the Central Part of the City of Timmins, Cochrane District, Northern Ontario. Paper 89. Geology Section. Available at: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/ARIP089/ARIP089.pdf. Accessed August 29, 2023.

OGS. 1983b. Aggregate Resources Inventory of the Eastern Part of the City of Timmins, Cochrane District, Northern Ontario. Paper 90. Geology Section. Available at: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/ARIP090/ARIP090.pdf. Accessed August 29, 2023.

OGS. 1984. Aggregate Resources Inventory of the Smooth Rock Falls Area, Cochrane District, Northern Ontario. Paper 93. Geology Section. Available at: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/ARIP093/ARIP093.pdf. Accessed August 29, 2023.

OAHS (Ontario Aboriginal Housing Services). 2021. Programs. Available at: https://www.ontarioaboriginalhousing.ca/programs

Ontario. 2021a. Iroquois Falls Landfill. Available at https://www.ontario.ca/page/iroquois-falls-landfill#:~:text=Environmental%20Assessment,-The%20Town%20of&text=The%20proposed%20capacity%20of%20the,the%20life%20of%20the%20site

Ontario. 2023a. Cochrane Solid Waste Disposal Capacity Study. Available at https://www.ontario.ca/page/cochrane-solid-waste-disposal-capacity-study

Ontario GeoHub. 2022. Areas of Natural and Scientific Interest (ANSI). Available at: https://geohub.lio.gov.on.ca/datasets/b88037cdb71e4daf9445afa6fb999194_3/about. Accessed December 8, 2023.

Ontario GeoHub. 2023a. Provincial Park Regulated. Available at: https://geohub.lio.gov.on.ca/datasets/lio::provincial-park-regulated/about. Accessed August 23, 2023.

Ontario GeoHub. 2023b. Conservation Reserve Regulated. Available at: https://geohub.lio.gov.on.ca/datasets/lio::conservation-reserve-regulated/about. Accessed August 23, 2023.

Ontario GeoHub. 2023c. Ontario Trail Network (OTN) Segment. Available at: https://geohub.lio.gov.on.ca/datasets/mnrf::ontario-trail-network-otn-segment/explore?location=48.296385%2C-80.300395%2C5.14. Accessed September 14, 2023.

Ontario GeoHub. 2023d. Forest Management Unit. Available at: https://geohub.lio.gov.on.ca/datasets/lio::forest-management-unit/explore. Accessed August 28, 2023.

Ontario GeoHub. 2023e. Forest Management Unit. Available at: https://geohub.lio.gov.on.ca/datasets/lio::forest-management-unit/explore. Accessed November 22, 2023.

Ontario GeoHub. 2023f. Bear Management Area. Available at: https://geohub.lio.gov.on.ca/datasets/lio::bear-management-area/explore?location=48.765373%2C-81.262143%2C8.75. Accessed August 25, 2023.

Ontario GeoHub. 2023g. Trapline Area. Available at: https://geohub.lio.gov.on.ca/datasets/lio::trapline-area/explore?location=48.911852%2C-81.216332%2C8.00. Accessed August 30, 2023.

Ontario GeoHub. 2023h. Bait Harvest Area. Available at: https://geohub.lio.gov.on.ca/datasets/lio::bait-harvest-area/about. Accessed September 12, 2023.

Ontario Health. 2023. Annual Business Plan, 2023/24. Available at: https://www.ontariohealth.ca/sites/ontariohealth/files/OHBusinessPlan23_24.pdf

Ontario Ministry of Mines. 2022. Mining Lands Administration System (MLAS) Map Viewer. Available at: https://www.lioapplications.lrc.gov.on.ca/MLAS/Index.html?viewer=MLAS.MLAS&locale=en-CA Accessed August 29, 2023.

Ontario Ministry of Natural Resources and Forestry. 2021. Aggregate Resources Policies and Procedures Manual. Available at: https://www.ontario.ca/page/aggregate-resources-policies-and-procedures Accessed August 29, 2023.

Ontario Ministry of Natural Resources and Forestry. 2022. Pits and Quarries Online. Available at: https://www.lioapplications.lrc.gov.on.ca/Pits_And_Quarries/index.html?viewer=Pits_and_Quarries.Pits_and_Quarries&locale=en-CA. Accessed August 29, 2023.

Ontario Ministry of Natural Resources. 2000. Crown Surveys in Ontario. Department of Lands and Forests, Revised 1968. Available at: https://www.aols.org/site_files/content/pages/public-awareness/crown-surveys-in-ontario.pdf Accessed August 25, 2023.

Ontario Ministry of Natural Resources and Forestry. 2023. Management Units and Forest Management Plan Renewal Schedules. Available at: https://www.ontario.ca/page/management-units-and-forest-management-plan-renewal-schedules Accessed August 28, 2023.

Ontario Northland. 2023. Ontario Northland Transportation Commission Business Plan 2023-2024. Available at: https://www.ontarionorthland.ca/sites/default/files/corporate-document-files/ONTC_Business_Plan23-24.pdf

Ontario Parks. 2023. Kettle Lakes Provincial Park. Available at: https://www.ontarioparks.com/park/kettlelakes. Accessed August 23, 2023.

ONWA (Ontario Native Women's Association). n.d. Our Services for Indigenous Women in Timmins. Available at https://www.onwa.ca/timmins-services.

OPP (Ontario Provincial Police). 2023. James Bay 2021 Progress Report. Available at https://www.opp.ca/index.php?&lng=en&id=115&entryid=5fa2dfccaa474625ae2aa1c3

PHU (Porcupine Health Unit). 2023. About the Porcupine Health Unit. Available at: https://www.porcupinehu.on.ca/en/admin/

RYAM Forest Management. 2018. Romeo Malette Forest 2019-2029 Forest Management Plan. Available at: MU930_2019_FMP_TXT_Sum.pdf. Accessed August 29, 2023.

Smooth Rock Falls. 2018. Landfill Expansion – Notice of Open House. Available at https://smoothrockfalls.ca/wp-content/uploads/2018/06/SRF-Landfill-Expansion_Notice-of-Open-House-ENG.pdf

Statistics Canada. 2022. Census Profile. 2021 Census. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released November 30, 2022. Available at: https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E

Statistics Canada. 2023b. Employee Wages by Industry, Annual. Statistics Canada table no. 14-10-0064-01. Ottawa. Released January 6, 2023. Available at: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410006401

Stoffman, N. 2023. Progress: Airport generates $200M annually to local economy. Article The Timmins Daily Press, April 10, 2023. Available at: https://www.timminspress.com/news/local-news/progress-airport-generates-200m-annually-to-local-economy

Timmins and District Hospital. 2023a. About TADH. Available at: https://www.tadh.com/about-tadh

Timmins and District Hospital. 2023b. Addiction Services. Available at: https://www.tadh.com/programs-and-services/addiction-services

Taykwa Tagamou Nation. 2023a. Taykwa Tagamou Nation Crawford Nickel Project Traditional Knowledge and Land Use Study. February 2023. Prepared by Leah Culver for Taykwa Tagamou Nation.

Taykwa Tagamou Nation. 2023c. Socio-economic Study for the Crawford Nickel Project: Summary of Findings and Recommendations Report. August 2023. Prepared by Shared Value Solutions.

TEDC (The Timmins Economic Development Corporation). 2021 Annual Report. Available at: https://timminsedc.com/wp-content/uploads/2022/11/TEDC-Annual-Report-2021-Web-Final.pdf

The Advocacy Centre for Tenants Ontario and Advocacy North. 2021. North at Home. https://www.acto.ca/production/wp-content/uploads/2021/05/North-at-Home-final-March-2021.pdf

The Daily Press. 2022. Doctor Shortage in Timmins reaches ‘crisis level’, says health centre. Article, The Daily Press, October 5, 2022. Available at: https://www.timminspress.com/news/local-news/doctor-shortage-in-timmins-reaches-crisis-level-says-health-centre

The Mattagami Region Source Protection Committee. 2014. Approved Source Protection Plan for the Mattagami Region Source Protection Area. April 2, 2014. Available at: http://www.dwsp.ca/wp-content/uploads/Approved-SPP-April-2-20141.pdf. Accessed November 14, 2023.

The Seven Northeastern Ontario Canada. n.d. Adventures – Explore Northeastern Ontario. Available at: https://www.northeasternontario.com/things-to-do/. Accessed August 24, 2023.

Timiskaming Forest Alliance Inc. 2021. Forest Management Plan Summary for the Timiskaming Forest, April 1, 2021 to March 31, 2031. Available at: https://nrip.mnr.gov.on.ca/s/published-submission?language=en_US&recordId=a0z3g000000ChwuAAC. Accessed November 22, 2023.

Timmins Native Friendship Centre. 2023. Child Care Centre. Available at: https://www.tnfc.ca/child-care-centre/

Timmins Native Non-Profit Housing Corporation. 2015. About. Available at: https://www.timminsnativehousing.com/

Timmins. 2018a. Timmins Fire Department – Recruitment. Available at https://www.timmins.ca/our_services/emergency_services/timmins_fire_department/recruitment

Tourism Cochrane. 2023. Step into Wilderness in Northern Ontario. Available at: https://cochraneontario.travel/. Accessed August 24, 2023.

Tourism Timmins. 2023. Explore Our Community. Available at: https://www.northeasternontario.com/go/timmins/. Accessed August 24, 2023.

Town of Cochrane. 2014a. The Corporation of the Town of Cochrane Official Plan By-law Number 984-2013. April 30, 2014. Prepared by FOTEN Planning & Urban Design and WSP (Consolidation 2018). Cochrane, ON

Town of Cochrane. 2014b. The Corporation of the Town of Cochrane Zoning By-law Number 986-2013. June 10, 2014. Prepared by FOTEN Planning & Urban Design and WSP (Consolidation 2018). Cochrane, ON.

Town of Cochrane. 2024. Where to Stay. Available at: https://cochraneontario.com/visiting/where-to-stay/

Town of Iroquois Falls. 1984. The Official Plan of the Town of Iroquois Falls Planning Area and Amendments No. 1 – 8. Prepared by Proctor & Redfern Limited. Office Consolidation November 13, 1984. Iroquois Falls, ON.

Town of Iroquois Falls. 2004. Town of Iroquois Falls Restricted Area Zoning By-law No. 2869/04. Prepared by The Plantario Group Ltd. Iroquois Falls, ON.

Town of Smooth Rock Falls. 2014. Smooth Rock Falls Planning Area 2013-14 Official Plan. Prepared by J.L. Richards & Associates Limited. Smooth Rock Falls, ON.

Town of Smooth Rock Falls. 2016. By-law No. 2016-04 Comprehensive Zoning By-law for the Town of Smooth Rock Falls. Prepared by J.L. Richards & Associates Limited. Smooth Rock Falls, ON.

Town of Smooth Rock Falls. 2023a. Visiting Here. Available at: https://www.smoothrockfalls.ca/visiting-here/. Accessed August 24, 2023.

Town of Smooth Rock Falls. 2023b. Skiing & Snowshoeing. Available at: https://www.smoothrockfalls.ca/visiting-here/things-to-do/skiing-snowshoeing/. Accessed August 24, 2023.

Town of Smooth Rock Falls. 2023c. Fishing, Boating & Hunting. Available at: https://www.smoothrockfalls.ca/visiting-here/things-to-do/fishing-boating-hunting/. Accessed August 24, 2023.

Town of Smooth Rock Falls and JLR. 2022. Smooth Rock Falls Waterfront Master Plan. Available at: https://smoothrockfalls.ca/documents/133/documents/01BFZNUC6SXFEK3NZW2JG2Y7NSAP5R5UM4/Waterfront%20Masterplan.pdf

TPS (Timmins Police Service). n.d. Timmins Police Service Workforce Complement. Available at http://www.timminspolice.ca/about/timmins-police-service-workforce-complement/#:~:text=TIMMINS%20POLICE%20SERVICE%20CURRENT%20COMPLEMENT&text=The%20total%20workforce%20is%20composed,civilian%20staff%20members%20and%20auxiliaries

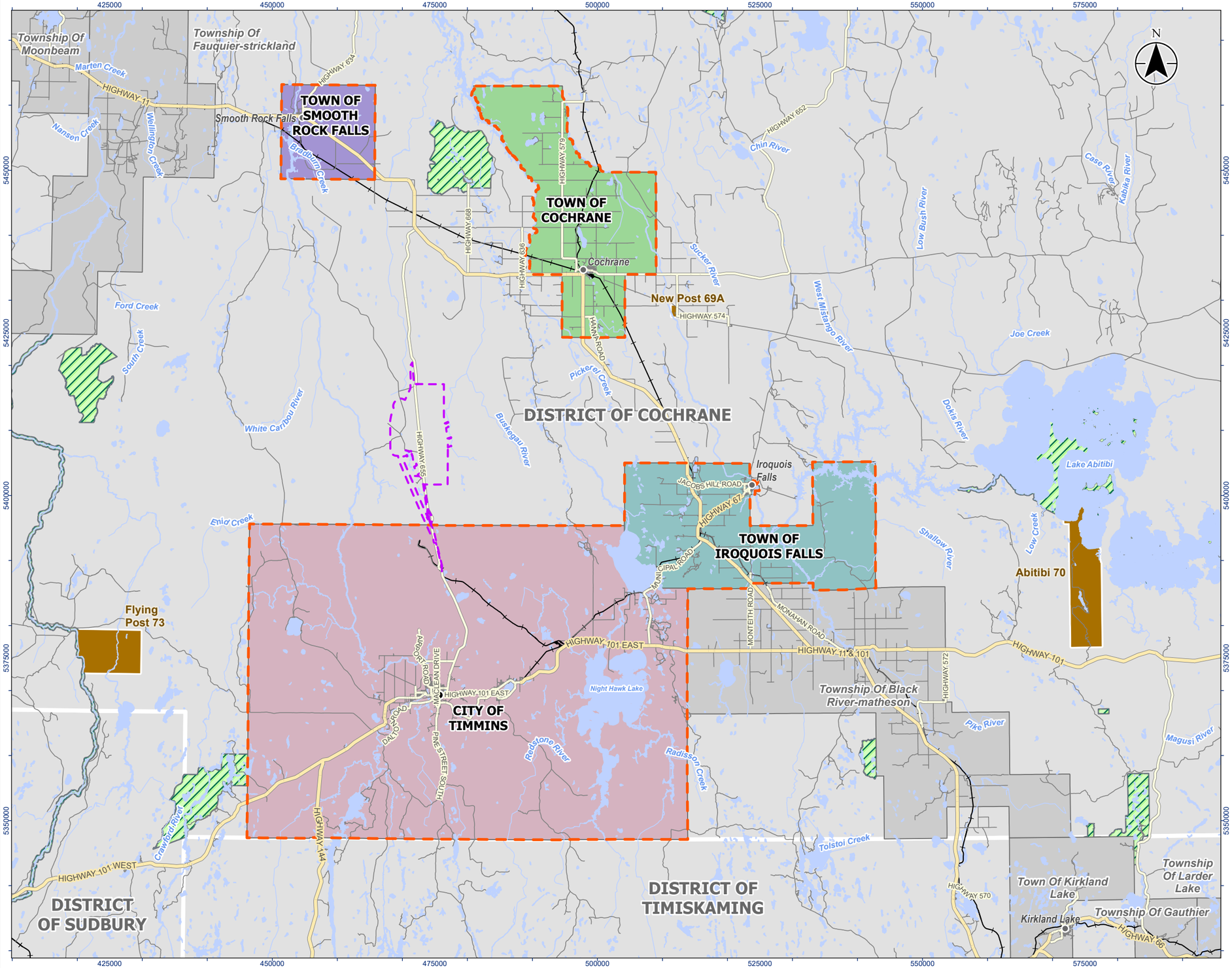
TPS. 2021. Timmins Police Service 2021 Annual Report. Available at http://www.timminspolice.ca/uploads/TPS-Annual-Report-2021.pdf

Transport Canada. 2021. Apply for an exemption under the Canadian Navigable Waters Act. Available at: https://tc.canada.ca/en/programs/navigation-protection-program/apply-exemption-under-canadian-navigable-waters-act. Accessed February 8, 2024.

TripAdvisor. 2023. Northeastern Ontario Hotels and Places to Stay. Available at https://www.tripadvisor.ca/Hotels-g4274794-Northeastern_Ontario_Ontario-Hotels.html

White, E. 2023. School enrolment up across northeastern Ontario thanks to immigration. Article, CBC News, November 20, 2023. Available at: https://www.cbc.ca/news/canada/sudbury/northeastern-ontario-school-enrolment-increase-1.7032298

22.10 Figures



Stantec

Legend

- Project Area
- Local/Regional Study Area
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- First Nation Reserve
- Provincial Park
- Waterbody

0 10 20 km

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Notes

1. Coordinate System:NAD 1983 UTM Zone 17N
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Project Location
Timmins, Ontario

160930456 REVA
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.1

Title
Services and Infrastructure Local/Regional Study Area

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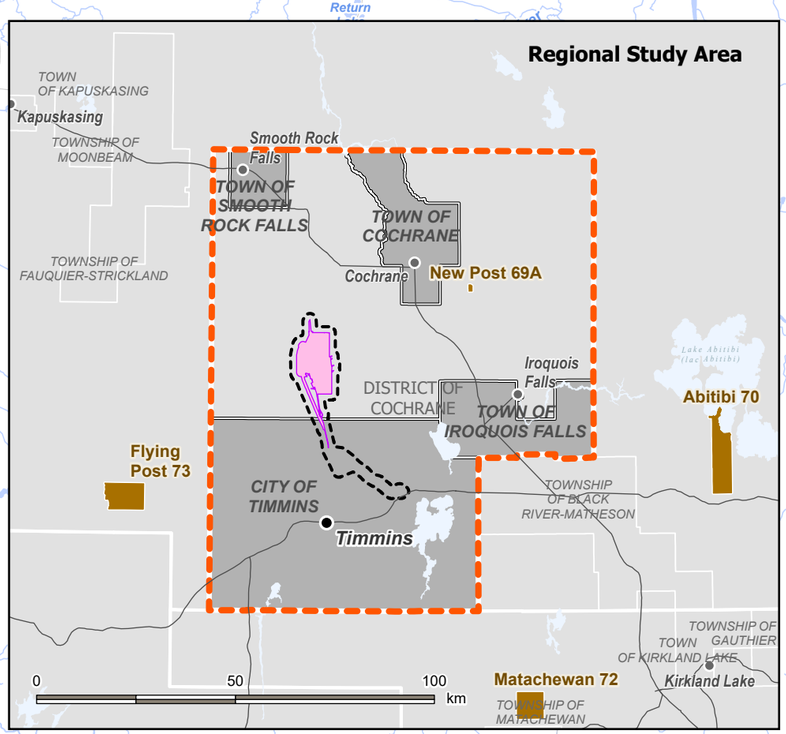

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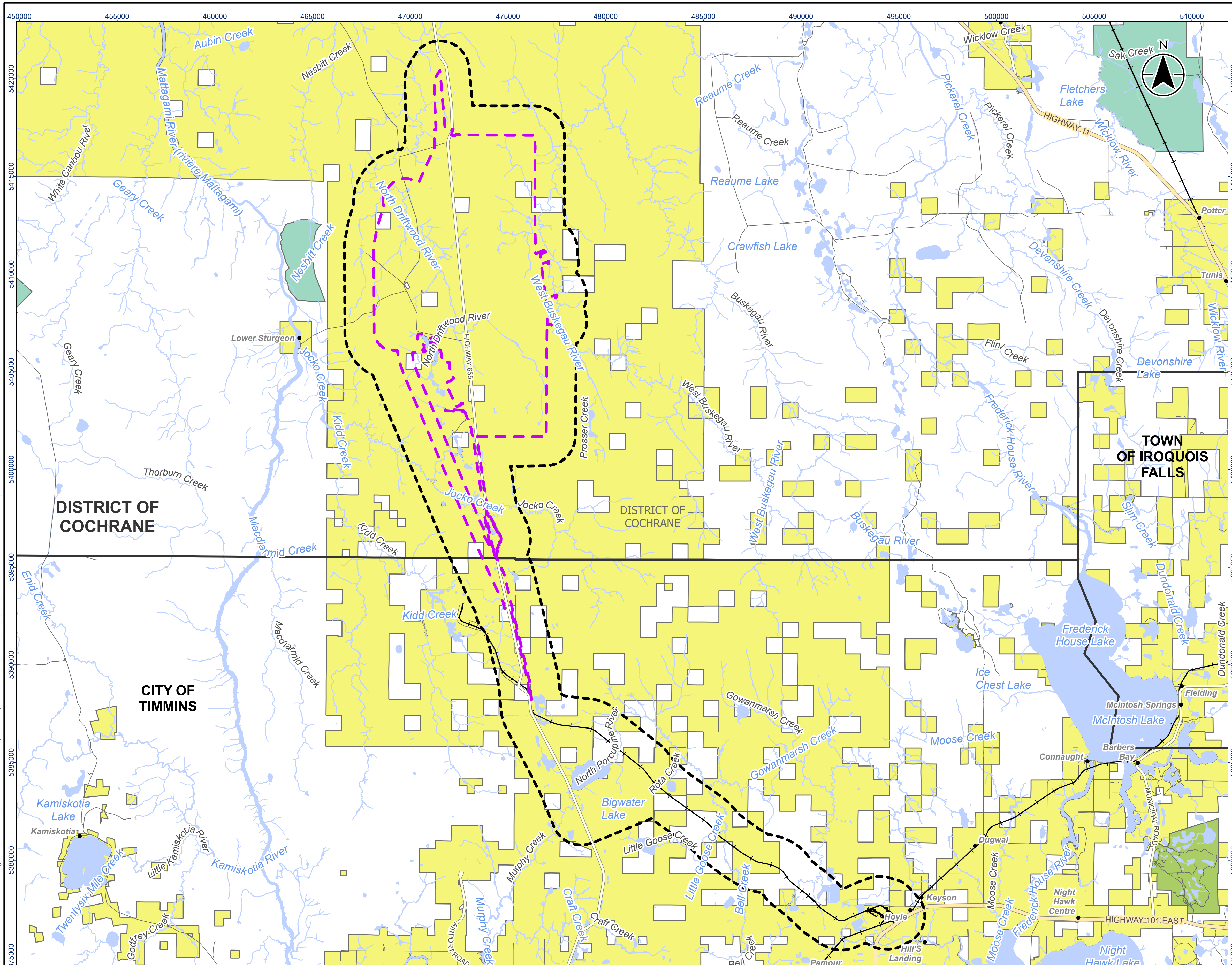
Project Location
Timmins, Ontario

160930456 REVA
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.2

Title
Local Study Area for Land and Resource Use



Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area

Land Ownership (Generalized)

- Patented Land (MNDM)
- Conservation Reserve
- Provincial Park
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

1:200,000 (At original document size of 11x17)

Notes

1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.
3. Patented Land derived from MNDM Mining Land Tenure and Non-mining Land Tenure patented lands. For general cartographic purposes only.

Project Location
Timmins, Ontario

160930456 REVA
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.3

Title
Patented Land

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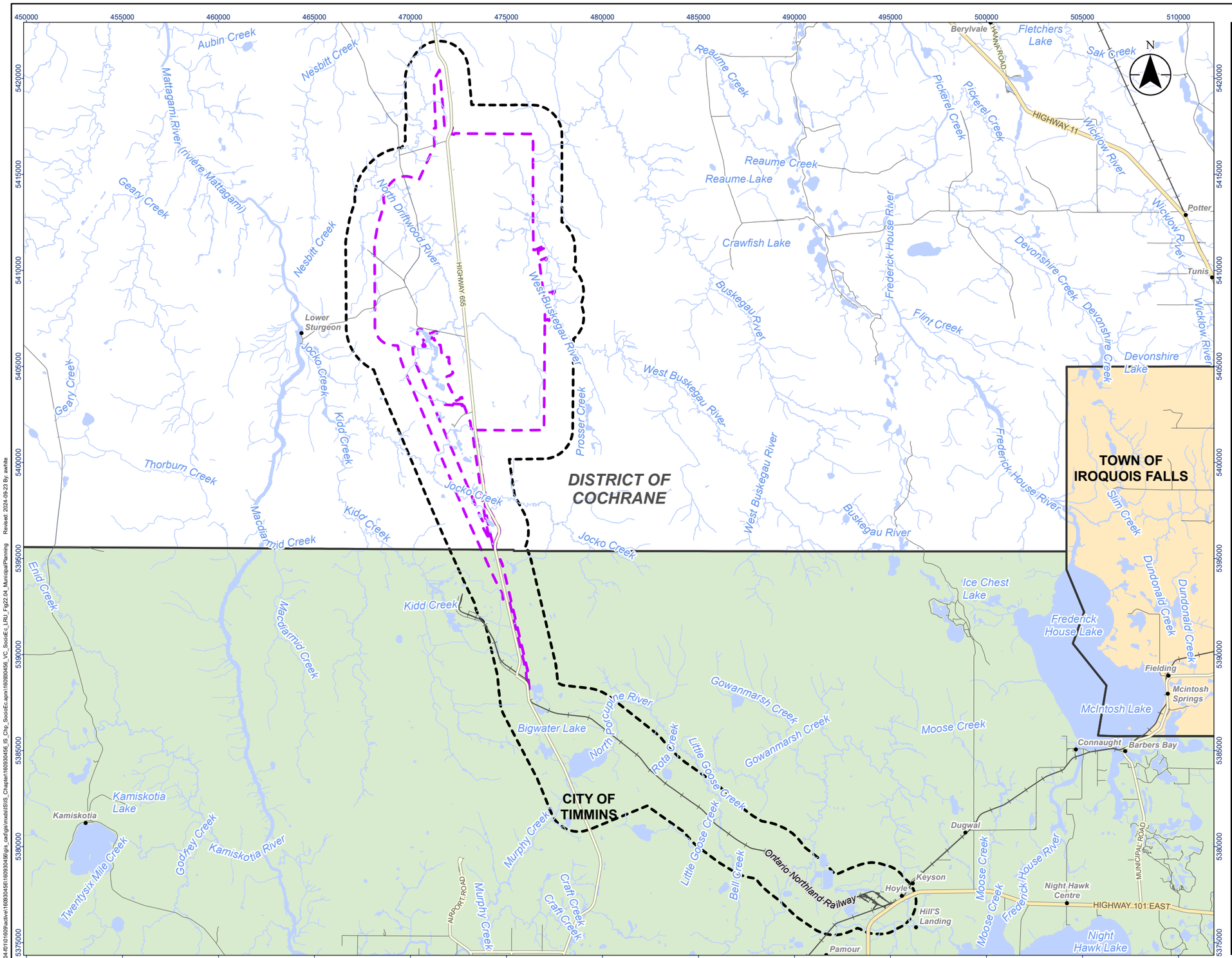

Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Municipal Boundary - Upper Tier and District

Lower and Single Tier Municipalities

- City of Timmins
- Town of Iroquois Falls
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

1:200,000 (At original document size of 11x17)

Notes

1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.

Project Location
Timmins, Ontario

160930456 REVA
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.4

Title
Municipal Planning

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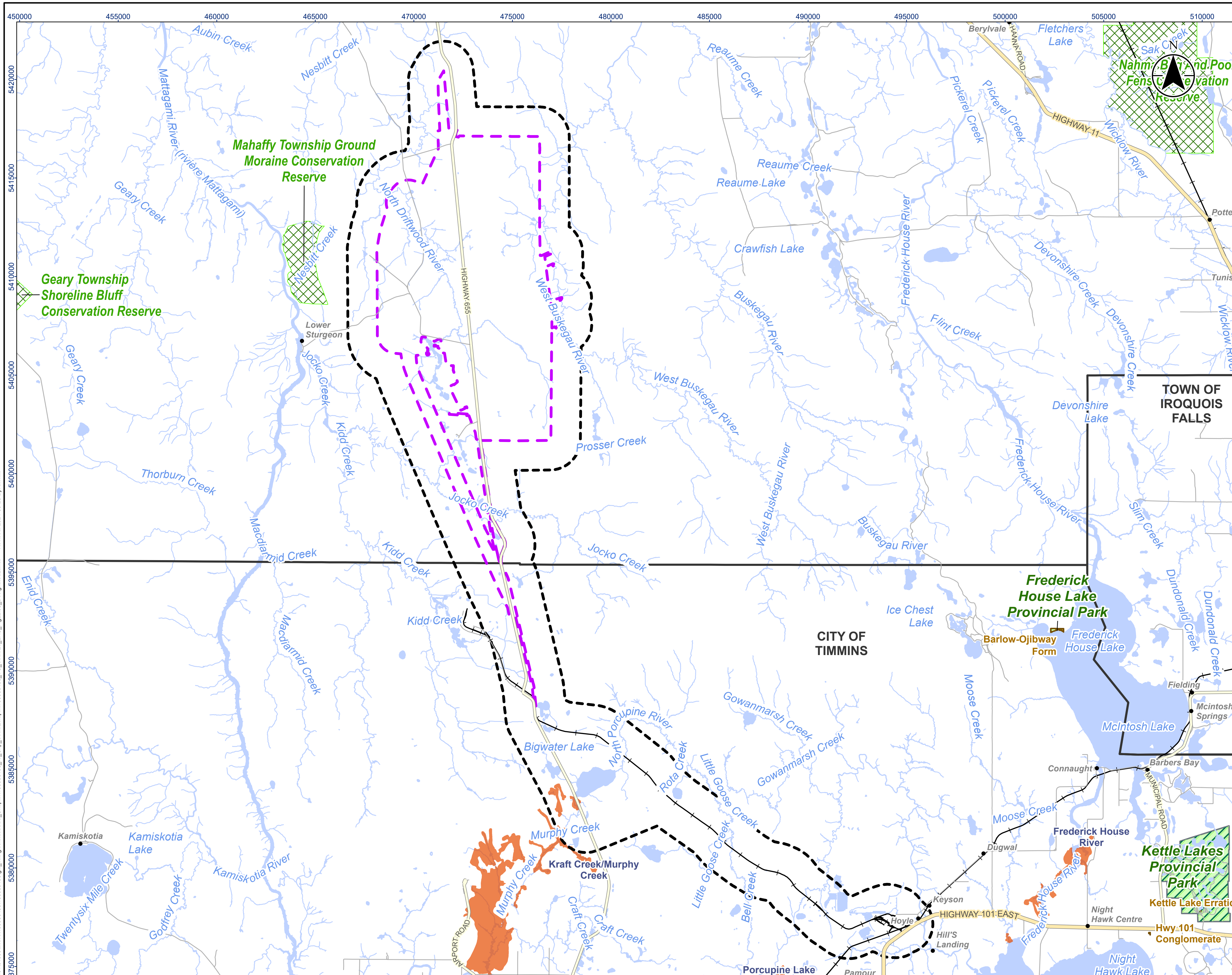


Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Area of Natural Scientific Interest
  - ANSI, Earth Science
- Conservation Reserve (Regulated)
- Provincial Park
- Wetland, Provincially Significant
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

1:200,000 (At original document size of 11x17)

Notes
1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.

Project Location
Timmins, Ontario

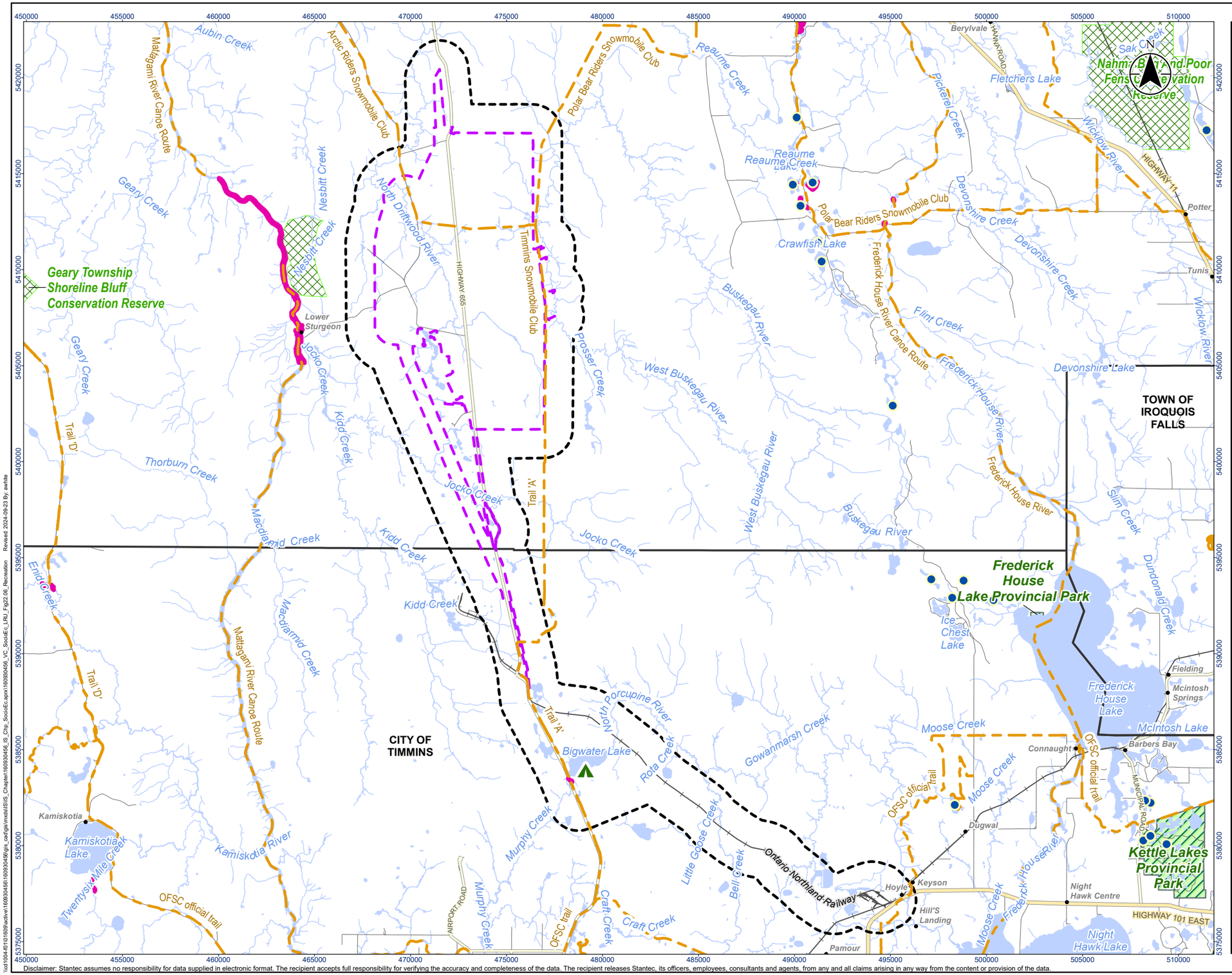
160930456 REVB
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.5

Title
Designated Lands and Protected Areas

Revised: 2024-09-23 By: awhite



Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Fish Stocking, Recreational
- Big Water Campgrounds
- Trail
- Conservation Reserve (Regulated)
- Fish Spawning Area
- Provincial Park
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

1:200,000 (At original document size of 11x17)

Notes

1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.
3. "Fish Spawning Area" from "Fish Activity Area", Land Information Ontario (MNR)

Project Location
Timmins, Ontario

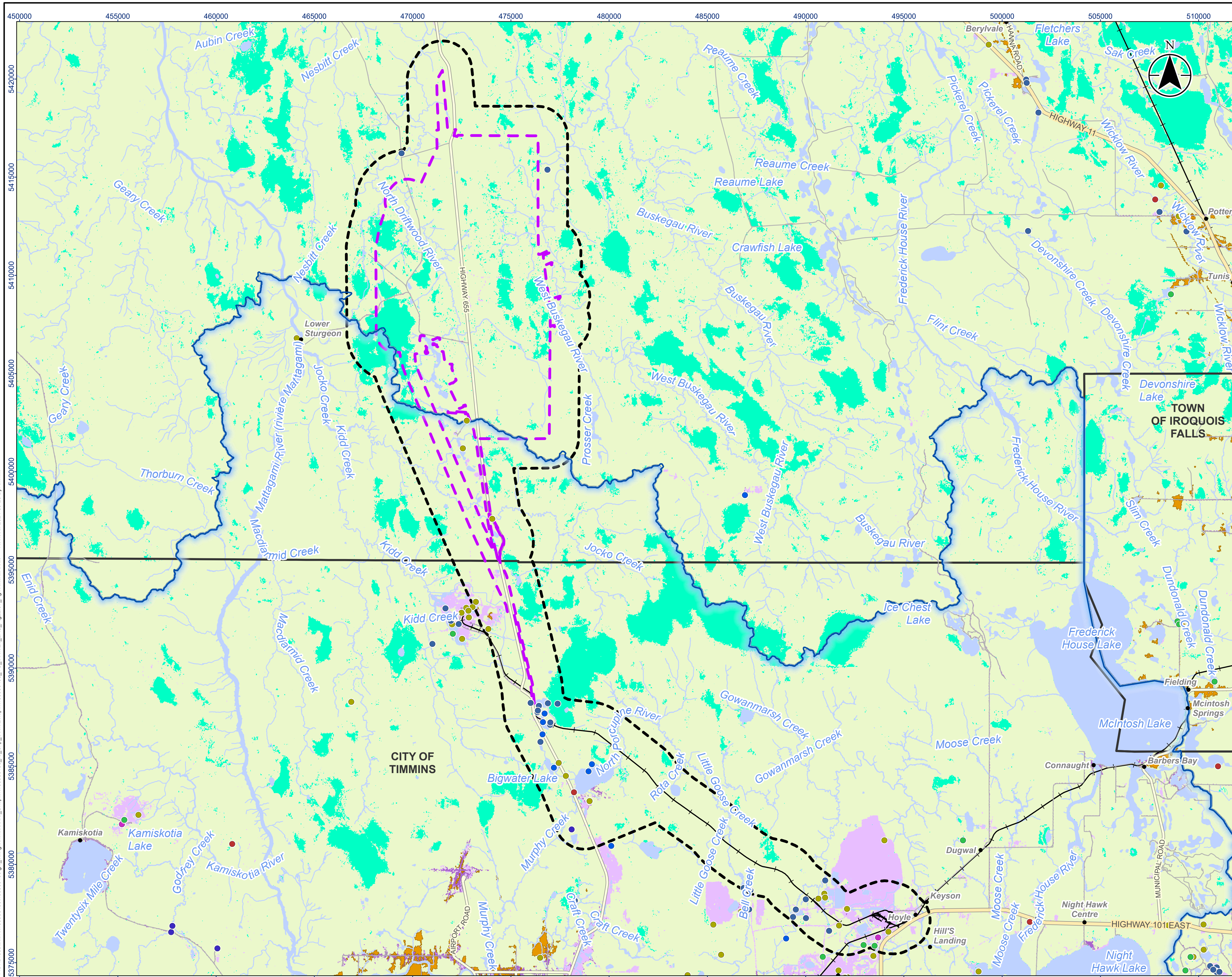
160930456 REVA
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.6

Title
Fishing and Recreation

\\ca1004-f01\01609\active\160930456\160930456\gis_cad\gis\mxd\ISIS_Chapter\160930456_IS_Chp_SocioEc.aprx\160930456_VC_SocioEc_LRU_Fig22.06_Recreation Revised: 2024-09-23 By: awhite



Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Source Protection Area (Generalized)

Permit to Take Water >= 50,000 L/Day (MOE)

- Commercial
- Construction
- Dewatering
- Industrial
- Miscellaneous
- Remediation
- Water Supply

Land Classification (AAFC)

- Agricultural Land
- Exposed Land/Barren
- Shurbland/Wooded Area
- Urban/Developed
- Water
- Wetland
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

1:200,000 (At original document size of 11x17)

Notes

1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.
3. Land Classification derived from Agriculture and Agri-Food Canada's Crop Inventory, 2022. Some classes combined.
4. Permit to Take Water data from the Ontario Ministry of the Environment, last updated April 2022.

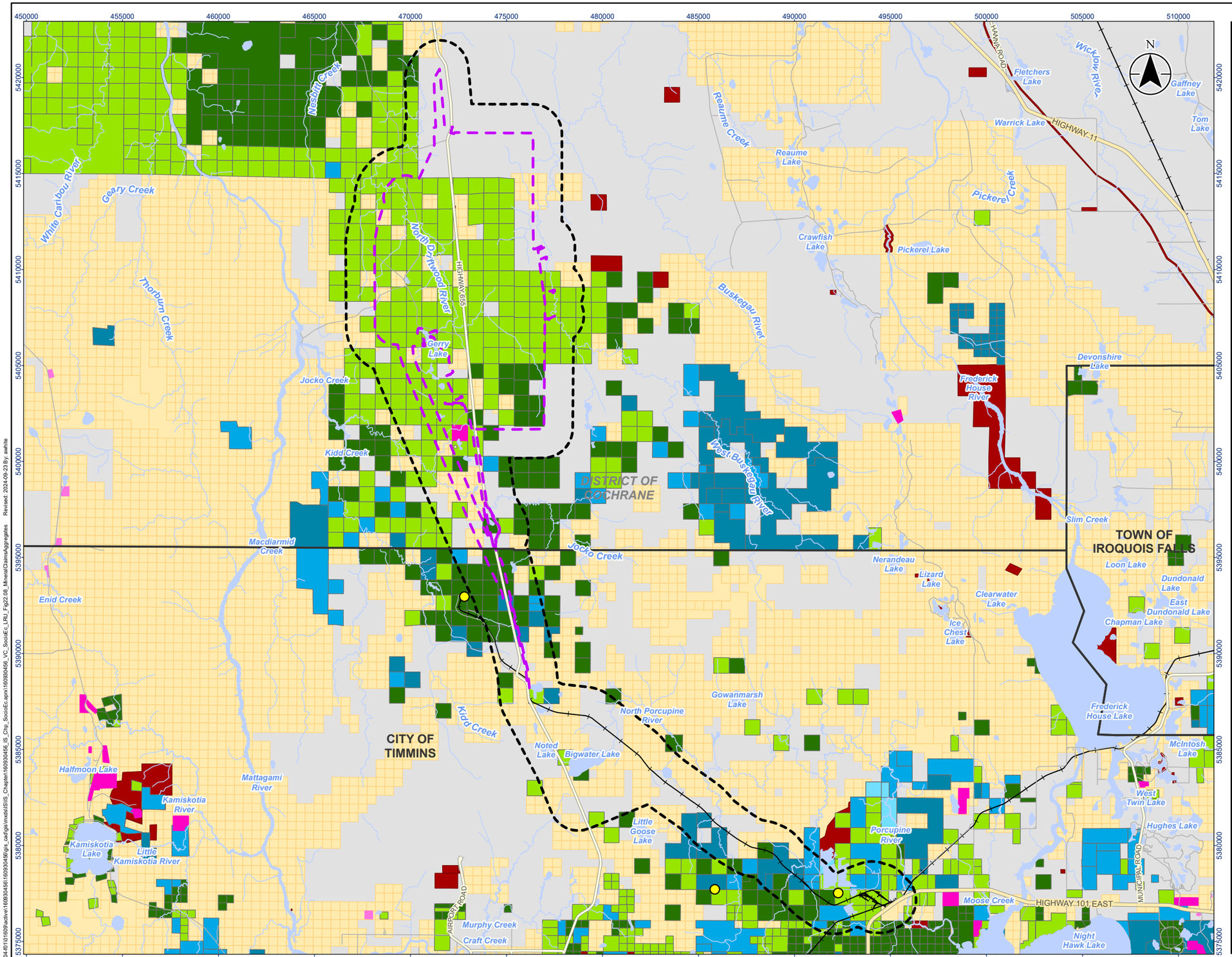
Project Location
Timmins, Ontario

160903456 REVA
Prepared by awhite on 2024-09-23

Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.7

Title
Agricultural Areas, Permits to Take Water, and Source Protection Areas



Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Operating Mine
- Aggregate Site, Authorized (Active)
- Aggregate Site, Authorized (Inactive)

Mining Land Tenure (MNDM)

- Lease,Mining and Surface Rights
- Lease,Mining Rights only
- Lease,Surface Rights only
- Mining Licence of Occupation,Mining Rights only
- Patent,Mining and Surface Rights
- Patent,Mining Rights only
- Operational Alienations
- Operational Cell Claim
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

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Notes

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Project Location
Timmins, Ontario

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Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.8

Title
Mineral Claims and Aggregates

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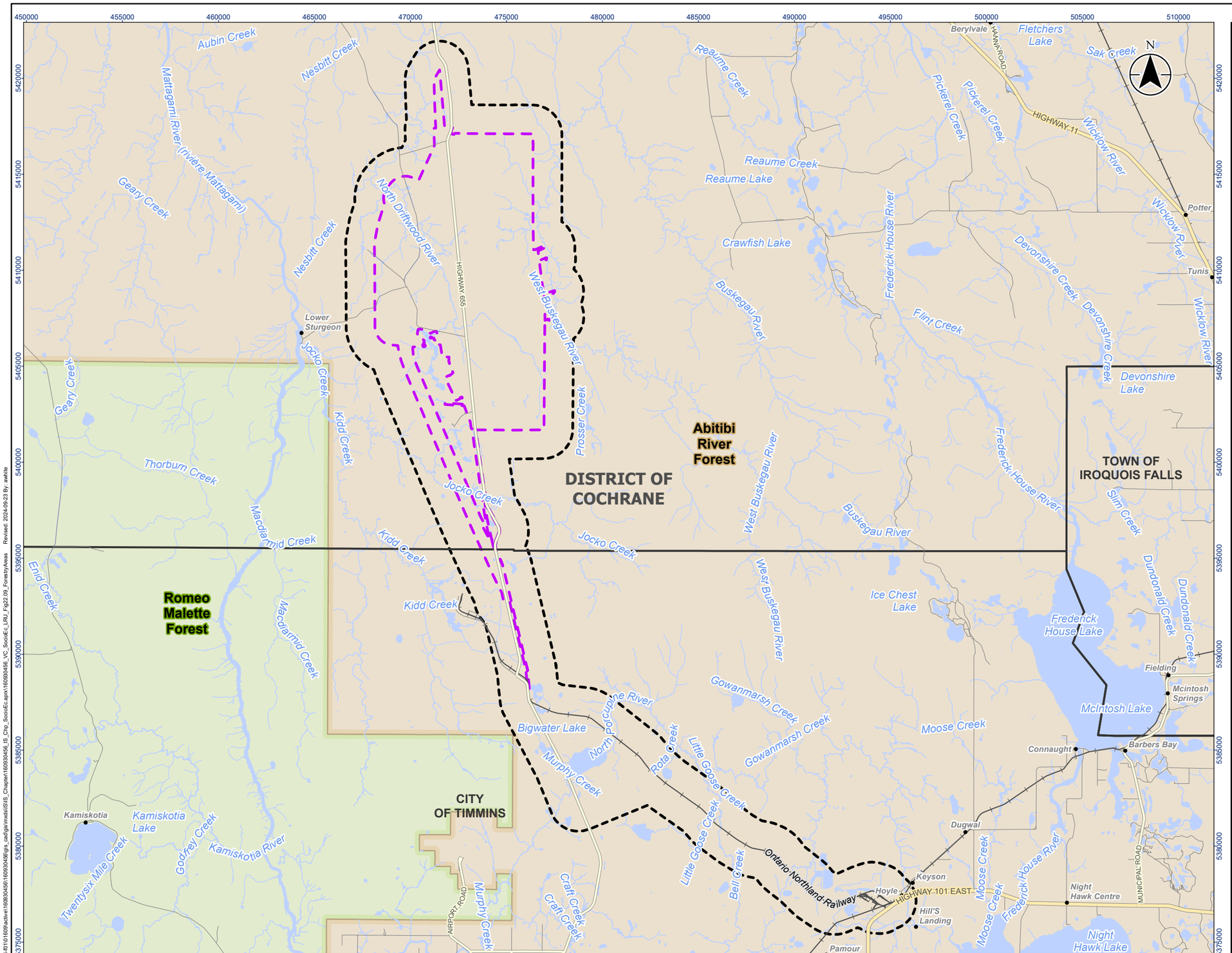

Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Abitibi River Forest
- Romeo Malette Forest
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

1:200,000 (At original document size of 11x17)

Notes

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Project Location
Timmins, Ontario

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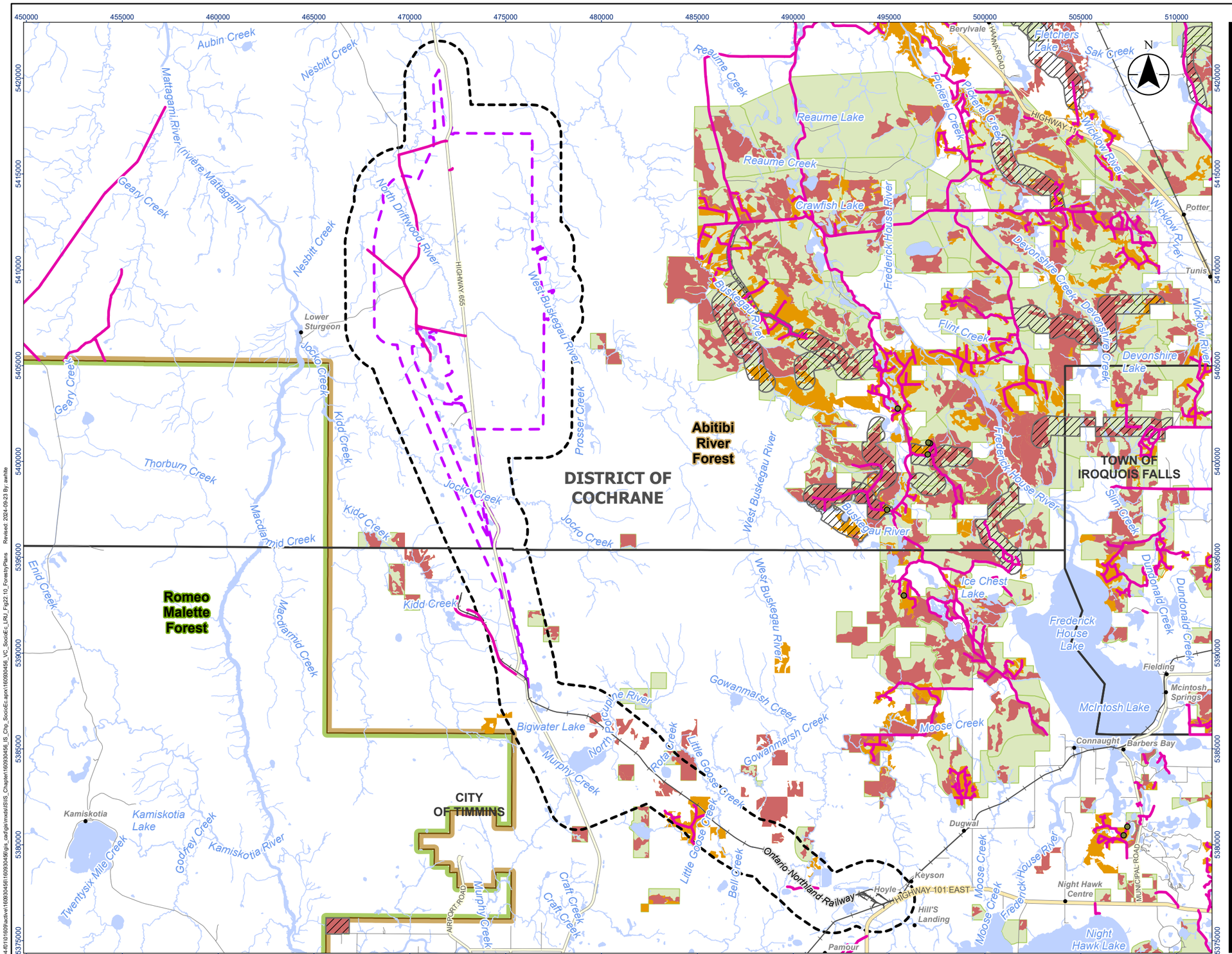
Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.9

Title
Forest Management Units



Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Abitibi River Forest
- Romeo Malette Forest
- Existing Aggregate Pits that may be used
- Proposed Harvest Areas
- Existing Roads that may be used for Forestry
- Forecast Depletion (Harvest) Areas (from the previous plan that were not harvested at the time of preparing the new plan, but were expected to be harvested by April 1, 2022).
- Operational Road Boundaries
- Proposed Corridors for Primary or Branch Roads
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

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Notes

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Timmins, Ontario

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Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.10

Title
Forest Management Plan - Abitibi River Forest

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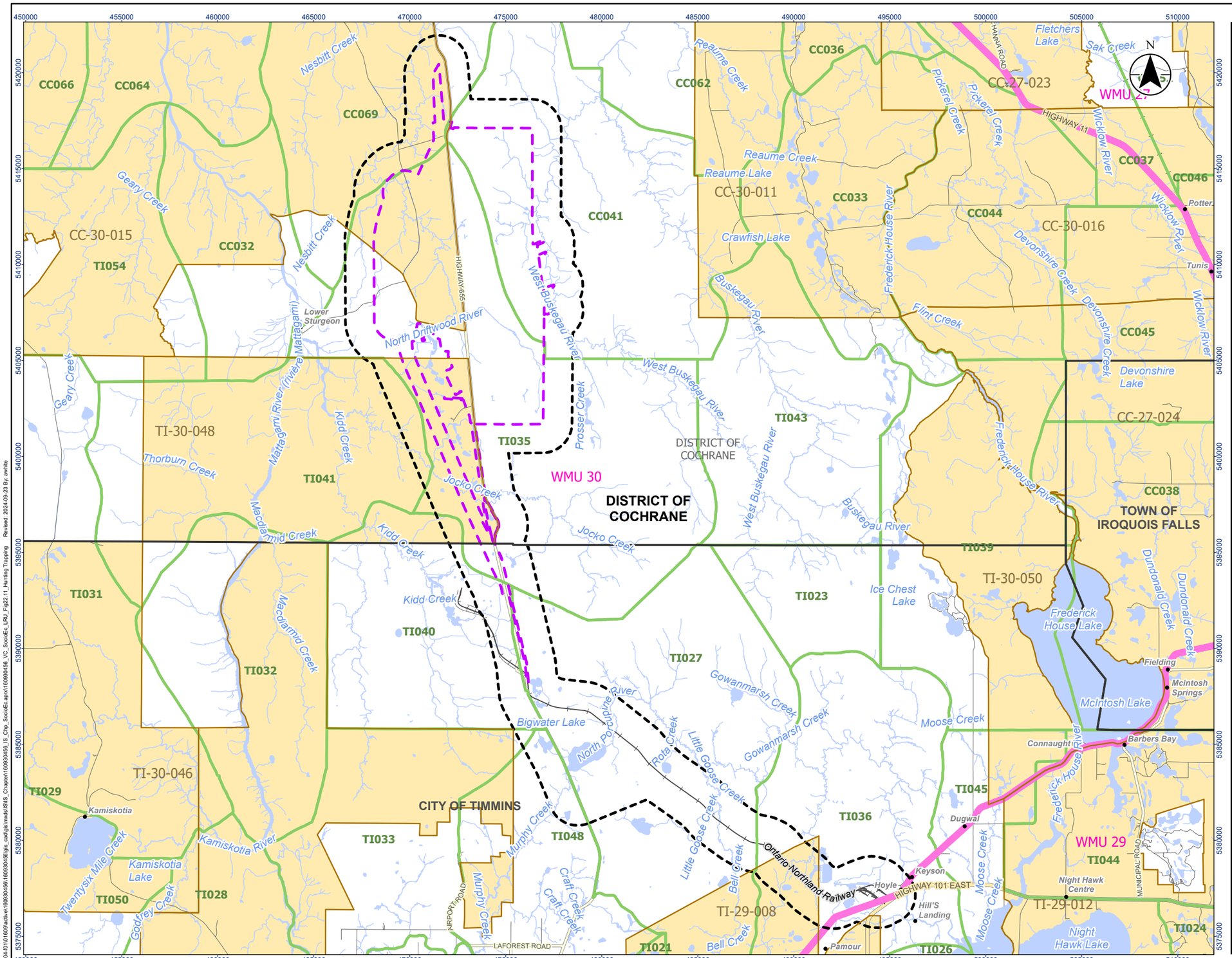

Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Bear Management Area
- Trapline Area
- Wildlife Management Unit
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

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Project Location
Timmins, Ontario

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Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.11

Title
Hunting/Outfitting and Trapping Areas

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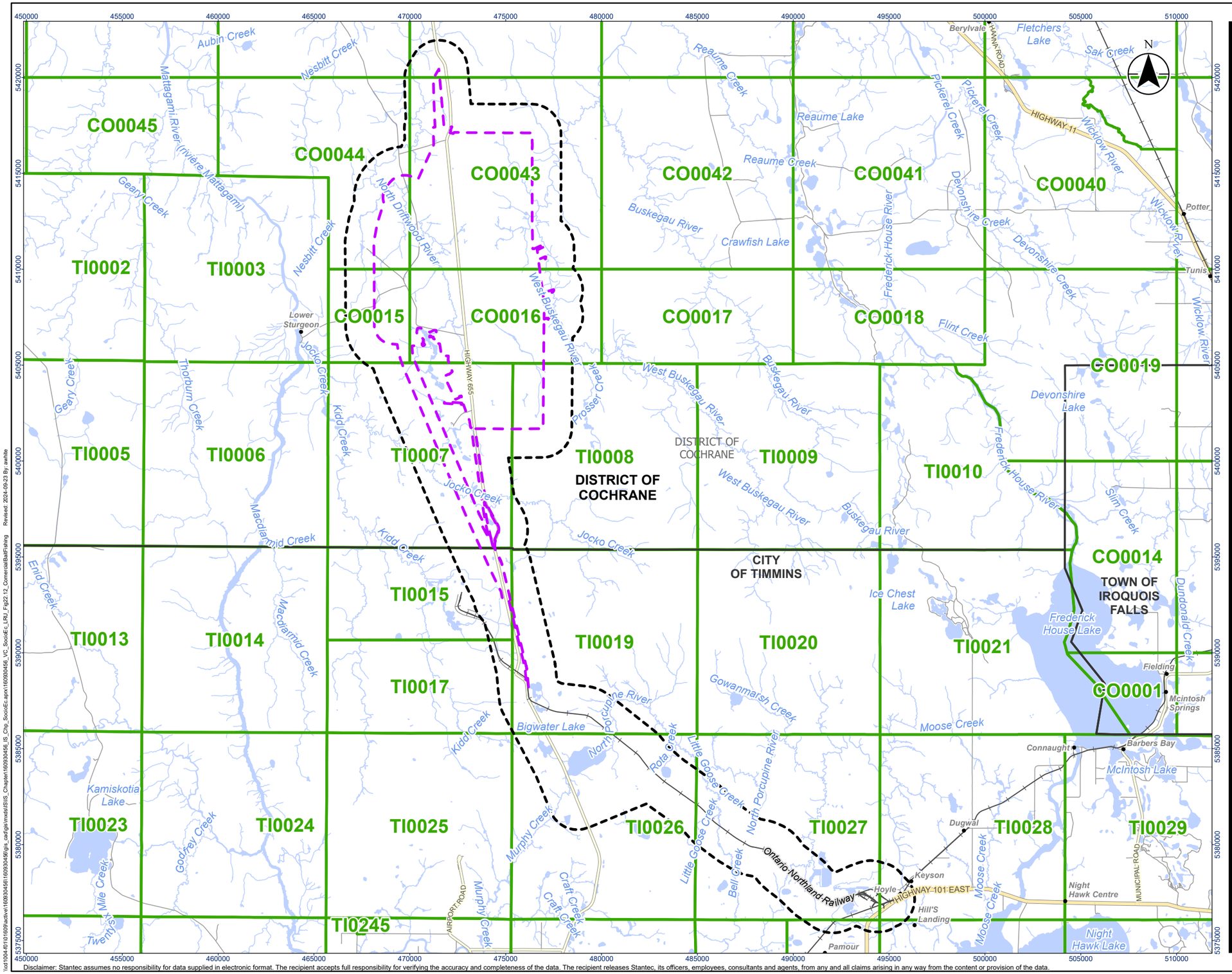

Stantec

CANADA NICKEL COMPANY

Legend

- Project Area
- Local Study Area
- Bait Harvest Area
- Railway
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipality - Lower and Single Tier
- Waterbody

0 5 10 km

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Project Location
Timmins, Ontario

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Client/Project
Canada Nickel Company (CNC)
Crawford Nickel Project

Figure No.
22.12

Title
Commercial Bait Fishing

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