## 7.5 SOCIOECONOMIC ENVIRONMENT

This document presents the results of the biophysical effects assessment in compliance with the federal and provincial guidelines. All results apply to both jurisdictions simultaneously, with the exception of the Air Quality component. For this, unless otherwise noted, the results presented/discussed refer to the federal guidelines. A unique subsection (7.3.2.2.2) is provided which presents the Air Quality results in compliance with the EPR guidelines.

### 7.5.1 Regional and Historical Context

The nearest populations to the Project site are found in the Schefferville and Kawawachikamach areas. The Town of Schefferville and Matimekush-Lac John, an Innu community, are located approximately 25 km from the Howse Property, and 2 km from the Labrador border. The Naskapi community of Kawawachikamach is located about 15 km northeast of Schefferville, by road. In Labrador, the closest cities, Labrador City and Wabush, are located approximately 260 kilometres from the Schefferville area (Figure 7-37).

The RSA for all socioeconomic components includes:

- Labrador West (Labrador City and Wabush); and
- the City of Sept-Îles, and Uashat and Mani-Utenam. As discussed in Chapter 4, however, Uashat and Mani-Utenam are considered within the LSA for land-use and harvesting activities (Section 7.5.2.1).

The IN and NCC are also considered to be within the RSA, in particular due to their population and their Aboriginal rights and land-claims, of which an overview is presented.

The section below describes in broad terms the socioeconomic and historic context of the region in which the Howse Project will be inserted.

Northwestern Labrador

With a population density of 0.1 inhabitant per km$^2$, Labrador has the particularity of having a small population spread over a large territory (Statistics Canada, 2011)[8]. While there are 32 recognized communities in Labrador, the most populated town, Happy Valley-Goose Bay (HVGB), has less than 8,000 inhabitants. The 2011 population of Newfoundland and Labrador was 514,526 inhabitants. Of this total, 26,728 reside in Labrador and more than 9,000 live in Labrador West (Statistics Canada, 2011). Thirty-five percent of the total population of Labrador has Aboriginal origins (Statistics Canada, 2011). Labrador is home to three Aboriginal groups: the IN, the Inuit of Labrador, and the Labrador Inuit Métis, under the NCC.

Ms. Yvonne Jones was elected federal Member of Parliament for Labrador (Newfoundland and Labrador)in May 2013 (Radio-Canada, 2013a) and re-elected in October 19$^{th}$ 2015.

The economy of the province of Newfoundland and Labrador relies in large part on the oil extraction industry: in 2012, this sector represented 28.2% of NL's GDP and the construction sector, accounting for

[8] The most recent census of the Canadian population was conducted in 2011, with data released in 2012. The government of Canada eliminated the mandatory long census form in the 2011 Census and this has resulted in data limitations and data discontinuity. Thus 2011 census information is limited to population and private dwelling data. Other data, previously available in the census, can be obtained through the National Household Survey (NHS). However, the NHS is not mandatory and some data are unavailable, statistically unsound or suppressed due to the small number of responses. In these cases, 2006 census data or other information was used.

9.2% of NL's GDP. In 2013, NL's GDP grew by 5.9%, largely stimulated by capital investments for the Muskrat Falls, Hebron and Vale nickel projects in Labrador, when capital investments reached $12.3 billion.

Labrador West is formed by the twin towns of Labrador City and Wabush, with populations of 7,367 and 1,861, respectively. Each of these municipalities has its own organizational structure, a mayor and a city council. These municipalities are accessible by paved and gravel roads that connect to Québec and central and eastern Labrador.

Labrador City's municipal council is composed of four permanent councillors (excluding the mayor and the deputy mayor). The current mayor of Labrador City is Ms. Karen Oldford. Labrador City is part of the Labrador West district (provincial elections) and the Labrador electoral districts (federal elections).


**LEGEND**

- Town/Community
- Howse Deposit Layout

Transportation infrastructure
- Road
- Railroad
- Airport

Basemap
- Watercourse
- Water Body
- Municipalité Régional de Comté (MRC)
- Provincial Boundary

FILE, PROJECT, DATE, AUTHOR:
GH-0618 , PR185-19-14, 2016-01-27, jtremblay

N

0 50 100 150 200 250
Kilometers

UTM 19N NAD 83

SCALE: 1:5 500 000

SOURCES:
Basemap
Atlas of North America, 1:7,500,000
Government of Quebec, BDGA, 1:1,000,000
Government of Quebec, MERN, MRC

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

# Regional Context and Transportation Infrastructure

*Howse Minerals Limited*

GroupeHemispheres

**Figure 7-37**

Wabush's municipal council is composed of four permanent councillors (excluding the mayor and the deputy mayor). The current mayor of Wabush is Mr. Colin Vardy. Wabush adopted a budget of $7.6 million in 2013. It is part of the same electoral districts as Labrador City.

The towns have similar histories as both were developed in the 1960s to support two local mining operations: IOCC and Wabush Mines respectively (IOCC, 2013). Wabush and Labrador City began as a mining camp in the early 1960s. The QNS&L railway built by the IOCC in the 1950s provided opportunity for mining development projects. In turn, the development of the mining industry required energy, which could be provided by the Churchill Falls hydroelectric dam. In the 1960s, Wabush and Labrador City were built to serve as workers' camps for mining companies. The region developed into mining towns (Labrador West, 2014*)*. Labrador City was founded in 1961, and in less than a decade, became a small town housing a few families.

The Trans-Labrador Highway (TLH) ensures the connection between cities in Labrador, from Wabush and Labrador City to Churchill Falls and Happy Valley-Goose Bay and to Cartwright, located on the eastern coast of Labrador, and provides access to the port located on Lake Melville. The TLH is also connected to Route 389 on the Québec side, via Fermont. Route 389 leads to Baie-Comeau, located on the north shore of the St. Lawrence River (Figure 7-37). In addition, the QNS&L railway connects Labrador West to Schefferville in the north and to Sept-Îles in the south. Air transportation companies (Air Inuit and Provincial Airlines, among others) provide passenger and freight services in the area, using Wabush airport and connecting with many towns in Labrador and in Newfoundland. Frequent connections are also available between Wabush and Schefferville.

The portion of Labrador that is adjacent to the Howse Project and the Québec border has historically been occupied by Aboriginal peoples and First Nations. This land is included in the New Dawn Agreement (2011) signed by the IN, the GNL and the Canadian government and is claimed by the NCC, the Naskapis, and the Innu of NIMLJ and ITUM. More details on agreements with Native communities are available in Chapter 4.

**Innu Nation**

Aboriginal peoples have long used the area along what they called the "Grand River", now known as the Churchill River, and around the Lake Melville area (Mailhot, 1993; Armitage and Stopp, 2003; NL Tourism, 2013). Human occupation in Hamilton Inlet's region goes back 6000 years (Mailhot, 1993). The Innu have used the Labrador territory since time immemorial, and their first recorded contacts with Europeans – especially with the Dutch explorers - dates from 1718 (Mailhot, 1993). A trading post was built in North West River (NWR) in 1743 by Louis Fornel and it became a gathering and service location for many Innu. It is only in 1837 that this post was acquired by the Hudson Bay Company (HBC). Historical records show that the name "Sheshashit" has been used for more than 300 years (Mailhot, 1993).

At that time, religious organizations and trading companies administered Labrador, and the government had little if any contacts with the Innu population. Catholic missionaries, notably the Jesuits, started sending priests in the region in 1769, and the Oblates took over the religious mission as of 1844. Both Jesuits and Oblates periodically visited the region from their base in Québec's Côte-Nord region (Mailhot, 1993). Although the Christianization of the Innu started at the end of the 1700s, permanent Oblate missions only arrived in Sheshatshiu in 1949 (Mailhot, 1993).

When the province of NL joined Canada in 1949, the federal government did not include the NL Aboriginal people under the *Indian Act*, as was the case in other Canadian provinces. Instead, the federal government provided funds to the GNL that would serve to provide services to Aboriginal populations, including healthcare and education. The GNL then sought to ensure children's education and forced Innu children to attend school by preventing families from receiving welfare if they left the community. This government requirement obliged families to remain in the communities for the greater part of the year, drastically

affecting their way of life, as it forced the adoption of a sedentary lifestyle (Innu Nation, 2014). Despite these changes, however, the Innu continued to hunt, fish and trap, and some Innu continued to leave the community for long periods of time (Newfoundland and Labrador Heritage, 2014).

The 1950s and 1960s was also a period that brought other challenges to Innu traditions and practices. Many industrial development projects took place, such as the Upper Churchill Falls hydroelectric project, which flooded a great part of Innu lands. At that time, the Innu were not consulted by the GNL (Innu Nation, 2014).

In 1973, the Innu joined the Native Association of Newfoundland and Labrador, along with the Inuit and the Mik'maq in order to protect their land and culture. Three years later, the Innu joined the Naskapi Montagnais Innu Association, which became the IN in 1990 (Innu Nation, 2014). A series of agreements were signed with the Canadian government, the GNL and mining companies, the latest one being the 2011 Agreement-In-Principle (AIP) that recognizes territorial rights and self-government, as described in Section 7.5.1.1.

The IN was known as the Naskapi-Montagnais-Innu Association until 1990. Currently, the IN, who's Grand Chief is Ms. Anastasia Qupee, represents two Innu bands: the Sheshatshiu Innu First Nation and the Mushuau Innu First Nation, both recognized under the *Indian Act* in 2002. The IN is a not-for-profit corporation and works on behalf of these two First Nations and their members. It oversees industrial developments on their territory, and ensures that these are carried out in a way that respects the Aboriginal rights of the Innu of Labrador. Further, the IN is also involved in negotiations regarding land claims and self-governance in the aftermath of the signing of the AIP in 2011, in view of reaching a Final Agreement. In addition, the IN represents its members at the regional level for matters that affect their Aboriginal rights, including for IBA negotiations, for example. While the Sheshatshiu Innu First Nation and the Mushuau Innu First Nation represent their members on matters that affect their respective reserves, their Band Council chiefs sit on the IN's board of directors.

The IN elects a president and a board of directors. Its mandate is to "provide a unified political voice to protect the Innu people's interests against outside threats, as well as to pursue land claim negotiations and help deliver education, healthcare, and other social services to its membership" (Innu Nation, 2014). This organization gave the Innu a voice in many respects, and allowed them to protest against low-level military flights and to be consulted in other projects, such as the Lower Churchill Fall Hydroelectric Project and the Voisey's Bay Mine (Innu Nation, 2014). The IN works with both federal and provincial governments to improve the quality of life in the communities through programs and policies that concern housing, education, and healthcare (Newfoundland and Labrador Heritage, 2014).

**NunatuKavut Community Council (NCC)**

The NCC is a not-for-profit organization representing the Labrador southern Inuit Métis. The NCC was formed in 1981 and was incorporated under federal law in 1985. Labrador's Métis (or southern Inuit population) are descendants of the resident Inuit and the Europeans who traveled to Labrador in the 1700-1800s (NCC, 2014). The Labrador Métis Nation changed its name to NunatuKavut – "our ancient land" – Community Council in April 2010 to better reflect its Inuit heritage (CBC news, 2012). Mr. Todd Russell was elected President of the NCC in 2012, following a previous term from 1994 to 2005.

The NCC's mandate primarily concerns the recognition of the Métis people's rights and the achievement of self-government. The NCC also aims to preserve its members' culture and harvesting practices, to promote economic development, to improve the well-being of its members, and to define its traditional territory. Economic development is managed by NUNACOR, the NCC's corporation (NCC, 2011).

The NCC adopted a Strategic Plan for 2011-2014 (NCC, 2011). The plan identifies five critical priorities for the group: community economic development; cultural preservation; health and social programs; labour market programs; and negotiations for self-government. In addition, several proposed goals and objectives related to reaching partnership agreements, moving forward in seeking a land claims agreement based on the Treaty of 1765, negotiating IBAs with companies in the mining and forestry sectors, and defining a communication strategy to inform and engage with NCC members (NCC, 2011).

The NCC has just over 6000 members (NCC, 2014). While many NCC members live in HVGB, where the head office of the NCC is located, the Labrador Métis are spread throughout various communities of Labrador, including North West River, Mud Lake, Cartwright, and many others. The NCC has service points in Cartwright, Charlottetown, Port Hope Simpson, and St-Lewis.

**Québec's Côte-Nord**

The Côte-Nord, located northeast of Québec represents the second most extensive administrative region in Québec. Its territory occupies ¼ of the geographic area of the province (236, 502 km$^{2)}$ and stretches over 1, 280 km, from the village of Tadoussac up the coast to the Gulf of St. Lawrence, where it meets the Labrador border. It is bordered by the St. Lawrence River to the south, and reaches Schefferville and the 55$^{th}$ parallel. The population is spread out over 52 municipalities. It covers a vast territory of 236, 502 km$^2$, with only 8.3% composed of municipal territory (ISQ, 2014).

In 2013, the population of the Côte-Nord region was 95, 552 inhabitants (1.3% of the population of Québec), mainly residing along the St. Lawrence River and the Gulf (ISQ, 2013). With a population density of 0.4 inhabitants per km$^2$, much of the Côte-Nord region remains uninhabited (CRECN, 2014). The two most populated urban poles of the region are Baie-Comeau and Sept-Îles, which make up nearly 50% of the region's population. Over 85% of the Côte-Nord's municipalities are populated by fewer than 2, 000 inhabitants (CRECN, 2014).

The Côte-Nord region is made up of six MRCs[9]: Haute-Côte-Nord, Manicouagan, Caniapiscau, Sept-Rivières, Minganie and Golfe-du-Saint-Laurent (CRECN, 2014) (Figure 7-37). The Howse Project affects the Caniapiscau MRC, where Schefferville is located, as well as the Sept-Rivières MRC, where the storage and shipping facilities are located (Sept-Îles). The QNS&L railway also runs through this MRC.

Seven Innu reserves, an Innu settlement and a Naskapi reserve are also scattered across the territory. These nine Aboriginal communities are: Essipit, Pessamit, Uashat, Mani-Utenam, Mingan, Nataskuan, La Romaine, Pakuashipi, Matikemush-Lac John, and Kawawachikamach. Québec's Innu population has reached 16, 000, with approximately 12, 000 living on the Côte-Nord region (SAA, 2014). The Innu inhabitants represent roughly 12% of the Côte-Nord's total population.

The Côte-Nord region is equipped with various types of transportation infrastructure: international-capacity airports (Baie-Comeau, Sept-Îles), high-volume port installations, extensive road network, railways, etc. A number of ferry boats ensure connections with the south shore of the St. Lawrence River. Starting in the 1950s, a network of 1,190 km of railway was developed for the mining extraction industry, which remains its principal usage today (CRECN, 2014). Route 138 is the backbone of the Côte-Nord's road network: it

[9] MRCs are administrative entities that were created in 1979 with the mandate to oversee land-use planning issues. Their specific roles are defined in the *Loi sur l'aménagement et l'urbanisme (L.R.Q., c. A-19.1) (LAU).* MRCs allow the representatives of municipalities to come together and to plan, in a concerted manner, matters related to the regional territory and its development. The responsibilities of the various MRCs were enlarged over time to cover issues that concern and affect all municipalities on their respective territories (MRC de Sept-Rivières website, July 2012). Their mandate was broadened in 1988, and since then they provide support and services to municipalities.

links the municipalities between Tadoussac and Natashquan, as well as the province's other regions along the north shore of the St. Lawrence River.

The Côte-Nord's economy is predominantly based on natural resource extraction. The region provides 30% of Québec's aluminum, 33% of its mineral production, 20% of the forestry exploitation volumes, 27% of the provincial electricity production, and 28% of Québec's fisheries production (CRECN, 2013). However, most municipalities have yet to diversify their economies, and depend rather on a single type of natural extraction. The Côte-Nord region has one of the lowest rates of industrial diversity in Québec (0.143), ranked 14 out of 17 regions (CRECN, 2013).

Caniapiscau MRC

The Caniapiscau MRC, where Schefferville is located, administers four non-organized territories[10]. It is the second largest MRC in Québec, with 81, 000 $km^2$, and its urbanized territory only accounts for 5% of its total surface. According to the ISQ, 4, 215 people inhabit the Caniapiscau MRC (ISQ, 2014).

Mr. Martin St-Laurent, mayor of Fermont, acts as the reeve for the MRC. The MRC's Council is composed of Schefferville's administrator, Mr. Ghislain Lévesque, and of one representative of the town of Fermont, Mr. Marco Ouellet. The MRC also employs five staff, including a secretary-treasurer and an urban planner.

Sept-Rivières MRC and Sept-Îles

The mineral extracted from the Howse Project will be transported to the port facilities in Sept-Îles in the Sept-Rivières MRC, where it will be shipped for export, as is currently the case for the mineral extracted from the DSO project, as well as other iron ore mining projects in the area (Section 8.2). The Sept-Rivières MRC is composed of two non-organized territories (Lac-Walker – including Lac Daigle's sector – and Rivière-Nipissis) and of two municipal agglomerations, Sept-Îles and Port-Cartier. With its 39,500 inhabitants in 2011, the Sept-Rivières MRC accounts for 42% of the overall population of the Côte-Nord region (MRC de Sept-Rivières, 2014). It is also home to the Innu communities of Uashat and Mani-Utenam.

The first Europeans known to frequent the Sept-Îles area were Basque fisherman who came annually for cod and whale fishing. In 1535, Jacques Cartier sailed by the islands and first recorded the existence of the archipelago he designated as the *Ysles Rondes* ("Round Islands"). Early European economic activity in Sept-Îles was based on fishing and on fur trade. Louis Joliet established trading posts by 1679. In 1842, the Hudson's Bay Company founded another post in Sept-îles, which was incorporated as a municipality in 1885. Lacking road access in the late 19th century, the town built its first pier in 1908. In 1951, on the 300th anniversary of the first Catholic mass held in the village, the City of Sept-Îles was incorporated. At that time, the population in Sept-Îles was roughly of 1,900 people, including about 700 Aboriginals (Ville de Sept-Îles, 2014).

Modern Sept-Îles was built rapidly during the construction of the QNS&L railway. Iron ore mined in Schefferville and later near Wabush, Labrador, was transported on this railway and shipped from the Iron Ore Company Port of Sept-Îles. Shipment of this important new commodity resulted in investments that turned Sept-Îles into a major port, second in Canada only to Vancouver in terms of yearly tonnage. The port's development led to a major increase in population, and housing was quickly built to accommodate the influx. The town grew from 2, 000 inhabitants in 1951 to 14, 000 in 1961, and 31, 000 in 1981. However, the decline in iron ore prices in the 1980s caused employment and population numbers to decrease.

[10] Lac-Vacher, Rivière-Mouchalagane, Lac-Juillet, Caniapiscau (MAMROT, 2014)

In the 1980s and 1990s, efforts were made to diversify the Sept-Îles economy. For example, the aluminum industry started up in the region at the beginning of the 1990s. The Plan Nord announced in 2008 and the ensuing boom in the mining sector triggered a rapid economic development in Sept-Îles, followed by a decline as of 2013.

With the Laurentian Highlands to the north, Gallix to the west and Moisie to the east, Sept-Îles' territory covers 2, 182 km$^2$. The city also borders a 45-km$^2$ bay with an entrance protected by a natural barrier composed of the seven islands that gave the city its name.[11]

The current urban configuration of Sept-Îles dates from 2003 following the merger of different agglomerations:

- Clarke City, annexed in 1970;
- Gallix, with a population of 671 in 2001, annexed in 2002; and
- Moisie, with a population of 930 in 2001, annexed in 2002.

The municipal council is composed of nine permanent councillors (excluding the mayor). The current mayor of Sept-Îles is Mr. Réjean Porlier, who was elected in November 2013. Sept-Îles is part of the Duplessis electoral district.

For the year 2013, the budget of the City of Sept-Îles was established at $6.16 million, an increase of 10.6% compared to 2012 (Le Nord-Est, 2012a). Due to the economic boom in the area, the city ended 2012 with a surplus of about $6.8 million (Radio-Canada, 2012a).

**Uashat and Mani-Utenam**

The Uashat reserve covers an area of 2.15 km$^2$ and is located in the northwest part of the City of Sept-Îles. The Mani-Utenam reserve is about 16 km east of the city limits and covers an area of 5.27 km$^2$ (AANDC, 2014). Together these reserves form the Innu First Nation of Uashat mak Mani-Utenam. They are considered as two settlements within one Indian reserve and they are administered jointly by the Innu Takuaikan Uashat Mak Mani-Utenam (ITUM) (AANDC, 2014).

The current ITUM Band Council is led by Chief Mike McKenzie. Nine councillors also form the Band Council – for a total of 10 elected members who manage and oversee the day-to-day affairs of ITUM. Elections are held every three years, the last one being on April 27, 2013 (Radio-Canada, 2013b).

Uashat mak Mani-Utenam is one of the five groups that form the Mamuitun Tribal Council (MTC, with Essipit, Mashteuiash, Pessamit and Matimekush-Lac John). Created in 1991, Mamuitun manages activities related to administration, financial management, community planning, economic development and technical services (Conseil Tribal Mamuitun 2014).

History

The Innu of Uashat mak Mani-Utenam are closely related to the Innu of Matimekush-Lac John and share a similar prehistory and history (Volume 2 Supporting Study D). The Innu people were composed of various bands living on the nowadays Côte-Nord and Labrador territory.

Historically, the population of Uashat mak Mani-Utenam stems from two Innu groups: those who lived near the Sainte-Marguerite River, who have progressively established themselves in Uashat, and those who exploited the Moisie River, and who, with time, sedentarized on the Mani-Utenam site (Castonguay,

[11] Grande Basque, Petite Basque, Corossol, Petite Boule, Grosse Boule, Manowin and Îlets De Quen (Ville de Sept-Iles, 2014).

Dandenault and Ass., 2006). These Innu groups faced similar challenges related to sedentarization, wage economy, and the establishment of towns by non-Aboriginal people as the Innu of MLJ.

The Uashat Reserve was founded in 1906 to protect the summer gathering site of the Innu who had camped there since the 17th century on their way from the Sainte-Marguerite and Moisie rivers. In 1949, the federal government created a second reserve, the Mani-Utenam Reserve, in an effort to allow for the City of Sept-Îles expansion plans. Though some individuals moved to the new reserve, approximately 50 families refused to abandon their traditional gathering site and resisted the forced relocation by the federal government with the support of religious authorities (Clément, 2009a). The conflict was resolved 17 years later in 1966, when the Uashat Reserve was finally integrated into the Sept-Îles development plan (AANDC, 2014).

Local Historical and Organizational Context

The LSA is where the Howse Project effects will be directly felt. It includes the following communities, located in the province of Québec:

- Naskapi Nation of Kawawachikamach (NNK);
- Nation Innu Matimekush – Lac John (NIMLJ); and
- Town of Schefferville.

However, for the land-use component, ITUM is also considered as part of the LSA.

**Naskapi Nation of Kawawachikamach (NNK)**

Kawawachikamach is located 15 km northeast of Schefferville, and about 5 km from the border with Labrador. The reserve covers 41.9 $km^2$ of land, which is for the exclusive use of the Naskapi as stipulated in the Northeastern Québec Agreement (NEQA, 1978). The NEQA recognizes a series of rights of the Naskapi (Chapter 4).

History

The term "Naskapi" was first seen in historical records of 1643 in the *Relations des Jésuites* (Mailhot, 1993). It is believed that the term referred to a subgroup of Montagnais people who were particularly dependant on caribou resources, and who lived more inland (Cooke, 1976; Mailhot, 1993; Clément, 2012; Newfoundland and Labrador Heritage, 2014). Up until the mid-1900s, the Naskapi lived from the resources harvested on the land that they exchanged at trading posts such as Fort McKenzie. They moved to the Schefferville area at the beginning of the 1950s where they found work at the Iron Ore Company of Canada. This is the period when the Naskapis entered the wage economy, which affected their nomadic way-of-life.

Between 1956 and 1983, the Naskapi and the Innu cohabited, first in Lac John (until 1972) and then in Matimekush (Weiler, 2009a; Genivar, 2006). It is only in 1983 that the Naskapi relocated to Kawawachikamach, after having signed the NEQA in 1978.

The signature of the NEQA was a historical milestone for the Naskapis (Chapter 4). Through this agreement, they obtained a series of rights, including territorial rights, and financial compensation in exchange for their consent to "cede, release, surrender and convey all their native claims, rights, titles and interests, whatever they may be, in and to land in the Territory and in Québec, and Québec and Canada accept such surrender" (NEQA, Sc. 2.1).

The closing of the IOCC mine in 1982 greatly affected the Naskapi. Many lost their employment, and opportunities for economic activities became very limited in the Schefferville area thereafter. The revival of the mining industry after 2000 brought new employment and business opportunities in the region.

Organization

Kawawachikamach is the only Naskapi community in Québec and in Canada. The current name of the band, the Naskapi Nation of Kawawachikamach (NNK), was authorized in 1996 by the Band Council itself.

The Naskapis of Kawawachikamach elect a chief, a deputy chief and four councillors every three years. The last election took place in September of 2012, and the current chief in office is Chief Noah Swappie. Under the Cree-Naskapi (of Québec) Act, the Council has the mandate to act as a local government that oversees and manages the land and its resources on category 1A-N land (i.e., the village), the use of the community's infrastructure, and the Nation's finances. In addition, the Council promotes the community's development and charitable works while preserving Naskapi culture and traditions. Moreover, the Band Council provides municipal services on Category 1B-N lands (Figure 7-38) (NNK, 2014). The Band Council is supported by two committees, the Elder's Advisory Council and the Emergency Preparedness Committee (NNK, 2012).

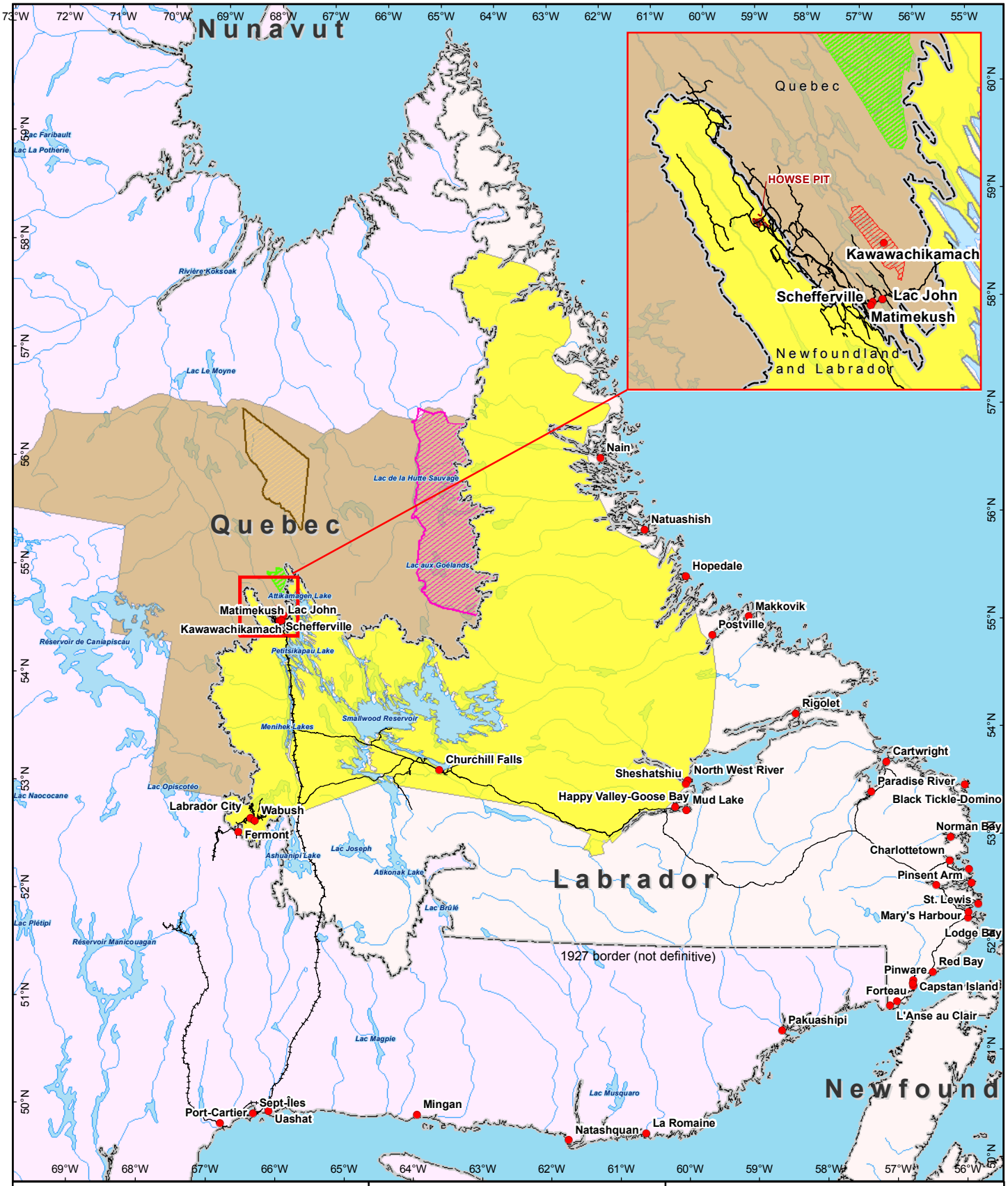
Band council revenues come from multiple sources: AANDC transfers, Health Canada, Canada Mortgage and Housing Corporation, MRNF, SAAQ, housing leases, and services contracts. Additional revenues also come from the NEQA and are managed by the Naskapi Development Corporation (NDC).

**Nation Innu Matimekush – Lac John (NIMLJ)**

The NIMLJ is comprised of two communities: Matimekush and Lac John. Matimekush is located within Schefferville on the shore of Lac Pearce and has an area of 0.68 $km^2$. The Lac John community covers an area of 0.23 $km^2$ and is located 3.5 km from Matimekush and from the center of Schefferville, on the road to Kawawachikamach (Nametau Innu, 2014).

History

The Innu were the "Montagnais" identified in historical records by Samuel de Champlain, a term that referred to the nomadic Native people that generally lived on the north shore of the St. Lawrence River and inland in the provinces of Québec and Labrador. They were divided into several bands, some of which lived inland and others along watercourses, notably the St. Lawrence River (Québec) and the Lake Melville area (Labrador) (Mailhot, 1993). With time, and depending on harvesting success, the Innu reorganized their bands according to the active trading posts, and some of them established around Fort McKenzie (Figure 7-39) at the beginning of the 20th century, given the importance of the fur trade.




**LEGEND**

- Schedule 4 Northeastern Quebec Agreement 1978
- Outstanding Land Claim - Labrador

Land Category

- Category IA-N Land
- Category IB-N Land
- Category II-N Land
- Area of Common Interest for the Inuit and the Naskapis

Basemap

- Road
- Railroad
- Watercourse
- Water Body
- Provincial Boundary

FILE, PROJECT, DATE, AUTHOR:
GH-0617 , PR185-19-14, 2016-01-27, jtremblay

N

0 50 100 150 200
Kilometers

UTM 19N NAD 83

SCALE: 1:5 500 000

SOURCES:
Basemap
Atlas of North America, 1:7,500,000
Government of Quebec, BDGA, 1:1,000,000
Aboriginal datas
Adapted from Alderon Iron Ore Corp (2012)

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

# Naskapi Nation of Kawawachikamach Lands in Quebec and Outstanding Land Claim in Labrador

*Howse Minerals Limited*

GroupeHemispheres

**Figure 7-38**

The Innu of MLJ, also known as the Schefferville Innu or Montagnais,[12] are in fact a subgroup of the Sept-Îles Innu, who have had hunting territories in the region since time immemorial, and who, at the beginning of the 1900s, stayed in the Schefferville region and formed the group of "those who go deep inland" (Clément, 2009a). As a result, most of the Innu living in MLJ are related by kinship and still remain in contact with their families in the Sept-Îles area.

The declining economic context at the end of the 1940s and beginning of the 1950s caused many inland trading posts to close. This in turn forced some Innu who needed other sources of income to settle around Lac John, where the IOCC mining company was beginning its operation.

At the time, in 1945, some Innu were employed to work on the construction of the railway, and settled on the shore of Knob Lake (NIMLJ, 2014). This is the period when the Innu entered the wage economy, which affected their nomadic way of life. In 1955, some of those who had worked on the construction of the railway settled near Lac John. By 1957, around 500 Innu lived in Schefferville, but they were not recognized as status Indians (Clément, 2009a).

Although the government of Canada requested that the Innu return to their original reserves on the Côte-Nord, over 300 Innu chose to stay near Schefferville. The Lac John reserve, which was shared with the Naskapi, was established in 1960 to accommodate the Aboriginal population. The Matimekush reserve was subsequently created in 1968 (Clément, 2009a; NIMLJ, 2014). The NIMLJ has been recognized as a band under the *Indian Act* since 1973. Before that, the Canadian government considered the Innu of the Schefferville region to be part of the Sept-Îles band (Conseil Tribal Mamuitun, 2014).

The closing of the IOCC was a difficult experience for the Innu, the Naskapis and the non-Aboriginal population of Schefferville. Many houses and facilities were destroyed, except for the arena that the local population managed to save by forming a human chain around the building, preventing the bulldozers from reaching it (Radio-Canada, 2012b). For the Aboriginal and non-Aboriginal populations who remained in the region, the period that followed the closing of the IOCC was characterized by profound economic difficulties.

Since 1982, the NIMLJ have focused on negotiating their rights and continuing to develop their community without the presence of the mining industry. Economic activities that have developed since included crafts, retail commerce, services and construction (NIMLJ, 2014).

Organization

Currently, the two reserves are jointly administered by one chief and four councillors elected for three-year terms in accordance with the Indian Act (AANDC, 2014). The current chief, Chief Real McKenzie, has been in office since 2007 and was re-elected in July 2013. The Band Council is subject to the Indian Act.[13]

[12] It is only in the 1980s that the Innu indicated their preference for the word "Innu" as opposed to Montagnais. Innu means people in the Innu language (Newfoundland and Labrador, 2014).

[13] Generally, band councils oversee the administration and organization of each Aboriginal reserve, as stipulated in the Indian Act (L.R.C. 1985, Sections I-5). They can proceed with elections according to provisions of the Indian Act or to their customary Aboriginal traditions (Conseil Tribal Mamuitun, 2012). The Band Council is free to put in place a number of committees or organizations to help in the daily administration of the reserve. Their mandate is to provide a number of services to their populations: housing, infrastructure, safety, education, health care, social services, and economic development. Band councils may also set up corporations or companies to promote the economic development of the community. Revenues of the band council come from multiple sources: AANDC transfers, Health Canada, Canada Mortgage and Housing Corporation, MRNF, SAAQ, housing leases, and service contracts.

The NIMLJ Band Council has been affiliated since 1991 with the *Conseil Tribal Mamuitun*, which provides support to Innu band councils in administration, economic development, technical services and community planning (NIMLJ, 2014).

**Schefferville**

The Town of Schefferville is home to the non-Aboriginal population of the LSA but also to a few Native families. It is located at 54°48' N and 66° 48' W, 25 km southeast of the proposed mine site. Schefferville is located about 2 km from the border with Labrador.

History

Mining exploration activities around Schefferville started in the early 1800s, but construction and operation of the first mine only began in 1945. The operation of the IOCC required the establishment of various types of infrastructure, such as landing strips, electricity, and workers' camps, and most importantly, the QNS&L railway to carry the ore to the Port of Sept-Îles. The railway was completed in 1954. Schefferville officially became a city in 1955, and workers accompanied by their families came to live there on a permanent basis (Clément, 2009a).

Between 1954 and 1982, Schefferville grew as a mining town. During the course of mining operations, Schefferville's population reached almost 2,000 people in 1971, peaked at 3,429 in 1976, and 3,271 in 1981 (NML, 2014). The town counted with two banks, a cinema, two hotels, restaurants, metalwork, gas stations and other stores. A town hall, including a police station and the fire department, and a federal post office were also available to the population, as well as recreational and sport facilities (arena, cultural center and a gym).

The economic recession of the beginning of the 1980s forced the IOCC to close Schefferville's mine. In 1984, the city had no more budget for daily operations, and found itself in a position where it could not pay its employees. In 1985, the Government of Québec officially terminated the legal existence of the municipality. The government encouraged every resident to leave Schefferville by offering compensation. The IOCC proceeded to the demolition of Schefferville's infrastructure, at the cost of $2 million (Radio-Canada, 2012c; 2012d).

However, in 1990, the IOCC, the governments of Québec and Canada agreed to save what was left of the municipality. About 60 houses were then transferred to the NIMLJ (Radio-Canada, 2013c). Except for a few people who provided services to the Aboriginal communities of Kawawachikamach and MLJ, the town was mostly abandoned by its non-native population. The city population continued to decline, downsizing to 280 people in 1996, and to 202 people in 2006.

More recently, between 2008 and 2015, Schefferville underwent an economic boom, which caused a rapid increase in the cost of life, and a shortage of accommodation for professionals. The Government announced a program for the municipality worth $25 million to update the city infrastructure and to provide housing and accommodations to its residents and visiting consultants (Radio-Canada, 2012c; 2012d). These projects however, were not all completed and the town's administrator has indicated that Scheferville's infrastructure is not ready for another boom (Joncas, 2014, *personal communication*).

Organization

Schefferville's territory is about 39 km$^2$. The town's first territorial development plan was prepared by the technical service of the IOCC, with the support of the former Ministry of Mines of Québec that existed between 1942 and 1960 (MRN, 2013). Under this plan, the town center had room for expansion and for possible construction of new infrastructure. Historically, the town's residential area had about 670 permanent family homes.

Today, according to the Schefferville's zoning regulations, the town has very little room to grow, since it is surrounded by Matimekush, Pearce Lake, and land belonging to Transport Canada for the airport. In addition, some of the land that could be used for expansion was formerly used by the IOCC for operations and is likely contaminated. Schefferville could only expand east of the current town center (NML and PFWA, 2009; Joncas, 2014, *personal communicatio*n).

The town, which is part of the Caniapiscau MRC, is governed by the Cities and Towns Act (R.S.Q., Chapter C-19). Since 1990, the municipality has been managed by the Government of Québec, and the *Loi concernant la Ville de Schefferville* includes provisions concerning municipal services. A Town Administrator manages Schefferville's municipal affairs. Schefferville is part of the Duplessis electoral district.

Schefferville's revenues come from property taxes, payment for municipal services, and government transfers.

#### 7.5.1.1 Aboriginal Rights: Treaties, Agreements, Land Claims and IBAs

**Treaty Rights**

The treaty rights of the NNK are included in the NEQA signed in 1978. The Howse Project, being located in Labrador, will not affect Naskapi lands located in the province of Québec, access to healthcare or education, or the rights that are inscribed in the NEQA. The only right that may be affected is related to caribou hunting, yet this right has already been affected by the drastic decrease in the caribou population, which is addressed in Section 7.5.2.1. This subcomponent will not be considered as a VC.

**Agreement-in-Principle**

The IN has signed an AIP with the GNL and the Canadian government. The main modalities of this AIP are described below. In particular, this AIP includes an Economic and Hydroelectric Major Development Impacts and Benefits Areas, which overlaps with the Howse Project site location. This gives the IN the right to negotiate an IBA, which it has done with both HML and LIM. As previously indicated, the proponent is committed to applying HML's IBA commitment to the Howse Project and will oversee that the provisions of this IBA, a confidential agreement, are implemented. Accordingly, this subcomponent is not retained as a VC.

**Land Claims**

The land claims of the NIMLJ and ITUM on their Nitassinan are not currently under negotiation with the province of Québec or the federal government. There are no indications that land claim negotiations with NIMLJ and ITUM could resume in the near future. In any case, both Innu groups have signed IBAs with LIM that include the Howse Project.

The Québec Innu's claim also concerns a part of Labrador, but the GNL did not accept this claim for negotiation, which is also the case for the NNK land claim on part of Labrador's territory.

The NCC submitted their land claim to the GNL in 1991 and is still waiting to begin an official negotiation process. They represent the last Inuit group in Canada with an outstanding land claim (NCC press release, 2014). The NCC has won two court cases in which the courts recognized the strength and credibility of their land claim: one in 2007 and one in 2014 (NCC Press Release, 2014). However, there are no indications that the GNL or the Canadian government will soon undertake a negotiation process. However, should such a process begin, the Howse Project should not interfere for three main reasons:

- the land-use activities of the NCC members seem to be concentrated in south and central Labrador, around Wabush and Labrador City, and HVGB, on the TLH axis (NCC, 2010; Mitchell and Coombs, 2012; Mitchell and Carroll, 2014);

- LIM has signed an Economic Partnership Agreement with NCC, which includes the Howse Project; and
- HML has signed a Cooperation Agreement with NCC for the purpose of the DSO project.

For the above-mentioned reasons, and in the absence of a negotiation process, an IBA or an agreement signed for the Howse Project, the Howse Project should have little if no effect on the respective land claims of the NIMLJ, ITUM, NNK and NCC. This subcomponent is thus not retained as a VC.

**IBA Implementation**

IBAs are confidential agreements, and it is therefore nearly impossible to accurately assess their effects on the local populations. In the case of the Howse Project, IBAs were originally signed with LIM. However, given that HML now owns the Howse Project, its IBA will be extended to include the Howse Project. There are some concerns among the population regarding the implementation of the IBA signed for the Howse Project, given the creation of HML, an unincorporated joint venture between HML and LIM. HML remains largely unknown by the population, and a trust relation with this entity remains to be established. At the moment, the population associates HML with HML, as explained in Chapter 4. LIM has also made its difficult financial situation public, which does not reassure the Aboriginal leadership and populations in terms of receiving the benefits they were promised. Expectations of Aboriginal groups in terms of the full respect of the IBA are high considering the sensitivity of the area and the presence of Kauteitnat.

However, as previously indicated, the Howse Project must be considered as being inserted into a brownfield context, more precisely as an extension of the DSO project by HML. Although the subcomponent IBA Implementation cannot be considered as a VC as it exceeds the purpose of the EIS, HML is aware of the stakeholders' concerns regarding IBA implementation, and measures will be taken to open a dialogue on this issue.

#### 7.5.1.1.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the NNK and the NIMLJ, located in the province of Québec. The RSA includes Aboriginal Groups that live further from the Project and who are not directly affected by the Project, but that have recognized Aboriginal rights and have signed agreements on the Howse Project:

- In Québec, ITUM; and
- In Labrador, the IN and the NCC.

The temporal boundary for this component includes up until the end of the decommissioning and reclamation phase of the Project, as this is when the Agreements signed for the Howse Project will expire.

**Aboriginal Rights: Treaties, Agreements, Land Claims and IBAs**

The section below describes Aboriginal rights for each Aboriginal group located in the LSA or RSA. Of the five Aboriginal groups concerned by the Project, only the Naskapi Nation of Kawawachikamach has signed a modern-day treaty.

Aboriginal groups have signed agreements with HML in the particular case of the DSO project and with LIM for the Howse project. IBA provisions for the Howse Project were originally included in LIM's agreements. However, given the change in circumstances when LIM obtained court protection from creditors, and the acquisition of 100% of the Howse deposit by HML, it is the intention of HML to incorporate the Howse deposit into its IBAs with Aboriginal groups. As such, the same commitments made as part of HML's DSO Project will apply for the Howse Deposit.

**LSA**

NNK

The Naskapis are pioneers in terms of establishing new types of relationships with governments and in creating and maintaining their own self-government. They have signed the following agreements:

- the James Bay and Northern Québec Agreement (JBNQA, 1975);
- the Northeastern Québec Agreement (NEQA, 1978);
- the Agreement Respecting the Implementation of the Northeastern Québec Agreement (1980);
- the Cree-Naskapi (of Québec) Act (CNQA, 1984); and
- the Partnership Agreement on Economic and Community Development between Naskapis and Québec (2009).

The JBNQA (1975) establishes which lands are exclusively for the use of the Cree and Inuit peoples and which lands remain under the provincial and federal jurisdiction. The JBNQA served as a model for the negotiations leading to the NEQA (which began in 1966), and established territorial and land-use rights and the environmental and social protection regime (Chapter 14 of the NEQA). The JBNQA chapter on harvesting rights (Section 24) was amended in the NEQA to include the Naskapi in the regulating committees.

The Naskapi lands include the following (Figure 7-38):

Category 1-N lands: Category 1 lands are reserved for the exclusive use of Naskapis (Figure 7-38).

- these lands "cannot be taken away by Québec. In those circumstances […] where the right to expropriate by Québec is exercised, the land must be replaced or compensation paid at the option of the Naskapis of Québec except if otherwise provided herein (NEQA, s.5.1.2, p.5-3)";
  - 1A-N lands correspond to the reserve on which the community is located, and were under the administration of the Canadian government (NEQA, s.5.1.2, p.5-2), until the signature of the Cree-Naskapi Act in 1994, which transferred responsibilities to the Band Council.
  - 1B-N lands are under provincial government jurisdiction, but are located on lands that are under the JBNQA and administered by the Kativik Regional Government (KRG). For this reason, the Chief of the NNK sits on the KRG Council (KRG, 2014). In essence, "Category IB-N lands comprise the lands to be granted for the Naskapis of Québec to a private landholding corporation established in virtue of the laws of Québec or by a special law thereof, and the members of which must be Naskapis of Québec" (NEQA, s.5.1.2, p.5-3).
- on category II-N lands, the Naskapis have "exclusive right of hunting, fishing and trapping and also the rights established in their favor under the Hunting, Fishing and Trapping Regime referred to in paragraph 15.2.1" (NEQA, s.1, p.1-2). Category II-N lands comprise, 65,086 km2 south of the 55th parallel, and the James Bay Cree share the exclusive right of hunting, fishing and trapping. In addition, the Inuit of Kuujjuaq have the right to harvest resources on 598 km2 of Category II lands. Other than hunting, fishing and trapping rights, provincial jurisdiction generally applies on these land;
- the Naskapi do not have exclusive harvesting rights on Category III lands, as these lands are under provincial jurisdiction (JBNQA, s.5-3). However, they may use these lands for harvesting activities without having to obtain hunting, trapping or fishing permits.

Aside from the Naskapi lands, the NEQA, which is a comprehensive agreement in terms of the themes that are addressed (healthcare, education, housing, governance, environmental regime, etc.), established a series of other protected rights, including the following:

- harvesting rights: "the right to hunt, fish and trap […] in accordance with the provisions of the Hunting, Fishing and Trapping Regime […] in the Naskapi area of primary interest […] subject to the principle of conservation." (NEQA s.15.3);
- the establishment of the Hunting, Fishing and Trapping Coordinating Committee, which oversees the management of traditional activities and makes recommendations to Québec and Canada. The Coordinating Committee is divided into subcommittees which deal with more specific issues (NEQA, s.19) ;
- the Hunter Support Program provides income and benefits to the community members who practice traditional activities for subsistence. The funds are provided by the MRN (NNK, 2012).
- governance: the establishment and legitimacy of the Band Council to act as local government on category 1A-N lands and as a municipality on 1B-N lands (NEQA, s.7 and 8).
- health services: "Upon the Naskapis of Québec establishing their permanent residence on Category 1A-N lands, Québec shall undertake, […] to assume and to deliver to the Naskapis of Québec the full range of health and social services […]. (NEQA, Ss.10.11).
- education: "Education services for the Naskapis of Québec shall be assured by the establishment of a school […]. The general administration of the Naskapi School shall be carried out by la Commission scolaire régionale Eastern Québec (NEQA, s.11).

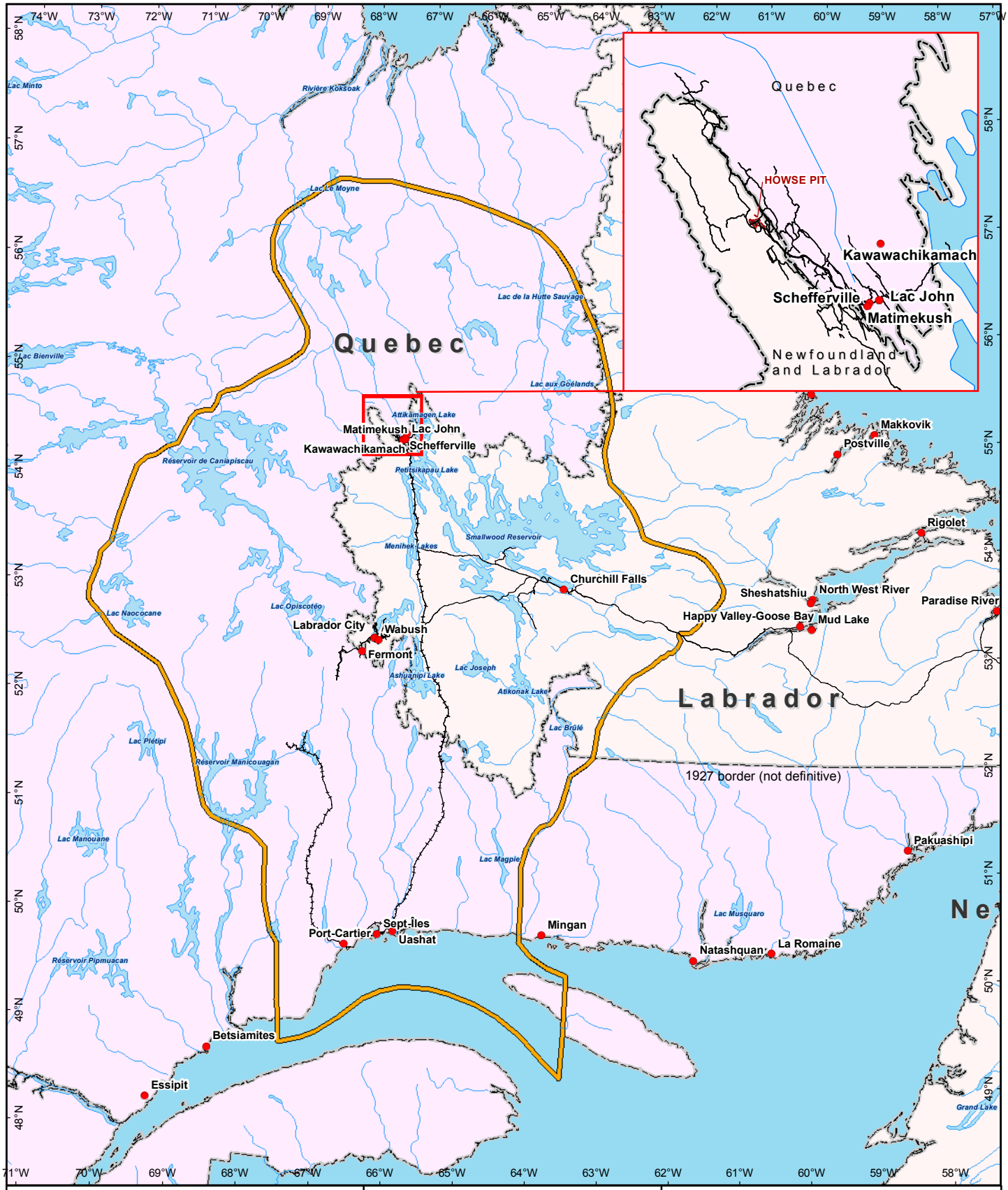
In 1980, the *Agreement Respecting the Implementation of the Northeastern Québec Agreement* was signed by the IOCC, but was only implemented in 1990. This Agreement "established the model for funding capital and operations and maintenance expenditures over five-year periods" (NNK, 2014). This agreement also provides a conflict resolution mechanism to solve disputes related to the implementation of the NEQA.

The Cree-Naskapi Act of 1984 confers a self-government status to the Band Council and establishes the current land management system into categories 1A-N and 1B-N, transferring responsibilities from the federal government to the Band Council. The Cree-Naskapi Commission is responsible for the implementation of the Act (Cree-Naskapi Commission, 2014).

In 2009, the Naskapis entered into the Naskapi-Québec Partnership Agreement (NQPA, 2009). The purpose of this agreement is to "establish a new nation-to-nation relationship and to put forward a common vision of the economic and community development of Naskapis" (NQPA, 2009). The parties agreed to promote development projects in the energy and mining sectors on Naskapi lands (as defined in the NEQA), and on sharing mechanisms for the benefits and economic opportunities of these development projects. This partnership agreement provides a framework for concluding agreements with mining companies, and "provides for revenue-sharing for certain types of energy projects, creates a mechanism to address a list of issues important to the Naskapis, including education and the Hunter Support Program, and targets solutions to problem areas relating to outfitting and culture" (NNK, 2014).

*NNK Land Claims in Labrador*

At the time of the impact assessment for the Lower Churchill Hydroelectric Project, former NNK Chief Louis Einish addressed a letter to the co-chairs of the Joint Review Panel, who had determined that the consultation with the Naskapi was not necessary in the context of the project. In his letter, Chief Einish explained that "the Nation asserts a claim to parts of Labrador" and that the Naskapi "still practice many aspects of [their] traditional way of life and culture, and rely on subsistence hunting, fishing and trapping in Labrador for a large part of [their] food supply and for many raw materials" (Chief Louis Einish, 2010, in CEAA 2012; Figure 7-38). The NNK has confirmed having submitted an official land claim to the federal and provincial governments, but that has not yet been accepted.




**LEGEND**

Ancestral Territory of the innu of Uashat mak Mani-Utenam and Matimekush-Lac John

Basemap
- Road
- Railroad
- Watercourse
- Water Body
- Provincial Boundary

FILE, PROJECT, DATE, AUTHOR:
GH-0617 , PR185-19-14, 2016-01-27, jtremblay

N

0 50 100 150 200
Kilometers

UTM 19N NAD 83

SCALE:
1:5 500 000

SOURCES:
Basemap
Atlas of North America, 1:7,500,000
Government of Quebec, BDGA, 1:1,000,000
Aboriginal datas
Adapted from Alderon Iron Ore Corp (2012)

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

NIMLJ and ITUM Nitassinan
*Howse Minerals Limited*

GroupeHemispheres

**Figure 7-39**

**Impact and Benefit Agreements**

The NNK has signed Impact and Benefit Agreements with the following mining companies:

- HML for the DSO project (2010); and
- Labrador Iron Mines for the Howse Project (2011).

The NNK also signed a Participation Agreement for the LabMag Project in 2004 with NML. The NNK owns 20% of this project, which is currently at the feasibility stage.

Negotiations to amend the agreement with LIM had begun but are presently at a standstill. LIM has not yet been successful in sustaining profitable operations in the region and has not been operating in 2014-2015.

NIMLJ

Unlike the NNK, the NIMLJ has not signed agreements or treaties with provincial or federal governments regarding land or self-government. However, NIMLJ has ongoing land claims and has participated in several rounds of negotiations over the years that failed to reach agreement. Compared to the Naskapi, Cree and Inuit, NIMLJ claims on their *Nitassinan* – which means "our land" – are particular in that they concern territories that are used and inhabited by non-Aboriginal people.

The negotiation process began in 1975, when the *Conseil des Atikamekw et des Montagnais* (CAM) was mandated to lead the Innu (Montagnais) and Atikamekw land claim negotiations with the governments. In 1979, CAM presented a claim for a Nitassinan that encompassed parts of Québec and Labrador territories. The GNL responded by stating it would first address the claims filed by its own Aboriginal inhabitants. The governments of Québec and Canada agreed to discuss the land claim filed by CAM, and signed a framework agreement in 1988 to that affect in order to plan further negotiations. In 1994, the Government of Québec made an offer to the Innu and Atikamekw that was rejected (NIMLJ, 2011). The divergence of opinions among CAM members led to its dissolution in 1994 (NIMLJ, 2011).

In 2004, the Mamuitun Tribal Council and Natashkuan, representing Mashteuitsh, Essipit, and Pessamit, signed an AIP with the governments of Canada and Québec.[14] Land claims in Labrador were not included in this AIP (NIMLJ, 2011). After the signing of this agreement, territorial negotiations with the government seem to have been relegated on a community by community basis, as each Innu community has its own demands and conditions.

The communities of Uashat mak Mani-Utenam and of Matimekush-Lac John, represented by the Ashuanipi Corporation, took part in a new round of negotiations as of 2005 concerning their Nitassinan, which covers part of the territory under the JBNQA (1975), of the province of Québec and of Labrador (Figure 7-39) (SAA, 2014). Meetings were held on a monthly basis between 2006 and 2008 to discuss a framework agreement. These negotiations were suspended in 2008. The Ashuanipi Corporation ceased its activities in 2009 when Ottawa ceased to finance the corporation, which employed 17 people.[15]

The *Alliance stratégique Innue* (ASI) was formed in 2008 by four Innu community (Ekuanitshit, Matimekush-Lac John, Pessamit and Uashat Mak Mani-Utenam), and was later joined by a fifth member,

[14] Agreement-in-Principle of General Nature between the First Nations of Mamuitun and Nutashkuan and the governments of Québec and Canada (2004).

[15] According to the government, the corporation had not respected its engagement in preparing territorial negotiations as well as discussions on the self-governance of both NIMLJ and ITUM. This point of view is currently contested by the Innu of both communities. Recently, the Ashuanipi Corporation appealed the Supreme Court decision that forced the corporation to repay $232,300 to Canada's Attorney General (Radio-Canada, 2012e).

Unamen Shipu. Its purpose is to ensure the respect of the rights and interests of these communities, as well as to lead the negotiation concerning the Nitassinan. The ASI represented about 12,000 Innu people, which corresponds to about 70% of the Québec Innu population (ASI, 2012). The ASI ceased its activities in 2011.

As mentioned above, the Innu Nitassinan claimed by the Innu of ITUM and of MLJ covers a portion of Labrador, and several administrative divisions of Québec, at least partially. These include:

- Saguenay-Lac St-Jean administrative region;
- Manicouagan MRC;
- Haute Côte-Nord MRC;
- Caniapiscau MRC (southern part);
- Minganie MRC (eastern part); and
- JBNQA territory, north of the 55th parallel.

According to Québec's *Secrétariat aux affaires autochtones du Québec* (SAAQ), a territorial agreement with the Innu of Matimekush and Uashat mak Mani-Utenam would remain subject to current legislation under which these territories are managed, but a number of provisions would most likely concern the following:

- traditional activities carried out by the Innu (hunting, fishing and trapping) would be in line with activities of Quebeckers;
- the Innu would be involved in the management of the land and natural resources. The mechanism of this participation remains to be determined;
- the Innu could also participate in development projects that could affect them. In case of conflict, the Innu could receive a financial compensation;
- the Innu would be entitled to a share of the royalties collected by Québec on the exploitation of natural resources; and
- the agreement would provide special protection to some Innu heritage sites and wildlife reserves (SAA, 2014).

To this day, the NIMLJ and ITUM have not reached agreement concerning the Nitassinan that they claim. They nonetheless have recognized ancestral rights under Section 35 of the 1982 constitution, and have harvesting rights recognized under the JBNQA (Section 24.3.22).

The Québec Innu, including MLJ, are challenging in court the Agreement-in-Principle (AIP) signed by the Labrador Innu, the GNL and the Canadian government in 2011, which is seen by Québec Innu as "extinguishing" Québec Innu claims on their Nitassinan. However, the Québec Innu does respect this agreement, although they deplore not having been consulted during the negotiation process that preceded the signature of the AIP. At the moment, the GNL tolerates the presence of Québec Innu on its territory for harvesting purposes but remains firm in its refusal to negotiate Québec Innu land claims on its territory (NIMLJ, 2011; Radio-Canada, 2012e).

The Innu communities of Québec have recently entered into discussions to reaffirm their common history, language, and shared culture and identity. In a *Declaration of Strengthened Unity of the Innu Nation* published in December of 2013, the chiefs of nine Innu communities, including MLJ, confirmed their will to work as one Nation "to develop Innu governance in order to achieve the recognition and autonomy of the members of the IN", notably by protecting Innu Aboriginal title and rights (Québec Innu Nation, 2013).

**RSA**

ITUM

ITUM shares a similar history with the NIMLJ in terms of land-claim negotiations (Section 4.2). The Innu negotiations started back in 1979, after the *Conseil des Atikamekw et des Montagnais* (CAM) was established in 1975.

As indicated in Section 4.2, the NIMLJ and ITUM have not reached an agreement concerning the Nitassinan. For its part, ITUM recently established the *Bureau de la protection des droits et du territoire* to pursue the protection of Innu rights under the Canadian constitution, as well as the protection of territory, including the environment and way of life. A large part of the bureau's work is connected to different governments, organizations and promoters wishing to develop on traditional territories. Territorial planning is developed in collaboration with the Innu Patrimonial Research sector, and eventually, with a consultative committee to be put in place.

The Nitassinan claimed by ITUM and NIMLJ is shown in Figure 7-39. The Innu still maintain the hope of negotiating their claim on the Nitassinan, as well as their wish to become one nation. An Innu Summit was held on the question in September 2012 (Radio-Canada, 2012f).

Since 2008, ITUM has signed four IBAs with mining companies (IBA Research Network, 2014):

- Cliffs Natural Resources (2008);
- HML, for the DSO project (2011);
- Labrador Iron Mines (2012); and
- ArcelorMittal (2012).

These agreements contain several provisions concerning employment and contract opportunities for the communities, as well as for the development of Uashat and Mani-Utenam. ITUM was the first community to negotiate royalties on the extracted tons of minerals. At least 90 jobs are guaranteed by the three most recent IBAs signed by ITUM. ITUM would even like to have a pellet plant on its territory (Industrie Québec, 2012). In order to ensure that the commitments ensuing from these agreements are respected, the Group Aishkat was created to increase the participation of the Innu in significant development projects (Industrie Québec, 2012).

Innu Nation

In September 2008, the GNL and the IN announced the signing of the *Tshash Petapen* ("New Dawn") *Agreement*, which resolved key issues relating to matters between the GNL and the IN surrounding the Innu land claim, as well as impacts and benefits related to past and proposed hydroelectric development projects in western and central Labrador. Since that time, the provincial and federal governments and the IN have completed detailed agreements on these matters, including a tripartite *Labrador Innu Land Rights Agreement-in-Principle* (AIP), which was ratified by the Innu on June 30, 2011 and signed by the three parties on November 18, 2011. The following describes the agreements signed by the IN.

*Voisey's Bay Memorandum of Agreement (MoA)*

A Memorandum of Agreement was signed in 2002 between the GNL and the IN in view of mitigating the effects that would be caused by the Voisey's Bay Project[16] on Innu lands. This MoA was signed in a context where land disputes were still undergoing between the GNL and the IN. This MoA provided the framework

[16] The Voisey's Bay Mine is located about 30km east of Natuashish.

for negotiation in view of signing an IBA with Vale Inco, the Voisey's Bay project proponent. The MoA established the revenues that would be paid to the IN, as well as harvesting modalities on the Voisey's Bay project area during the operation of the mine. For example, the Innu could continue to harvest on the site under certain conditions and had to be consulted at the moment of imposing any restrictions on land-use activities. In exchange, the "activities may be restricted or limited by legislation of the Province only to the extent necessary to provide for public health, safety, or conservation" (Voisey's Bay MoA, 2002).

*Tshash Petapen Agreement/New Dawn Agreement*

The New Dawn Agreement is a bilateral agreement between the IN and the GNL, as well as the Energy Corporation of Newfoundland and Labrador (Nalcor Energy), which took part in the negotiations. It was signed in September 2008, and its purpose was to settle disputes that would later facilitate the signing of an AIP. These issues included:

- Disputes between the GNL and the IN with regard to Innu land claims, and which included specifications on land categories, and on economic development areas.
- Redress for the Upper Churchill hydroelectric project, which may be considered as an IBA signed "after the fact", to compensate the Innu for loss of their lands.
- The Lower Churchill IBA, defining the payments that IN would receive; in exchange, the IN "shall provide a comprehensive release to ECNL related to any adverse effects of the project upon the rights and interests of the Innu of Labrador, including Aboriginal rights" (New Dawn Agreement, 2008:6).

*Innu Nation Agreement-in-Principle (AIP)*

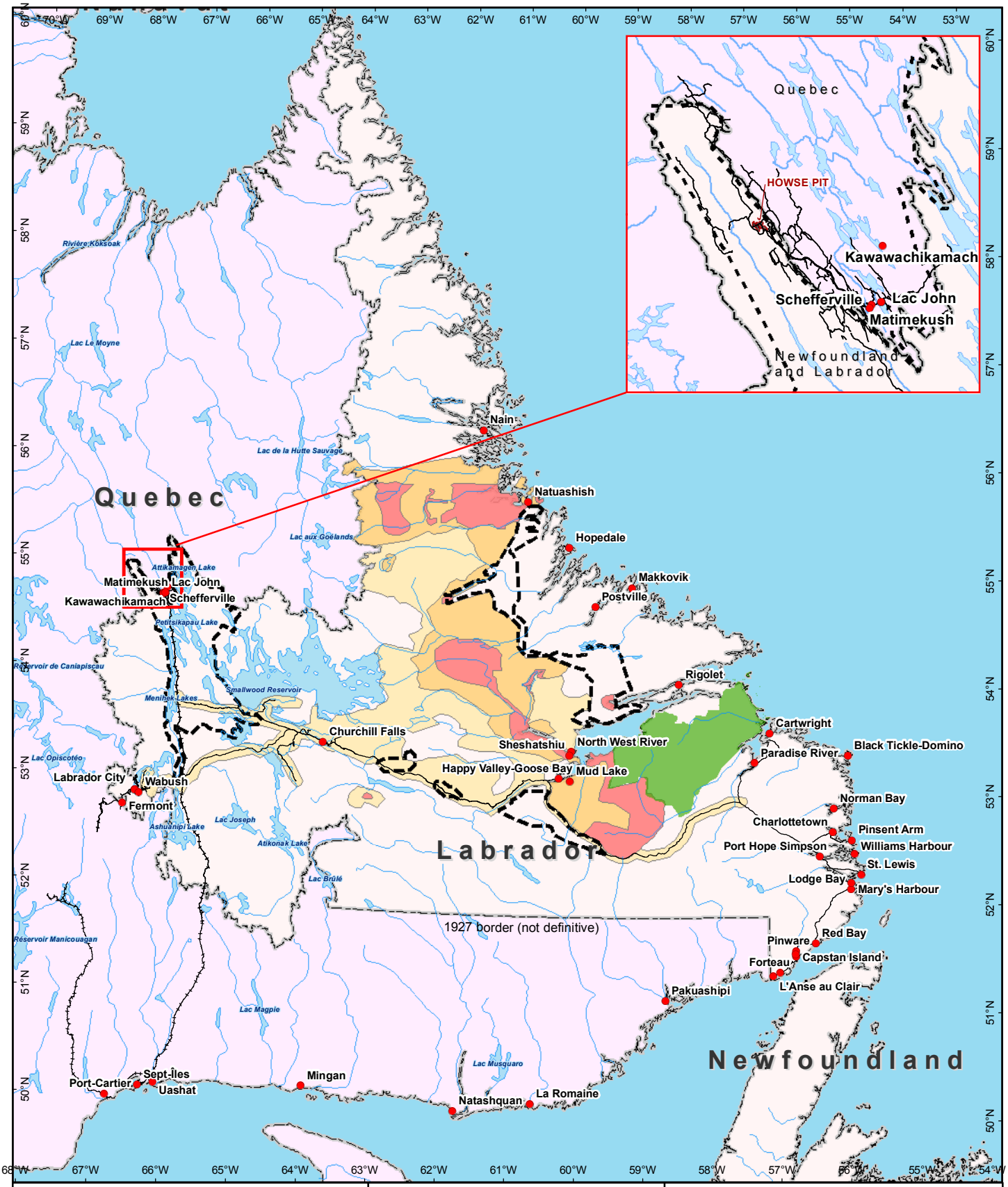
The IN submitted its first land claim in 1977. The claim, which focused on central Labrador, did not contain enough information, and the GNL agreed to fund further research. Another land claim was submitted in 1990, and a framework agreement was signed in 1996.

Negotiations to reach an AIP between the IN, the GNL and the Canadian government started in 2008 in the wake of the New Dawn Agreement. As part of its land claim talk, the IN also began negotiating self-government arrangements with the provincial and federal governments in 2006. The AIP was signed in November 2011, after three years of negotiations.

The AIP "sets out jurisdictions, rights, benefits and limitations for the Labrador Innu in a variety of subject areas. These include the harvesting of forest resources and plants; fish; migratory birds; and wildlife. All rights and benefits are directly tied to specific geographically defined lands (AANDC, 2014). The AIP is not yet legally binding, but will be once it becomes a treaty. Negotiations towards a final land claim agreement (eventually a treaty) and self-government agreement are still ongoing between the IN, the GNL and the Canadian government.

The AIP defines four categories of lands (Figure 7-40):

- The Labrador Innu Lands (12,950 $km^2$), which is administered by the Labrador Innu authority or government (IN);
- The Labrador Innu Settlement Area (LISA) (14,000 $km^2$), which includes Labrador Innu lands. The Innu have rights to harvest resources on the LISA (though not for commercial use), and will be involved in decisions that relate to land management.
- The Permit-Free Hunting Area (33,670 $km^2$), where the Innu have harvesting rights without the prior obtainment of a permit.
- The Economic and Hydroelectric Major Development Impacts and Benefits Areas, on which the Innu have the right to negotiate IBAs.




**LEGEND**

- Labrador Innu Lands (LIL) Category I
- Labrador Innu Settlement Area (LISA) Category II
- Labrador Innu Settlement Area (LISA) Category III
- Mealy Mountain National Park Reserve
- Economic and Hydroelectric Major Development Impacts and Benefits Areas

Basemap

- Road
- Railroad
- Watercourse
- Water Body
- Provincial Boundary

FILE, PROJECT, DATE, AUTHOR:
GH-0617 , PR185-19-14, 2016-01-27, jtremblay

N

0 50 100 150 200
Kilometers

UTM 19N NAD 83

SCALE:
1:5 500 000

SOURCES:
Basemap
Atlas of North America, 1:7,500,000
Government of Quebec, BDGA, 1:1,000,000
Aboriginal datas
Adapted from Alderon Iron Ore Corp (2012)

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

# Labrador Innu Land Claims AIP Area

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**Figure 7-40**

In total, these lands cover approximately 70% of Labrador (GNL, 2014a). None of these land categories infringe on the territory of the province of Québec.

As illustrated in Figure 7-40, the proposed Project does not overlap or otherwise interact with land areas that have been designated as Labrador Innu Lands (LIL) (Category 1), Labrador Innu Settlement Area (LISA) (Category 2) or Permit-Free Hunting Areas (Category 3) under the current Labrador Innu Land Claims AIP. The proposed Project site is approximately 120 km away from the closest area of Category 3 lands in western Labrador, and is well over 200 km from any designated Category 1 or 2 lands. It is also located approximately 480 km from Sheshatshiu and 410 km from Natuashish.

However, the proposed Project site is located within the Western Labrador Economic Major Development Impacts and Benefits Agreement Area (Figure 7-40), which under an eventual Final Land Claims Agreement would see the Innu having the right to IBAs for "Major Developments", as defined specifically in the Agreement.

**IBAs**

The IN has signed IBAs with three mining companies (Chapter 4.2):

- HML;
- LIM (which covered the Howse Project before the acquisition of the project by HML)17; and
- Vale Inco.

NCC

The NCC has submitted a land claim that covers much of central and southeastern Labrador, including the area of western Labrador in which the proposed Project site is located. However, this land claim has not been accepted for negotiation by the federal or provincial governments.

*Land Claims*

In 1991, the NCC submitted a first land claim to the federal and provincial governments. However, to date, the Canadian government has not yet communicated its decision to reject or accept the NCC claim (Figure 7-41). In 2010, in the context of the Lower Churchill hydroelectric project, the NCC submitted a document to the CEAA entitled *Unveiling NunatuKavut: Describing the Lands and People of South/Central Labrador* (NCC, 2010a). The purpose of the document was to summarize the research carried out on Aboriginal ancestors and ancestral lands, but also to serve as "a foundation treatise to the Federal Department of Justice and Indian and Northern Affairs Canada, in an effort to illustrate present day rights and titles held by the Inuit descent people of South/Central Labrador" (NCC, 2010a).

The available information indicates that the traditional trapping areas of this group extended through southeastern Labrador to the Churchill River and included traplines up to the "Height of Land" in Western Labrador (LIM, 2009). NCC members continue to rely upon the resources of the land, the water and the sea (NCC, 2013), and are known to undertake land use and harvesting activities throughout Labrador. These include hunting for large and small game, fishing and harvesting vegetation for food, traditional medicines, firewood and other purposes (Martin, 2009; LIM, 2009; NCC, 2010a; 2010b).

[17] The existing IBA of HML, signed in the context of the DSO project, will include the Howse project.


**LEGEND**

- NunatuKavut Land Claim within Labrador

Basemap
- Road
- Railroad
- Watercourse
- Water Body
- Provincial Boundary

FILE, PROJECT, DATE, AUTHOR:
GH-0617 , PR185-19-14, 2016-01-27, jtremblay

N

0 50 100 150 200
Kilometers

UTM 19N NAD 83

SCALE:
1:5 500 000

SOURCES:
Basemap
Atlas of North America, 1:7,500,000
Government of Quebec, BDGA, 1:1,000,000
Aboriginal datas
Adapted from Alderon Iron Ore Corp (2012)

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

# NunatuKavut Community Council Land Claim within Labrador

*Howse Minerals Limited*

GroupeHemispheres

**Figure 7-41**

An NCC 2012 Land Use Study in the area of current and potential future iron ore mining in Western Labrador indicated that NCC members residing in Western Labrador undertake a variety of land and resource use activities in the region, including hunting, fishing, berry picking, camping and associated travel across the land. That study did not record any indication of current land, water or resource use by NCC members in or near the proposed Project area.

HML signed a cooperation agreement with the NCC for the DSO project in 2013. The NCC also signed an Economic Partnership Agreement with LIM in 2012. To our knowledge, the NCC has not signed IBAs with other mining companies (IBA Research Network, 2014).

**Existing Literature**

The component description is based on the assessment of existing treaties, agreements, land claims and IBAs.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component. However, Some IBAs are confidential agreements and their content or quality can hardly be assessed or compared. The effect assessment on this component is thus based on information publically available on existing treaties, agreements, land claims and IBAs.

**Recommended Measures for Improvement**

Current efforts by HML to communicate with stakeholders will continue. However, the EIS consultation has demonstrated that some concerns specific to IBA implementation should be addressed promptly.

To this end, information will continue to flow to interested parties and communities at large, as has been done for the DSO Project, and improvements will be made as required, including:

- reinforce and accelerate the current work of the IBA Implementation Committees;
- include the Howse Project in HML's HSE Committee;
- provide radio updates on Project progress and discussions held in the HSE Committee.
- issue a newsletter on Project activities, including information on IBA implementation; and
- work with Band Councils to prepare a joint communication plan on IBA implementation to ensure that up-to-date, accurate information reaches community members periodically.

#### 7.5.1.2 Paleontological, Historical and Heritage Sites

The main concerns raised during the public consultations (Table 7-2) were:

- Ensure that the required archaeological research is carried out.

Given the absence of archaeological or historical sites on the Howse Property or on the haul road proposed trajectory, this component was not retained as a VC.

However, it is important to note that some stakeholders consulted have raised concerns regarding the archaeological potential of the area, especially with regard to Kauteitnat. Is this regard, it is important for HML to respect its engagement to limit operations to the proposed areas, as defined in the EPP (Volume 1 Appendix Ia).

##### 7.5.1.2.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the area located near the Howse Project, including Kauteitnat.

- The RSA has not been considered for this component as Project effects will be felt locally.

The temporal boundary for this component includes up until the end of the operation phase of the Project, as this is when the Howse Project will no longer have potential effects on heritage sites.

**Archaeological Research**

Archaeological work was carried out in the vicinity of the Howse Project and resulted in the discovery of some prehistoric sites, as well as numerous Aboriginal sites from the contemporary period. An extensive assessment of archaeological potential (McCaffrey *et al.,* 2006) conducted in a pipeline assessment corridor—between Harris Lake, northwest of Schefferville, and Pointe-Noire in Sept-Îles (LabMag Iron Ore Project)—and followed by inventory survey, revealed some forty recent (post-1940s) sites in the northern section of the study corridor (Figure 7-42).

An assessment of archaeological potential and archaeological field work (supervision and survey) were later conducted in 2007 (Arkéos Inc., 2008a) in the Harris Lake area, and more specifically in the upper reaches of Goodwood River. Two test pits revealed the GgDu-1 and GgDu-2 sites, where three lithic tool fragments and altered stones were discovered, suggesting the presence of an ancient fireplace. The GgDu-2 site also contained seven contemporary Aboriginal camps. In July 2013, an inventory was conducted at these two sites and no additional lithic artefacts were discovered (Artefactuel, 2013). An analysis of the three relics discovered in 2007 did not find them to be noteworthy and the Borden codes were cancelled. A survey conducted in 2011 along the Goodwood–Timmins road yielded a prehistoric site (GfDs-3) where an endscraper and a scraper, both carved in stone, were discovered on a plateau overlooking the valley of Morley Lake in Labrador (Arkéos Inc., 2012). The site is located about 3.5 km east of the Project site. During the survey, several relics from recent camps (all connected to the existing road) were also recorded. Interestingly, an archaeological survey (Schwartz, 2006) was also conducted west of Howells River to determine if 58 chert outcrops recorded by LabMag geologists had served as sources of prehistoric lithic raw materials. The research did not show traces of human alterations associated with quarrying or any other human activities.

Another archaeological survey was carried out in 2008 (Arkéos Inc., 2008b) on properties affected by TSMC's DSO project, but it did not reveal any new archaeological sites. Lastly, it bears mentioning that a Stage 1 Historic Resources Assessment was conducted in 2008 on behalf of LIM for a number of iron ore deposits, including the Howse Property, and that no archaeological sites were identified (Stantec, 2009).

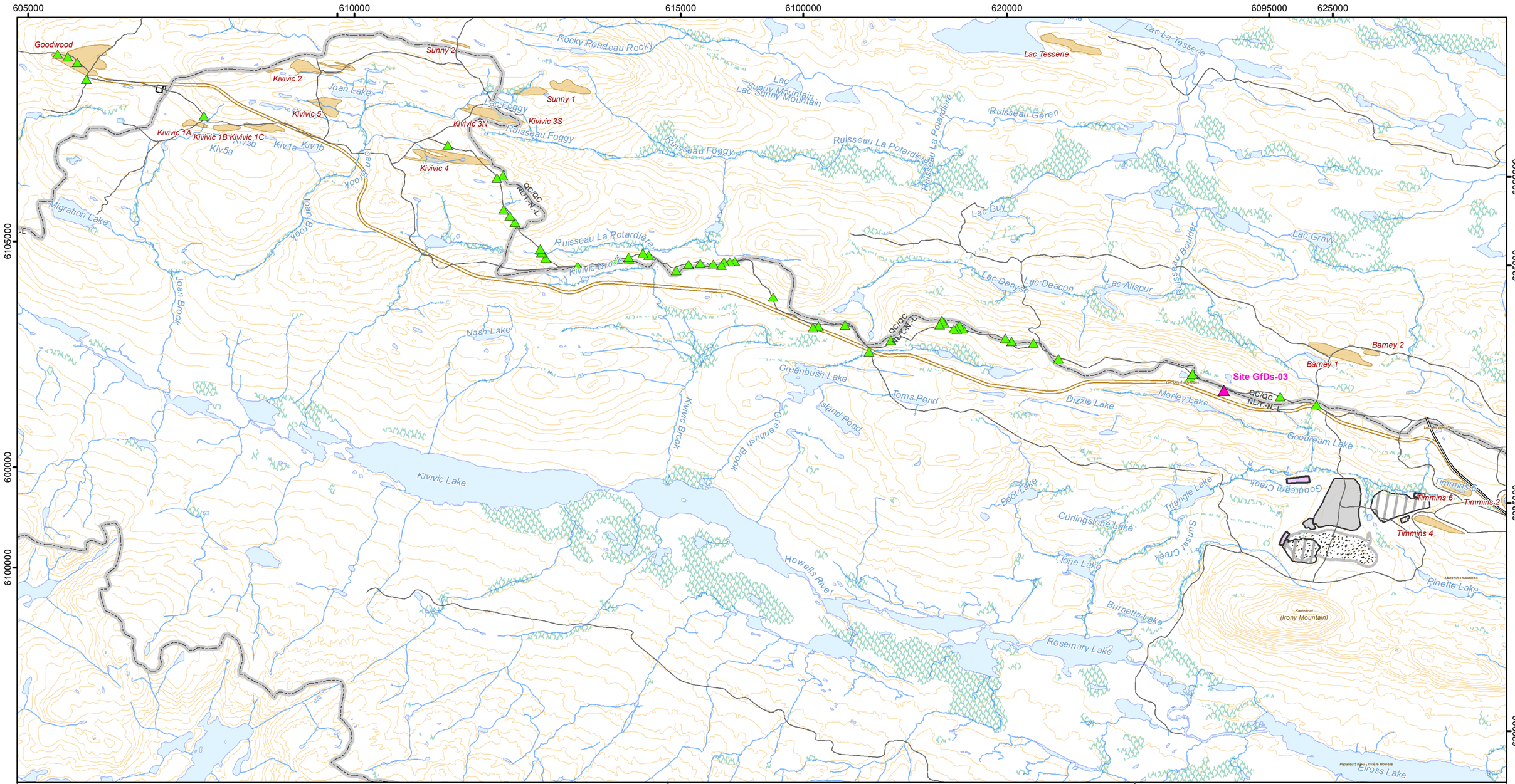
**Archaeological Potential**

All of the available data related to the paleogeography and geography of the Project footprint (glacial retreat, proglacial lake, climate, accessibility, surface characterization, resource availability and abundance, position in relation to travel routes, etc.), as well as the existing archaeological and ethnohistorical data, was used to determine the prehistoric potential.

The presence of ice on the territory until about 6500–6000 BP establishes a maximum age for human colonization of the area. However, the favorable climate that followed deglaciation and the sector's rapid colonization by vegetation after the glaciers melted and proglacial lakes retreated made human inhabitation possible thereafter. It is therefore plausible that there may have been a human presence in the region as early as 6000 BP.

The studied area spans 3.5 km in a northwest–southeast direction and 2 km in a northeast–southwest direction, and its landscape varies in altitude between 600 and 700 m. Its surface materials consist primarily of moraine deposits, i.e., coarse components mixed with sand, silt and clay deposited on the bedrock, which is exposed in some areas. The area features a few low-lying areas filled with organic matter with poor drainage, if any. In the southwest section, a small nameless lake flows through a series of small creeks

and lakes before reaching Rosemary Lake, a northern constituent of Howells River. To reach this river, approximately 8 km of non-navigable streams must be crossed. A nameless stream is found alongside the west flank of the study area and runs through a sloping section that is not suitable for setting up camps. Goodream Creek flows into a relatively flat valley, but its surface areas are practically non-existent due to poorly drained surface materials. In short, given the environmental features, the area does not lend itself well to the establishment of human settlements. Archaeological inventories conducted in Québec's subarctic have revealed a general tendency for Aboriginals to settle in areas characterized by fine, well-drained surficial deposits situated near watercourses or water bodies that are linked to a drainage basin.




**LEGEND**

Archaeological Components

- GfDs-03 Site
- Contemporary Site

Infrastructure and Mining Components

- Proposed Howse Pit
- Proposed Topsoil/Overburden Stockpile
- Proposed Site Infrastructure
- Proposed Waste Dump/In-Pit Dump
- Proposed and Existing Sedimentation Pond
- DSO Haul Road
- Existing Railroad

Basemap

- Main Access Road
- Existing Road
- Contour Line (50 ft)
- Provincial Border
- Watercourse
- Water Body
- Wetland

*Hydronyms are oriented along the direction of water flow

FILE, PROJECT, DATE, AUTHOR:
GH-0616 , PR185-19-14, 2016-03-23, edickoum

0 2 4 6
Kilometers

UTM 19N NAD 83

SCALE: 1:70 000

SOURCES:

Basemap
Government of Canada, NTDB, 1:50,000, 1979
Government of NL and government of Quebec,
Boundary used for claims,

Mining Components
Howse Minerals Limited/ MET-CHEM Howse Deposit Design for General Layout, 2015
Groupe Hémisphères, Hydrology and wetland update, 2013

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

# Archaeological Sites

*Howse Minerals Limited*

GroupeHemispheres
5731, rue Saint-Louis, Bureau 201, Lévis (QC) Canada, G6V 4E2
1453, rue Beaubien est, Bureau 301, Montréal (QC) Canada, H2G 3C6

**Figure 7-42**

Some documented archaeological sites in Québec–Labrador, however, show that the Aboriginals used chert from the Labrador Trough to prepare certain tools as early as 3500 BP, and around that same time, this resource began to be used in the dealings within a vast social network (McCaffrey, 1989). Still, among other things, the studied area contains fine chert that could have been utilized. Access to the studied area is nevertheless difficult, as it is situated away from main paths and water bodies. As such, it appears unlikely that Aboriginals would have invested time and energy to reach this relatively remote area given the presence of much more accessible chert outcrops along watercourses or water bodies (McCaffrey et Denton, 1987). Furthermore, a visual inspection of the studied area was conducted in 2008 and no archaeological relics were recorded at that time.

**Recent Archaeological Investigation on Howse Project Area**

For the specific needs of the Howse Project, a Historic Resources Impact Assessment was conducted in September 2014 (Volume 2 Supporting Study O). This survey was conducted on the proposed location for the 30 km Goodwood-Timmins haul road, and the 9 km² Howse Property deposit. The survey identified no pre-contact historic resources, but recent (20th century) historic resources were identified, though typically recent and within close proximity to an existing access road. Such findings included signs of past caribou presence in the form of several sets of antlers and a skeleton, and several surface-level chert fragments. A few test pits were dug during this survey, but with no findings.

While the surveys did not lead to the discovery of historic sites, the presence of a wide range of features was identified, including recent fire pits, a teepee, and mining-related debris. All are contemporary or near-contemporary, and are for the most part located near access roads.

During the fall of 2014, an elder reported that a burial would have been found on Kauteitnat, information that could not be confirmed by the Provincial Archaeology division of the GNL's Business, Tourism, Culture and Rural Development Department. However, if such a discovery was eventually confirmed, there would be no interference with the Howse Project, as HML has stated that there are no plans to extend the Howse Property boundaries any closer to Kauteitnat. Furthermore, TSMC's EPP (Volume 1 Appendix Ia) provides for Cultural Heritage protection in section 5.15 (Cultural Heritage Control Plan).

**Existing Literature**

The component description is based on the archeological researches that have been conducted in the region through time and that have been cited where appropriate in the text.

The EPP's Cultural Heritage Control Plan protects any cultural heritage resources that could be affected by construction activities. In this sense, should a discovery be made during Project construction, operation or decommissioning and reclamation, the proper means will be taken to protect such resources.

**Data Gaps**

The existing data provides a recent and sufficient understanding of the component.

### 7.5.2 Land Use Practices

#### 7.5.2.1 Land-use and Aboriginal Traditional Knowledge

What follows summarizes the land-use study carried out for the purpose of the Howse Project (Volume 2 Supporting Study D). Previous studies indicated a rather intensive use of this area by local land-users (Clément, 2009; Weiler 2009), and TSMC found it necessary to obtain more precise information regarding harvesting practices specific to the proposed Howse Project location (Figure 4-1). Accordingly, the Howse Project study's purpose was to identify the current land-use and harvesting practices that are carried out in the vicinity of the Howse Project proposed site (Figure 4-1). Participants in the study were Innu from

NIMLJ and ITUM, and the NNK. The participatory mapping approach and methodology are described in Volume 2 Supporting Study D, as well as the historical land occupation of both the Innu and the Naskapi.

It should be mentioned that the land-use and ATK discussion focuses on the Québec Innu (NIMLJ and ITUM) and the Naskapi, as they represent the harvesters who occupy and intensively use the area.

Subcomponents are the following:

- Subsistence and traditional caribou hunting;
- Subsistence and traditional activities (hunting, fishing, trapping and berry/medicinal plant harvesting);
- Preservation of and access to Kauteitnat;
- Outfitting businesses;
- Access to land.

Schefferville used to be an area where outfitting businesses operated. However, since the ban on the caribou hunt, most outfitting businesses in the area have ceased their activities, or have maintained marginal activities in terms of the revenues they generate. Given this context, outfitting businesses, whether they belong to Aboriginal or non-Aboriginal owners, will not be retained as a VC.

Access to land is discussed in Section 7.5.3.4 under the subcomponent "Access to the local road network, access to lands, and road safety", and several measures are proposed to alleviate the issues related to access to land, which is key in the pursuit of harvesting activities.

It is important to note that the VC assessment below primarily concerns local Aboriginal groups, namely the NIMLJ and NNK, as they represent the most active land-users, or those who may carry out subsistence harvesting practices in the vicinity of the Howse Project site. However, ITUM and the family trapline holders are also included in assessing these VCs.

Subsistence and traditional caribou hunting

Both the Innu and Naskapi of Schefferville have historically relied on caribou for food, clothing and materials. Subsistence and traditional caribou hunting is thus of high cultural value, and there is a rich knowledge associated with caribou hunting. During the Howse Project consultations, concerns regarding the presence or absence of caribou in the region were expressed by many, including the IN and NCC, in the letters they submitted in the context of Project Registration (Chapter 4). This is why this subcomponent is considered as a VC.

Subsistence and traditional activities

Subsistence and traditional activities remain important for the Innu, Naskapi and non-Aboriginal population living in Schefferville area, but the Howse Project area itself is mostly used to reach other harvesting grounds (Volume 2 Supporting Study C and Supporting Study D). A fair amount of opportunistic harvesting activities are still carried out in the area, especially taking into account that it is easily accessible by road. However, the presence of the Howse Project and of other mining activities forces users to go farther inland to find resources, which translate into increased financial costs for the families. Therefore, this subcomponent is considered as a VC.

Preservation of and access to Kauteitnat

The cultural value of Kauteitnat for both Innu and Naskapi has been explained above. Many if not all participants in the consultations raised concerns regarding the proximity of Kauteitnat to the proposed mine site. Its historic and contemporary use as a landmark and its role as an observation point for caribou

hunting are recognized and valued by Innu and Naskapi alike. Therefore, the preservation of and access to Kauteitnat is considered as a VC.

#### 7.5.2.1.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the following communities, located in the province of Québec:

- Naskapi Nation of Kawawachikamach (NNK);
- Nation Innu Matimekush – Lac John (NIMLJ);
- Land-users from the Town of Schefferville.

In addition, ITUM is considered within the LSA for this component as some families are trapline holders in the vicinity of the Howse Project. The RSA has not been considered for this component as Project effects will be felt locally.

The temporal boundary for this component includes up until the end of the decommissioning and reclamation phase of the Project, as this is when the Howse Project will no longer have an influence on the LSA as the sources of effects will not be operative.

**LSA**

NIMLJ and ITUM

The current land use and Innu-Aitun in the study area reflect the changes in the way of life that were triggered by the beginning of mining operations by the IOCC, the development of Schefferville, and the closure and recent start-up of mining activities (Figure 4-1). Way of life has been greatly affected by the disappearance of caribou in the region, a vital resource in the exercise of Innu-Aitun, which influenced Innu subsistence hunting.

The Schefferville area is an easily accessible location for the practice of Innu Aitun and harvesting activities. As people from MLJ are close and have easy access to the study area, they are the most frequent users. Young MLJ Innu users are very active in the study area and use the land during short stays for resource harvesting activities, depending on the season. On the other hand, elders have reduced their activities in the study area, and now go farther for extended stays, using the study area mostly as a transit area.

Innu from Uashat and Mani-Utenam live farther away, and they travel less frequently to the area. Most often, they come for temporary visits to traplines (Figure 7-44). The fact remains that Uashat and Mani Utenam trapline holders near the study area have a special attachment to this territory, even though they are not continuously present and do not regularly practice harvesting activities in the area.

The roads built by IOCC in the study area are used by Innu for their traditional activities. The road that goes from Kauteitnat to Howells River is used frequently. Pick-up trucks are the most used mean of transportation, while ATVs, ski-doos and canoes are also complementary vehicles. The settling of long-term camps in the study area is random because most users now travel for short-term specific resource harvesting, and access by road allows them to come and go in a day by their own means. Most permanent camps are farther away and most of the existing camps in the study area are now used for day or short-term hunting and fishing trips.

Although the NIMLJ and ITUM Innus often pass through the area, some activities still take place. Depending on the season, the main activities practiced by Innu are caribou hunting, waterfowl hunting, trapping, fishing, small game hunting and plant harvesting. Irony Mountain or Kauteitnat is also an important landmark, having cultural and spiritual significance to the Innu. Table 7-103 presents the annual cycle of activities practiced in the study area, which are then described one by one.

**Table 7-103 Annual Cycle of Activities Practiced by the Innu in the Study Area**

| SEASON | ACTIVITIES |
|---|---|
| **Fall** | - Waterfowl and small game hunting<br>- Fishing<br>- Beginning of trapping for some species<br>- Alpine Cranberry harvesting<br>- Caribou hunting if sightings (outside study area) |
| **Winter** | - Small game hunting<br>- Fishing<br>- Trapping |
| **Spring** | - Waterfowl hunting (mainly Canada geese)<br>- Other activities in standby until geese move away |
| **Summer** | - Fishing<br>- Waterfowl hunting<br>- Wild berry harvesting |

*Caribou Hunting*

The Innu of Labrador and Québec used to hunt caribou from the George River herd. This was the main activity exercised by the Innus of Matimekush-Lac John and Uashat Mani-Utenam in the fall, when the herd passed through the region during its migration to the north. During the last five years approximately, the herd has gradually disappeared from the region and is largely decimated. Caribou hunting is no longer practiced, which greatly affects the Nation's food supply and traditions. Hunters must go farther away to find caribou, which is expensive. The local population is also prevented from passing on the cultural knowledge that is associated to the caribou.

*Waterfowl Hunting*

Canada Goose is the most hunted waterfowl. Goose hunting is mainly practiced in the spring by family-related groups who wait for geese flocks around water bodies. Three sites in the study area are largely used: Rosemary Lake, Triangle Lake and Pinette Lake. Howells River is also a preferred location. Besides the Canada Goose, the Loon, Black Duck and Long-Tailed Duck are also present and harvested in the area.

*Trapping*

Beaver trapping is practiced in late fall, whereas mink, fox and marten are mostly trapped in the winter. Lynx is present but is harder to catch. Beaver meat is very prized among the Innu. Trapping takes place around Matimekush-Lac John. However, according to elders, trapping is not practiced as much as before because it requires a lot of time investment, and the fur market is complex. The absence of caribou would incite trappers to go outside the study area, towards Greenbush and its surroundings, where there are permanent camps for long-term stays.

*Fishing*

Fishing is practiced with nets and fishing rods in summer and fall, at various sites in the study area, mostly Rosemary Lake, Triangle Lake and Pinette Lake. The main species fished are various trout species, char, cisco, Lake Trout and Landlocked Salmon. Ice fishing for Brook Trout is also practiced.

*Small Game Hunting*

Ptarmigan, hare and porcupine are harvested during spring, fall and winter. Small game is very appreciated by the Innu and is present in the study area. Small game hunting is mostly practiced opportunistically, while carrying out other harvesting activities.

*Plant Harvesting*

Blueberries and cloudberries, found in bogs, are the fruits most harvested during summer. Raspberries can also be found. Alpine cranberries are popular in the fall. Harvesting is mostly practiced by women, who are assisted by men to reach the harvesting sites. Harvesting is carried out in the study area, mainly in the Rosemary Lake area. Many people now refrain from harvesting berries or plants in the study area because of the presence of mining activities.

*Irony Mountain or Kauteitnat*

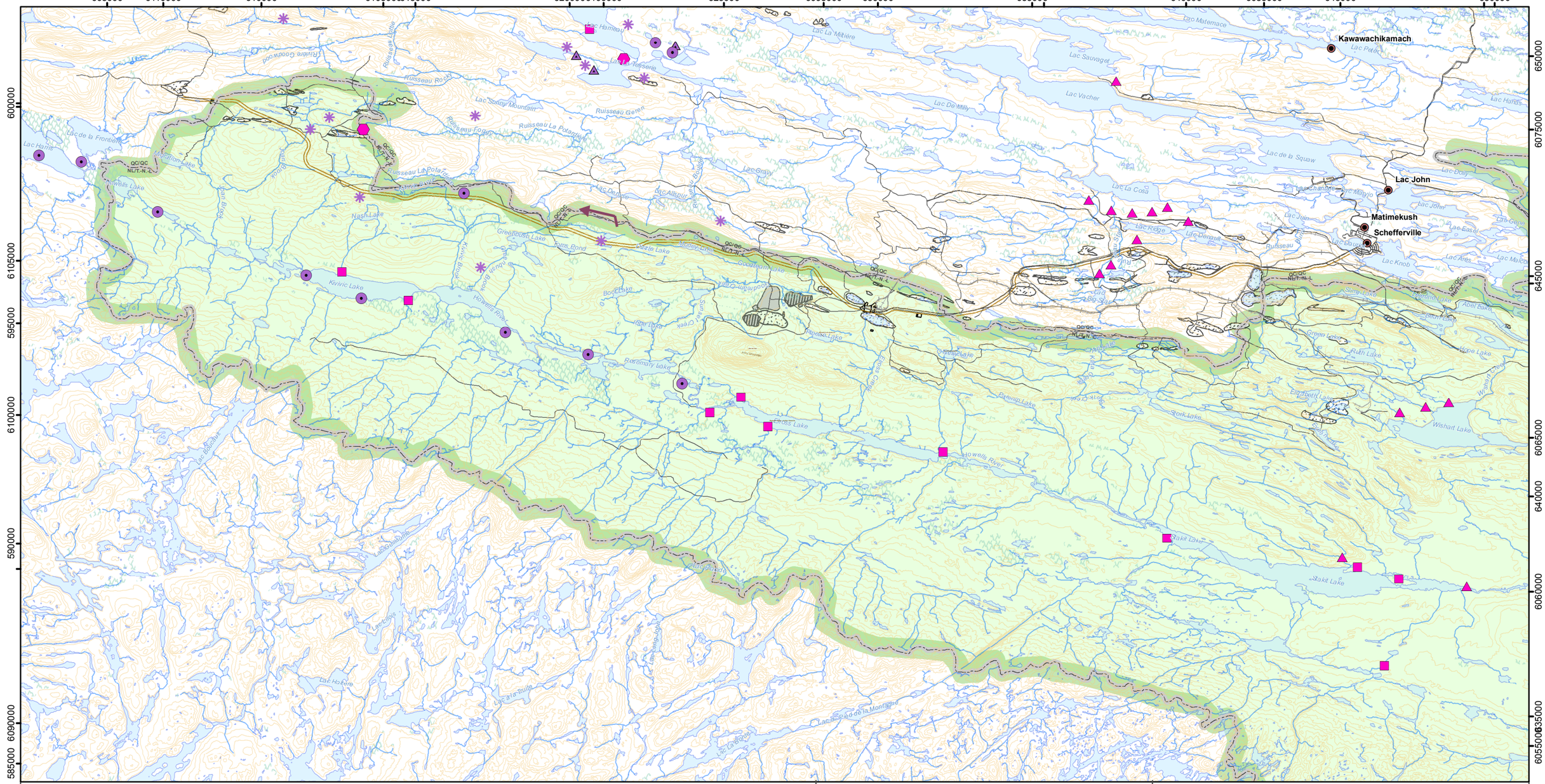
This mountain is an important topographic landmark for Innus of Matimekush-Lac John and Uashat-Mani-Utenam. The mountain has always been an important observation hill for locating caribou and other species. The mountain's intricate ties with resources and Innu-Aitun confer a sacred aspect to the site for the Innu. It is an important symbol in Innu culture.

NNK

The Naskapi use of the territory is quite similar to that of the Innu described above. However, many political and socioeconomic factors are specific to each Nation. The study area is mostly used for opportunistic harvesting and as a passing-through zone to reach the Greenbush or Goodwood area. Much of the Naskapi's harvesting activities are carried out in the vicinity of Lake Attikamagen and Swampy Bay, as well as the Kauteitnat, Goodwood and Greenbush areas. The territory is shared informally between the two nations, based on good will, and relations are generally positive.

The Naskapi use the existing roads to access different water bodies and sites in the study area. Chemin de la Montagne (Teketaut Meshkenu) is used to access the northeast, Goodwood and Greenbush. Like the Innu, the Naskapis us pick-up trucks most often for transportation, with ATVs, ski-doos and canoes used as complementary vehicles. There are few or no permanent camps in the study area, the zone being mostly used to travel to camps to the north, near Attikamagen and Swampy Bay lakes. Temporary camps are located along the Greenbush/Goodwood roads, outside the study area, and on the eastern side of Kauteitnat, as well as around Rosemary Lake (Figure 4-1).

Irony Mountain or Kauteitnat is also an important landmark for the Naskapi, and they practice more or less the same harvesting activities as the Innu on the territory: caribou hunting, waterfowl hunting, trapping, fishing, small game hunting, and plant harvesting. The specifics of each land use activity are described below, and Table 7-104 presents an overview of their annual cycle.




**LEGEND**

Recreational Land Use

- Town
- Innu Cabin
- Naskapi Cabin
- Other Cabin
- Labrador Small Game/Fur zone
- Labrador Black Bear Management Area
- Bustard Observation And Hunting Site
- Beaver Lodge And Observation Site
- Picking Site (Cloudberry, Lingonberry, Bog bilberry, Blueberry, Labrador tea)

*Hydronyms are oriented along the direction of water flow

Infrastructure and Mining Components

- DSO Haul Road
- Existing Railroad
- Deposit
- Proposed Howse Pit
- Proposed Topsoil/ Overburden Stockpile
- Proposed Site Infrastructure
- Proposed Waste Dump/ In-Pit Dump
- Proposed Sedimentation Pond
- Elross Lake Area Iron Ore Mine Plant Infrastructure Footprint

Basemap

- Existing Road
- Contour Line (50 ft)
- Provincial Border
- Watercourse
- Water Body
- Wetland

FILE, PROJECT, DATE, AUTHOR:
GH-0584b , PR185-19-14, 2016-03-23, edickoum

N

0 2 4 6
Kilometers

UTM 19N NAD 83

SCALE: 1:150 000

SOURCES:

Basemap and Land Use Components
Government of Canada, NTDB, 1:50,000, 1979
Government of NL and government of Quebec, Land Use Atlas, 2009
Daniel Clement, 2009.

Mining Components
TATA Steel Minerals Canada Limited/ MET-CHEM Howse Deposit Design for General Layout,, 2013
Groupe Hémisphères, Hydrology and update, 2013

ENVIRONMENTAL IMPACT ASSESSMENT
HOWSE PROPERTY PROJECT

# Known Harvesting Locations Schefferville Area

*Howse Minerals Limited*

GroupeHemispheres
5731, rue Saint-Louis, Bureau 201, Lévis (QC) Canada, G6V 4E2
1453, rue Beaubien est, Bureau 301, Montréal (QC) Canada, H2G 3C6

**Figure 7-43**

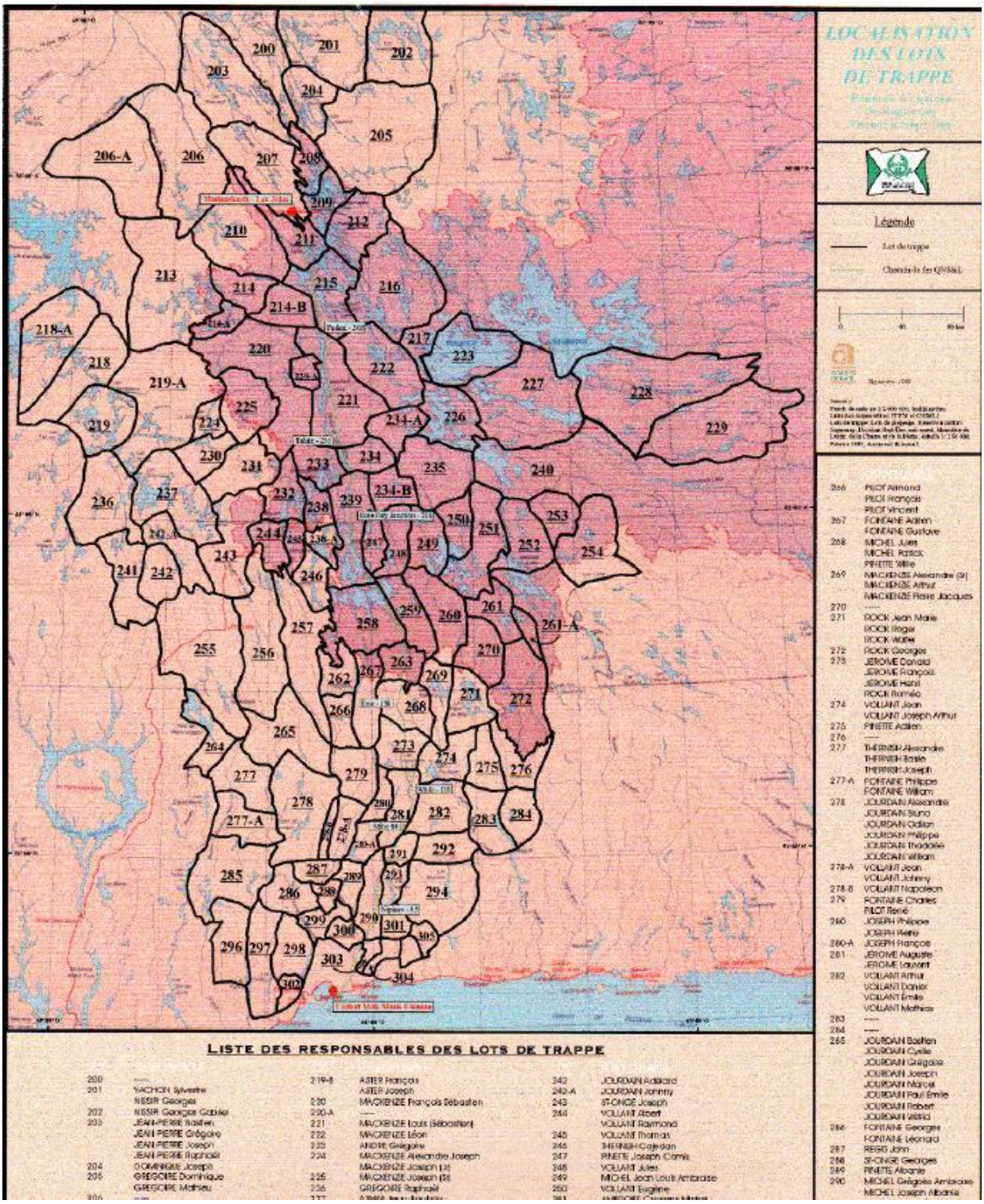



**Figure 7-44 Family Trapline Holders**

**Table 7-104 Annual Cycle of Harvesting Activities Practiced by the Naskapi**

| SEASON | ACTIVITIES |
|---|---|
| **Fall** | - Waterfowl hunting (Canada geese and grouse)<br>- Fishing<br>- Alpine Cranberry harvesting<br>- In the past, caribou hunting, now some Naskapi go to the Kuujjuaq region |
| **Winter** | - Waterfowl hunting (ptarmigan)<br>- Trapping<br>- Ice Fishing |
| **Spring** | - Waterfowl hunting (mainly Canada geese) |
| **Summer** | - Fishing<br>- Waterfowl hunting<br>- Wild berry harvesting |

*Caribou Hunting*

Naskapi used to hunt the George River caribou herd in groups on the western side of Kauteitnat. There is now a ban on George River caribou hunting. The Naskapi may hunt the Rivière aux Feuilles herd occasionally. The recent scarcity of the species has had an effect on the Naskapis' lifestyle and they now have to go north to hunt caribou, which is more costly. The local population is also prevented from passing on the cultural knowledge that is associated to the caribou.

*Waterfowl Hunting*

Canada Goose hunting is a very important activity in the spring, when large flocks arrive. It is mostly practiced outside the study area, although some Naskapi hunt along the Papateu Shipu basin. Loon, Black Duck, Long-Tailed Duck and Black Scoter are also preferred waterfowl species that are hunted on some lakes in the study area.

*Small Game Hunting*

Grouse is a highly sought-after species in the fall, whereas ptarmigan is hunted more in winter. Grouse is hunted along roads and ptarmigan can be found on small plateaus in the study area.

*Trapping*

Naskapi trapping activities are rare in the study area. Some Naskapi will trap marten or mink while passing through the area for other activities.

*Fishing*

Naskapi come to the study area to fish Trout, Lake Trout and Landlocked Salmon in the Lake Curlington, Lake Rosemary and the Papateu Shipu areas. In winter, ice fishing for Brook Trout is practiced. Outside the study area, the Goodwood, Lake Attikamagen and Swampy Bay areas are also used for fishing.

*Plant Harvesting*

Blueberries, bog bilberries and raspberries are gathered by the Naskapi outside the study area, at the edge of Kauteitnat, mainly in the summer. Black crowberries and cloudberries are harvested in bogs. Alpine cranberries are the main harvest in fall, on Kauteitnat Mountain. Many now refrain from harvesting in the study area or part of it, because of the dust generated by mining operations.

*Irony Mountain or Kauteitnat*

For the Naskapi, Kauteitnat is a site for caribou hunting, and is unique for its use, and for the concentration of species that feed, rest or breed there. It is a landmark that played an important role

in caribou hunting, as it is an accessible observation point from which to see the caribou coming and a place that helped harvesters orient themselves on the land from afar. However, the mountain does not have the same symbolic or sacred significance for the Naskapi as it has for Innu.

General observations on land-use in the vicinity of the Howse Project

Subsistence and traditional remain important for the Innu (NIMLJ and ITUM), Naskapi and non-Aboriginal population living in Schefferville area. The land-use study conducted for the purpose of the Howse Project (Volume 2 Supporting Study C) concluded that land-users mostly circulate through the Howse Project area to travel to other harvesting zones, towards the Greenbush/Goodwood areas, or towards Rosemary Lake. The hunting and trapping activities in the area are mostly opportunistic, in the sense that users will harvest resources that they see on the road, rather than purposely harvesting on the Howse Project proposed site. The exception if Rosemary Lake area (Figure 4-1). Fishing, however, occurs on the Project area mostly on day trips. Several users indicated that they refrain from harvesting berries in this zone because of the dust generated by mining activities and traffic.

The study also highlighted the importance and cultural significance of Kauteitnat for the local Aboriginal population and ITUM trapline holders, and confirmed that the presence of caribou in the area has been rare for at least the five past years.

The following observations were made:

- Subsistence fishing: According to the informants who took part in the Howse Project land-use study (Volume 2 Supporting Study D), fishing activities still occur in the study area, even close to the Howse Project proposed site, in Pinette Lake and Triangle Lake in particular. The WMP that will be put in place will avoid effects on the fish and fish habitat in Pinette Lake and minimize those effects in Triangle Lake.
- Subsistence trapping: Trapping, as an activity, requires time, efforts and funds. Very few land-users trap on a permanent basis. Trapping does occur, however, on an ad hoc basis, like while fishing, for example. Few trapping areas were identified during the land-use study in the vicinity of the Howse Project. Given the low occurrence of trapping activities generally, and specifically in the study area, effects on trapping per se will be limited.
- Subsistence gathering of berries and medicinal plants: Given the dust generated by both the road and the mining activities in the vicinity of the Howse Project proposed site, land-users have indicated that they refrain from harvesting berries in the study area (see Figure 4-1).
- Subsistence hunting: Some species, such as ptarmigan, waterfowl, and grouse, are harvested in the area. However, many harvesters now prefer to go elsewhere or farther towards the Rosemary Lake / Goodwood areas to avoid the mining activities.

In the context of the HHRA, a country food survey was undertaken in the Howse Project land-use area (Figure 4-1). Fourteen households that potentially collect country food in this area were met to obtain information on their harvesting habits in that specific area. The respondents were Innu families as the Naskapis have indicated not using this area for their harvesting activities. Nine families out of fourteen had used the study area in the past year, and the survey clearly demonstrated that the location that was most used by Innu families, within the study area, was the surrounding of Rosemary Lake. The survey also confirmed that daily trips were the most popular, as opposed to staying at the camps: longer stays are occasional and occur mostly in the fall. The area is not as used in the winter time due to a more difficult access by snowmobile. Generally, hunting activities are limited in the winter time in this particular area, and the most hunted specie is ptarmigan. Results confirm that country food harvested in the study area does not represent a significant source of food intake when considering the general diet of the respondents, as demonstrated in Table 7-105 below.

**Table 7-105 Average consumption of country food from the land-use study area among surveyed households in the past 12 months**

| COUNTRY FOOD | MEALS / MONTH |
|---|---|
| Small mammals | 0.3 |
| Waterfowl | 1.8 |
| Fish | 1.7 |
| Berries | 1.7 cups |

Source: Country Food Survey (Volume 2 Supporting Study D)

**Existing Literature**

The component description is based on literature review of previous studies carried out in the context of the DSO Project (Clément 2009a,b; Weiler 2009a,b) and information provided by the land users for the purpose of the land-use assessment (Volume 2 Supporting Study C) and country food survey (Volume 2 Supporting Study D) carried out specifically for the Howse Project.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component.

#### 7.5.2.1.2 Effects Assessment

**VC Assessment**

**SUBSISTENCE AND TRADITIONAL CARIBOU HUNTING**

The state of the herd is a constant concern for the Innu and Naskapi, and has deep effects on the cultural value attributed to the caribou, and on knowledge transmission, as indicated above. The main concerns raised during the public consultations (Chapter 4) were:

- The main concern is that the caribou will not come back to the area because of mining activities.
- People are well aware of the decrease in caribou population, which they partly attribute to climate change, mining activities, and other natural causes.
- People would like to be sure that mining activities will stop if caribou is spotted in the area.

**Interaction of the Project with Caribou Subsistence and Traditional Caribou Hunting and Potential Effects**

Site Construction Phase

All project activities have an interaction with caribou during the site Construction phase.

*Potential interaction*

- construction/upgrading of the Howse haul road and bypass road;
- pit development;
- transportation and traffic.

These activities will cover a limited area and will be carried out over short periods of time. As indicated in Section 7.4.3, the site Construction phase activities will cause disturbances that may cause caribou avoidance of the area. However, no caribou sightings were reported in the area during the last five years.

➔ The potential effects associated with the Project activities during the site preparation and construction phase is the prolonged absence of caribou in the area caused by anthropogenic disturbances.

**The nature of the effect is indirect and the effect is adverse.**

Operation Phase

*No potential interaction*

- solid waste disposal;
- hazardous waste management;
- explosives waste management; and
- treatment of sanitary wastewater.

No additional loss of habitat is expected, aside from the mine pit itself. However, caribou feeding habitats are common locally and regionally and so the Howse Project is not expected to limit caribou occupancy of the area. Increased traffic related to the vehicles for the disposal of additional wastes generated by the Howse Project is considered under the "Transportation of ore and traffic" activity.

*Potential interaction*

- removal and storage of remaining overburden and topsoil;
- blasting and ore extraction;
- mineral processing;
- dewatering;
- operation of waste rock dumps;
- transportation of ore and traffic; and
- ongoing site restoration.

More specifically, noise and vibration disturbance will be generated by:

- diesel generators used continually for pit dewatering and mineral processing;
- blasting; and
- transportation of ore and traffic.

The IN of Québec published a *Note to the Nation* on November 5, 2014, asking its members to reduce their hunting activities as much as possible. The note indicated that caribou hunting should be restricted to community hunts and for the purpose of traditional knowledge transmission. The *Note* also recommends that Innu members not practice hunting activities on Cree or Inuit lands until a protocol between Nations has been signed (Nation Innue, November 5, 2014). However, some do continue to hunt caribou, and go farther inland. The cost of such subsistence activities may be significant for these families.

Several lines of thought are to be considered in the assessment of the effect on this component:

- Subsistence and traditional caribou hunting is of high cultural value for both the Innu and the Naskapi, as there is rich knowledge associated with caribou hunting. In these terms, the absence of caribou affects the Innu and Naskapi cultures and their transmission.
- Informants have stated that the caribou does not come into the area of the mining projects anymore (north west of Schefferville), or near the Howse Project proposed site, and that they have not harvested caribou in the area for the past five years;
- The Nation Innue du Québec and NNK are active members of the Ungava Peninsula Caribou Aboriginal Round Table (UPCART), which includes the Nunavik Inuit, the Nunatsiavut Inuit, the NCC, the Grand Council of the Crees, and IN.

- According to specialists, it would take several decades for the George River herd to recover to a healthy number of animals: natural decline has occurred in the past, and the species has always recovered, but it took time (Fortin 2014, personal communication). This time, researchers are wondering how the herd could recover given the many anthropogenic disturbances and climate change effects: there is no unanimity among the scientific community on the question. In all cases, it is very unlikely that the population would recover to 2001 levels – up to 385,000 animals - in the time span of the Project (12-13 years). Should the caribou return, it may be located east of Schefferville, and there would be other locations to find and harvest the caribou.
- There are costs for harvesters who wish to go farther inland, as this requires expenses for helicopters or planes, for example.

These points suggest that, despite the high cultural value of subsistence and traditional caribou hunting for the Innu and Naskapi, subsistence caribou hunting is not likely to be an activity that will be pursued intensively by the Innu or the Naskapi during the life time of the Howse Project in the study area, even in the absence of the Howse Project. Given that there is hardly any caribou in the Howse Project area currently, and given the surrounding mining exploration and exploitation activities, the Project in itself will probably not exacerbate the situation, at least from a subsistence point of view.

➔ The potential effects associated with the project activities during the Operation phase is the prolonged absence of caribou in the area caused by anthropogenic disturbances.

**The nature of the effect is indirect and the effect is adverse.**

Decommissioning and Reclamation Phase

*No potential interaction*

All project activities have an interaction with caribou during the Decommissioning and Reclamation phase.

*Potential interaction*

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic; and
- final site-restoration.

The demobilization of the Howse facilities may result in fewer disturbances. The Howse haul road will not be decommissioned, but the waste rock dumps will be revegetated. The main road leading to the Howse Project site will continue to be used for other projects. Once the Project is over, restoration should allow the recovery of some habitat loss.

➔ The potential effects associated with the Project activities during the Decommissioning and Reclamation phase is the prolonged absence of caribou in the area caused by anthropogenic disturbances.

**The nature of the effect is indirect and the effect is adverse.**

## SUBSISTENCE AND TRADITIONAL ACTIVITIES (HUNTING, FISHING, TRAPPING AND BERRY/PLANT HARVESTING)

The main concerns raised during the public consultations (Chapter 4) were:

- local people are conscious that they will need to go elsewhere, which means increased cost for subsistence. Concerns that resources will be affected by dust and that wildlife will move away. Dust is considered as an important issue and its effects on air quality, water quality and health is a concern;
- concerns regarding access to land for subsistence activities;

- effects on fish, animals, and waterfowl are of concern because these resources are used for subsistence; and
- sightings of wildlife (wolverine, caribou or lynx, etc.) should be reported to the Nation and the government.

**Interaction of the Project with Subsistence and Traditional Activities (hunting, fishing, trapping and berry/medicinal plant harvesting) and Potential Effects**

Site Construction Phase

*Potential interaction*

- construction/upgrading of the Howse haul road and bypass road;
- pit development; and
- transportation and traffic.

The activities associated with the Construction phase will cause disturbances (noise, loss of habitat, pollution, light emissions, vibrations) that may disturb wildlife resources. Fish and fish habitat will probably be affected during the Construction phase but fish will remain fit for consumption. Plants and berries may be affected by dust, but will remain fit for consumption if given a thorough wash. The perception of the environmental disturbances by the local population may affect their confidence in the quality of the resources harvested in the vicinity of the Project site. Hence, as it is already the case for a few land-users, the population will likely refrain from harvesting resources near mining sites.

➔ The potential effects associated with the Project activities during the site preparation and construction phase is **a decrease in accessible subsistence and traditional activities and increased costs for family subsistence**

**The nature of the effect is indirect and the effect is adverse.**

Operation Phase

*No potential interaction*

- solid waste disposal;
- hazardous waste management;
- explosives waste management; and
- treatment of sanitary wastewater.

Those activities will take place at existing DSO facilities that will be in operation in 2015. Increased traffic due to the additional wastes generated from the Howse Project is considered under the "Transportation of ore and traffic" activity.

*Potential interaction*

- removal and storage of remaining overburden and topsoil;
- blasting and ore extraction;
- mineral processing;
- dewatering;
- operation of waste rock dumps;
- transportation of ore and traffic; and
- ongoing site restoration.

It was estimated that a 215 ha of vegetated area will be destroyed or severely disturbed during the Howse Project, and operations will also affect lakes and streams (Goodream Creek and Burnetta Creek

in particular) through the mine effluent. During the operation phase, the fish and fish habitat of the Goodream Creek will be affected, but the fish will stay fit for consumption. In addition, the presence of wildlife will be affected by noise, vibration, light, and dust.

➔ The potential effects associated with the Project activities during the operation phase is **a decrease in accessible subsistence and traditional activities and increased costs for family subsistence**

**The nature of the effect is indirect and the effect is adverse.**

The opportunistic harvesting that may occur in the Howse Project proposed area will likely decrease because of avoidance of disturbances, perceived contamination of the vicinity of the Project and safety measures taken around the mine site. The presence of the Timmins-Kivivik bypass road and eventual additional bypass road (Section 2.5.3) however, will allow users to easily reach their harvesting grounds, though this may be more time consuming and costly.

This means that families may incur greater costs to fulfill their subsistence needs, as going farther on the land implies a certain number of expenses (fuel, temporary camps). In addition, there is a risk that impediments to accessing harvest resources affects the health of some people in the LSA: families who have limited means may prefer to buy less nutritious foods at the store rather than finding the necessary funds to go farther on the land to find suitable resources. However, land-users in Schefferville also have the possibility of going elsewhere in the vicinity of the community, and they already take advantage of this possibility. There might be constraints related to family hunting territories and to increasing number of land-users in a given area, which could put additional pressure on resources.

It is also important to keep in mind that ATK is site-specific. Hence, there is a possibility that knowledge related to the lands located in the vicinity of the Howse Project would be lost.

Decommissioning and Reclamation Phase

All project activities have an interaction with subsistence and traditional activities during the decommissioning and reclamation phase.

*Potential interaction*

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic;
- final site restoration.

The demobilization of the Howse facilities may result in less disturbances caused by mining activities. The Howse haul road will not be decommissioned, but the waste rock dumps will be revegetated. Site restoration should allow the recovery of some habitat loss, but it may take time for animals to come back due to the overall Project disturbance. Some wildlife species may come back to the area faster than others.

➔ The potential effects associated with the project activities during the decommissioning and reclamation phase is an **increase in accessibility of subsistence and traditional activities**

**The nature of the effect is indirect and the effect is adverse.**

Once the Decommissioning and Reclamation phase begins, land-users will continue to refrain from harvesting resources in the Project area due to fear of contamination, as well as due to other mining activities in the area (see Section 8.2). The Project area will continue to be negatively perceived by the locals for at least a few years after the Project ends.

**PRESERVATION OF AND ACCESS TO KAUTEITNAT**

Concerns raised during the public consultations (Chapter 4) were:

- Kauteitnat is a sacred place. There is concern about the proximity of the pit to this site (too close);
- Kauteitnat Mountain is an observation point. Caribou could be spotted from the top. Elders are very attached to Kauteitnat;
- There is a fear that the final objective is to eventually mine the Kauteitnat Mountain;
- Concerns that blasting activities may affect Kauteitnat;
- Kauteitnat has a lot of history, particularly geological history; and
- The mountain is considered as a nice area that should become a park but protection has never been discussed.

**Interaction of the Project with the Preservation of and Access to Kauteitnat and Potential Effects**

Site Preparation and Construction Phase

*Potential interaction*

- construction/upgrading of the Howse haul road and bypass road;
- pit development; and
- transportation and traffic.

Site Construction phase activities will cause changes to the access road to Kauteitnat, but should not affect the mountain itself given the distance to the mine pit (500 m from the foot of the mountain). The presence of such activities will certainly alter the landscape around Kauteitnat.

➔ The potential effects associated with the Project activities during the site preparation and construction phase **will be the destruction of the access road to Kauteitnat, and the alteration of the landscape around Kauteitnat.**

➔ In turn, these effects will also affect the **cultural symbol that is Kauteitnat, especially for the Innu**.

**The nature of the effect is indirect and the effect is adverse.**

Operation Phase

*No potential interaction*

- solid waste disposal;
- hazardous waste management;
- explosives waste management;
- treatment of sanitary wastewater;
- mineral processing;
- dewatering; and
- operation of waste rock dumps.

*Potential interaction*

- removal and storage of remaining overburden and topsoil;
- blasting and ore extraction;
- transportation of ore and traffic; and
- ongoing site restoration.

The landscape surrounding Kauteitnat will permanently change with the mining of the open pit, located less than 1 km from the foot of the mountain. However, Kauteitnat as a landmark will remain the same, as the mountain itself will not be affected by the Project (Figure 4-1), but the cultural symbol that is Kauteitnat will be affected. There was no mention during the consultations of spiritual activities or rituals taking place on Kauteitnat. Camping and harvesting activities take place around Kauteitnat, especially towards Rosemary Lake. Few activities take place *on* Kauteitnat, except perhaps for occasional berry or plant harvesting, or occasional hiking.

The potential effects associated with the Project activities during the operation phase for access to Kauteitnat will be the destruction of the access road to Kauteitnat, and the alteration of the landscape around Kauteitnat.

In turn, these effects will also affect the cultural symbol that is Kauteitnat.

**The nature of the effect is indirect and the effect is adverse.**

Decommissioning and Reclamation Phase

All Project activities have an interaction with Kauteitnat during the decommissioning and reclamation phase.

*Potential interaction*

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic;
- final site restoration.

The demobilization of the Howse facilities may result in less disturbances caused by mining activities. The road leading to Kauteitnat will not be rehabilitated. Although disturbances from mining activities generated by the Howse Project should cease once the Project is decommissioned, the traces left in the landscape will be permanent. Site restoration, however, should help improve the landscape and regain a natural visual aspect.

➔ The potential effects associated with the Project activities during the decommissioning and reclamation phase for access to Kauteitnat will be the destruction of the access road to Kauteitnat, and the alteration of the landscape around Kauteitnat.

➔ In turn, these effects will also affect the cultural symbol that is Kauteitnat, especially for the Innu.

**The nature of the effect is indirect and the effect is adverse.**

#### 7.5.2.1.3 Mitigation Measure

**SUBSISTENCE AND TRADITIONAL CARIBOU HUNTING**

The mitigation measures that will be applied to limit negative effects on caribou are listed and discussed in Section 7.4.3.3. In terms of subsistence and traditional caribou hunting, some measures are particularly relevant and are worth mentioning here.

Standard Mitigation Measures

- EPP includes a Noise Control Plan to prevent excessive noise emissions from site operations and construction activities. This plan identifies measures to control the potential effects of noise released by a variety of sources and activities. For example, heavy equipment will be equipped with properly operating noise abatement systems and all materials handling will be carried out in such a way as to avoid unnecessary generation of noise.

Specific Mitigation Measures

- HML will continue to contribute to a fund as specified in certain IBAs[18] for traditional activities. The Aboriginal leadership determines how the funds are allocated and used. First Nation leadership determines how the funds are allocated and used. This fund contributes to alleviating the financial burden for families who count on subsistence harvesting for its economic and nutritive value, in an area where store-bought food is expensive, such as for a fuel allocation for all members.
- HML/TSMC will pursue its financial participation in Caribou Ungava to advance research on caribou and on the effects of mining activities on the George River herd decline, and on other factors that may play a role in this decline or in the change of migratory paths, for example. Within the framework of the program, researchers will involve the concerned Aboriginal communities in its research initiatives by considering their views, their traditional indigenous knowledge in the studies and by involving them in the research activities held on their traditional territories;
- Sightings of caribou will be reported to the HSE Committee. Blasting activities are announced on the radio two days ahead of time. Measures to be taken when there are caribou sightings are explained in Section 7.4.3.3.
- The Proponent recognizes that the GRCH can, one day, return to its original grounds and includes, in its mitigation measures, a commitment to be aware of any caribou seen within a 100 km radius of Howse activities, conduct surveys if collared caribou are found within 20 km of Howse and cease all activities if caribou are known to be within 5 km of the active pit or the processing complex.

**SUBSISTENCE AND TRADITIONAL ACTIVITIES (HUNTING, FISHING, TRAPPING AND BERRY/PLANT HARVESTING)**

The mitigation measures to be applied to limit negative effects on wildlife and fish resources are discussed in Section 7.4.9.3. In terms of subsistence and traditional hunting, mitigation measures focus on ensuring access to resources, taking into account the costs incurred by families.

Standard Mitigation Measures

- The Timmins-Kivivik bypass road was completed and will allow harvesters to go farther on the land to access resources without experiencing security issues (the road was built in collaboration with Aboriginal groups);

Specific Mitigation Measures

- The mandate of the HSE Committee, which acts as an environmental monitoring committee and collaborates with TSMC to oversee and assess the effectiveness of the relevant mitigation measures (dust control, vegetation, for example), will include the Howse Project once the construction begins (already planned by HML). For instance, in collaboration with the HSE Committee, and in some cases with local authorities, mining activities will be adapted if needed to minimize the effects on traditional activities.
- Continue to contribute to a compensation fund as specified in certain IBAs to assist with costs for harvesters to access other areas for subsistence and traditional activities, in accordance with local land use and inter-family agreements. First Nation leadership determines how the funds are allocated. This fund contributes to alleviating the financial burden for families who count on subsistence harvesting for its economic and nutritive value, in an area where store-bought food is expensive (Section 7.5.3.5) and to maintaining other traditional activities.
- Sightings of wildlife (Wolverine, Caribou or Lynx, etc.) will be reported to the HSE Committee. Furthermore, monthly TSMC Environmental reports are made available to the HSE Committee members on the shared drive.

[18] Local leadership have determined in each of their respective IBAs their needs in regard to land-use. As such, said compensation funds vary according to the IBA. However, in all cases, HML provides the funds but each local leadership is responsible for funds management and allocation.

- Even during the decommissioning and reclamation phase, HML will maintain ongoing communication on activities with the local population through radio programs and bulletins, and via the HSE Committee, including environmental updates and reports.
- With respect to vegetation stripping, any usable wood will be made accessible to the local communities in a secure location near the site.
- Maximize the presence of Aboriginal personnel for all security shifts to facilitate communication in Innu with local lands users. Work with the local communities to hold a Security course for its members, so that there are additional Innu personnel at the security post.

**PRESERVATION OF AND ACCESS TO KAUTEITNAT**

Standard Measures

Except for the measures that were already taken within the Project design (locating the open pit farther from the foot of Kauteitnat, limiting the height of waste rock piles, and partial in-pit dump, for example), no other mitigation measures can be taken to avoid the changes to the landscape around Kauteitnat, or to preserve the road to Kauteitnat. However, the Timmins-Kivivik bypass road that was recently built should partly solve the issue of maintaining access to Kauteitnat, as an access will be provided on the western side of the mountain (Section 2.5.3). The 500-m buffer zone between the mine site and the foot of Kauteitnat will be strictly respected.

TSMC has already committed through its IBA with communities to not undertake any development activities, including exploration work, on Kauteitnat. As per discussions between TSMC and NML, it is envisaged that the mining claims covering Irony Mountain will be transferred to the local communities by the GNL and designated as a no-mining area.

Specific Measures

Progressive restoration should give the decommissioned mine pit a natural look once it is over, as there will be water at the bottom of the pit, and its surroundings will be revegetated (Chapter 10).

Some ITUM members plan to create a protected area that would include Kauteitnat and its surroundings. HML, through its Canadian JV Partner NML, considers to continue to play a role in facilitating or supporting this process, which would have to be discussed with NL authorities.

#### 7.5.2.1.4 Residual Effects Significance Assessment

**SUBSISTENCE AND TRADITIONAL CARIBOU HUNTING**

Table 7-106 presents the criteria applicable for subsistence and traditional caribou hunting for the assessment of the residual effect significance.

The mitigation measures presented in Section 7.4.3.3 will reduce the effects on caribou in general, but will likely not change the significance of the residual effects on subsistence and traditional caribou hunting, as the caribou will nonetheless continue to avoid the area for reasons that are beyond the control of the proponent.

**Table 7-106 Assessment Criteria Applicable for Subsistence and Traditional Caribou Hunting**

| TIMING | | |
|---|---|---|
| **Inconsequential** | **Moderate** | **Considerable** |
| Will not have an effect | Will have a moderate effect at times | Will have an effect at all times during all phases of the Project. |
| **GEOGRAPHIC EXTENT** | | |
| **Site specific** | **Local** | **Regional** |

| | | |
|---|---|---|
| Effects are limited to the footprint of the Project. | Effects extend beyond the footprint, but do not extend outside the LSA. | The effect of the Howse Project will affect a large geographic area and a significant portion of the VC within the RSA. |
| **DURATION** | | |
| **Short** | **Medium** | **Long** |
| During all or part of preparation/construction phase, the start-up period, a single season | Preparation/construction phase and first 24 months of operation phase. | Throughout preparation/construction/operation phases and beyond. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Full restoration of pre-development situation likely. | Partial restoration of pre-development situation likely. | Little/no restoration of pre-development situation likely. |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Affects <5% of the population in the LSA or 5% of the activity in question and few or no people in the RSA. | Affects 5%-15% of the population in the LSA or of the activity in question and a few people in the RSA. | Affects >15% of the population in the LSA or of the activity in question and more than a few people in the RSA. |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| ~once per year | Occasional/intermittent | Year-round (continual) |

Timing

Subsistence activities and traditional hunting of caribou in the LSA has been declining for the past 10 years, to a point where activities are restricted to a minimum due to the caribou population decline. In this context, the caribou is not available to be hunted in the LSA, it is unlikely that it will be disturbed by the project activities at any time during project activities. Timing is thus considered as inconsequential. (Value of 1).

Geographic Extent

The geographic extent is local since potential disturbance will be restricted to the LSA. (Value of 2).

Duration

The duration of the effect will be short for the site preparation and construction phase (Value of 1), long for the operation phase (Value of 3) and short for decommissioning and reclamation phase (Value of 1).

Reversibility

The effect (negative) will be fully reversible considering that the caribou is expected to return to their pre-Howse population status and distribution and that it is likely that similar subsistence and traditional caribou hunting conditions will be encountered after the project. (Value of 1).

Magnitude

The magnitude of the residual effect will be low for all phases of the project. (Value of 1).

Frequency

The frequency of the effect is considered intermittent for all phases of the project. The land users access the LSA seasonally (during the caribou hunting season if any presence of the animal). (Value of 2)

*7.5.2.1.4.1 Significance*

**Based on the assessment, the residual effect of the Howse Project on subsistence and traditional caribou hunting will be non-significant for all three phases of the Project** (values of 8, 10 and 8 for the site preparation and construction, operation and decommissioning and reclamation phase, respectively).

Likelihood

The likelihood of Howse having an effect on caribou hunting is low, considering that the caribou is already absent from the study area at the moment.

**SUBSISTENCE AND TRADITIONAL ACTIVITIES (HUNTING, FISHING, TRAPPING AND BERRY/PLANT HARVESTING)**

Table 7-107 presents the criteria applicable for subsistence and traditional activities for the assessment of the residual effect significance.

**Table 7-107 Assessment Criteria Applicable for Subsistence and Traditional Activities (hunting, fishing, trapping and berry/plant harvesting)**

| TIMING | | |
|---|---|---|
| **Inconsequential** | **Moderate** | **Considerable** |
| Will not have an effect | Will have a moderate effect at times | Will have an effect at all times during all phases of the Project. |
| **SPATIAL EXTENT** | | |
| **Site specific** | **Local** | **Regional** |
| Effects are limited to the footprint of the Project. | Effects extend beyond the footprint, but do not extend outside the LSA. | The effect of the Howse Project will affect a large geographic area and a significant portion of the VC within the RSA. |
| **DURATION** | | |
| **Short** | **Medium** | **Long** |
| During all or part of preparation/construction phase, the start-up period, a single season | Preparation/construction phase and first 24 months of operation phase. | Throughout the site preparation/construction/operation phases and beyond. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Full restoration of pre-development situation likely. | Partial restoration of pre-development situation likely. | Little/no restoration of pre-development situation likely. |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Affects <5% of the population in the LSA or 5% of the activity in question and few or no people in the RSA. | Affects 5%-15% of the population in the LSA or of the activity in question and a few people in the RSA. | Affects >15% of the population in the LSA or of the activity in question and more than a few people in the RSA. |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| ~once per year | Occasional/intermittent | Year-round (continual) |

Timing

The extent of timing as a factor will be dependent on the resource being sought. For example, the timing of blasting activities during Goose Hunting Season in May will be a considerable factor, because harvesters frequent areas at the NW edge of Irony Mountain during this time, while for fishing, harvesters tend to frequent areas farther from the LSA. So timing is considered moderate (Value of 2).

Spatial Extent

The spatial extent is local since potential disturbance will be restricted to the LSA. (Value of 2).

Duration

The duration of the effect will be short for site preparation and construction phase (Value of 1), long for the operation phase (Value of 3) and short for the decommissioning and reclamation phase (Value of 1).

Reversibility

The effect will be fully reversible considering that a partial restoration of pre-development situation is likely and that disturbances will cease once the Project is over. (Value of 1).

Magnitude

The magnitude of the residual effect will be low for all phases of the project, as access to the land remains available and as most activities are carried out in an area of the LSA where the overall magnitude of the effects will be low. (Value of 1)

Frequency

The land users usually use the LSA intermittently and seasonally (for example during hunting seasons or on the week-end for recreational purpose) and for a short periods of time (round trips in a single day). The frequency of the effect has nevertheless been considered continual as activities could be carried on a continuous basis in the vicinity of the Project, and as various resources are present in the vicinity of the Project throughout the year. (Value of 3).

Effect Significance

Based on the assessment, the residual effect significance will be **low** for site preparation and construction phase and the decommissioning and reclamation phase (Value of 10). For the operation phase, the effect will be **moderate** (Value of 12).

Likelihood

The likelihood of Howse having an effect on traditional activities is low, considering that a few families use the Howse Project vicinity, with the exception of Rosemary Lake area, where effects will be negligible. Land-users who pass through the Howse Project area to reach other locations will be able to use the bypass road.

**PRESERVATION OF AND ACCESS TO KAUTEITNAT**

Mitigation measures, for the most part, have been embedded within the Project design, and the final restoration of the site will also help in visually giving a natural look to the decommissioned site (magnitude will decrease from moderate to low). No other measures can alleviate alterations to the landscape in this particular case. In terms of access to Kauteitnat, the Timmins-Kivivik bypass road facilitates access and another option is being assessed (Section 2.5.3).

Table 7-108 presents the criteria applicable for subsistence and traditional caribou hunting for the assessment of the residual effect significance.

**Table 7-108 Assessment Criteria Applicable for Preservation of and Access to Kauteitnat**

| TIMING | | |
|---|---|---|
| **Inconsequential** | **Moderate** | **Considerable** |
| Will not have an effect | Will have a moderate effect at times | Will have an effect at all times during all phases of the Project. |
| **SPATIAL EXTENT** | | |
| **Site specific** | **Local** | **Regional** |
| Effects are limited to the footprint of the project. | Effects extend beyond the footprint, but do not extend outside the LSA. | The effect of the Howse Project will affect a large geographic area and a significant portion of the VC within the RSA. |
| **DURATION** | | |
| **Short** | **Medium** | **Long** |
| During all or part of preparation/construction phase, the start-up period, a single season | Preparation/construction phase and first 24 months of operation phase. | Throughout preparation/construction/operation phases and beyond. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Full restoration of pre-development situation likely. | Partial restoration of pre-development situation likely. | Little/no restoration of pre-development situation likely. |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Affects <5% of the population in the LSA or 5% of the activity in question and few or no people in the RSA. | Affects 5%-15% of the population in the LSA or of the activity in question and a few people in the RSA. | Affects >15% of the population in the LSA or of the activity in question and more than a few people in the RSA. |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| ~once per year | Occasional/intermittent | Year-round (continual) |

Timing

Kauteitnat will not be directly affected by the Project but the landscape in its vicinity (N-E of Kauteitnat) will be partly disturbed by the Project in the long-term. Timing will not be a factor (Value of 1).

Spatial Extent

The spatial extent will be site-specific for the three phases of the project because the effect will occur within or near the Project footprint. (Value of 1).

Duration

The duration is short for the site preparation and construction (Value of 1). Starting from the beginning of the operational phase, the duration is considered long and will remain as such, given that the alterations to landscape will exceed the length of the project, beyond the decommissioning and reclamation phase (Value of 3).

Reversibility

The effect will be partially reversible as Kauteitnat itself will be affected but not compromised. The main effect on the landscape will gradually appear during the operation of the project. Although the site will be restored, it is likely that long-term effects will remain visible in the landscape near and from

Kauteitnat. In terms of access to Kauteitnat, the Timmins-Kivivik bypass road facilitates access and another option is being assessed (Section 2.5.3) (Value of 2).

Magnitude

The residual magnitude will remain moderate, given that a) the integrity of Kauteitnat is affected but not compromised and b) damage to the landscape and possibility to the perception of the culturally valued site will persist beyond the end of the decommissioning and reclamation period. (Value of 2).

Frequency

The frequency is continual because the effect will occur year-round. (Value of 3).

Effect Significance

The residual effect significance will be **low** for the site preparation and construction phase (Value of 10) and **moderate** for both the operation and decommissioning phases (Value of 12) because of the importance of Kauteitnat for the Aboriginal population and given that the alterations to landscape will exceed the length of the decommissioning and reclamation phase.

Likelihood

The likelihood of Howse having an effect on the preservation of and access to Kauteitnat will be moderate given that the mountain itself will be preserved, but that effects on landscape will nonetheless be visible. Access to Kauteitnat will be maintained through the by-pass road and will also continue to be accessible via the main mining road on which a safety escort service will be provided.

Following this effect assessment, three components were considered in the cumulative effect assessment:

- Socioeconomic conditions, to reflect the importance of employment and contracting opportunities, especially for the local Aboriginal groups;
- Subsistence and Traditional Activities: taking into consideration the significance of land-use activities for the local Aboriginal populations, as well as access to land, and of Kauteitnat;
- Human health: given the concerns expressed by the local population with regards to the potential effects of mining projects on their health and on wildlife resources.

#### 7.5.2.2 Human Health

A human health risk assessment for the effects of the Howse Project on the local land users is presented in this section, in addition to Volume 2 Supporting Study D in compliance with federal guidelines. The air quality data discussed in this chapter derives from the data presented in the federal report (Volume 2 Suppporting Study E).

Under section 5 of CEAA (2012), the changes to the environment which are expected to effect changes to health conditions are to be assessed as VCs. In addition, through Aboriginal Consultation, physical health of local residents was identified as a VC within the context of potential changes to environmental chemistry that might arise from the Project. Specifically, perceived effects of dust generated by mining projects on resource quality, the environment, and health were concerns raised by local stakeholders of MLJ, NNK and Schefferville. Given the importance of these concerns and the potential effects of environmental disturbances on the health of the local population, human health is considered as a VC.

Although the Howse mine site is located approximately 25 km from the nearest populations of Schefferville (24.1 km) and MLJ (24.6 km), and Kawawachikamach (24.5 km), the consultation and the land-use study demonstrated that some harvesters travel through this area, and that some camps,

lakes and rivers in the vicinity of the Howse Project are used (Volume 2 Supporting Study D). Accordingly, the health of these harvesters could potentially be affected through breathing air, drinking water or by consuming country food.

#### 7.5.2.2.1 Component Description

**LSA, RSA and Temporal Boundaries**

The potential health effects (risks) of the project were assessed within the vicinity of the Howse Project Property which represents areas with operable exposure pathway and the receptors. The following study areas have been defined for the HHRA and are defined spatially in Figure 7-45, which reflects the LSA/RSA of the air dispersion component of the EA (Section 7.3.2). The nature of air dispersion affords the largest potential footprint of interest and is highly relevant to this VC. The RSA is considered to be the Howells River watershed and the Schefferville region, including:

- in Labrador, Labrador West (Labrador City and Wabush), as well as the IN; and
- in Québec, the Ville de Sept-Îles, and the Innu of Uashat and Mani-Utenam (ITUM), who although located outside of the RSA have trap lines within the Project area and have a presence based on land-use and harvesting activities.

Temporal boundaries for the human health VC were established in the following manner:

- temporal window of 16 years for the combined Construction (1yr) and Operation (15yrs) phases during which project-related air emission would occur and conceivably influence human health during the event of active exposure; and
- temporal window of human lifetime was considered for potential health effects related to cancer.

**Existing Literature**

Supporting literature and input data used for the HHRA were acquired and/or derived from technical support studies of other biophysical disciplines within the present document, and by applying the data within the context and framework of the Health Canada (2010) guidance on Detailed Quantitative Health Risk Assessment (DQHRA). Air quality data were obtained from the Air Quality component of the present document (7.3.2 and 8.3) which modelled future emissions and air dispersion at selected receptors in terms of pollutant concentrations in $\mu g/m^3$, and particulate deposition to ground ($mg/m^2$/year).

To establish background air concentrations, which for this study would represent air concentrations prior to the start of DSO3/DSO4, a review of existing monitoring data and guidance information documents provided by provinces and applicable to the region was conducted (and reported) within the air quality component of the present document. Background (baseline) air concentrations selected for the Howse EIS were also based on the conclusions presented in the air dispersion component. Table 7-109 lists various documents from which information and data were obtained relevant to the LSA and RSA in the development of the HHRA.

**Table 7-109 Supporting Documents Used to Inform HHRA**

| REPORT | DATA PROVIDED |
|---|---|
| Schefferville Iron Ore EIS (Jacques Whitford 2009) | RSA soil and surface water |
| Air Dispersion Modelling Report (Volume 2 Supporting Study E) | LSA Air Quality |
| Hydrology and MODFLOW Modelling Howse Property (GEOFOR 2015) | LSA Groundwater quality |
| Aquatic Survey – Howse Pit Study Area Technical Report (Volume 2 Supporting Study M) | LSA Water quality and Sediment quality |
| Hydrological Campaign DSO3 and DSO4 (Groupe Hémisphères 2011) | LSA Water quality |

| REPORT | DATA PROVIDED |
|---|---|
| Fish and Fish Habitat Investigation for the Direct-Shipping Ore Project (AMEC 2009) | LSA Water quality |
| Groupe Hemisphères Field Report – 2013 Baseline Aquatic Fauna Characterization: Elross Lake Area Iron Ore Mine (ELAIOM) Environmental Effects Monitoring (EEM) | LSA Water quality |
| KAMI Concentrate Storage and Load-out Facility, Québec (Stantec 2012) | RSA water quality |
| Air Quality Monitoring Baseline Study (Stantec 2012) | RSA air quality |
| Howse Property Country Food Survey (Volume 2 Supporting Study D-2) | Socioeconomic |

Ingestion rates of country foods were estimated using literature-derived dietary patterns as well as from a dietary survey conducted for the LSA (Volume 2 Supporting Study D). Literature-derived ingestion patterns indicate that Caribou represents a significant portion of the total ingestion of country foods. It was therefore necessary to quantify the associated dose resulting from caribou ingestion as part of the multimedia risk assessment. A literature review was conducted to establish baseline tissue quality and its contribution to baseline dietary exposure to substances of interest that the aboriginal community may consume. Detailed discussion of this topic is provided in the HHRA technical support document (Volume 2 Supporting Study D).

**Current Study**

Volume 2 Supporting Study D provides additional insights from the literature and includes a Country Food Survey (Volume 2 Supporting Study D-2). In brief, quantitative risk estimation was conducted for scenarios where receptors, operable exposure pathways and substantive changes in environmental quality were considered plausible. A detailed description of the risk exposure scenario is available in the HHRA technical support document. The exposure scenario addressed related to the following key questions:

- HH1: What effect will project releases have on water and subsequently human health?
- HH2: What effect will project releases have on air quality and subsequently human health?
- HH3: What effect will project releases have on soil quality and subsequently human health?
- HH4: What effect will project releases have on food quality and subsequently human health?
- HH5: What will be the collective effect of changes to water, air, soil and food on human health?

A broad screening was used to identify substances of interest (SOI, also known as *potential contaminants of concern* or PCOCs) to be evaluated in the baseline and future scenarios (see HHRA technical support document; Volume 2 Supporting Study D). The screening included a wide array of metals and, at the request of CEAA, organic compounds from air emissions were also added. The screening framework evaluated substances against available federal and provincial guidelines for metals and hydrocarbons, site-specific background concentrations, or additional regulatory sources. In the final analysis the key substances of interest (potential contaminants of concern) were:

- Arsenic
- Barium
- Beryllium
- Iron
- Lead
- Manganese
- Mercury
- Molybdenum
- Selenium

- Chromium

Receptor and Exposure Pathways included aboriginal adult and young children (toddlers) that could be present in the LSA/RSA during prolonged traditional land use excursions. The following exposure pathways were considered relevant:

- Ingestion
  - Contaminated soil that is incidentally ingested (as soil or non-respirable dust) during outdoor activities such as camping, hunting etc. will result in an ingestion exposure.
  - Contaminants in drinking water will be retained by the body and result in an ingestion dose.
  - Contaminated produce/vegetation that is ingested will result in an ingestion dose.
  - Ingestion of contaminated fish or game will result in an ingestion dose.
- Inhalation
  - Airborne contaminants (either as vapour or respirable particulates as PM10) at the receptors location will be inhaled and retained within the body resulting in an inhalation exposure.
  - Frequency of exceedance of PM10 criteria at the off property maximum locations (assuming 1 day per week of blasting) results in PM10 concentrations in exceedance of regulatory guidelines <1% of the time.
- Dermal Absorption
  - Dermal contact with contaminated soil will adhere to skin surfaces and result in a dermal exposure.

**Conceptual Exposure Model (CEM)**: A qualitative CEM provides the context for the quantitative risk assessment. The CEM (Figure 7-45) is a conceptual representation of the multimedia exposure pathways, and illustrates all contaminant sources, release mechanisms, transport pathways, and routes of exposure for the human health assessment at the mine site. The subsequent quantitative risk assessment and numerical risk estimates are based on the basic structure of this CEM.

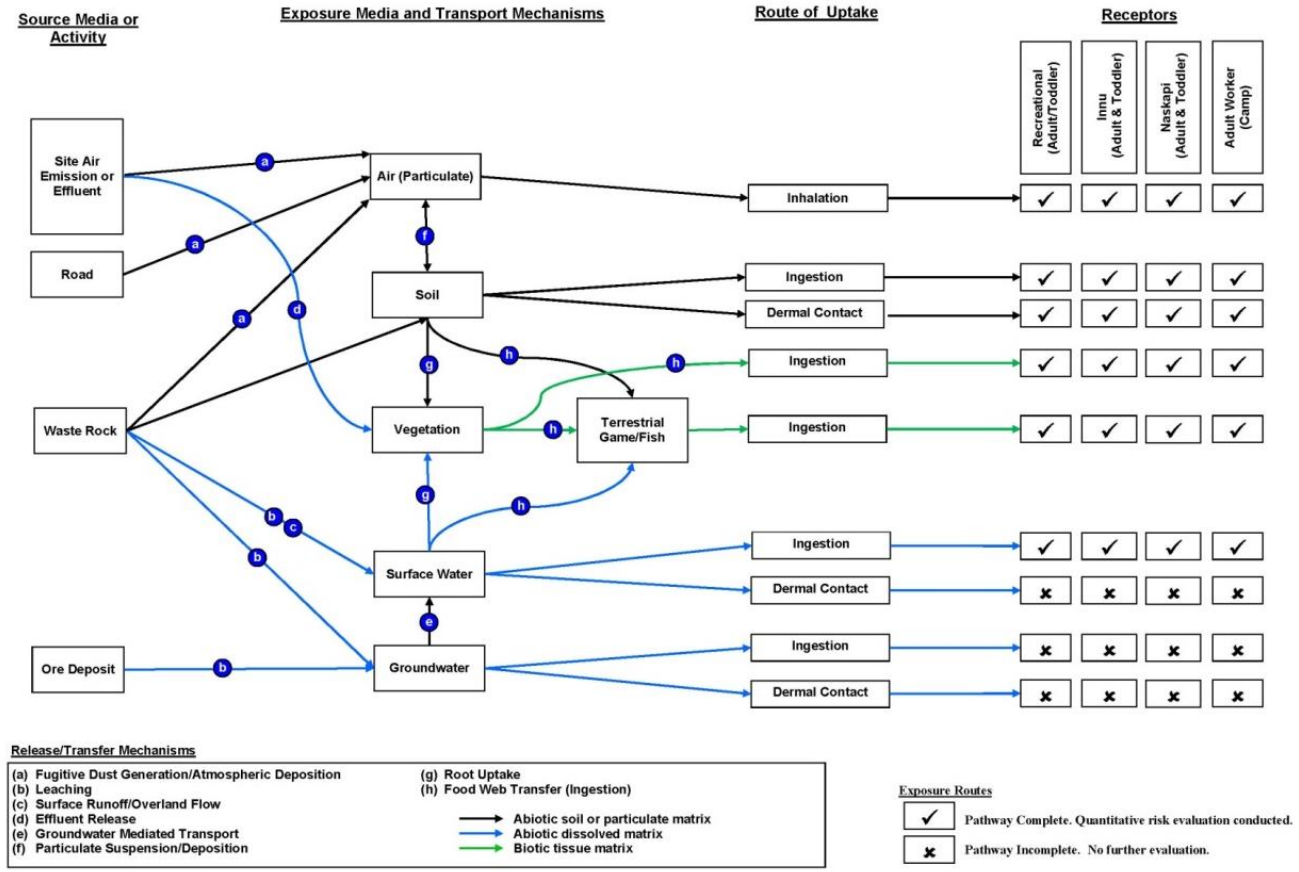



**Figure 7-45 Conceptual Exposure Model for Human Receptors at the Howse Mine Site**

### Aboriginal Traditional Knowledge

ATK was gleaned from Aboriginal consultations to understand locations and timing for traditional activities such as fishing and hunting camps. This information was noted and compared to results of air quality modelling to associate exposure point concentrations during the estimation of potential exposure and health risk.

Similarly, knowledge was gleaned from a Country Food Survey and interviews to better understand the scope and frequency of traditional food types derived from hunting. Typically the final risk assessment assumptions employed for risk estimation were more conservative than the data inferred from the Country Food Survey; this was applied to allow for the possibility of individuals that may consume certain foods such as wild game, berries or medicinal plants at a higher frequency than recorded by the survey. This information is reported in Volume 2 Suppporting Study D.

### Data Gaps

The HHRA component relied centrally on the air quality dispersion modelling, field sampling data (soil, berries, water, and fish tissue) and literature derived data. Key data gaps relate primarily to the air quality modelling and select small mammal baseline tissue quality which had to be predicted in the present assessment.

For air quality, it is anticipated that during normal operation, blasting at the Howse Property will occur approximately once per week during summer and infrequently during winter. Blasting will also occur at the Fleming 7N pit, and since this pit is part of the DSO3 area and may have parallel operations with Howse, blasting events at both pits are included in the air dispersion modelling study. Blasting events are short in duration and infrequent. The air dispersion software input requirements limits the representativeness of these blasting events, which leads to an overestimation of the resulting short-

term impacts on air quality. One way to minimize this inaccuracy would be to obtain more precise factors to depict emissions from explosive detonation during the blasts. Such factors were not available at the time of preparing the air quality study and the HHRA.

The quantitative dose estimates based on the conceptual exposure model presented above were calculated using standard Health Canada exposure models (see HHRA support document) and a set of exposure scenarios and broad assumptions (Table 7-110) that describe the strategy for use of statistical metrics where data were available, and assumptions or derivations where data gaps existed.

**Table 7-110 Overarching exposure assumptions for Baseline, Project and Cumulative impact scenarios**

| PARAMETER | BASELINE SCENARIO | PROJECT SCENARIO | CUMULATIVE SCENARIO |
|---|---|---|---|
| **Abiotic Site Media** | | | |
| Soil | Site specific 95% Upper Confidence Limit of the Mean (UCLM95) soil samples collected within the LSA during 2015. | Calculated as sum of baseline soil concentration and Project Incremental Soil Concentration (ISC) as a result of particulate deposition. | Calculated as sum of baseline soil concentration and Cumulative Incremental Soil Concentration (ISC) as a result of particulate deposition. |
| Surface Water | Site specific maximum measured concentration from Pinette or Triangle Lake. | No change from baseline | No change from baseline |
| Particulate | Calculated assuming baseline $PM_{10}$ concentration of 4 $\mu g/m^3$ and chemical composition of baseline soils. | Calculated as 10.1 ($\mu g/m^3$) using 90th percentile predicted maximum $PM_{10}$ concentrations for the project activities.<br><br>Chemical composition of particulates assumed to be equal to the 95%UCLM of the ore dataset. | Calculated as 31.5 ($\mu g/m^3$) using 90th percentile predicted maximum $PM_{10}$ concentrations for the cumulative activities.<br><br>Chemical composition of particulates assumed to be equal to the 95%UCLM of the rock dataset.<br><br>Note: In addition inhalation risks were assessed following probabilistic risk assessment principals. Details of the probabilistic risk assessment are presented in Section 3.3.4. |
| **Biological Tissues** | | | |
| Berries | The 90th percentile for unwashed partridge berry samples collected from the LSA. Barium, Iron and Manganese were the only elements that exceeded analytical detection limits. Elements not detected in berry samples were modelled from soil concentrations using literature derived transfer factors. | Modeled based on predicted soil chemistry and literature derived soil to berry transfer | Modeled based on predicted soil chemistry and literature derived soil to berry transfer factors |

| PARAMETER | BASELINE SCENARIO | PROJECT SCENARIO | CUMULATIVE SCENARIO |
|---|---|---|---|
| Labrador Tea | The 90th percentile for unwashed Labrador tea samples collected from the LSA. Barium, Iron and Manganese were the only elements that exceeded analytical detection limits. Elements not detected in berry samples were modelled from soil concentrations using literature derived transfer factors, | Modeled based on predicted soil chemistry and literature derived soil to vegetation transfer | Modeled based on predicted soil chemistry and literature derived soil to vegetation transfer factors |
| Fish | Maximum measured concentrations in fish collected from Triangle Lake or Pinette Lake. Beryllium, chromium and molybdenum modelled from surface water using literature derived transfer factors. | No change from baseline | No change from baseline |
| Game Bird | Site specific maximum measured concentrations from game bird (Spruce Grouse) collected from the LSA. | Modeled based on receptor characteristics, predicted chemistry and literature derived transfer factors. | Modeled based on receptor characteristics, predicted chemistry and literature derived transfer factors. |
| Human Health Risk | Literature derived maximum concentrations measured in muscle tissue. | No change from baseline | No change from baseline |
| Hare | Modeled based on receptor characteristics, abiotic chemistry and literature derived transfer factors. | Modeled based on receptor characteristics, predicted chemistry and literature derived transfer factors. | Modeled based on receptor characteristics, predicted chemistry and literature derived transfer factors. |

#### 7.5.2.2.2 Effects Assessment

**Literature review and Current Studies Data Used to Assess the Potential Effect**

When concentrations of some pollutants in various media collectively contribute a total dose that exceeds a toxicological safe dose, a human health *risk* is recognized. Whether this predicted risk translates to a future effect on the VC *human health* is uncertain, however it is prudent to manage the risk to avoid a health effect. To this end, a HHRA considers a multitude of possible health effects which are broadly grouped as either *non-carcinogenic* or *carcinogenic* effects.

For non-carcinogenic substances, a hazard quotient (HQ) is the measurement endpoint and is calculated as the ratio of the estimated daily exposure (dose) to the safe dose for each contaminant. These contaminants are threshold acting stressors, in that no health risks are predicted provided a threshold of safe exposure is not exceeded. The hazard quotient is a numerical metric of how a receptor's daily dose compares to what is toxicologically considered to be the safe dose, over a prolonged (chronic) period.

For substances with a non-threshold dose response (i.e., carcinogens) the risk estimate is a calculation of the Incremental Lifetime Cancer Risk (ILCR). ILCR is the predicted risk of an individual in a population of a given size developing cancer over a lifetime. The ILCR is expressed as the one additional person per "n" people that would develop cancer, where the magnitude of n reflects the risks (i.e., probability) to that population. For example, in Canada the lifetime probability of developing cancer is ~0.4 (40%), or 40 out of 100 people. An increase in the incremental lifetime cancer risk of 1E-5, would result in a probability of 0.40001, a 0.0025% increase relative to background cancer incidence. Due to the estimation nature of the prediction of ILCR, Health Canada recommends that ILCRs only be calculated for adult exposures.

To provide interpretive insight on the risk (effect) levels and conservative assumptions employed to offset various sources of uncertainty normally encountered in health risk assessment, the following categories were used to describe the risk magnitudes for non-carcinogenic compounds:

- Negligible: HQ<1.0 (consistent with Health Canada (2010a,b) guidance for a comprehensive multi-media exposure and has become accepted common practice)
- Low and likely to be negligible: 1.0>HQ≤10 (acknowledges in this case that considerable conservatism is employed by the risk assessor and that over estimation of risk is likely)
- Potentially elevated: HQ>10 (acknowledges in this case that considerable conservatism is employed by the risk assessor and that over estimation of risk is likely)

In cases where an estimated HQ may exceed any of the above categories by a change of <10% from the Baseline case, the Baseline is noted as the risk driver, and the incremental contribution from the Project is considered separately for interpretation of significance.

For carcinogenic compounds, the magnitude of the cancer risk was rated as follows with similar interpretation as note above for hazard quotients:

- Negligible: ILCR ≤ $1x10^{-5}$
- Low and likely to be negligible: $1x10^{-5}$ < ILCR ≤$1x10^{-4}$
- Potentially elevated: ILCR>$1x10^{-4}$

The potential effects of the Project on human health were assessed by comparing predicted contaminant exposure rates to Toxicity Reference Values (TRVs); TRVs were used as benchmarks of safe exposure levels and are prescribed by a variety of national and international agencies for the purpose of characterizing risks associated with exposure to environmental contaminants. Toxicity reference values used in the HHRA are tabulated in Volume 2 Supporting Study D and provide an understanding of the potency and type of health effect for which the TRV provide a health safety margin. Sources for TRVs in order of preference were:

- Health Canada, Toxicological Reference Values and Chemical-Specific Factors, Version 2.0
- US EPA Integrated Risk Information System

The reader should also refer to Table 7-109 "HHRA Supporting Documents Used to Inform HHRA".

**Interaction of the Project with Human Health Risk and Potential Effects**

Site Construction Phase

During the site Construction phase, virtually all project activities will have potential interaction with the biophysical environment including water and air quality.

Potential activities and that may interact with the environment potentially affecting human health include

- upgrading/construction of the Howse haul road and upgrade of the bypass road;
- pit development;
- installation of the ore processing plant (Howse Mini-Plant) in close proximity to the rail loop;
- transportation and traffic; and
- heavy machinery use and light vehicle traffic

➔ The general effect to physical environment associated with the above potential interactions is a potential decrease in (i) water quality of select receiving water bodies and (ii) air quality and associated particulate deposition to soil, which might affect human health.

➔ The effects to surface water quality and consequence effect to human health at the construction phase are considered negligible because settling pond design effluent criteria are intended to meet regulatory discharge standards.

- The WMP (Volume 1 Appendix IV) establishes that settling pond effluent will comply with all relevant and applicable quality standards. Water quality from existing local settling ponds (Timmins operation) and effluent support this position. Although rare events of minor settling pond discharge with elevated TSS have been documented in existing settling ponds (Volume 1 Appendix IV), the magnitude and occurrence are not anticipated to change the quality of the aquatic receiving environment

➔ The effects to air quality and potential to affect human health during the Construction phase were not assessed directly because air quality was modelled only for the operation phase. However, the types of air emissions and associated air contaminants that will occur during the Construction phase will be similar to those during the Operation phase. During the Construction phase, air emissions from diesel powered engines, dust emissions due to vehicle movements and blasting will occur, but rates of air emissions during the construction phase will be less than those of operation phase, which will be continuous and of a higher intensity. One important reason why the nature of the air contaminants remains the same during the three phases is the fact all power used at the site is generated by diesel equipment; the site is not connected to the power grid. Consequently, the air quality impact study was conducted for the Operation phase only, and effects to air quality at the construction phase are inferred to be less than that assessed for the operation phase.

➔ ***The effect of the Construction phase to human health is therefore considered to be negligible.***

Operation Phase

During the Operation phase, various activities will have potential interaction with the biophysical environment which might contribute human health risks.

Activities unlikely to cause interactions with the biophysical environment and human health include the following:

- hazardous waste disposal;
- explosives waste management;
- treatment of sanitary wastewater; and
- treatment of waste rock run-off water in settling ponds.

Potential interactions influencing the environment and potentially affecting human health include:

- removal and storage of remaining overburden and topsoil;
- blasting and ore-extraction;
- mineral processing;
- operation of waste rock dumps;
- dewatering;
- transportation of ore and traffic;
- solid waste disposal; and
- ongoing site restoration.

The effects associated with the above potential interactions is a potential decrease in air quality and a possible negative effect towards human health. For continuity with the conceptual exposure model, the project interaction was associated with the key questions of the HHRA and the exposure pathways within the CEM.

1. Activities potentially affecting Air Quality (considered operable and assessed in the HHRA):
   - emissions from power generators and truck fleet
   - fugitive dust emissions from blasting, crushing and hauling
2. Activities potentially affecting Soil Quality (considered operable and assessed in the HHRA):
   - accumulation of ore-based chemical constituents from particulate air deposition
3. Activities potentially affecting Traditional Food Quality (considered operable and assessed in the HHRA):
   - accumulation of ore-based chemical constituents in vegetation (e.g., berries, plants) from soil after prolonged particulate air deposition
   - accumulation of ore-based chemical constituents in small local game (e.g., game birds, hare) from soil after prolonged particulate air deposition
4. Activities potentially affecting Surface Water and Fish Tissue Quality (considered operable but not assessed in the HHRA due to negligible alteration of aquatic environment):
   - The water management plan (Volume 1 Appendix IV) establishes that settling pond effluent will comply with all relevant and applicable quality standards. Water quality from existing local settling ponds (Timmins operation) and effluent support this position. Although rare events of minor settling pond discharge with elevated TSS have been documented in existing settling ponds (Volume 1 Appendix IV), the magnitude and occurrence are not anticipated to change the quality of the aquatic receiving environment

➔ The general effect of the operations to physical environment associated with the above potential interactions is a potential decrease in air quality and associated particulate deposition to soil, which might affect human health. Potential effects from remaining multi-media exposure pathways were assessed for aboriginal adults or toddlers present at the discrete receptor locations modelled in the air dispersion technical support document. The estimated effects to human health are:

➔ The predicted non-carcinogenic effects to adults and toddlers are provided below in Table 7-111 and Table 7-112 as hazard quotients (HQs). *The low magnitude of the numerical risk estimates (effects to human health) and the previously defined risk categories indicate the incremental operational risks to human health are negligible.*

➔ The predicted carcinogenic effects to adults (not tabulated but available from the HHRA technical support document) *and the previously defined risk categories indicate the incremental lifetime cancer risk (ILCR) from operational interactions to human health are negligible*.

**Table 7-111 Predicted incremental hazard quotients for Adult receptors for the Project scenario assessment**

| | POTENTIAL CONTAMINANT OF CONCERN | ROUTE OF EXPOSURE | | | | | TOTAL |
|---|---|---|---|---|---|---|---|
| | | Soil Ingestion | Particulate Inhalation | Soil Dermal Contact | Surface Water Ingestion | Country Food Ingestion | |
| PROJECT INCREMENT | Arsenic | 1.0E-05 | 6.5E-05 | 2.7E-06 | 0.0E+00 | 3.3E-03 | 3.4E-03 |
| | Barium | 1.2E-08 | 3.2E-07 | 1.4E-07 | 0.0E+00 | 0.0E+00 | 4.8E-07 |
| | Beryllium | 6.0E-11 | 6.1E-08 | 7.3E-08 | 0.0E+00 | 7.3E-08 | 2.1E-07 |
| | Chromium | 1.2E-07 | 3.1E-05 | 7.8E-06 | 0.0E+00 | 1.3E-04 | 1.6E-04 |
| | Iron | 5.1E-05 | 3.9E-03 | 4.4E-05 | 0.0E+00 | 0.0E+00 | 4.0E-03 |

| | POTENTIAL CONTAMINANT OF CONCERN | ROUTE OF EXPOSURE | | | | | TOTAL |
|---|---|---|---|---|---|---|---|
| | | Soil Ingestion | Particulate Inhalation | Soil Dermal Contact | Surface Water Ingestion | Country Food Ingestion | |
| | Lead | 4.8E-06 | 2.3E-05 | 4.1E-05 | 0.0E+00 | 1.7E-04 | 2.4E-04 |
| | Manganese | 2.8E-08 | 2.8E-06 | 6.0E-06 | 0.0E+00 | 0.0E+00 | 8.8E-06 |
| | Mercury | 1.5E-08 | 7.2E-05 | 1.3E-07 | 0.0E+00 | 8.2E-06 | 8.0E-05 |
| | Molybdenum | 9.9E-12 | 5.5E-11 | 8.5E-13 | 0.0E+00 | 4.4E-09 | 4.4E-09 |
| | Selenium | 9.1E-12 | 2.7E-11 | 7.8E-13 | 0.0E+00 | 3.4E-10 | 3.7E-10 |

**Table 7-112 Predicted incremental hazard quotients for Toddler receptors for the Project scenario assessment**

| | POTENTIAL CONTAMINANT OF CONCERN | ROUTE OF EXPOSURE | | | | | TOTAL |
|---|---|---|---|---|---|---|---|
| | | Soil Ingestion | Particulate Inhalation | Soil Dermal Contact | Surface Water Ingestion | Country Food Ingestion | |
| PROJECT INCREMENT | Arsenic | 1.8E-04 | 2.8E-04 | 4.6E-06 | 0.0E+00 | 7.5E-03 | 8.0E-03 |
| | Barium | 2.0E-07 | 1.4E-06 | 2.4E-07 | 0.0E+00 | 0.0E+00 | 1.8E-06 |
| | Beryllium | 1.0E-09 | 2.6E-07 | 1.3E-07 | 0.0E+00 | 1.5E-07 | 5.4E-07 |
| | Chromium | 2.0E-06 | 1.3E-04 | 1.3E-05 | 0.0E+00 | 3.6E-04 | 5.1E-04 |
| | Iron | 8.8E-04 | 1.7E-02 | 7.6E-05 | 0.0E+00 | 0.0E+00 | 1.8E-02 |
| | Lead | 8.3E-05 | 9.8E-05 | 7.1E-05 | 0.0E+00 | 4.1E-04 | 6.7E-04 |
| | Manganese | 5.5E-07 | 1.4E-05 | 1.2E-05 | 0.0E+00 | 0.0E+00 | 2.6E-05 |
| | Mercury | 2.6E-07 | 3.1E-04 | 2.2E-07 | 0.0E+00 | 2.0E-05 | 3.3E-04 |
| | Molybdenum | 2.1E-10 | 2.9E-10 | 1.8E-12 | 0.0E+00 | 1.9E-08 | 1.9E-08 |
| | Selenium | 1.4E-10 | 1.1E-10 | 1.2E-12 | 0.0E+00 | 8.8E-10 | 1.1E-09 |

Decommissioning and Reclamation Phase

During the Decommissioning and Reclamation phase, all project activities will have some potential interaction with air quality, and therefore potential interaction with human exposure.

Potential interaction includes:

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic; and
- final site restoration.

The effect associated with the above potential interactions is a time limited potential decrease in air quality which may affect human health.

- ➔ The general effect to physical environment associated with the above potential interactions is a potential decrease in air quality and associated particulate deposition to soil, which might affect human health.
- ➔ The effects to surface water quality and consequence effect to human health at the decommissioning phase are considered *negligible* because settling pond management and decommissioning are intended to meet regulatory discharge standards.
- ➔ The effects to air quality and consequent potential to affect human health at the decommissioning phase were not assessed directly because air quality was modelled only for the operation phase. However, the types of air emissions and associated air contaminants that will occur during the site decommissioning will be fewer, less intense and of shorter duration than those of the operation phase.
- ➔ Final site restoration will further improve fugitive dust emissions and air quality (revegetation of waste dumps and overburden stockpiles) thus reducing dust exposure via inhalation.
- ➔ *The effect (impact) of the decommissioning phase to human health is therefore inferred from that described in the previous section for the operation phase, and is considered to be negligible.*

#### 7.5.2.2.3 Mitigation Measures

Standard Mitigation Measures

The following standard mitigation measures will be applied as previously cited in the Air Quality Section (7.3.2.3); these are designed to optimize air quality and are most relevant to mitigating human health. These are reproduced below for convenience in Table 7-113.

**Table 7-113 Standard Mitigation Measures for Human Health Risk**

| CODE | MEASURE | MITIGATION EFFECT |
|---|---|---|
| **Tree removal and timber management (TM)** | | |
| TM10 | Ensure that cleared areas that are left bare and exposed to the elements are kept to a strict minimum. | Minimizing bare areas will reduce potential for airborne dust generation by wind erosion during dry periods |
| **Erosion and Sedimentation Control (ES)** | | |
| ES15 | Avoid storing excavated material on steep slopes and ensure they are properly compacted. To ensure better compaction of fill more than 60 cm thick, it is preferable to deposit several thin layers rather than a single layer. In zones with no transversal slope, the height and depth of the fill must be limited to three metres. | Airborne dust from wind erosion of excavated material piles will be transported on shorter distances if their height is limited |
| **Waste Management (WM)** | | |
| WM2 | Emphasize, in the following order, reduction at source re-use, recycling and conversion of waste. Replace hazardous products with less harmful ones if possible. The quantity of waste can be reduced at source by using up products completely, buying in bulk and accurately estimating required amounts. | Waste reduction will minimize potential air emissions due to landfilling of organic wastes and transport to the landfill site |
| WM7 | Comply with applicable regulations that prohibit the burning of waste. | |
| **Drilling and Blasting (DB)** | | |

| CODE | MEASURE | MITIGATION EFFECT |
|---|---|---|
| DB3 | Only properly qualified and trained personnel may handle and detonate explosives as per the manufacturer's instructions and applicable laws and regulations. | Best practices used for drilling and blasting will minimize short-term air emissions associated with these activities. Combine these standard measures to the specific measure for management of NOx from Blasts. |
| DB4 | The manufacturer's instructions must be followed to ensure that blasting procedures are safe both for humans and the environment. | |
| DB21 | Take the necessary precautions to control dust emissions from drilling. | |
| DB22 | Fill borehole necks with clean crushed rock to eliminate dust and gas emissions during blasting. | |
| **Construction Equipment (CE)** | | |
| CE4 | Construction equipment must be delivered to the site in good working order, without leaks and equipped with all emissions filters required to comply with emissions regulations and reduce noise disturbance. The equipment must be regularly inspected to detect any leaks or mechanical defects that could lead to fuel, lubricant or hazardous material spills. | Well maintained engines will keep air emissions in-line with regulations |
| CE8 | Install appropriate road signs and follow speed limits in order to minimize accidents and disturbance to the environment. | Road dust emissions are minimized at lower speed. |
| CE14 | Use low sulphur content fuels. | There is a direct relationship between $SO_2$ emissions and fuel sulfur content. Low fuel sulfur content, means low $SO_2$ emissions. Fuel sulfur content is limited to 15 ppm, as per Canadian regulations |
| CE15 | The dust-control liquid used must comply with GNL regulations. | Application of a dust control agent will reduce road dust emissions |
| **Mining Operations (M)** | | |
| M3 | Reports required by governments must be submitted by the stipulated deadlines. | n/a |
| **Management of Ore, Rock Piles, Waste Rock, Tailings and Overburden (MO)** | | |
| MO1 | Take the necessary steps to prevent wind erosion of stored tailings and avoid slippage around the mine tailing storage sites. | Reduce dust emissions by minimizing tailings disturbances<br>Minimizing tailings volumes reduces dust emissions caused by erosion |
| MO4 | Prepare scenarios for using tailings, particularly waste rock. For example, tailings could be used to build roads and railways. | |
| MO5 | The physico-chemical parameters of the ore and tailings must be characterized. | |
| MO6 | Control dust emissions from tailing storage and handling. | |
| **Air Quality Control (AQ)** | | |
| AQ1 | Dust extractors with filter bags will be used to control dust emissions at the Howse Mini-Plant dryers. | Well maintained fabric filter dust emission control reduces dust emissions by >95% |
| AQ2 | Dust recovered from the dust extractor must be disposed of in a manner that prevents dust emissions. | Good practices in dust handling minimizes punctual releases in the environment |
| AQ3 | Use a water-spraying system at conveyor transfer and drop points. | Water spraying is efficient in reducing dust releases |

| CODE | MEASURE | MITIGATION EFFECT |
|---|---|---|
| AQ4 | Mix the ore with water in the drum scrubber. | Water mixing is efficient in controlling dust from being released at the source |
| AQ5 | A dust extractor will be used to limit dust emissions from drills. | The dust extractor limits the area in which wind gusts could blow dust away from the drill |
| AQ6 | Roads will be sprayed to reduce dust emissions during dry periods. | Application of a dust control agent will reduce road dust emissions |
| **Rehabilitation (R)** | | |
| R1 | Follow good practices presented in the rehabilitation plan. | Dust emissions from wind erosion will be minimized by considering it as a specific issue in the rehabilitation plan |
| R2 | Draw up a rehabilitation plan | |
| R3 | Produce post-mining and post-rehabilitation monitoring reports. | |

Specific Mitigation Measures

Based on the finding of negligible incremental health risks quantified for the project activity scenarios, no specific mitigation measures are identified for human health.

#### 7.5.2.2.4 Residual Effects Significance Assessment

The ecological context for human health impact relates to the association of health impact as a result of human receptor relationships to traditional ecological food quality – such as berries, medicinal plants, game and fish meat. The multimedia exposure and risk assessment indicates the food component under the future conservative project only and cumulative scenarios yields negligible risk to human health. Therefore the ecological context is that traditional foods are found to be a negligible risk factor to human health risk under future project scenarios.

The human health context of the residual effect significance relates to the association of six criteria that may characterize the significance of health effects: timing (as it relates to project activities or receptor behaviours), spatial extent (LSA versus RSA extent of an effect), duration (duration of a predicted effect), reversibility of a predicted effect, magnitude (measure as the hazard quotient or incremental lifetime cancer risk), and frequency of the effect. The criteria and the rationale for how they have been assigned to the residual effects are further defined in Table 7-114.

**Table 7-114 Assessment Criteria Applicable to Human Health Risk**

| TIMING | | |
|---|---|---|
| **Inconsequential timing** | **Moderate timing** | **Unfavorable timing** |
| Timing and seasonality of predicted Howse activities or human receptor activities has no significant effect on Human Health. | Timing and seasonality of predicted Howse activities or human receptors activities may affect Human Health. | Timing and seasonality of predicted Howse activities or receptors activities will significantly affect Human Health. |
| **SPATIAL EXTENT** | | |
| **Site specific** | **Local** | **Regional** |
| Effects are limited to the footprint of the project. | Effects extend beyond the footprint, but do not extend outside the LSA. Further, a subsection of Human Health Risk habitat will be altered. | The effect of the Howse Project will affect Human Health Risk in substantial part or the entire RSA. |
| **DURATION** | | |

| Short | Medium | Long |
|---|---|---|
| The effect of the Howse Project will last less than 12 months. | The effect of the Howse Project will last between 12 or 24 months (Extends beyond the preparation/construction phase, but shorter than the lifespan of the Project). | Health effects will last longer than 24 months, possibly as long as the project duration. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Health Effects expected to return to their pre-Howse levels. | Health Effects can be reversed but only in certain locations and not others; or certain health effects may be reversible but others may not be reversible. | Health Effects are not reversible (e.g. cancer) |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Hazard Quotients ≤1.0 and Incremental Cancer Risks ≤ $10^{-5}$ -or- Change in Risk relative to Baseline Case is <10% | 1.0< Hazard Quotients ≤10 or $10^{-5}$ < Incremental Cancer Risks ≤$10^{-4}$ | Hazard Quotients >10 or Incremental Cancer Risks >$10^{-4}$ |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| When no health effect occurs. | N/A | When health effects occur it is considered continuous. |

Timing

The criterion *timing* in the present context relates to how the timing of project activities or human receptor activities could exacerbate or ameliorate exposure and health risk. Air quality and the presence/absence of human receptors are the most relevant factors. Other factors such as dietary exposure are extended over long time-lines (e.g. year-round consumption of frozen traditional foods tends to dampen a seasonal exposure). Noteworthy in this risk assessment, is the adoptions of exposure scenarios with worse-case exposure concentration and the assumption of receptors being present and exposed – notwithstanding the seasonality of hunting camps and summertime recreation. The multimedia exposure predicted total and pathway-specific exposure to yield negligible risk. Given this risk estimate is predicated on worse-case assumptions (e.g., conservatively high dietary consumption, high concentrations of air quality parameters), the influence of timing on the residual effect, although plausible, is considered inconsequential because the risk worse-case risk is negligible, and therefore *timing* is assigned a value of 1. Additional context for timing and seasonal air quality exposure is provided below.

For $NO_2$ (1-hr), air quality exceedances were predicted at 8 sensitive receptors (R9, R10, R11, R13, R16, R17 and R24) in the "With Blasts" scenario, while no exceedances would occur at these same receptors in the "No Blasts" scenario. Note that the 8 receptors are located in the vicinity of the Howse deposit. The maximum number of exceedances is 13 (0.71% of the time) at R9 – Young Naskapi Camp 7 (Pinette Lake). A more detailed review indicated that all exceedances at these 8 receptors occur during winter (November to March period) and are due to blasting events at the Howse pit. By minimizing blasting at the Howse pit during the winter period (which the Proponent will do), exceedances will also be minimized.

Spatial Extent

The concept of variable exposure concentrations beyond the project footprint is plausible. In rare cases (i.e., rare frequency), brief occurrences of an elevated air parameter were predicted (see paragraph on winter NO2, above), however these infrequent occurrences do not translate to a spatially expanded zone of health effects. Because the health effects under the conservative assumptions are predicted to be negligible, the criterion of spatial extent is assigned a value of 1.

Duration

The residual effect criterion *duration* is considered in the context of duration of a significant health effect; the duration ranging from <12months to >24mo, the latter which may also encompass a significant risk of lifetime cancer. In the present instance, all conservatively assessed exposure pathways yielded negligible risk, as characterized by acceptable risk level defined by Health Canada. Accordingly, the criterion of duration of residual effect is assigned a value of 1.

Reversibility

The residual effect criterion *reversibility* is considered in the context of whether a significant health effect, if it was to occur, would be reversible within the timeframe of the project and/or physiologically reversible (e.g., cancer health effect). In the present instance, all conservatively assessed exposure pathways yielded negligible risk, as characterized by acceptable risk level defined by Health Canada. Accordingly, the criterion of reversibility does not strictly apply, and is assigned a value of 1.

Magnitude

The residual effect criterion *magnitude* is considered in the context of risk magnitude previously defined for ranges of hazard quotients (for non-cancer endpoints) and incremental lifetime cancer risk (ILCR). The categories were developed with consideration for Health Canada policy on acceptable health risk and conservative assumptions employed in the risk assessment. In the present instance, all conservatively assessed exposure pathways yielded negligible risk, as characterized by acceptable risk level defined by Health Canada. Accordingly, the residual effect criterion magnitude is assigned a value of 1.

Frequency

The residual effect criterion *frequency* is considered in the simplified context of whether a significant health effect is predicted to occur or not occur. It has not been considered in the context of number of people, as generally Health Canada policy for HHRA is to consider significance of health risk to an individual, rather than frequency within a population. In the present instance, all conservatively assessed exposure pathways yielded negligible risk, as characterized by acceptable risk level defined by Health Canada. Accordingly, the residual effect criterion frequency is assigned a value of 1.

*7.5.2.2.4.1 Significance*

**The overall effect of the Howse Project on human health is non-significant (value of 6).** This conclusion is based on conservative exposure assumptions that err on the side of over – rather than under-estimating human exposure scenarios.

Likelihood

The likelihood of the Howse project having an effect on human health is considered very low, because the multimedia exposure assessment has employed numerous conservative assumptions, with consideration to traditional foods, Aboriginal traditional activities, and a comprehensive evaluation of the interaction of mine activities, air emissions and meteorological conditions that will influence air quality. Notwithstanding the conservative assumptions, the magnitude of health risk was found to be negligible for all exposure pathways, both individually and additively.

#### 7.5.2.3 Visual Environment

No particular concerns were raised during consultations with local Aboriginal groups in terms of visual effects, except in relation to Kauteitnat, which is discussed in Chapter 4. Accordingly, the visual environment component is not considered as a VC, except in its relation to Kauteitnat.

##### 7.5.2.3.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the area located near the Howse Project, including Kauteitnat. The RSA has not been considered for this component as Project effects will be felt locally.

The temporal boundary for this component includes up until the end of the decommissioning and reclamation phase of the Project, as this is when the Howse Project will no cause changes in the visual environment. However, it is also understood that some alterations to the landscape caused by the Howse Project will be permanently visible.

**Visual Environment**

The Howse Project is located in an area where the landscape has been altered by mining exploration and operation over for the past decades. Mining operations in the Labrador Trough are characterized by the exploitation of open pits, which leave a significant footprint in the landscape. As discussed in Chapter 4, mining-related alterations to the landscape also include numerous test pits and trenches, stock piles, survey cut-lines, access roads and yards, and abandoned camps, infrastructure and equipment. There would be 18 open pits in Schefferville area, and some participants in the consultations have indicated that they "are the ones who live with the holes in the environment" (NIMLJ Council 2014, *personal communication*). These pits are of various sizes, some several hundred metres across and perhaps more than a hundred metres deep, and they certainly represent the most important alteration to the landscape in the vicinity of the Howse Project (NML and PWFA, 2009). Even if some of these pits have been abandoned or decommissioned, very little vegetation has grown on their perimeter or within them. The Howse Project will be inserted in an environment where mining operations have altered and continue to alter the visual environment.

No populations live near the Project site, Schefferville and MLJ being the closest communities, located 25 km from the site. In this sense, alterations to the landscape caused by the Project will not be seen on a continuous basis by the population of the LSA. However, as discussed in detail in Section 7.5.2.1, Innu and Naskapi continue to transit in this area to access their harvesting lands.

HML is aware that the presence of Kauteitnat is a particularly sensitive issue to Aboriginal Groups, as was presented in Section 7.5.2.1 and in Chapter 4. As discussed, the Project will alter the environment on the southeast of Kauteitnat, without, however, affecting the mountain itself. HML has made efforts to adjust the Project layout in order to minimize visual effects on Kauteitnat: the stockpiles will not exceed 50 metres, so that Kauteitnat will continue to be the main landmark in the area; and the limit of the Project infrastructure was located as far as possible from the foot of the mountain (see also Section 7.5.2.1). The visual aspect of the Howse Project has been included in the discussion on Kauteitnat because it is part of the cultural value of the mountain. In a sense, the visual effects cannot be dissociated with the cultural symbol that is Kauteitnat.

It should be mentioned that the progressive restoration plan will also play a part in giving a natural aspect to the site, which should be particularly visible once the site is decommissioned. This progressive restoration consists in laying topsoil that was set aside from preliminary mining work and planting vegetation, building safety barriers around the pits, and re-grading waste dumps to fit into the natural landscape.

**Existing Literature**

The visual environment has been described from existing topographical data and maps (land use, vegetation, and geomorphology).

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component, taking into consideration that a discussion on visual effects is included in Section 7.5.2.1 on Kauteitnat.

#### 7.5.2.4 Land Use Practices Summary

As per Section 6.3.4 of the final EIS Guidelines for the Preparation of an Environmental Impact Statement, we describe below how changes to the environment caused by the Howse Project affect aboriginal people, with a focus on socioeconomic conditions, namely:

- the use of navigable waters;
- forestry and logging operations;
- commercial fishing, hunting, trapping and gathering activities;
- commercial outfitters; and
- recreational use.

In the present context, we consider the latter three points.

The Howse Project will occur within a large mining complex which is heavily disturbed by historical mining operations, which have resulted in avoidance of the area for several years. Consequently, recreational land use activities are scant in the immediate area. This was confirmed by a country food assessment and survey conducted by HML for the Howse Project (Volume 2 Supporting Study D). Although it is acknowledged that dust settling on vegetation may deter some local land users from traditional activities (namely collecting medicinal plants and berries), a Human Health Risk Assessment (Volume 2 Supporting Study D) confirms that the risk of contamination to country foods associated with the Howse activities is also very low. As such, the effect of the Howse Project on any of the few recreational land use activities that occur in the Howse Project area will be negligible.

Land use in closest proximity to the Project (i.e. Pinette and Triangle Lakes) will persist during the entire mine life because the Proponent is committed to providing access to these locations via a bypass road (both Alternatives provide access to these locations, as well as the Howells River valley).

The physical environmental effects (cumulative and not) of the Howse Project are limited to air quality, noise, light and water. The residual effects on these components have been evaluated as significant for air quality only, albeit only temporarily. The effects of noise, light and water quality could have the potential to affect wildlife habitat and/or behavior under normal circumstances but, given the historical ecological setting in which the Howse Project lies, wildlife species are currently relatively rare in the area and expected to remain so (i.e. the Howse Project is not expected to reduce their numbers further). Consequently, there are no known commercial fishing, hunting, trapping and gathering activities in the Howse Project area.

The residual biological environmental effects (cumulative and not) of the Howse Project on caribou, avifauna and aquatic fauna have been evaluated as non-significant. As such, while it is recognized that the Howse Project activities could affect these biological components, their rarity in the area (caribou and avifauna) and the Project's avoidance of sensitive areas (fish habitat) and associated WMP, and focused mitigation measures (avifauna) and monitoring commitments (for all components) and adaptive management commitments (avifauna and caribou) have mitigated these residual effects to the point where they are not expected to change the current low number of wildlife species in the area. Further, since caribou have not been seen in the vicinity of the Howse site recently, no effects on outfitting are expected.

The distance between the Project and known waterfowl hunting sites should prevent any adverse effects on goose hunting in that area. There is a slight chance that geese might be scared away from Pinette Lake, but since they still use it with the ongoing DSO project, no significant change in resource availability is expected. Other waterfowls is also harvested in the study area and their situation should

be similar. The Proponent is committed to surveying waterfowl habitat every 5 years and the plan to restore the site at the end of its mining operations will assist in the potential return of some species, notably caribou, to the area.

Consequently, the effects of the Howse Project on Aboriginal people is expected to be limited. The lack of wildlife in the area coupled with the relatively small effects of the Howse Project activities on the biophysical environment minimizes the changes to the availability of resources (from hunting, fishing, collecting of medicinal plants and berries). The Proponent's commitment to working with First Nations to provide continued access to the land by upgrading existing roads rather than building new ones, thereby also limiting habitat destruction/fragmentation effects. These roads will ensure that locals continue to have access to Kauteitnat.

### 7.5.3 Population and Community

#### 7.5.3.1 Population: Demography and Household Characteristics

The population and demography component includes two subcomponents:

- Demography and maintenance of local populations; and
- Household characteristics

No particular concerns were raised during the consultations with regard to this component.

**Demography and Maintenance of Local Populations**

In the LSA, both Innu and Naskapi living in MLJ and Kawawachikamach have demonstrated very little population fluctuations in the past (NML and PFWA, 2009). Very few people leave their communities for southern cities to go to school or for jobs; community members tend to remain close to their families. Although there are examples where the presence of workers' camps has caused increased mobility of the local populations (Costa, 2007), there is no indication at the moment that this could be the case in the LSA, as HML's camp is located . 25 km from Schefferville. Workers who will be mobilized for the Howse Project will be accommodated at the Timmins camp for all of the site Construction, Operation and Decommissioning and Reclamation phase. Aboriginal workers from the LSA will stay in their villages and will commute to work.

The presence of mining operations in the Schefferville area could affect the local populations positively by providing employment and contracts in an area of Québec and Labrador where work opportunities may be rare. With the Howse Project, current employment levels of HML's DSO project will be maintained at the local or regional levels. Newfoundland and Labrador benefits, in terms of employment, should also remain at their current level (Chapter 4).

Therefore, the subcomponent "Demography and maintenance of local populations" was not retained as a VC.

**Household Characteristics**

In the LSA, NIMLJ and NNK have young populations which have respectively 1.6 and 2.1 children per family. The Howse Project will not affect this family and population structure, unless a greater proportion of women from the local communities are employed. Considering that household characteristics and family cohesion did not change significantly in recent decades, even with the presence of the mining activities, and considering the importance of the family for the NIMLJ and NNK communities, there is a low probability that this could delay the moment at which they have children and the number of children they wish to have.

Aboriginal workers from the LSA will commute to work on a daily basis. The effects on mine workers' families will not be significantly different that on families that have members working elsewhere in the community, except perhaps due to the longer working hours (10 to 12-hour shifts).

The situation may be different for ITUM, IN and NCC members or for non-Aboriginals who may take a job at the site on a rotational basis through the fly-in fly-out mechanisms. While the Howse Project will prolong their possibility for employment at the mine site and economic gains, it will also mean the prolonged absence of workers from their families. The effects of fly-in fly-out on workers' families and spouse are well documented and may include difficulties for family members of coping with the absence of a spouse or a parent, the need to redefine family members' roles and disruption of routines, the reliance on social and family networks, fidelity issues, spouse loneliness, etc. (Costa, 2007; McLean, 2003; WIN, 2010; CIAFT, 2011; MABC *et al.,* 2011). However, given that employees come from various areas of Labrador, Newfoundland and Quebec, the effects of rotational work on family cohesion in the RSA is impossible to predict. Accordingly, this will not be considered as a VC.

#### 7.5.3.1.1 Component Description

What follows provides a description of the demographic situation of the populations located in the LSA and the RSA, as well as a brief portrait of their respective household characteristics.

**LSA, RSA and Temporal Boundaries**

The LSA includes the following communities, located in the province of Québec:

- Naskapi Nation of Kawawachikamach (NNK);
- Nation Innu Matimekush – Lac John (NIMLJ); and
- Town of Schefferville.

For this component, the RSA includes:

- Labrador West (Labrador City and Wabush), as well as the IN and the NCC; and
- Sept-Îles, and the Innu of Uashat and Mani-Utenam (ITUM).

The temporal boundary for this component includes up until the end of the decommissioning and reclamation phase of the Project, as this is when the Howse Project will no longer have an influence on the LSA as the sources of effects (employment or contract opportunities, traffic, etc.) will no longer be operative.

NNK

The Naskapi population has more than doubled since 1986, reaching 1,261 people as of September 2014, of which 884 live on the reserve and 373 live off-reserve (MSSS, 2014; NNK, 2013). This represents an increase of almost 4% in the number of members living on Category IA-N land compared to 2013 (851) (Table 7-115).

**Table 7-115 Population Characteristics in the LSA, 2011-2014[19]**

| | REGISTERED POPULATION 2014[1] | POPULATION 2011[2] | POPULATION 2006[2] | VARIATION[3] (%) | LAND AREA[4] (KM²) | POPULATION DENSITY PER KM² |
|---|---|---|---|---|---|---|
| Kawawachikamach (2014) | 884 | 586 | 569 | 3.0 | 30.83 | 79.0 |

[19] The most recent demographic information comes from the 2011 Population Census carried out by Statistics Canada. However, it seems that the participation rate of Aboriginal peoples was quite low, which resulted in underestimated population counts (Statistics Canada 2012, *personal communication*). More reliable sources of information on Aboriginal populations are the Indian Registry of AANDC and the *Ministère de la santé et des services sociaux du Québec* (MSSSQ) for Québec's Aboriginal peoples who have signed treaties. However, given that most statistics presented in this socioeconomic portrait comes from Statistics Canada, the 2011 population counts were also included.

| | | | | | | |
|---|---|---|---|---|---|---|
| Matimekush-Lac-John (2014) | 782 | 540 | 528 | 2.3 | 0.74 | 734.1 |
| Schefferville (2011) | - | 213 | 202 | -5.2 | 25.11 | 8.5 |

Sources:

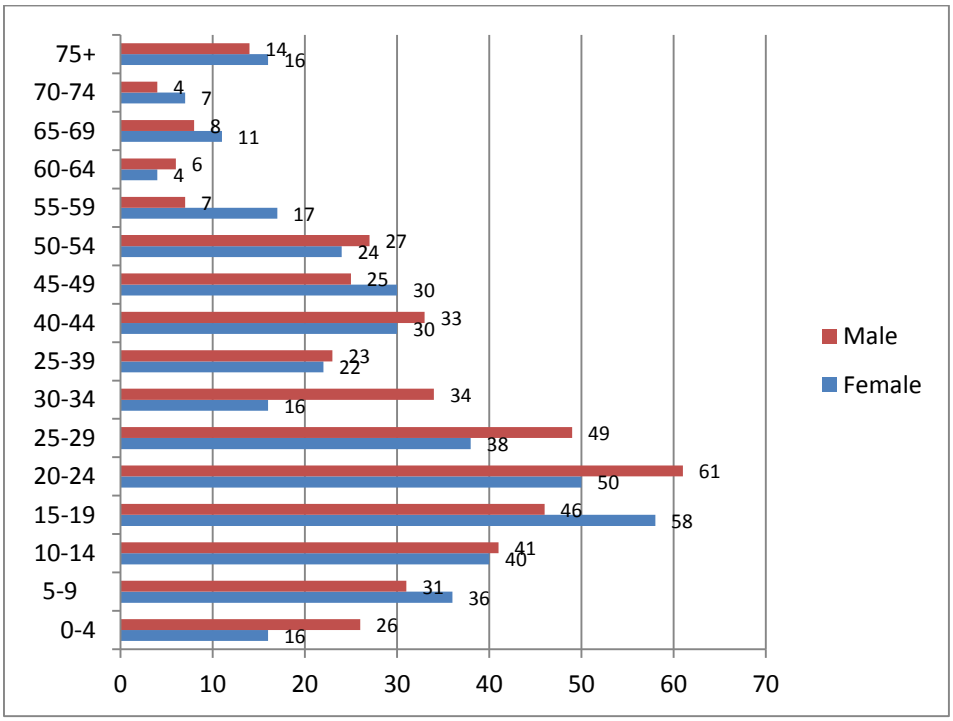
1 Registered ***on-reserve*** population. For NNK, Registre des Naskapis, 2014; For NIMLJ, AANDC, Indian register, 2014. There are 951 NIMLJ members, but 782 live in Matimekush-Lac John.

2 Statistics Canada, 2011.

3 Population variation calculated based on information provided by Statistics Canada.

4 For MLJ, land area and population density are only known for Matimekush, and exclude Lac John.

In 2013, 48.8% of the Naskapi population living in Kawawachikamach was made up of women (NNK, 2013). The age data represented in Figure 7-46 indicates a predominance of very young individuals in the community. The population of Kawawachikamach is composed of 22.3% individuals below 15 years of age, and 57.5% below 30 years of age. The median age of the NNK's population is 23 years old, whereas the median age in Québec is 41.9 years old (Statistics Canada, 2011).




Source: Statistics Canada, 2011.

**Figure 7-46 Age of the Naskapi Population in Kawawachikamach, 2011**

At the same time, the number of elders within the NNK population has doubled since the relocation of the community in 1983, a phenomenon that may be attributed "in part to the improved infrastructure, facilities and services available" (NNK, 2013). Nonetheless, as of March 2013, Naskapis aged 65 years and older formed 7.1% of the Kawawachikamach population, which is much less than the average for this age group within the province of Québec (16%) (NNK, 2013; Statistics Canada, 2011).

In 2011, Kawawachikamach counted 169 private dwellings. The average number of people per household is 3.9, and there is an average of 2.1 children per family. Eighty-nine percent of the total

couple families are with children, and 36% of the census families are single-parent families (Table 7-116) (Statistics Canada, 2011).

**Table 7-116 Household Characteristics in the LSA, 2011**

| | KAWAWACHIKAMACH | MLJ | SCHEFFERVILLE |
|---|---|---|---|
| Total private dwellings, 2011 | 169 | 200 | 178 |
| Average number of persons in private households | 3.9 | 3.3 | - |
| Total population 15 years and over by marital status | 410 | 360 | - |
| Average number of children at home per census family | 2.1 | 1.6 | - |

Source: Statistics Canada, 2011.

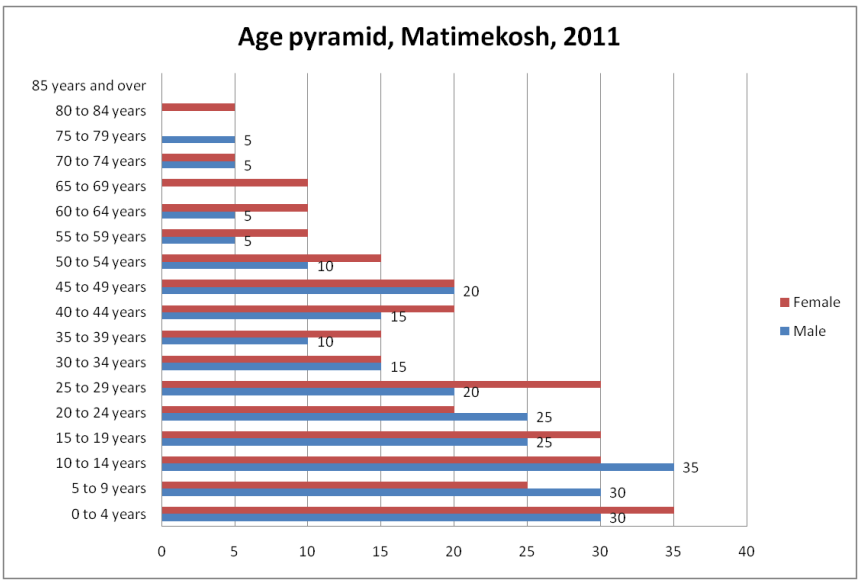
NIMLJ

According to the Indian Register, the population of NIMLJ is 951 people, with 782 living in MLJ (AANDC, 2014) (Table 7-115).

The population of MLJ underwent a rapid increase of 2.3% between 2006 and 2011 (Statistics Canada, 2011) (Table 7-115). It was suggested that the MLJ population has roughly tripled since 1957 (Clément, 2009a). According to Statistics Canada (2011), NIMLJ's population is young: population under 15 years old accounts for 34%, and the population under 30 years old represents 61% (Figure 7-47). The median age of NIMLJ is 24.8 years old, compared to 41.9 in Québec.

**In Matimekush-Lac-John, 54% of the population is composed of women, and 46% are men (**

Table 7-117).




Source: Statistics Canada, 2011.

**Figure 7-47 Age of Innu Population of Matimekush-Lac John, 2011**

**Table 7-117 Age Characteristics of the Populations of NNK and NIMLJ, 2011**

| | KAWAWACHIKAMACH | | | MLJ | | |
|---|---|---|---|---|---|---|
| | TOTAL (%) | M (%) | F (%) | TOTAL (%) | M (%) | F (%) |
| Median age of the population | 23.0 | 22.0 | 24.4 | 24.8 | 23.2 | 25.8 |
| % of the population aged 15 and over | 70.2 | 70.7 | 68.4 | 67.2 | 66.4 | 70.3 |

Source: Statistics Canada, 2011.

There are 200 private dwellings in MLJ. The average number of people per household is 3.3, and there is an average of 1.6 children per family. Eighty-three percent of the total couple families are with children, and 40% of the census families are lone-parent families (Table 7-116) (Statistics Canada 2011).

Schefferville

Schefferville has 213 permanent residents (Statistics Canada, 2011), of which about 30% are of Aboriginal origin (MRC Caniapiscau, 2014) (Table 7-115).

Statistics Canada has not released information regarding the age characteristics or gender ratio of Schefferville's population for the 2011 census. However, the 2006 age and gender information indicates a different social composition of Schefferville's population compared to other typical cities in the province of Québec (NML and PFWA, 2009). For example, 55% of Schefferville's population is composed of men, compared to 45% for women. The population aged between 30 and 60 years old was also found in a high proportion of 55%. Schefferville's population thus consists mostly of middle-aged people. This structure is attributed largely to the fact that experienced, middle-aged professionals move to Schefferville to provide services to the Aboriginal communities that neighbor the municipality, as well as to provide labour to the mining industry (NML and PFWA, 2009).

Schefferville's resident population counts do not take into account the town's non-permanent residents. The revival of mining activities brought an increasing number of professionals who came to work in Schefferville. No statistics are available concerning non-permanent residents of Schefferville. However, the number of dwellings occupied by non-residents provides an idea of their number. Of the 178 private dwellings in Schefferville, 52% were occupied by non-residents in 2006.[20]

Schefferville households differ from neighboring Aboriginal households as there are far more households composed of one person (37%), and more households without children (21%) when compared to NNK and NIMLJ (Statistics Canada, 2006).

**RSA**

Labrador West

The towns of Labrador City and Wabush, referred to as Labrador West, are in close proximity to one another and generally function as one large community. Due to mining industry cycles, the population

[20] Information not available for 2011.

of Labrador West decreased between 2001 and 2006 and increased between 2006 and 2011, though not enough to compensate for the previous decline (Table 7-118).

**Table 7-118 Population Characteristics in Labrador City and Wabush, 2011**

| | POPULATION 2011 | POPULATION 2006 | VARIATION % | LAND AREA IN KM$^2$ | POPULATION DENSITY PER KM$^2$ |
|---|---|---|---|---|---|
| Labrador City | 7,367 | 7,240 | 1.8 | 38.8 | 189.7 |
| Wabush | 1,861 | 1,739 | 7.0 | 46.2 | 40.2 |

Source: Statistics Canada, 2011.

In Labrador City, average household size is 2.6, and 53% of couples live with children (Table 7-119). The proportion of couples with children is slightly higher than the provincial average (30% in NL).

**Table 7-119 Household Characteristics in the RSA Labrador, 2011**

| | LABRADOR CITY | WABUSH |
|---|---|---|
| Total private dwellings, 2011 | 2,976 | 775 |
| Average number of persons in private households | 2.6 | 2.5 |
| Total population 15 years and over by marital status | 6,010 | 1,520 |
| Average number of children at home per census family | 0.9 | 0.8 |

Source: Statistics Canada, 2011.

* Numbers and percentages may not add up due to rounding. Includes married and common-law couples.

Innu Nation

The Innu of Labrador currently number about 2,500 and reside primarily in Sheshatshiu in Central Labrador and Natuashish on the Labrador North Coast (AANDC, 2014). The Sheshatshiu Innu and the Mushuau Innu of Natuashish are separate bands. In 2011, the registered Indian population for the Sheshatshiu Innu totaled 1,399 individuals, with 1,263 living on reserve and on Crown land, compared to 819 and 761 respectively for the Mushuau Innu (Table 7-120).

**Table 7-120 Registered Labrador Innu Population, 2014**

| | POPULATION 2014 |
|---|---|
| Sheshatshiu Innu First Nation | 1,508 |
| Mushuau Innu First Nation (Natuashish) | 939 |
| **Total** | **2,447** |

Source : AANDC, 2014

NunatuKavut Community Council

The NCC has approximately 6,000 members that live in various cities of Labrador (NCC, 2014).

Uashat mak Mani-Utenam

As of January 2014, the Indian Registry recorded Uashat mak Mani-Utenam's Innu population at 4,304, with 976 members living off-reserve.[21] According to Statistics Canada (2011), the population increase between 2006 and 2011 reached 21.1% for Uashat mak Mani-Utenam (24.8% in Uashat and 17.2% in Mani-Utenam) (Table 7-121). Population density within the reserves, particularly Uashat, has increased significantly to reach 438.547/ km$^2$ in 2011, which is 27 times higher than in Sept-Iles.

**Table 7-121 Population Characteristics, Sept-Îles and Uashat and Mani-Utenam, 2011**

| | REGISTERED POPULATION[1] 2014 | POPULATION[2] 2011 | POPULATION[2] 2006 | VARIATION[3] (%) | LAND AREA[4] (KM$^2$) | POPULATION DENSITY PER KM$^2$ |
|---|---|---|---|---|---|---|
| Uashat | 4,424 | 1,485 | 1,190 | 21.1 | 6.387 | 438.547 |
| Mak Mani-Utenam | | 1,316 | 1,123 | | | |
| Sept-îles (including Moisie, Matamec and Galix) | - | 28,487 | 27,827 | 2.4 | 1,770.52 | 16.1 |

Sources:

1 AANDC: Registered population for 2014.

2 Statistics Canada, 2011

3 Population variation calculated based on information provided by Statistics Canada, 2011.

4 Statistics Canada, 2011

The median age of the Uashat and Mani-Utenam population in 2011 was 23.7 years old. Accordingly, the proportion of the population aged 15 and over is lower compared to the provincial proportion: 69.6% in Uashat, 68.7% in Mani-Utenam, and 84.1% in Québec (Table 7-122). Figure 7-48 below illustrates the breakdown of age categories. The highest concentration of population is within the 0 to 4 years age range. The proportion of elders aged 60 and over is much lower than in Québec generally (Statistics Canada, 2011).

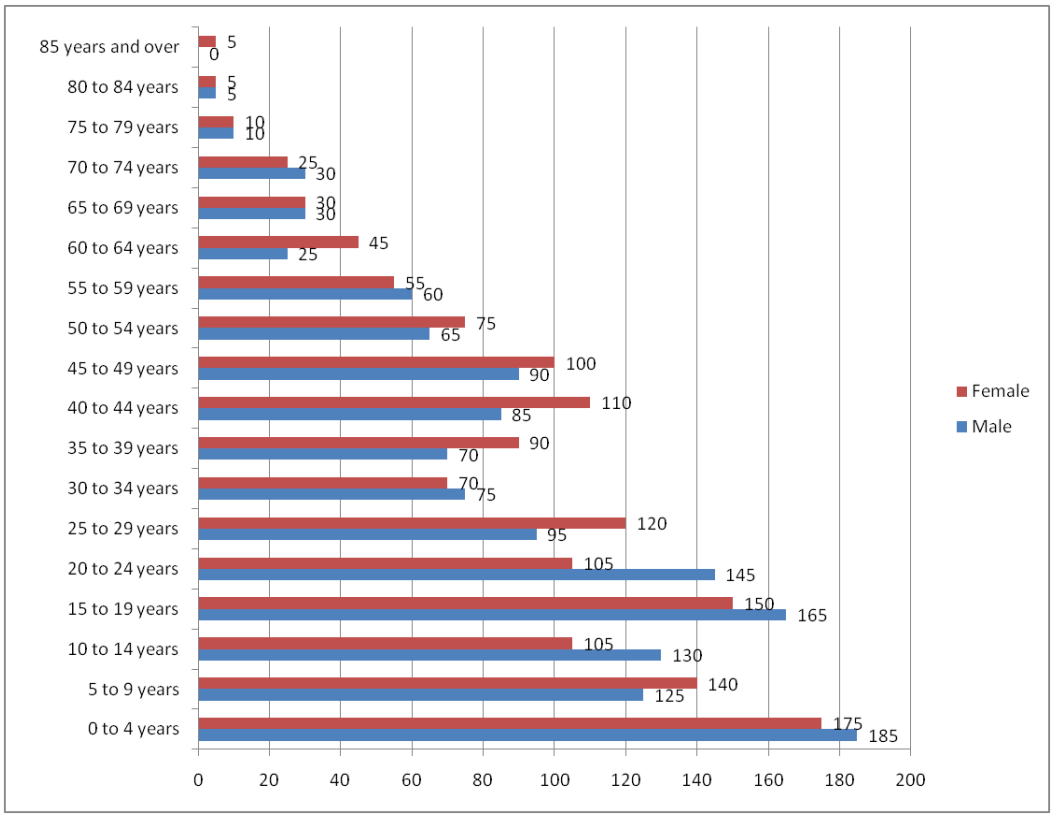
**Table 7-122 Household Characteristics, Sept-Îles 2011**

| | SEPT-ÎLES | UASHAT | MANI-UTENAM |
|---|---|---|---|
| Total private dwellings, 2011 | 12,912 | 438 | 445 |
| Average number of persons in private households | 2.3 | 3.5 | 3.1 |
| Total population 15 years and over by marital status | 23,265 | 1,035 | 905 |
| Average number of children at home per census family | 1.0 | 1.8 | 1.7 |

* Numbers and percentages may not add up due to rounding. Includes married and common-law couples.

Source: Statistics Canada, 2011.

[21] This is a significant change from the 2011 National Census, which recorded the population as being 2,801 (1,485 for Uashat and 1,316 for Mani-Utenam) (Statistics Canada, 2011).




Source: Statistics Canada, 2011.

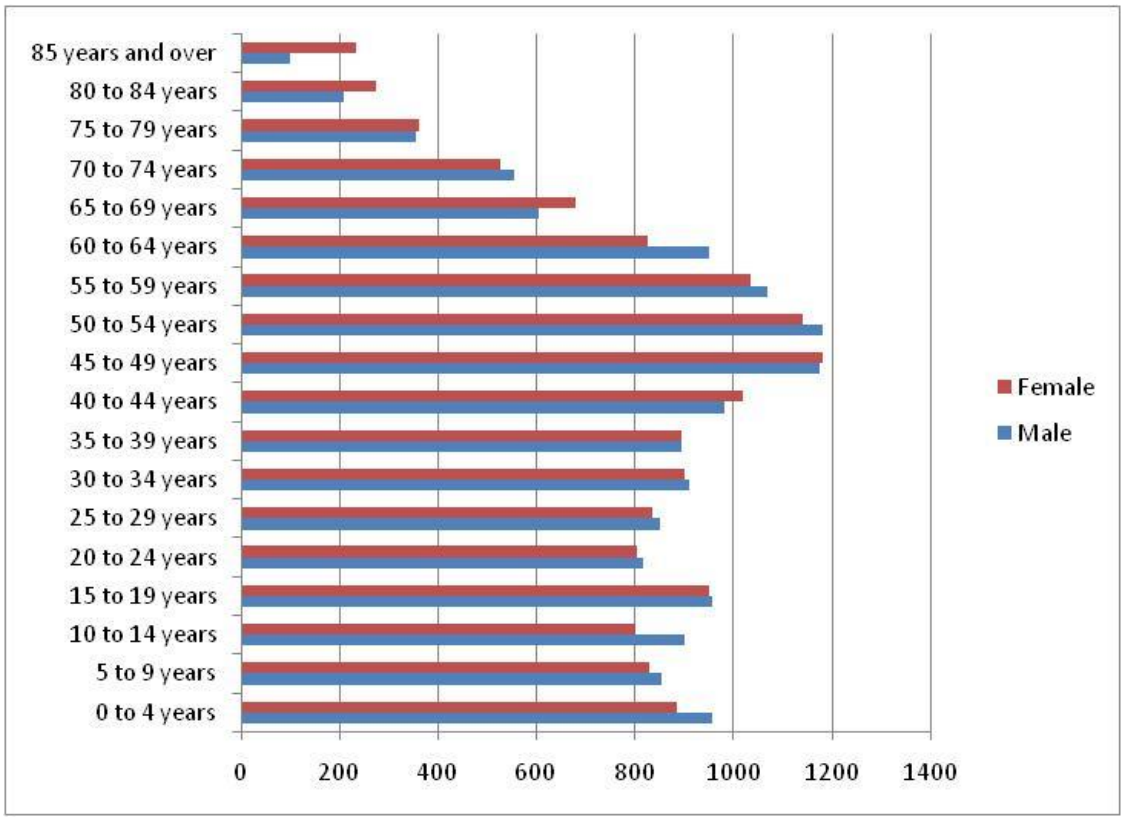
**Figure 7-48 Age Characteristics, Uashat and Mani-Utenam, 2011**

As of 2011, there are 438 private dwellings in Uashat, and 445 in Mani-Utenam. The average household size is 3.5 in Uashat, and 3.1 in Mani-Utenam. Over 70% of households in both Uashat (72%) and Mani-Utenam (76%) include children, with a combined average of 1.75 children per household (Statistics Canada, 2011).

Sept-Îles

According to the 2011 census, the population of Sept-Îles agglomeration is 28,487 inhabitants, which represents a 2.4% increase compared to 2006. The gender ratio is Sept-Îles is equal: 50% men, and 50% women.

In 2011, the median age in the communities of Sept-Îles was 40.5, which is slightly younger than Québec's 2011 median age of 41.9 (Table 7-121). Figure 7-49 clearly shows that the highest concentration of population is between 45 and 55 years old. Similarly, 83% of the population is over the age of 15 in Sept-Îles, compared to 84.1% for the province as a whole (Statistics Canada, 2011). Generally, the population in Sept-Îles is aging in similar ways as in the province of Québec.




Source: Statistics Canada, 2011.

**Figure 7-49 Age Characteristics, Sept-Îles, 2011**

The total number of private dwellings in Sept-Îles is 12,912, and the average household size is 2.3 people. Forty-eight percent of households include children, and there is an average of 1 child per household.

**Existing Literature**

The component description is based on literature review and official reports and statistics providing mainly from Statistics Canada, which were cited throughout the text where appropriate. Recent AANDC data on Aboriginal Registered population, NNK and Indian Registers have also been used.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component.

**Recommended Measures for Improvement**

In order to provide greater support to employees working on rotational schedules, HML will put in place an Employee Assistance Program once DSO/Howse are in full operation, for workers and their spouse in case of difficulties.

### 7.5.3.2 Education

For the education component, the subcomponents are *educational attainment* and *labour force training*. Labour force training goes hand-in-hand with employment, and was raised as an issue several times during the consultations. Accordingly, this subcomponent will be addressed in Section 7.5.3.5.

In terms of concerns raised during the public consultations (Chapter 4):

- no concerns were raised with regard to educational attainment in particular; and

- concerns raised regarding training are addressed in Section 7.5.3.5.

Educational attainment in the Aboriginal communities of the LSA is lower than the average education attainment for the provinces of Québec and NL (Section 7.5.3.2). This is due to several socioeconomic factors that have an effect on student success rates, be they family violence, absenteeism, lack of parental support, disconnect between training or the local job market (NIMLJ and NNK 2014, *personal communications*; Aerial Consulting 2014). Although NNK and NIMLJ primary and secondary schools provide complete facilities, there are no or few permanent facilities for vocational training, save for the recent learning center in Kawawachikamach.

The proponent has no control over the education system or the programs offered to increase the numbers of graduates from primary and secondary schools in the LSA. Nevertheless, the mining industry can positively influence the youth by demonstrating the employment opportunities that could be available to them once they graduate. The proponent has already participated in initiatives organized by NNK in this regard (Chapter 4).

Although education levels are a concern in terms of the future labour force, it is difficult to predict whether the possibility of getting jobs in the mining industry in the vicinity of the LSA communities could perhaps influence the success rates of the students, as many factors affecting it are beyond the proponent's control (quality of the education provided, parental involvement, teaching professionals, etc.). However, harmonizing training and job opportunities should have a positive influence (Aerial Consulting, 2014), and this would, in turn, increase the number of Aboriginal employees from the LSA, especially when taking into account the population increase and the young age of the Aboriginal populations (Section 7.5.3). To this end, a discussion on improving the possibilities for vocational training is included in Section 7.5.3.5.

The proponent also has no influence over the education systems Québec in the RSA, where the job markets are more diversified than in the LSA, opportunities for technical and professional training are varied, and educational attainment is higher when compared to the LSA. Most employees come from the province of Labrador, and a few come from the province of Québec.

Accordingly, education attainment cannot be considered as a VC.

#### 7.5.3.2.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the NNK, the NIMLJ and the town of Schefferville, all located in the province of Québec. The RSA includes Labrador West (Labrador City and Wabush) and, in Québec, the City of Sept-Îles, and Uashat and Mani-Utenam (ITUM). The temporal boundary for the education component includes up until the end of the decommissioning and reclamation phase of the Project, as this is when the Howse Project will no longer have an influence on the LSA as the sources of effects (i.e. employment or contract opportunities) will no longer be operative.

**LSA**

NNK

Québec's education system has been offered to the Naskapis since the beginning of the 1970s. At the end of the first decade, less than half of the Naskapi people had completed high school, but the number had doubled by the beginning of the 1990s (NML and PWFA 2009).

The children are taught in Naskapi from pre-school to Grade 2 (95% in Naskapi). Introduction courses to oral English take place in Grade 1 and 2, but the need for these courses in Grade 1 is being questioned, as many kids are already good in English (TV and video games are all in English). For the past six years, Grade 3 has been split into a two-year program for the kids to gain a stronger foundational knowledge of English. At the moment, the school is developing tests to verify the skills of some of the Grade 3 students to see which ones could bypass this extra year.

In June 2014, 17 students completed Grade 6, and six students graduated from Secondary V, which represents an average year in terms of graduation (Tootoosis 2014, *personal communication*). It was noted that students who have an English-speaking parent have a better chance of success. The high school graduation rate is 31%. In fact, children who complete Secondary 3 and Secondary 4 have higher chances of success: 80% of them will go on to Secondary 5. Three years ago, the school tried a pilot program to promote the return to school for 20 dropouts. The success rate of this group was 50% (10 out of 20 graduated) which was considered significant. At the moment, the group in Secondary 2 is quite strong, giving the school principal good reason to hope that the graduation rate will increase in the years to come.

As the number of children is growing in the community, a budget was approved in 2009 for the school's expansion (NNK, 2010). The school expansion began in May 2011 (NNK, 2012) and negotiations are ongoing for expansion of the gymnasium (NNK, 2014).

*Vocational and On-the-job Training*

In accordance with Section 18 of the NEQA, training programs were made available to the Naskapi people during the late 1970s, over a seven-year period. Available training included small business management, outfitting, operation of heavy equipment, radio operation, and firefighting. The Naskapis have had access to various training programs:

- during the IOCC operations, the Naskapis often worked as general laborers, and rarely as specialized workers. When the mine closed in 1982, 17 Naskapis were permanent employees. At that time, some Naskapis also worked as fishing and hunting guides, and about 18 people were employed for the construction of the La Grande Complex, mostly for slashing trees (NML and PWFA, 2009);
- the building of the community itself at the beginning of the 1980s was an occasion to train Naskapi workers. Once the construction of Kawawachikamach was over, the NNK became the most important employer of the Naskapi people. It was estimated that approximately 375 Naskapis participated to related training programs (NML and PWFA, 2009). It was only in 1992 that training opportunities were made available to the community again, mainly to upgrade the skills of the NNK employees. These training programs included crafting, carpentry, construction and more recently, heavy equipment operations, truck driving (Class 1 and Class 3), health and safety officers, crusher operator, waste management specialist, welding, telecommunications and mineral prospecting;
- in 2001, training activities resumed, and in 2004, four Naskapis took part in a training to become geological technicians. In 2005-2006, 17 young Naskapis were involved in post-secondary programs (NML and PFWA, 2009);
- In 2010, the NNK Band Council obtained funding from several organizations to offer a one-year training program in mining exploration services for 12 young Naskapis. The training was provided between April 2010 and March 2011 (NNK, 2010);
- in 2011, funding was granted by the Human Resources and Skill Development Canada to provide a three-year training program in the mining sector to Naskapis, and a total of 113 Naskapis registered. A 66% success rate was reached for the training programs already completed (NNK, 2014); and
- every summer the Nation also provides a six to eight week summer career program.

The Naskapi Local Management Board (NLMB) "is mandated by Council to prioritize the employment and training needs of Naskapis and non-Naskapi Natives residing on Category 1N-A land, and to develop employment and training programs". It administers the funds for employment and training allocated to the First Nations Human Resources Development Commission of Québec (NNK, 2013). During the 2011-2012 fiscal year, the NLMB funded 23 training programs, whereas 24 programs were funded in 2012-2013 and in 2013-2014. In 2011-2012, a 32-week mining exploration training program was offered in which 12 people participated. Other training programs from 2011 to 2014 included Microsoft Office Training, High School Upgrading, Construction, Early Childhood Education, Carpentry, Painting Work Initiative and Sound and Music Recording. In addition, the NNK manages a yearly Summer Career

Program in which approximately 30 young people participate in six to eight week work placements within various community organizations (NNK, 2013; 2014; 2015).

The academic councillors organize a career fair in the community every year, in which mining companies sometimes participate (Tootoosis 2014, *personal communication*). Overall, there are few technician hands-on programs ("blue" programs) in the community. It was noted that there were more vocational programs during the first two or three years of the DSO project, and that any training offered in the community has to be rotational (not the same every year) because there is not enough clientele (Tootoosis 2014, *personal communication*).

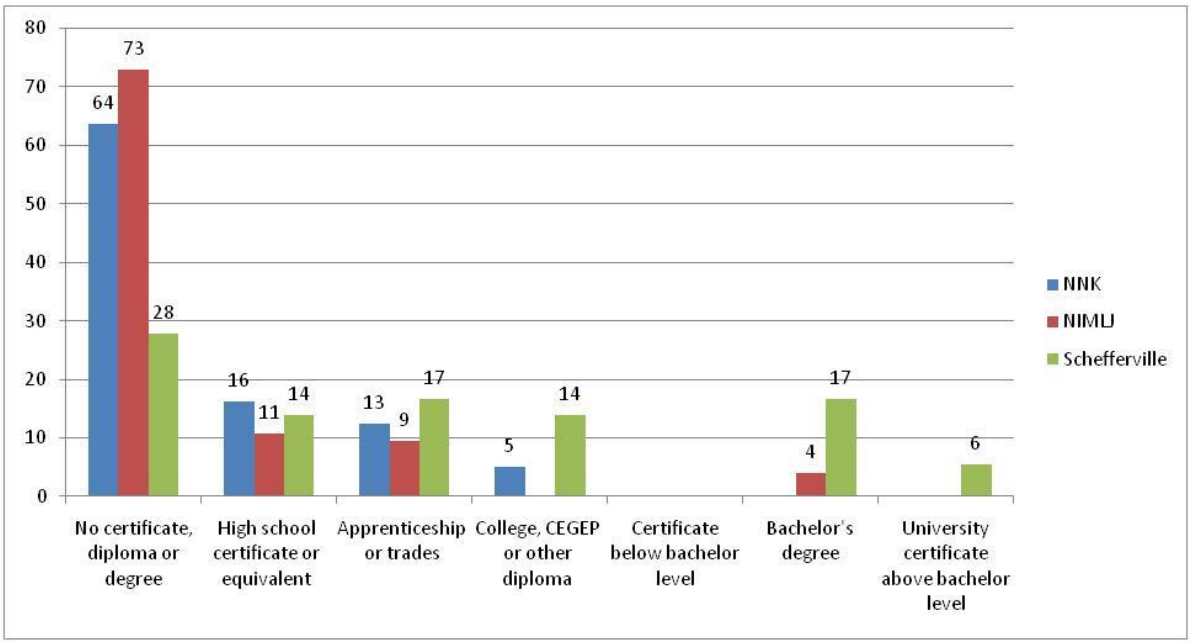
There is no facility for vocational training in the Schefferville area, but there is the new James Chescappio Memorial Learning Centre (Tootoosis 2014, *personal communication*), where the Workplace Essential Skills Program has been provided since 2011. One hundred and fourteen Naskapis have participated in the program since its introduction, and 30 students have been able to find a job (NNK, 2014).

The Jimmy Sandy Memorial School is collaborating with this learning center for older students who are not doing well in the regular setting (school) or because of family issues. The learning center provides more flexibility for these students, who also get paid $11 an hour when they pursue adult education. The learning center is mainly intended for young adults (21 years old and older) who cannot attend the school anymore.

HML has supported several training programs relating to the mining industry that were recently held in Schefferville area and in Kawawachikamach. For example, 50 participants from both communities obtained their DEP in heavy equipment operation and truck driving. HML is also contributing to the Essential Skills training in Kawawachikamach, and an introductory course in Process Plant Operations has been organized in the spring of 2015 for members of NIMLJ, NNK and ITUM.

*Educational Attainment*

Figure 7-50 below shows that NNK has a high percentage of people who have not completed their high school degree: 64% in Kawawachikamach compared to 22% in the province in general. Less than 1% of NNK population has obtained a university degree.




Source: Statistics Canada, 2011.

**Figure 7-50 Educational Attainment of the Population Aged 15 Years and Over in the LSA, 2011**

Gender differences in education are shown in Table 7-123. For 16% of population with high school certificates, 54% are men and 46% are women. In Québec, this proportion is reversed: 54% of women have a high school certificate, compared to 46% of men. However, 70% of men have apprenticeship or trade certificates, compared to 30% of women. Statistics do not show if the holders of a bachelor degree (less than 1 percent, or about 10 Naskapi people) are men or women.

High school graduates often leave for Ontario, to attend Algonquin College or go to North Bay, where courses are given in English (Tootoosis 2014, *personal communication*). They sometimes go to Québec or Sept-Îles, but very few go to Montréal. Some study social sciences while others study arts. A few have tried culinary or restaurant management.

**Table 7-123 Educational Attainment by Gender of the Population Aged 15 Years and Over in the LSA, 2011**

| | KAWAWACHIKAMACH | | | NIMLJ | | | SCHEFFERVILLE | | | QUÉBEC (PROVINCE) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL (%) | M (%) | F (%) | TOTAL (%) | M (%) | F (%) | TOTAL (%) | M (%) | F (%) | TOTAL (%) | M (%) | F (%) |
| Population, 15 years old and over | 100 | 53 | 48 | 100 | 46 | 54 | 100 | 53 | 47 | 100 | 49 | 51 |
| No certificate, diploma or degree | 64 | 50 | 50 | 73 | 46 | 52 | 28 | 40 | 50 | 22 | 50 | 50 |
| High school diploma or equivalent | 16 | 54 | 46 | 11 | 38 | 62 | 14 | 40 | 60 | 22 | 46 | 54 |
| Apprenticeship or trade certificate or diploma | 13 | 70 | 30 | 9 | 57 | 43 | 17 | 83 | 16 | 16 | 61 | 39 |
| College, CEGEP or other non-university certificate or diploma | 5 | 50 | 50 | 0 | 0 | 0 | 14 | 40 | 60 | 17 | 44 | 56 |
| University certificate or diploma below bachelor level | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 41 | 59 |
| Bachelor degree | 0,25 | 0 | 0 | 4 | 33 | 67 | 17 | 50 | 50 | 12 | 45 | 55 |
| University certificate, diploma or degree above bachelor level | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 7 | 52 | 48 |

Source: Statistics Canada, 2011.

Note: Numbers may not add up due to rounding/missing data. E.g. for 'No certificate, diploma or degree' for NIMLJ, the total value was 270 individuals, 125 men and 140 women (total 165 individuals).

NIMLJ

The Uatikuss childcare center of MLJ has a capacity of 44 children (Ministère de la famille, 2015), and it employs five educators and two support staff (NIMLJ, 2015; LIM, 2009). The daycare charges $7,30 per day to the parents. The waiting list contains approximately 20 names and the waiting time may vary between 6 months to a year, depending on the age of the children (Einish 2015, pers. comm.)

Schefferville residents may use the MLJ childcare facility.

In MLJ, the Kanatamat Tahitipetitamunu School is located on the MLJ Reserve and offers classes from kindergarten to Secondary V. The school, originally administered by Schefferville, was transferred to MLJ in 1998. Children are taught in Innu aimun and French. Native and non-Native children share the Kanatamat Tshitipetitamunu School. However, Schefferville's English-speaking children can attend the school in Kawawachikamach.

For the current school year (2014-2015), the school offers elementary programs to 58 children and high school programs to 38 students, for a total of 96 students (Jean-Pierre 2014, *personal communication*). The school currently employs 18 teachers, with 11 at the elementary level and 7 at the secondary level (Jean-Pierre 2014, *personal communication*). Specialist staff includes teachers in English, Innu, physical education, and arts, as well as a speech therapist and a psychoeducator.

The children are taught in Innu in pre-school (4-5 years old). Education is provided in French starting in Grade 1, but two Innu courses are taught over a seven-day cycle during the entire elementary school (Grade 1 to 6).

In June 2014, four students completed Grade 6 and three graduated from high school (Jean-Pierre 2014, *personal communication*). Between 35% and 40% of students drop out of school before finishing Secondary V. Absenteeism remains a major barrier to school success, although the situation has improved in the last two to three years. There is no special initiative in place to prevent school dropout, but students receive $30/month when their attendance rate is over 95%, and $20/month when it is between 80% and 95%.

*Vocational Training*

In 2008, one student was enrolled in vocational training in heavy machinery operations, 11 students had undertaken college level programs, and six students were attending university courses outside the community. Innu with higher education degrees tend to leave the region to seek employment opportunities (NML and PFWA, 2009).

Some NIMLJ members have been trained in the following sectors: carpentry, electricity, heavy machinery operation and construction (NML and PFWA, 2009).

Training programs have been delivered in disciplines relevant to current and future mining activities. Courses included heavy equipment operations and truck driver Class 1 and Class 3. On-the-job training has been provided by HML in health and safety, security, heavy equipment operation, food preparation, housekeeping, mining exploration and sampling (Howse Project Registration, March 2014). There is no adult training center in MLJ.

The members of NIMLJ participated in the truck driving and heavy equipment operation training programs described above. In addition, HML has been supporting adult education for several years. However, of the dozen or more people who registered at the beginning of term, only a few participants complete the courses from one year to the next.

*Educational Attainment*

In MLJ, the proportion of high school graduates is 11%. MLJ has a high percentage of people who have not completed their high school degree: 73% compared to 22% in the province in general. Four percent of the MLJ population has obtained a university degree, two-thirds of whom are women (Figure 7-50).

The total population of high school graduates is composed of a majority of women: 62% compared to 38% of men. Vocational training has been completed by 9% of the population, 57% of which are men compared to 43% women.

**RSA**

<u>Labrador West</u>

- Labrador City and Wabush are home to several education institutions, from pre-school to a university campus of the College of the North Atlantic.
- The First Steps Family Resource Centre Inc offers services to support families in the development of their children under seven through play, programming, education, and

family networking (Labrador West, 2014). There are also two preschools in the area: The Wee College Child Care Centre and The After School Zone (GNL, 2014c).

There are three primary/high schools (see Table 7-125) located in Labrador City, which are managed by the Labrador School Board, with the exception of the French school. The *Centre éducatif l'Envol* is managed by the *Conseil scolaire Francophone Provincial de Terre-Neuve-et-Labrador* (Labrador West, 2014).

The schools managed by the Labrador School Board offer different grades, so each student has to go through each of the schools to complete an elementary and high school education. This is not the case for the *Centre éducatif l'Envol*, where all the grades are offered under one roof.

From 1990 to 2000, four schools closed their doors: three in Labrador City (McManus Primary School, Labrador City Collegiate and Notre Dame Academy) and one in Wabush (Community Accounts, 2014). During this time period, student enrollment fell from 3,634 to 1,482 students (NL Community Accounts, 2014). However, since 2001, total student enrollment has started to rise again, increasing by 8.9% between 2001 and 2008 (LIM, 2009). Despite this increase in enrollment, all schools still have the capacity to accommodate a greater number of students. However, recruitment and retention of teachers has become difficult for the School Board and Conseil francophone (LIM, 2009; Conseil scolaire francophone provincial de Terre-Neuve-et-Labrador, 2014).

There is one school in Wabush, the J.R. Smallwood Middle School, which has a capacity to accommodate 1,000 students (Table 7-124). This school is also managed by the Labrador School Board. However, once students reach grade 8, they have to attend the Menihek High School located in Labrador City.

Labrador City is home to one of the 17 campuses of the College of the North Atlantic (CNA) in NL. The CNA offers post-secondary training in a variety of trades and continuing education. Approximately 300 full-time students attend courses per semester, while 30 students are registered part-time (CNA, 2014).

**Table 7-124 Schools in Labrador West, 2012**

| SCHOOL NAME | LOCATION | GRADES | ENROLLMENT 2014/2015 | SCHOOL CAPACITY* |
|---|---|---|---|---|
| A.P. Low Primary | Labrador City | Kindergarten to 3 | 424 | 600 |
| J.R. Smallwood Middle School | Wabush | 4-7 | 420 | 1,000 |
| Menihek High School | Labrador City | 8-12 | 617 | 800 |
| Centre éducatif l'ENVOL | Labrador City | Kindergarten to 12 | 36 | N/A |

Source: GNL Department of Education and Early Childhood Development, 2014.
*Source: LIM. 2009

The Continuing Education evening courses attracted more than 1,000 students in 2012, and offer the following programs periodically:

- construction/Industrial Electrician (One year Program-Red Seal Certification)22;
- engineering Technology (First Year);
- industrial Mechanic (Millwright) - Red Seal Certification;
- mining Technician (two-year program);

[22] The Interprovincial Standards Red Seal Program (also known as the Red Seal Program) was established more than 50 years ago to provide greater mobility across Canada for skilled workers. Today, it represents a standard of excellence for industry. Through the program, tradespersons are able to obtain a Red Seal endorsement on their provincial/territorial certificates by successfully completing an interprovincial Red Seal examination. The Interprovincial Standards Red Seal Labour Force Qualification Program acknowledges their competence and ensures recognition of their certification throughout Canada without further examination (Red Seal Program, 2014)

- office Administration; and
- welding (one-year program).

The CNA in Labrador City is an important training facility for the mining industry. The Labrador West CNA campus is the only campus in NL to offer a two-year Mining Technician program, and has been designated as a Mining Centre of Excellence (LIM, 2009). The Provincial Mining Technology Centre, located at the campus, had 150 students registered for full-time studies in 2010-2011 (IOCC, 2013).

There are no post-secondary education facilities in Wabush. However, students may attend the CNA in Labrador City.

*Educational Attainment*

The proportion of people with no post-secondary certificate is much lower in Labrador City (16%) compared to NL (28%). The number of people in Labrador City with high school diplomas is similar to the provincial ratio, but more people in Labrador City have apprenticeship of trade certificates (22% compared to 13%) and college degrees (27% compared to 20%). The population of Labrador City has a similar level of university education as the NL population in general.

Gender differences in education are shown in Table 7-125. Similar numbers of men and women have no high school certificate or have obtained a high school certificate in Labrador City. The difference in men and women's education is the following: within the 22% of people with apprenticeship or trade certificate, 74% are men and 26% are women. In contrast, more women have obtained college degrees (56% compared to 44% of men), and 71% of the 7% of people with bachelor degrees are women. However, more men have obtained graduate degrees, in a proportion of 65% compared to 35% for women.

**Table 7-125 Educational Attainment – Labrador City, 2011**

| | LABRADOR CITY | | | NL (PROVINCE) | | |
|---|---|---|---|---|---|---|
| | TOTAL (%) | M (%) | F (%) | TOTAL (%) | M (%) | F (%) |
| Population, 15 years old and over | 100 | 53 | 47 | 100 | 48 | 52 |
| No certificate, diploma or degree | 16 | 48 | 52 | 28 | 49 | 51 |
| High school certificate or equivalent | 22 | 51 | 48 | 23 | 46 | 54 |
| Apprenticeship or trades certificate or diploma | 22 | 74 | 26 | 13 | 66 | 34 |
| College, CEGEP or other non-university certificate or diploma | 27 | 44 | 56 | 20 | 43 | 57 |
| University certificate or diploma below the bachelor level | 3 | 49 | 49 | 3 | 42 | 58 |
| Bachelor's degree | 7 | 29 | 71 | 9 | 42 | 58 |
| University certificate, diploma or degree above bachelor level | 3 | 65 | 35 | 5 | 49 | 51 |

Source: Statistics Canada, 2011.

No information relative to educational attainment for Wabush in 2011 was released by Statistics Canada. However, the 2006 data shows that the proportion of people with no post-secondary certificate in Wabush was 19%. Twenty-eight percent of the population had obtained high school certificate, and 16% had an apprenticeship or trade certificate. Up to 25% had college degrees, and 9% of the Wabush population had a bachelor's degree. It is likely that 2001 education statistics for Wabush are similar to those of Labrador City.

Uashat mak Mani-Utenam

The following educational institutions are available to ITUM members:

- there is one childcare center in Mani-Utenam, the Auasis Center, with a capacity of 58 children. In Uashat, the CPE Kanitautshinaushiht can accommodate 44 children (RCPECN, 2013). There is currently one elementary school and one high school in Uashat: École Tshishteshinu (preschool and elementary) and École secondaire Manikanetish (high school). At least 169 children attended the primary school in 2012-2013, and 209 attended high school (Institut Tshakapesh 2014). The Manikanetish School employs five support staff (including the director), 24 teachers and two specialists. The school offers several optional programs, such as crafts, arts, sewing, sports, wood carving and hockey.
- in Mani-Utenam, there is one elementary school, named École primaire Johnny Pilot, where 224 children were taught in 2012-2013. Teenagers must travel to Uashat to attend high school. These schools are operated by the Institut Tshakapesh (Institut Tshakapesh, 2014).
- the Tshakapesh Institutes integrates traditional culture and language into the educational programs (Institut Tshakapesh, 2014). The Institute's objectives are also to offer the Innu population up-to-standard school programs for its children, and to promote the success of its primary and secondary students.
- according to a study conducted in 2001, barely 30% of people aged 15 and older finished their secondary V (Grade 11) studies. At the elementary school level, the education crisis was even more pronounced, with only 42% to 45% of students passing Grade 6. From 2000 to 2005, major investments were made by ITUM to improve schooling and education in the community. The graduation rate in Secondary V rose from 56% in 2000-2001 to 83% in 2003-2004 (GPS, 2006).
- compared to other Innu communities, Uashat and Mani-Utenam are located near Sept-Îles, where there are various possibilities in terms of post-secondary education. This means that young people do not need to leave the community to pursue their education. As indicated above, approximately 125 Innu are involved in various post-secondary programs at the Cégep de Sept-Îles (Industrie Québec, 2012). ITUM is hoping to build a post-secondary institution that would be specifically dedicated to meeting the needs of Innu communities.

*Educational Attainment*

Uashat mak Mani-Utenam education attainment compares to that of NNK and NIMLJ, and is significantly lower than in the neighboring City of Sept-Îles. Sixty-six percent of the population of Uashat and 62% of Mani-Utenam's population do not have post-secondary education certificates (Table 7-126), which are double the rates in Sept-Îles. The percentage of people with trades is 12% in both communities, and the number of people with college degrees was approximately half that of Sept-Îles (8% in Uashat, 10% in Mani-Utenam, compared to 17% in Sept-Îles) (Table 7-126). Only 2% of the population in both locations have a bachelor's degree, compared to 8% in Sept-Îles.

A greater proportion of the population with high school diplomas is composed of women. In Uashat, among the 10% of the population that completed high school, 57% are women, and this proportion reaches 67% in Mani-Utenam. However, many more men have completed apprenticeships or trade certificates: over 65% in Uashat, and over 80% in Mani-Utenam. The situation between both communities is different when it comes to the population with college degrees. In Uashat, equal numbers of men and women have obtained college certificates, but in Mani-Utenam, 61% of the population with college degrees are women, and 33% are men. Greater numbers of women have pursued high education: women represent 80% of Uashat's population with certificates below the bachelor's level, and 67% of Mani-Utenam's population. Generally, more women in both communities have obtained bachelor's degrees and graduate degrees.

Six percent of the population chose to study architecture, engineering and related technologies, while 3% chose business and management and education, and another 3% studies personal, protective and transportation services.

Sept-Îles

Several educational services are available in Sept-îles:

- Like in the province of Québec in general, government subsidized childcare centers, or Centre de la petite enfance (CPE), cost $7.30/day per child. Childcare in Sept-Îles is at capacity, and many childcare centers have long waiting lists. The lack of childcare services is partly due to new regulations that require childcare providers to be certified through a recognized course. To improve the situation, the Cégep de Sept-Îles offers childcare certificate courses for potential childcare providers to complete the program in less time (Cégep de Sept-îles, 2014). Additionally, the municipality offers a drop-in childhood education center for children aged two to five. The center offers activities aimed at the holistic development of children (Ville de Sept-Îles, 2014).
- The Commission scolaire du Fer operates seven French primary schools in Sept-Iles, and two secondary schools. A new primary school was opened in Sept-Îles in the fall of 2013.
- The Québec English School Board Association (QESBA) operates three Anglophone schools in Sept-Îles (QESBA, 2014): the Fleming Elementary School (Elementary, Sept-Iles); the Queen Elizabeth High School (Secondary, Sept-Iles); and the Northern Lights Adult Education and Vocational Centre.
- Sept-Îles has two post-secondary institutions: the Cégep de Sept-Îles and a branch of Université du Québec à Chicoutimi (UQAC). In addition, the Commission scolaire du Fer also offers continuing education programs, distance learning and high school completion for adults through the Centre de formation professionnelle et générale A.W. Gagné (Commission scolaire du fer, 2014).
- Courses at A.W. Gagné Sept-Îles are offered in partnership with the Commission scolaire du fer and other distance-learning institutions. Distance education courses are offered for those who wish to earn their high school certificate. A.W. Gagné also offers professional development programs adapted to the needs of the job market on the North Shore (Commission scolaire du fer, 2014).
- The Cégep de Sept-Îles offers eight technical diploma programs and four pre-university programs. Seven diploma programs are aligned with Université Laval and UQAC for those continuing onto a bachelor's degree. There are also partnerships that allow a bachelor's degree to be completed in two years instead of three. This applies to the nursing science program (UQAC), accounting and management (Université Laval), and information technology (UQAC and Université Laval) (Cégep de Sept-îles, 2014).

In May 2010, ArcelorMittal announced a CAN $800,000 donation to the Cégep de Sept-Îles to construct a pavilion for programs related to mining, including mineralogy training and industrial maintenance technology. The pavilion was inaugurated in August 2011 and now bears the name of *Institut de technologie minérale ArcelorMittal.* The Cégep also completed the construction of new residences in August 2012. For the 2011-2012 academic year, the college added a mineral technology (*Technologie minérale*) diploma program. The program prepares students to be technicians in mineral resource management. It is structured as an alternating work-study program with a paid internship semester. The program was first offered in the summer of 2012 in collaboration with mining companies in the region (Cégep de Sept-îles, 2014).

A new building has been added to the Cégep de Sept-Îles, representing an investment of $4.7 million. The building is dedicated to the industrial maintenance program. Courses were scheduled to start in the new building in the winter of 2014 (Radio-Canada, 2013d).

In addition, the Cégep is partnering with the Innu communities to offer training that matches the present and future labour force needs, especially in a context where ITUM has signed agreements with mining companies that guarantee them a certain number of jobs. At the moment, approximately 125

young Innu are studying at the Cégep de Sept-Îles, which corresponds to 13% of its total number of students (approximately 900 on a yearly basis). For example, a training program on train wagon operation is offered, though not exclusively to Aboriginal people. The Cégep hopes to support ITUM in the eventual creation of an Innu training center (Industrie Québec, 2012).

There is an UQAC branch in Sept-Îles with full-fledged undergraduate and masters programs.

*Educational Attainment*

Education attainment in Sept-Îles is, overall, similar to education attainment rates in Québec more generally. The proportion of people without post-secondary certificates in Sept-Îles is 30% compared to 22% in the province of Québec, and the proportion of people with high school certificates is almost the same, at 20%. The percentages of the population with apprenticeship or trade certificates and college degrees in Sept-Îles are 18% and 17%, respectively, which is very similar to provincial rates. The Sept-Îles population includes a high percentage of people with bachelor's degrees, i.e., 8% (Table 7-126).

Gender differences in education are reflected in Table 7-126, and the general education trends are in line with those observed at the provincial level. Similar numbers of men and women have obtained high school certificates, yet more men have obtained apprenticeships or trades certificates (62% of men compared to 38% of women). In contrast, more women have obtained college degrees (54% of women compared to 46% of men) or bachelor degrees (60% of women compared to 40% of men) and a slightly higher percentage of women have completed graduate degrees (53% of women compared to 47% of men).

**Table 7-126 Educational Attainment of Population Aged 15 Years and Over in Sept-Îles, Uashat and Mani-Utenam, 2011**

| | SEPT-ÎLES | | | UASHAT | | | MANI-UTENAM | | | QUÉBEC | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL (%) | M (%) | W (%) | TOTAL (%) | M (%) | W (%) | TOTAL (%) | M (%) | W (%) | TOTAL (%) | M (%) | W (%) |
| Population, 15 years old and over | 100 | 50 | 50 | 100 | 49 | 51 | 100 | 50 | 50 | 100 | 49 | 51 |
| No certificate, diploma or degree | 30 | 48 | 52 | 100 | 48 | 52 | 62 | 50 | 50 | 22 | 50 | 50 |
| High school certificate or equivalent | 20 | 50 | 49 | 66 | 43 | 57 | 10 | 39 | 67 | 22 | 46 | 54 |
| Apprenticeship or trades certificate or diploma | 18 | 62 | 38 | 10 | 67 | 29 | 12 | 82 | 18 | 16 | 61 | 39 |
| College, CEGEP or other non-university certificate or diploma | 17 | 46 | 54 | 12 | 50 | 50 | 10 | 33 | 61 | 17 | 44 | 56 |
| University certificate or diploma below the bachelor level | 3 | 44 | 55 | 8 | 40 | 80 | 2 | 0 | 67 | 5 | 41 | 59 |
| Bachelor's degree | 8 | 40 | 60 | 2 | 50 | 50 | 2 | 50 | 75 | 12 | 45 | 55 |
| University certificate, diploma or degree above bachelor level | 3 | 47 | 53 | 2 | 0 | 0 | 1 | 0 | 100 | 7 | 52 | 48 |

Source: Statistics Canada, 2011.

**Existing Literature**

The component description is based on a data collection on Statistics Canada website, and on a literature review of recent reports provided in particular by NNK, and on information provided by HML. Data sources were cited where applicable. This information has been completed through personal communication with key informants of the education sector in the LSA.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component.

**Recommended Measures for Improvement**

It is recommended that the proponent continue to collaborate with the communities of the LSA on initiatives to encourage youths to graduate and continue on to vocational training and/or post-secondary education levels and to increase opportunities for Aboriginal employment. Some measures are suggested in Section 7.5.3.5.

#### 7.5.3.3 Health Conditions and Services

The following subcomponents are considered:

- continued availability of healthcare services for local residents;
- workers' health and safety;

Given the location of the mine site, potential effects on these subcomponents will mostly be felt in the LSA, except for the effects on workers' health and safety, as most of the workers are from the RSA or from other parts of Labrador or in Newfoundland. It is important to note that potential effects of dust on human health was one of the most recurring concerns raised during consultations.

The main concerns raised during the public consultations (Chapter 4) were:

- air quality and dusts and air quality monitoring;
- effects on health;
- effects on Pinette Lake and on fish and fish habitat;
- information made available about potential health issues; and
- an agreement or a protocol would make things easier for healthcare employees.

Issues concerning potential effects on human health are presented in Section 7.5.2.2).

**Continued Availability of Healthcare Services for Local Residents**

The Howse Project worker's camp features a well-equipped nursing station, and a nurse is present on site 24 hours per day. In 2014, HML recorded 18 medical aids by the camp nursing station. Although there is no formal protocol for medical intervention, effective collaboration has been established between the HML nurse and the nurses working at the Schefferville CLSC. It does happen that for confidentiality or proximity reasons, workers accommodated in Schefferville go to the local CLSC instead of the camp dispensary. The Schefferville CLSC nurse has indicated that they have the capacity to help out when needed, without interfering with Schefferville's residents' services (Porlier 2014, *personal communication*). In addition, workers in need of radiography would have to go to Kawawachikamach, where the local physician goes once a week to read the X-rays. In case of serious emergencies, workers would be flown to Sept-Îles, even if they come from Labrador. In general, the presence of workers and their potential need for care affect the Schefferville CLSC in a limited way (Porlier, J. *personal communication*, 2014), may have a potential effect on Kawawachikamach's X-ray facility, and does not affect the NIMLK facility.

Availability of services was not raised as a concern. Further, there are no indications so far that the presence of workers imposed a burden on local health services or has prevented resident from accessing services, the continued availability of healthcare services for local residents is not considered as a VC.

**Workers' Health and Safety**

Occupational hygiene testing was conducted in 2012 and 2013 (Pinchin LeBlanc Environmental Limited, 2012; 2013), focusing on breathable crystalline silica and particulates, and a respiratory hazard assessment was conducted in 2014 (Davis Industrial Hygiene Consulting, 2014). The report lists a series of measures that are in place to deal with occupational safety, and breathable silica in particular. Such measures, which would apply to the Howse Project, have already been or will soon be taken by HML:

- all heavy equipment cabs were thoroughly cleaned and inspected for leaks around the seals;
- a wash bay was built at the mine site and a schedule was put in place to ensure regular cleaning of vehicles when temperature is above 0o C, between May and October;
- a maintenance program was implemented to ensure the heavy equipment cabs are kept clean and free of dust. Training was provided to the operators to ensure that they understood the importance of this;
- manometers were installed in all relevant heavy equipment to ensure positive pressure is maintained;
- a policy was implemented so that all heavy equipment windows would be kept closed during operation;
- two water trucks were commissioned to water the roads around site to reduce dust. One covers the road to Schefferville and one covers the worksite area;
- boot cleaners were added to the cafeteria entrance to reduce dust brought into the mud room;
- mud rooms were added to the entrances of all dorms so that workers could leave dirty boots and work clothes in them;
- a respiratory protection program was implemented; and
- the use of HEPA-equipped vacuums for cleaning was implemented.

Nonetheless, analysis showed that some worker samples are above the ACGIH exposure limits, and in some cases, above the "action level", defined as one-half of the ACGIH established exposure limit (0.50 * TLV). Only one sample was above the exposure limit, and four above the action level (Davis Industrial Hygiene Consulting, 2014). Therefore, the 2014 report made the following recommendations:

- Continue to use all existing controls as previously listed in Section 3.4 of this report.
- Implement the use of water trucks to suppress dust from plants 1 and 2, parking lots, and stockpiles.
- Implement personal hygiene practices for protecting workers from exposure to crystalline silica. Workers should wash their hands and faces before eating, drinking, or smoking.
- Workers should not eat, drink, or use tobacco products in dusty areas.
- Workers should receive training that includes the following:
    - Information about the potential adverse health effects of crystalline silica exposure
    - Discussion about the importance of engineering controls, personal hygiene, and work practices in reducing silica exposure
    - Instruction about the use and care of appropriate protective equipment (including protective clothing and respiratory protection).

In addition, HML has a draft Health and Safety Program (Volume 1 Appendix VII) and an Emergency Response Plan, and several measures to mitigate risks are included into the EPP (Volume 1 Appendix Ia). Other measures that ensure a safe working environment include the zero tolerance policy for alcohol and drugs. In cases where an employee is caught with or under the effects of drugs or alcohol, the employee is invited to deal with his issues, and the possibility of returning to work is re-evaluated afterwards.

Worker's health and safety is a rigorously regulated sector: it is assured through provincial and federal legislations, and companies have to observe the legislation in order to operate. Worker's health and Safety has been discussed here to reassure the workers, their families and the communities that HML is complying with all laws and legislations in this sector. To this end, generally Worker Health and Safety is not considered as a VC. Volume 1 Appendix VII presents HML's draft Health and Safety Program that will be operational throughout the Howse Project.

#### 7.5.3.3.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes NNK, NIMLJ and the town of Schefferville, located in the province of Québec. The RSA includes Labrador West (Labrador City and Wabush) and, in Québec, the City of Sept-Îles, and Uashat and Mani-Utenam (ITUM).

The temporal boundary for this component includes up until the end of the Decommissioning and Reclamation phase of the Project, as this is when the sources of effects will be operative.

**LSA**

NNK

*Health Services*

Health and social services are provided in Kawawachikamach at the Local Community Service Center (CLSC), which is managed by a board of directors composed of a majority of Naskapi, and is administratively linked to the CSSS de l'Hématite in Fermont.[23] The local CLSC was inaugurated in 2001 (NNK, 2014).

The Naskapi CLSC offers a range of health and social services to NNK's population. Three doctors and six nurses work on a rotating schedule (AANDC, 2014). The center deals with minor medical issues and psycho-social consultations, while patients in need of long-term care are transferred to Sept-Îles. The CLSC is equipped to offer the following services: X-rays, dentistry, ophthalmology, psychology, occupational health, pharmacy and laboratory. Specialized services are available on a monthly basis (Nalcor Energy, 2011; LIM, 2009). A dentist is shared between the Naskapi CLSC, Schefferville and MLJ (NML and PFWA, 2009). In addition to emergency or curative services, the CLSC also works on health prevention. Medication is available onsite. It should be noted that X-rays are only available at NNK CLSC for the region of Schefferville.

The CLSC is functioning at full capacity, and has been accumulating a yearly deficit since 2007. The services offered will eventually need to be adapted to the population increase that is anticipated in the next coming years, and also to the changing age pyramid and growing number of elders (LIM, 2009). As an indication, the CLSC provided over 1,000 psycho-social consultations in 2007-2008, and 300 under the Aboriginal Diabetes Initiative (NML and PWFA, 2009). The construction of a new CLSC was approved at the beginning of 2013. Construction should be completed in 2016 (NNK, 2014).

A series of health programs are offered, as well as numerous workshops on youth suicide, addiction, domestic violence, alcoholism, elder care, etc. Examples of programs include: the Fetal Alcohol Spectrum Disorders Program, the Prenatal Nutrition Program, the Home and Community Care Program and the National Native Alcohol and Drug Addictions Program (NNADAP) – to help those who deal with drug, solvent abuse, and alcohol addictions (NNK, 2014).

Other health-related activities held in the community include:

- Spiritual Week;
- National Aboriginal Addictions Awareness Week;
- Elder's Christmas Feast;
- International Women's Day;
- Brighter Futures Program;
- Maternal and Child Health Program;
- Indian Residential School Resolution Health Support Program;
- Head Start Program;

[23] For most Aboriginal reserves, health services are managed by Health Canada. However, this responsibility was transferred to Québec in the NEQA (1978).

- Aboriginal Diabetes Initiative;
- First Nation and Inuit Childcare Services Initiative;
- Family Violence Program;
- Québec en Forme (NNK, 2014).

The National Aboriginal Youth Suicide Prevention Strategy, funded by Health Canada, is also active in the community and supports several activities, notably the Applied Suicide Intervention Skills Training and the Dialogue for Life Conference (NNK, 2014).

The Naskapi CLSC is working in a way that integrates Naskapi culture while respecting the obligations established by Québec health and social services and those related to the NEQA. The Naskapi CLSC faces several challenges, in particular the recruitment and retention of non-Native employees (NNK, 2012).

*Health and Safety Conditions*

Because of the confidential nature of the files, it is very difficult to obtain information or statistics on the health conditions of community members. However, the 10 community health priorities that were identified by the CLSC Naskapi Board of Director and the Nations' Health Committee provide an idea of the most pressing issues with which community members are dealing:

- Diabetes;
- Addiction;
- Mental Health;
- Health Education in Naskapi;
- Maternal and Child Health;
- Physical and Mental Disabilities;
- Chronic Diseases;
- Elder Services;
- Promotion of Health Living Conditions; and
- Health and Human Resource Development (NNK, 2014).

In 2009, the two major health problems in the community were diabetes and drug and alcohol abuse (NML and PWFA, 2009). This was also the case in 2014, as confirmed during the consultations (various participants). The number of diabetes cases in NNK, NIMLJ and Schefferville has exploded in the last 30 years, being seven times higher than in the Canadian population. An increase in breathing problems is also noticeable among the Native population (Gaudreault 2014, *personal communication*), and may be attributed to promiscuity, second hand smoke, and mold and dust in homes (Cloutier 2014, *personal communication*).

Several children have dermatitis that varies in severity. These skin problems may be related to a poor diet, quality of life, or home and personal hygiene (Gaudreault 2014, *personal communication*).

In 2013-2014, the Naskapi Police received a total of 813 calls, an increase of 58% compared to 2012-2013, and by 426% compared to 2010-2011. In 2013, there was a marked increase in the number of calls for conjugal violence (a total of 81, and an increase of 58% compared to the previous year), and in the number of alcohol-related calls (a total of 368, and an increase of 63% compared to the previous year). Alcohol-related calls are the most frequent and account for 45% of the total calls. In comparison, drug-related calls are far less frequent and account to 5% of the total number of calls. The number of attempted suicides seems to vary from one year to the next, yet there were 16 calls in 2013-2014, which represented the highest number in five years. Sixty percent of the calls concern men (NNK, 2014).

It is hard to explain why there was such an increase in the number of calls in the recent years. The Chief of the Naskapi Police Force has noted that violence is often related to alcohol abuse, as well as the mischief committed in the community (e.g., breaking windows). He also observed that the alcohol-related calls may concern a few individuals who have addiction issues and are known by the Naskapi Police Force. The Naskapi Police Force does approve of the zero tolerance policy that was adopted by HML at their work camp (Martin 2014, *personal communication*).

NIMLJ

*Health Services*

The dispensary of Matimekush, funded by Health Canada, provides a wide range of health and social services to NIMLJ's population. The services offered compare to those offered by the CLSCs of Schefferville and Kawawachikamach. The staff is composed of three nurses, a nutritionist, psychologists, a liaison officer, and doctors, in addition to administrative support staff. The mission of the dispensary is to adequately address the needs of its population through emergency services, general medical services, prevention and medical and social emergency intervention (NIMLJ, 2014).

The dispensary, which is relatively new, shares the doctor's services with the Schefferville and NNK CLSCs. It is equipped with two observation beds, and specialists come on a rotation basis to provide services to the population (ORL, ophthalmologist, dentist, physicians and optometrist) (NIMLJ, 2014).

Social services are also available to NILMJ members. The dispensary offers programs for people with specific needs, particularly those who went to boarding schools, who suffer from addictions, for suicide prevention, and for elder care. Youth protection services – in case of family violence and/or child abuse – are available, as well as care for those who suffer mental health issues. Social services in MLJ focus on six objectives that are largely family-oriented:

- promote and reinforce early intervention for children and their parents;
- promote and reinforce less disruptive measures and prevention services for families;
- promote child development in their family of origin;
- prevent and reduce the number of crisis situations;
- prevent and reduce the number of child abuse cases and youth protection interventions; and
- reduce the number and duration of child placements outside their families and community of origin (NIMLJ, 2014).

There is also a women shelter that provides care for women who are undergoing family violence (physical and psychological).

*Health and Safety Conditions*

As was the case for NNK, it is difficult to obtain precise information on the health conditions of the MLJ population.

The most frequent health problems in MLJ include inadequate nutrition, diabetes and smoking (NML and PWFA, 2009). In 2008, the doctors and nurses of the MLJ dispensary have seen 525 patients, and another 50 people visited the clinic for issues such as addiction and to seek psychological help. Addictions and social problems have been identified as the major cause of school drop-outs (NML and PWFA, 2009). At the moment, the main health problems encountered at the dispensary of Matimekush can be attributed to promiscuity (houses are overcrowded), smoking and second-hand smoke, as well as dirt and mold in homes (Jean-Hairet 2014, *personal communication*). An increase in breathing problems has been noticed since 2009, yet given the conditions in homes and smoking habits, it is difficult to draw a clear association with the dust generated by the mining activities, and no studies have ever been conducted on this issue.

Violence among the youth has also been identified as an important problem in the community. According to the local CLSC sociologist, youths are violent in part because they cannot self-identify with either the traditional culture or with the modern culture of the majority. Many young people suffer from low self-esteem problems (Radio-Canada, 2012g). Alcoholism is frequent and has an effects on health and social life (Jean-Hairet 2014, *personal communication*).

At the moment, the main safety issue in the community is alcohol consumption (Bouchard 2014, *personal communication*). Most calls come from intoxicated community members for disturbing the peace, assault, or threats. Arrivals of drugs for consumption are monitored as closely as possible in the community. Recently, the police found 825 pills of speed on the Schefferville train (Bouchard 2014, *personal communication*).

Schefferville

*Health Services*

Schefferville is home to the CSSS de l'Hématite, and is administratively linked to Fermont's facility. In 2007-2008, the center had 225 patients and performed 946 interventions (LIM, 2009). Most of its clients are the non-Aboriginal population of Schefferville.

The CSSS offers the services of a nurse and a doctor on a permanent basis. The doctor shares his time between the CSSS de l'Hématite, the Matimekush dispensary and the Naskapi CLSC. In case of emergency, patients are treated at the CSSS de l'Hématite, where three nurses work on eight-week rotations (Porlier 2014, *personal communication*). Outside the clinic's working hours, the attending nurse remains on call 24/7, and can be reached by the doctor if necessary (Porlier 2014, *personal communication*).

Several services are offered by the CSSS de l'Hématite, including:

- observation beds;
- full-time ambulance service;
- pharmacy (via Fermont's drugstore);
- pharmaceutical patient follow-up;
- emergency/medical evacuation;
- vaccination;
- blood tests; and
- obstetric follow-up (NML and PWFA 2009).

A new building is currently being built for Schefferville's CLSC. For years, the CLSC was located in a renovated two-story house, which was inadequate for patients' care. However, the Schefferville's CLSC nurse indicated that better choices could have been made in terms of the equipment that will be available in the new facility. Patients will now be able to stay for more than 24 hours if required, yet there will not be more staff to respond to demands. A new residence for doctors was also built in 2011.

*Health and Safety Conditions*

In 2010, the *Agence de la santé et des services sociaux de la Côte-Nord (*ASSSCN) gave the firm Léger Marketing the mandate to conduct health surveys in Côte-Nord, including one in the Caniapiscau MRC. The survey excluded the Aboriginal communities of Matimekush-Lac John and Kawawachikamach, but

included the Aboriginal population living off-reserve and Schefferville's population. The data for the survey was collected in 2011.[24]

The survey revealed that 95% of the Caniapiscau MRC population is in good physical health, and 97% in good mental health. Almost everyone (97%) was satisfied of their overall life conditions, and 41% stated that their life was not stressful.

Although 46% of the population exercises at least 30 minutes each week, one of the major health problem identified was excess weight, which affects 62% of the population of the Caniapiscau MRC. Another issue identified was the drinking habits of the residents: 78% drink alcoholic beverages regularly, compared to 70% in the rest of Côte-Nord. In addition, 31% of the residents smoke cigarettes on a regular basis.

Chronic diseases affect one person out of three, which is less than in Côte-Nord region more generally (41%). Thirteen percent of the population suffers from hypertension, 6% from asthma, and 5% from diabetes. However, 97% of the diabetics and 90% of those suffering from asthma have found treatment or adequate information to control their diseases.

At least 27% of Caniapiscau MRC residents have indicated their concerns regarding industrial pollution, compared to 34% of Côte-Nord residents. However, 32% of residents cited second-hand cigarette smoke as causing the most harm to their quality of life (ASSSCN, 2010).

Although quality of life is perceived as excellent by Caniapiscau MRC residents, little is known regarding the health of Schefferville's residents in particular. There have recently been concerns due to the increasing respiratory problems related to the quantity of dust in the air caused by the mining industry (Radio-Canada, 2012d). However, this could not be confirmed at the Schefferville CLSC.

As discussed above, safety issues in Schefferville are often related to alcohol consumption, and include mischief and petty crimes (Bouchard 2014*, personal communication*). Schefferville and MLJ share the same police force (Sûreté du Québec), and joint statistics are kept. It is thus impossible to obtain information that concern Schefferville residents only.

**Existing Literature**

The component description is based on a review of official reports and of statistics providing mainly from Statistics Canada. All data sources were cited throughout the text where applicable. The information available has been completed through personal communications with key informants of the health sector in the LSA.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component.

**Recommended Measures for Improvement**

Several measures could be put in place to improve services, save time and ease the work of the treating nurses and physicians, and to ensure that services remain available for residents in the future. These measures would also play a preventive and protection role for the workers:

- all workers should have the prescription medications that they need with them for their rotation period;
- all workers should submit a list of the medication they take to the camp's nurse in case of emergency or medical treatment;

[24] The survey was carried out by phone, but the methodology does not specify how many survey participants were from Schefferville. However, the survey results are based on the 346 interviews in the Caniapiscau MRC, and the margin of error is estimated at 5.27% (ASSSCN, 2010)

- all workers should have their vaccination record with them, and should automatically receive tetanus vaccine and flu shots;
- workers from Québec should have their medicare cards with them at all times;
- the camp nurse should have a copy of all worker medical files, which should be translated into French in case of emergency, given that patients could be transferred to Sept-Îles;
- workers should have receive certain information prior to accepting a job at the site:
    - availability of medical staff: patients are not used to dealing with nurses;
    - dentistry services are not available for workers;
    - what happens in case of medication evacuation, with patients sent to Sept-Îles;
    - Schefferville nurses do not speak English fluently, and it might be difficult to obtain health services in English in the case of a transfer to Sept-Îles.

Language is an issue for local healthcare services in two major ways. Labrador workers who do not speak French may have to interact with Schefferville CLSCs, where the nurses might not speak English. Additionally, in case of emergency or severe injury, all workers are automatically transferred to the Sept-Îles hospital, to which Schefferville's CLSC is administratively related. In such a case, Anglophones from Labrador end up in the francophone Sept-Îles hospital, which is equipped with a translation service. Having a medical file in French would then help, but the problem runs deeper given that their relatives may also only speak English. It would perhaps be relevant for HML to develop a protocol in which workers from Labrador could be sent to Labrador City instead of Sept-Îles. The quality of the health infrastructure would allow for such transfers (Section 7.5.3.3). This would also accommodate workers from the IN or NCC.

Finally, there was a period in the summer of 2014 when there was no nurse available at camp. This situation has temporarily put an additional burden on Schefferville CLSC staff. HML, which is responsible of the Timmins camp, has indicated that this situation should not occur again in the future.

Taking into account the concerns raised during the consultation, HML will continue to observe effects on worker's health in order to improve the measures in place and keep exposure levels below the action level in June 2015. Sampling intervals were increased in 2015, and exceeded the minimum sampling frequency in the case of silica sampling. HML will continue to monitor the health of workers ensure that all precautionary measures are in place to maximize worker protection by the time the mine is in full operation. The HSE Committee will be made aware of the sampling results, and be given the opportunity to propose additional measures to HML. Results and measures will also be communicated to workers in the LSA and RSA to alleviate the concerns of the workers' families.

A Training Control Plan is defined in EPP in order to ensure that any training requirement arising as a result of the PEMP is adequately managed. Hence, contractors are required to train their personnel in environmental, health and safety matters. This should be enforced by HML.

#### 7.5.3.4 Infrastructure and Services

The section that follows describes the infrastructure and the services that are available to the communities in the LSA and RSA.

For the infrastructure component, the subcomponents are the following:

- availability of public services and infrastructure for residents;
- housing in the LSA;
- maintenance of social stability; and
- access to the local transportation network, access to land, and road safety.

These subcomponents are unique to the LSA given that the overall DSO project will not increase, for instance, the traffic on the railways or the level of activities in Sept-Îles area.

The main concerns raised during the public consultations (Chapter 4) were:

- there is a need for a bypass road for access and safety reasons, such as:
  - speed;
  - one-way escorts; and
  - presence of machinery;
- issue of housing in Schefferville and in Aboriginal communities;
- difficulties relative to the expansion of Schefferville and concerns regarding the capacity of the Schefferville infrastructure;
- the city cannot expand anymore. There are only six lots left for expansion in 2014 (there were 125 in 2012);
- infrastructure and facilities in the community are not well maintained: some street lights are broken, sidewalks and road need maintenance and major repairs. There is no financing. The Council would like support from HML;
- railway traffic and priority is given to to ore trains on the railway. Passenger and freight transport is less possible. Freight is a particular issue in the summer. The construction period is short, and it becomes more difficult to bring in materials, groceries, all types of supplies (May-December). Sometimes (3-4 week period) waiting time, which causes lost–payments for carpenters, staff. This situation is worse because of increased traffic;
- vehicles drive too fast, which creates more dust;
- access to the territory is a very important issue and the bypass road would better ensure this access (access via the Timmins-Kivivik road was made available starting in the Summer of 2015); and
- ski-doo access is not possible because of new traffic on the road, and trucks leave rocks behind.

**Availability of Local Services and Infrastructure for the Residents**

Given that the workers who will be employed for the Howse Project Construction and Operation phases will be based at HML's Timmins camp, there is very little chance that workers will use the public and recreational services and infrastructure in the Schefferville area. The exception would be health services, which were discussed in Section 7.5.3.3, although there is a first-aid facility, and a nurse on duty 24 hours per day, seven days a week at the camp. Only local First Nation workers or workers from Schefferville will have the opportunity to commute to their homes by bus before and after their 12-hour shifts.

Given that the Howse Project will rely on HML's Timmins camp to accommodate its workers, all sanitary installations (land-fill, water, sewage, etc.) will remain the same and will not need to be upgraded. Electricity supplies will continue to come from the Menihek Generating Station surplus and will be sufficient to meet the needs of the Howse Project. The rest of the needs will be filled by diesel generators. Accordingly, the energy needs of the Howse Project will have no negative effects on Schefferville, MLJ and Kawawachikamach electricity supply (NML and PFWA, 2009).

Some of Schefferville's infrastructure is currently being used for HML's DSO project, and its use should remain stable with the construction and operation of the Howse Project, as it will maintain rather than increase the production level of HML's DSO project.

For instance:

- workers are flown in and out to/from the Schefferville airport. The number of workers who transit via the airport will not increase once the Howse Project is in construction or operation;
- workers will be accommodated at Timmins camp site; and
- however, the workers who transit via the airport also use the local road network to and from airport. Pick-up trucks do generate dusts and come into the city with dirt from the

mine site. A wash bay has been built at the mine site to minimize the effects of dust coming from the mine site into the communities. It operates between May and October, and can be used by all vehicles. In addition, during dry periods, a water truck will be used to minimize the dust generated by the vehicles.

Infrastructure in Kawawachikamach will not be affected as it is located further from the mine site. Only Naskapi workers will return to their homes after work.

This also applies to the community recreational infrastructure. Aside from special events held in collaboration with HML, such as hockey tournaments, workers housed at the Timmins camp will not be using the recreational infrastructure located in MLJ, Schefferville, or Kawawachikamach.

Accordingly, the Howse Project should not have negative effects on the availability of local services and recreational infrastructure for the residents. The same observation is valid for the facilities of the RSA (Wabush and Sept-Îles airports for example). This subcomponent is thus not retained as a VC.

**Housing in the LSA**

Schefferville has a limited capacity for housing, which is also the case for MLJ and Kawawachikamach. When the mining industry was booming in 2011 and 2012, finding temporary or long-term accommodation in Schefferville was difficult. The Howse Project should not have an effect on housing in Schefferville, given that all workers will be accommodated at the Timmins camp. In cases of the camp being temporarily overbooked, HML also has its own accommodations in Schefferville. HML has also booked a number of rooms at the recently built Innutel, which is a positive economic benefit for MLJ.

The Howse Project will have little if any effect on housing in the LSA, and housing is thus not considered as a VC. Given that there will be no need for an additional workforce in Sept-Îles, there will be no effect on housing in the RSA either.

**Maintenance of Social Stability**

"Social stability can be threatened when a transient labour force, especially one composed primarily of highly paid and predominantly single men, takes up residence in or near a small community, especially an Aboriginal one. The danger of such tensions is especially great when the transient workers have more disposable income than local residents" (NML and PFWA, 2009). This is especially true when workers are accommodated within communities, and these interaction need to be thoroughly assessed (IFC and EBRD, 2009).

In the particular case of the Howse Project, the Timmins camp is located in Labrador, 25 km from Schefferville and Matimekush, and has been in place for the past three years. During this time, very few relational incidents have disrupted social stability in Schefferville, MLJ or Kawawachikamach. Disturbances have been associated with the traffic and dust generated by the current mining projects in the area. The fact that the workers for the Howse Project will live at camp, and will work 12-hour shifts reduces the risks of social disturbances. Workers who transit between Schefferville and the camp are transported by bus, along with the workers from MLJ and Kawawachikamach. A zero tolerance policy for alcohol and drugs at the camp has also been established and enforced for safety reasons.

Interviews with the SQ officer in Schefferville and with the NNK Police force confirmed that most of their interventions in Schefferville, MLJ and Kawawachikamach are not related to the presence of workers, but more to alcohol abuse, family violence or mischief (Martin 2014, *personal communication*); Bouchard 2014, *personal communication*). Incidents at the camp are rare, but nonetheless, an agreement was recently signed between the Québec and Labrador police forces, giving full powers to Québec's SQ officers to intervene in Labrador when necessary. This agreement was signed on August 31, 2014. Both officers interviewed indicated that a long-term collaboration with HML has been established. An example of this collaboration is the adoption of a Joint Committee on Emergency Measures in which HML will be involved (Chapter 4).

Given the current limited effects on social stability and the measures in place to contain and minimize these effects, the maintenance of social stability is not considered as a VC.

**Access to the Local Transportation Network, Access to Land, and Road Safety**

As described in above, the local transportation network located northwest of Schefferville is currently used by HML and the local population. Several concerns were raised regarding the road network and its safety in relation to the conflicting types of uses – industrial versus recreational/subsistence activities – and these roads provide access to harvesting lands for both the Innu and the Naskapi (Figure 4-1: Rosemary Lake area, Goodwood area, Greenbush, for example). Accordingly, this subcomponent is considered as a VC and includes a set of issues that are intrinsically linked: the road network has become important in the practice of harvesting activities, especially in a context where land-users have less time to dedicate to these activities. In turn, given the multiple uses of this road, safety issues are becoming a concern, especially for harvesters. At the request of local First Nations Communities, the proponent has upgraded existing IOCC roads and therefore made available the Timmins-Kivivik bypass road since August 2015, which helps in reducing safety issues that relate to the multiple uses of the main road.

#### 7.5.3.4.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the NNK, NIMLJ and the town of Schefferville, located in the province of Québec. The RSA is where the anticipated project effects are expected to be indirect and to have low levels of influence on the component. For this component, this area includes Labrador West (Labrador City and Wabush), Sept-Îles, and Uashat and Mani-Utenam (ITUM).

The temporal boundary for this component includes up until the end of the Decommissioning and Reclamation phase of the Project, as this is when the Howse Project will no longer have an influence on the LSA as the sources of effects will not be operative.

**LSA**

NNK

*Housing*

In 2011-2012, Kawawachikamach had 167 housing units (NNK, 2014), where an average of 3.9 people lived (Statistics Canada, 2011). According to APNWL, a total of 162 units existed in 2014, with an average household size of 5.3 persons per unit. Houses are owned by the NNK Band Council. Since the building of the community at the beginning of the 1980s, an average of three to four houses have been constructed every year (NNK, 2014). Beneficiaries of the Social Assistance Program pay a rent of $100/month, while other tenants pay $40/week, an amount that has remained unchanged since 1983.

Kawawachikamach is undergoing a shortage of housing, and new houses are allocated on a first-come, first-served basis, according to a list held by the Band Council. At the end of the 2013-2014 fiscal year, the list contained 130 requests for houses, and the oldest request dated from 1997. According to APNQL, in 2014, needs for new dwellings were estimated at 200. Some of the applicants currently live outside the community (NNK, 2013). Each year, 10 to 15 houses are renovated, and two new houses are built (Corbeil 2014, *personal communication*).

*Transportation*

Kawawachikamach is located approximately 25 km from Schefferville, to which it is connected by road. This road link provides Kawawachikamach with access to the QNS&L railway and the Schefferville's airport infrastructure. NNK is responsible for the maintenance of the road that connects Schefferville to the Reserve.

*Community Services*

Generally, the Department of Public Works (DPW) is responsible for the maintenance of the community infrastructure, shown in Table 7-127.

**Table 7-127 NNK-owned Buildings, 2014**

| NNK BUILDINGS | COMMENTS |
|---|---|
| Municipal Garage | Built in 1981; renovated in 1999 |
| Water Pumping Station | Built in 1982; Renovated in 2006 |
| Sewage Pumping Station | Built in 1982 |
| Building for Sewage Lagoons | Equipment upgraded in 1992-1993 |
| Nation Office | Built in 1986; renovated in 2001-2002 |
| Filling Station | Built in 1989 |
| Radio Station | Built in 1993 |
| Police Station | Built in 1995; rebuilt in 2001-2002 |
| Ice Rink Changing Room | Built in 1996 |
| Sachidun Childcare Center | Converted into childcare center in 1997; renovated in 2001 |
| Dolly Ridge Tower and Equipment Shed Fire Station | Purchased in 1998 |
| Jonathan Shecanapich Memorial Fire Station | Built in 1999 |
| Recreation Facility | Completed in 2001 |
| Community Center | Built in 2002-2003 |
| Air Schefferville Hangar | Purchased in 2007-2008 |
| Naskapi Miiywaayimuun Miichiwaahp | Purchased in 2008-2009; located in Sept-Îles |
| CLSC Personnel Residence | Built in 2009-2010 |
| New Municipal Garage | Built in 2011-2012 |
| Wastewater Technician Building | Built in 2012-2013 |
| Habitaflex II – Two (2) Units | 2 modular units purchased and erected in Schefferville |

Source: NNK, 2014

Kawawachikamach has its own police force according to an agreement between the Cree Regional Authority (CRA) and the governments of Québec and Canada (AANDC, 2014). The Kawawachikamach police force is composed of five constables and one auxiliary helper (Martin 2014, *personal communication*). In 2013-2014, eight people were employed by the Naskapi Police Force (NNK, 2014). The police are equipped with five vehicles, including a snowmobile, an all-terrain vehicle, two pick-up trucks and one four-wheeler (NNK, 2014).

The NNK has a Volunteer Fire Department Service that is run by a Fire Chief, an Assistant Fire Chief, a Director, and a total of total of 20 Naskapis volunteer firefighters. The fire station is equipped with one truck and regular firefighting equipment. Six fires/accidents were recorded in the last fiscal year (NNK, 2014). Kawawachikamach, MLJ, and Schefferville have now completed the development of a joint emergency preparedness plan to make collaboration easier for all types of emergencies; HML is a participating member (see Chapter 4).

Kawawachikamach has a recreational centre that includes an outdoor ice rink, a swimming pool, a gymnasium, a workout room and a baseball field (NML and PWFA 2009). The center employs six people permanently (NNK, 2014). The pool was closed during the 2013-2014 fiscal year, and repairs took place in late summer 2014 (NNK, 2014). Construction of a new arena has begun.

The Naskapi Community Center offers a range of activities for young Naskapis, including Girl Guides, family reunions, community feasts and gatherings, and festivities of all sorts. It employs a manager, and assistant manager, a janitor and youth animators, and it is equipped with a multi-purpose room, a small library, and is home to the Youth Center. The Youth Center is a place for young people to "hang out", and is equipped with a pool table, several games, and computers with internet connection (NNK, 2014).

A summer day camp for kids and teenagers aged 5 to 14 years old takes place during the warm season. Approximately 80 children attended the camp in 2013, and 19 staff prepared and supervised the activities. Other recreational activities for youth included the summer and winter circus camps, and the winter carnival (NNK, 2013).

NIMLJ

*Housing*

According to Statistics Canada, there were 200 housing units in MLJ in 2011. On the other hand, statistics from the APNQL for 2014 state that there are 188 units in MLJ, with an average size of household of 3.9 person/unit, and a need for 112 new dwellings. The housing backlog in MLJ is an important issue for the community (APNQL, 2014).

The Hotel Innutel Rodeway, built in 2013, provides temporary lodging in Matimekush. It has 30 rooms.

*Transportation*

Matimekush is located within the limits of Schefferville, and therefore shares its road, rail and air connections. Lac John is connected by road to Schefferville and Matimekush, as it is located on the road to Kawawachikamach.

Tshiuetin Rail Transportation (TSH) belongs to the NNK, NIMLJ and ITUM. Since 2005, TSH has managed the portion of the QNS&L railway located between Emeril Junction (Labrador West) and Schefferville, a distance of 200 km (TSH, 2014). The train station in Schefferville employs five people on a permanent basis (TSH, 2014). It is equipped with a maintenance garage (built in 2007). The service is available for both passengers and freight. The passenger train stops at every station along the way (Cordova 2014, *personal communication*).

Freight transportation is the most important business for TSH. It is expected that over 9 Mt of iron ore will be transported yearly by 2015, which should create and maintain approximately 15 permanent jobs and 40 seasonal positions and generate substantial revenues for TSH shareholders. In order to be up to the task, TSH hopes to invest $75 million in the next 10 years to rehabilitate its rails. Funds would come from the mining industry and from the provincial and federal governments (Industrie Québec, 2012). HML and LIM have jointly invested over $21 million for improvements to the railway operated by TSH.

TSH also provides passenger and freight rail service between Schefferville and Sept-Îles. TSH currently transports less than 1 Mt of freight annually but can carry up to 8 Mt every year (Cordova 2014, *personal communication*). Between 120 and 164 freight cars are currently used for each trip. The passenger train has priority over the freight train, the latter using the sidings to allow the passenger train to pass on the main line. The passenger train makes about 104 round trips every year, carrying between 15,000 and 17,000 passengers per year (Cordova 2014, *personal communication*).

*Community Services*

Some community services in MLJ are shared with Schefferville (sewage, waste disposal, roads, water, etc.). The *Sûreté du Québec* (SQ) based in Schefferville currently provides police services to the NIMLJ

community (NML and PWFA, 2009). [25] Fire protection services are provided by the municipality of Schefferville (Nametau Innu, 2014), as are sewage services (NML and PFWA, 2009).

MLJ is equipped with a community center, a community radio, a church, an arena, a library and a gymnasium. The arena was recently renovated. The Youth Center provides a space where youth can meet up, hang out, and benefit from the cultural and recreational activities that are periodically organized. The Youth Center offers the Ushu summer camp, which proposes outdoor activities to demonstrate the value of traditional activities and Innu culture to the young people of the community. The camp is offered to kids aged between 5 and 17 years old.

Schefferville

*Housing*

After the closing of the IOCC, many houses in Schefferville were destroyed. In 2011, there were 178 private dwellings in Schefferville (Statistics Canada, 2011). The municipality experienced an economic boom in 2011-2012 due to mining activities, which caused a shortage of housing, both for long-term and short-term accommodation. At the moment, the city cannot expand its territory further for the construction of new houses, as all of the lots have been bought.

Three hotels provide short-term accommodation in Schefferville:

- Hotel/Motel Royal;
- WedgeHills Lodge; and
- Hotel Auberge Guest House.

Hotel occupancy data for hotels in the region are unavailable.

*Transportation*

Schefferville's road network is not connected to any provincial roads. Locally, Schefferville has an 8-km "network of all-weather" gravel roads that were built back in the 1950s. This network reaches Kawawachikamach and was extended to include Matimekush at the end of the 1990s. The municipality maintains and upgrades the road network, which is connected to the Schefferville airport and train station. HML has entered into discussions with the Québec Government to support an initiative for the pavement and rehabilitation of the local municipal roads. According to information received from the Québec Government, it is possible that road pavement work could begin in the summer of 2016.

Another set of roads covering approximately 200 km were built during the IOCC mining operations and have been left unmaintained since 1982, except for those located within the municipality. These "historic roads" are nonetheless still used by the residents of Schefferville, MLJ and Kawawachikamach. They may be used by pick-up trucks and ATVs in the summer, or snowmobiles in the winter. Some of these roads are also located within the Howse Property LSA (see Figure 7-37).

Schefferville is equipped with an airport that belongs to Transport Canada (TC) but is managed by the Schefferville Airport Corporation, jointly owned by the NNK and NIMLJ. The terminal was built in 1971, and there is a paved runway, a fire hall and a garage (NML and PWFA, 2009). Air Inuit is the main user of the Schefferville Airport, and operates flights between Sept-Îles and Schefferville on a daily basis, and two flights a week between Schefferville and Québec and Montréal. Provincial Airlines also offers regular flights, with one commercial flight between Wabush and Schefferville three days a week. Air Inuit, and Max Aviation provide charter flights as required. Nolinor also provides services, mostly for HML.

[25] The costs of the SQ services in Aboriginal communities have increased by 60% over the last 10 years (Radio-Canada, 2012h)

*Community Services*

Police services are provided by the SQ, with six police officers: the director and five patrolmen (Bouchard 2014, *personal communication*). Two full-time officers are on call 24 hours/day, seven days/week, in addition to their official daily work hours five days a week. If interventions are needed outside these hours, a dispatch service located in Baie-Comeau will call the officers on duty. The SQ also provides services for Matimekush and may occasionally provide support to the Naskapi police force (NML and PFWA, 2009). As of August 31, 2014, SQ officers are also sworn special constable of Labrador, which gives them the authority to intervene in emergencies and preliminary investigations in Labrador without having to ask the permission of Labrador City police officers.

Firefighting services in Schefferville also extend to Matimekush, which shares the costs of the services. Recruitment of volunteer firefighters is a significant challenge, as is supporting the costs related to upgrading equipment to government standards and training new volunteers (NML and PFWA, 2009).

The Schefferville waste disposal site is also used by the NNK and NIMLJ. The site was expected to last 21 years, but in the absence of a waste management plan, its lifespan is decreasing, as some of the waste is not appropriate for this kind of disposal. Another waste disposal site is reserved for old vehicles.

Schefferville's drinking water directly comes from Knob Lake (MDDELCC, 2014). The water gravitates to the pumping and chlorination station, and the water is distributed to both Schefferville and Matimekush. A new wastewater treatment system was built in 1999. The current water and sewage system dates back to 1955.

**RSA**

Labrador West

*Transportation*

The communities of Labrador West and Sept-Îles are far from the proposed Howse Property, but workers, materials and equipment for the Project will likely move through Labrador City and Wabush. This section discusses regional services that may be relevant to the population and industry of the Schefferville area. Current operations in the Sept-Îles area will not change if the Project is approved.

The Labrador West transportation infrastructure includes a road / highway network. The Trans Labrador Highway (Route 500) extends from Happy Valley/Goose Bay to the Québec border west of Labrador City. This highway does not connect to the Schefferville area.

The QNS&L connects Labrador West and Québec but not the Canadian rail network. The QNS&L transports iron ore products, goods and freight for other enterprises in Labrador West (IOCC, no date). QNS&L is a common rail carrier and each company that uses the system manages its own rail cars. Again, passenger rail service is available from Schefferville to Sept-Îles on TSH's rail service and is provided by TSH.

Wabush Airport is operated by Transport Canada, with commercial flights offered by: Air Canada, Air Canada Jazz, Provincial Airlines, Air Inuit, Pascan Aviation and Air Liaison. Private charters also use the Wabush Airport (TC, 2013). The airport provides connections to points within Newfoundland and Labrador and Québec (Figure 7-37).

Aircraft and passenger traffic have both increased at Wabush Airport due largely to strong mining industry and construction activity (Table 7-128). Passenger movements increased by 82% between 2004 and 2010 (TC, 2010; 2013). The total number of passenger movements exceeded 200,000 in 2012 (Dooley, 2013).

**Table 7-128 Wabush Airport Passenger Movements (2004-2010)**

| YEAR | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|
| Passenger Movements | 54,756 | 57,993 | 67,180 | 71,344 | 86,416 | 78,078 | 99,579 |

Source: TC, 2010

Aircraft movements at Wabush Airport reached 25,910 in 2012 (tripled since 2009) (TC, 2013a). Aircraft movements increased most noticeably from May to October (Table 7-129). Transport Canada has developed a plan for improvements to Wabush Airport. Note that since the closure of Wabush Mines in December 2015, this traffic may be altered.

**Table 7-129 Wabush Airport Aircraft Movements (2010-2011)**

| MONTH | 2010 | 2011 | CHANGE (%) |
|---|---|---|---|
| January | 741 | 959 | 29 |
| February | 789 | 1,060 | 34 |
| March | 868 | 1,260 | 45 |
| April | 795 | 1,098 | 38 |
| May | 856 | 1,325 | 55 |
| June | 1,004 | 1,659 | 65 |
| July | 850 | 2,064 | 143 |
| August | 1,134 | 2,182 | 92 |
| September | 1,228 | 2,183 | 78 |
| October | 1,244 | 1,904 | 53 |
| November | 1,227 | 1,642 | 34 |
| December | 927 | 1,388 | 50 |
| Total | 11,663 | 18,724 | 61 |

Source: TC, 2013

*Community Services*

Labrador West is served by the Royal Newfoundland Constabulary (RNC) through a detachment in Labrador City. Firefighting services are provided by combined professional and volunteer municipal fire departments. Emergency response teams are available at each of the mining sites (LIM 2009). Beverly Lake and Ouananiche Lake respectively provide the municipal water supply to Labrador City and Wabush. As indicated in Chapter 4, an inter-provincial agreement now allows the Québec SQ to intervene in the Schefferville area when the reason for intervention is located in Labrador. These interventions, however, have to be reported.

Solid waste is sent to an incinerator. A study was commissioned to determine whether Labrador should develop one super-site to accommodate all of the garbage from Labrador West and East. In the meantime, the Labrador West regional waste management committee is considering setting up a temporary landfill at an old dump site (LIM, 2009).

Electricity is provided to Labrador West by NALCOR. Industrial sites and communities are connected to technologies and telecommunications with advanced fiber optic cables (Labrador West, 2014).

Uashat mak Mani-Utenam

In 2011, the national census showed a slight increase in housing units, with 438 in Uashat (13 additional units built in the last two years) and 445 in Mani-Utenam (11 additional units built in the last two years). According to the APNQL, total housing units reached 942 in Uashat mak Main-Utenam in 2014.

As in many Aboriginal communities, several housing units are occupied by up to three generations (parents, children and grandchildren). New dwellings needed in Uashat and Mani-Utenam were in the order of 540 units as of 2006 and 463 in 2014. Renovation needs are also acute, with 41 dwellings needing major renovations. There are also serious concerns in terms of dwelling decontamination needs, specifically involving mold and vermiculite. In 2013-2014, six single family houses were built in Uashat and six in Mani-Utenam. Eight others were planned to be built in Uashat but were postponed (ITUM, 2014). Eleven units were approved in the Individual Section, which covers individual loans for housing, of which three were built in Uashat and four were built in Mani-Utenam. The four other approved projects were postponed until 2014-2015. Finally, the program for access to property financed one housing unit in Uashat. The community also finances a project for major renovations, with a $60,000 budget in 2013-2014 and a vermiculite decontamination program, which will start in the spring (ITUM, 2014).

Uashat and Mani-Utenam are both located in the vicinity of Sept-Îles and benefit from the same transportation infrastructure as described in Section 7.5.1. Both reserves are connected via Route 138. The QNS&L railway is particularly important to those who travel inland to carry out traditional activities. Snowmobiles and ATVs are also heavily used by ITUM members along the railway and electricity transmission lines.

Police services are provided by *Sécurité publique de Uashat mak Mani-Utenam* (SPUM). Fifteen police officers and three civilians compose the police force, including the director (Malec 2014, *personal communication*). The Band Council administers the budget for the police force. In addition, there is good collaboration with the SQ and the City of Sept-Îles.

Sept-Îles

*Housing*

Sept-Îles is faced with a growing population and, as a result, with a lack of housing and accommodation. According to the *Front d'action populaire en réaménagement urbain* (FRAPRU), no social housing projects have taken place in the Côte-Nord region since 1994. This lack of housing caused prices to increase, and some families living in Sept-Îles now spend more than half of their income on housing (Radio-Canada, 2013e). The vacancy rate in 2012 was 0.2%, which means that available housing is extremely rare considering that a balanced housing market has a vacancy rate of about 3% (CMHC, 2012; Le Nord-Côtier, 2013b).

As conditions for housing and accommodations tighten, prices also increase, making it more difficult for people with low incomes or newly arrived to find reasonably priced accommodation. The cost of housing has increased steadily since 2005. House prices have doubled in six years, from an average of $113,000 in 2006, to an average of $231,653 in 2012. Many reasons may explain this increase in prices: full employment, the arrival of new workers, and the scarcity of housing itself (La Presse, 2012).

The combination of the increasing cost of housing and rental accommodations and prosperous mining activity in the region is limiting the availability of housing for the needed labour force. While the municipality is supporting new housing developments, including a condominium development, the anticipated growth from expansion projects will continue to strain the housing market. Since the 2006 census, the CMHC reports that Sept-Îles has constructed over 225 new single family homes, 15 condos and three rental suites (CMHC, 2011). Between April 2013 and 2014, there was a 4.5% increase in rent and the vacancy rate increased from 0.9% to 1.1% (Desjardins, 2014).

Homelessness has emerged as a problem, yet there is only one shelter that welcomes homeless people in Sept-Îles. The Transit Sept-Îles facility receives 1,000 requests each year for housing, and houses between 250 and 300 people. Even though Sept-Îles is undergoing an economic boom, poverty remains an issue (Le Nord-Côtier, 2013c).

*Transportation*

Sept-Îles acts as a service center for the MRC de Sept-Rivières and the Côte-Nord region more generally, which makes it a strategic location for the economic development of the Côte-Nord region (Le Nord-Côtier, 2012a). It is equipped with a range of transportation infrastructure that includes the international airport, the Port of Sept-Îles, and Route 138, which connects Sept-Îles to Port-Cartier and to all villages of the Côte-Nord region, located on the north shore of the St. Lawrence River, as well as to Québec and Montréal. Pointe-Noire is connected by road to Route 138 and the Sept-Îles area road network.

The Sept-Îles international airport occupies a territory of 922 ha that belongs to Transport Canada. In addition to the terminal of 10,560 $m^2$, there are two landing strips, one control tower, fuel tanks, and a maintenance building. Several companies offer services to and from Sept-Îles: Air Canada Jazz, Air Inuit, Air Labrador, Aéro services Sept-Îles, Exact Air, and Provincial Airlines, as well as Hélicoptères Canadiens, Héli-Nord and Héli Rive-Nord (TC, 2012).

The Port of Sept-Îles dealt with 27.9 Mt of iron ore in 2012, which is a record. The port has undergone renovations to increase its capacity, the cost of which is shared by HML, New Millennium, Alderon, Labrador Iron Mines, and Champion, who all pledged to finance the installations up to $110 million. The federal government also promised a contribution of $55 million (Le Nord-Est, 2013).

The multi-user port facility is connected to the QNS&L railway. It was estimated that about 30 Mt per year of mineral travels on the railway to the port of Sept-Îles (CRECN, 2013).

Sept-Îles residents receive their water from several locations. For a majority of residences, potable water comes from Lac des Rapides, located some 15 km north of Pointe-Noire. The water pumped from Lac des Rapides serves about 25,000 people in Sept-Îles (MDDELCC, 2014). The populations of Gallix and Moisie get their potable water from underground water.

It should also be mentioned that Sept-îles has a lively network of social organizations, as well as environmental groups.[26] Centraide Duplessis is active and collects donations that are later distributed to the city's organizations. There is a homeless shelter and a women's shelter. However, shelters and kitchens lack adequate funds. For example, Transit Sept-Îles welcomed 266 people during the 2012-2013 financial year, and 7,122 meals were served. However, funds were insufficient to meet demand (Le Nord-Côtier, 2013d).

**Existing Literature**

The component description is based on a literature review that included recent official reports and statistics, from competent organizations and from NNK and NIMLJ annual reports, as well as press releases. Data sources have been cited where applicable throughout the text.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component.

#### 7.5.3.4.2 Effects Assessment

**Recommended Measures for Improvement**

[26]Conseil régional de l'environnement de la Côte-Nord; Comité Zip Côte-Nord du Golfe; Corporation de protection de l'environnement de Sept-Îles; Comité de défense de l'air et de l'eau de Sept-Îles

Taking into consideration the "brownfield context" of the Howse Project, additional measures could be put in place as a proactive approach to favor social stability. Consultations confirmed that there are internal divisions within the NIMLJ and NNK with regard to mining projects. While some look forward to the economic benefits and find the presence of the mining industry stimulating and hopeful, others see it as highly disruptive environmentally and socially, and do not see the economic benefit (Chapter 4). Some community members show various degrees of disappointment with promises made and not yet fulfilled, or that took time to be accomplished (ex. the Timmins-Kivivik bypass road which was made available to First Nations since August of 2015).

In the particular case of the Howse Project, its proximity to Kauteitnat, which is culturally valued and considered as sensitive by the local population, adds another layer of complexity in terms of social and environmental disruption.

HML certainly does not have control over the community's internal issues and divisions, but does have control over how Project-related issues and activities are communicated, and how agreements are implemented, which positively contribute to social stability and the acceptability of mining projects. To this end, HML has signed IBAs with all potentially affected groups and has established mechanisms through which community members can make their concerns known (Chapter 4).

The HSE Committee, which has been put in place by HML to collaboratively oversee and assess the effectiveness and relevance of the environmental mitigation measures for the DSO Project, will also cover the Howse Project. This Committee's purpose is to provide information to the NIMLJ and the NNK on a regular basis of the economic benefits, mitigation measures, and health and safety issues.

In addition, a Regional Steering Committee on Mining issues was established as of May 2015 to oversee issues relation to mining activities in Schefferville area. This Committee meets three to four times a year and is composed of local stakeholders (Ville de Schefferville, Schefferville Airport, NIMLJ, NNK and local land-users from both communities), and of mining companies working in the area.

Some complementary initiatives to these mechanisms could further consolidate the positive relationship with HML and thus favor social stability, such as:

- employing a local Innu liaison agent;
- ensuring that the cultural training recently started for all workers, Aboriginals and non-Aboriginals continues and is repeated periodically; and
- when required, referring individuals to Aboriginal counselling services available in the local communities.

#### ACCESS TO THE LOCAL TRANSPORTATION NETWORK, ACCESS TO LAND, AND ROAD SAFETY

In 2014, HML recorded 27 road incidents (ranging mostly from slipping off the road to collisions). As of November 17 2015, there were 47 incidents involving vehicles and heavy equipment for 2015. The vast majority involved vehicles backing into objects or other vehicles in parking lots, and this number includes TSMC activities and contractors. Although none of these accidents caused major injuries or fatalities, they are a reminder that prevention and safety measures are required. However, these incidents represent a low proportion compared to the quantity of road traffic registered at the security point (gate): 722 locals were counted between May 2014 and April of 2015 (Table 7-130), and a total of 30 000 gate-crossings were counted in April 2015 (Figure 7-51). The total number of individuals passing the gate reached a peak of 35,000 in May of 2025, and has since stabilised at around 30 000 (until September of 2015).

**Table 7-130 Number of land-users counted at HML's security point, excluding mining-related traffic between May 2014 and April 2015**

| MONTH / YEAR | TO/FROM GREENBUSH | TO/FROM IRONY MOUNTAIN | TOTAL |
|---|---|---|---|
| May 2014 | 4 | 57 | 61 |
| June 2014 | 7 | 17 | 24 |
| July 2014 | 29 | 81 | 107 |
| August 2014 | 56 | 33 | 89 |
| September 2014 | 105 | 91 | 196 |
| October 2014 | 49 | 24 | 73 |
| November 2014 | 13 | 22 | 35 |
| December 2014 | 8 | 2 | 10 |
| January 2015 | 7 | 6 | 13 |
| February 2015 | 0 | 0 | 0 |
| March 2015 | 7 | 0 | 7 |
| April 2015 | 0 | 104 | 104 |
| Total | 285 | 437 | 722 |

Source: HML, personal comm.

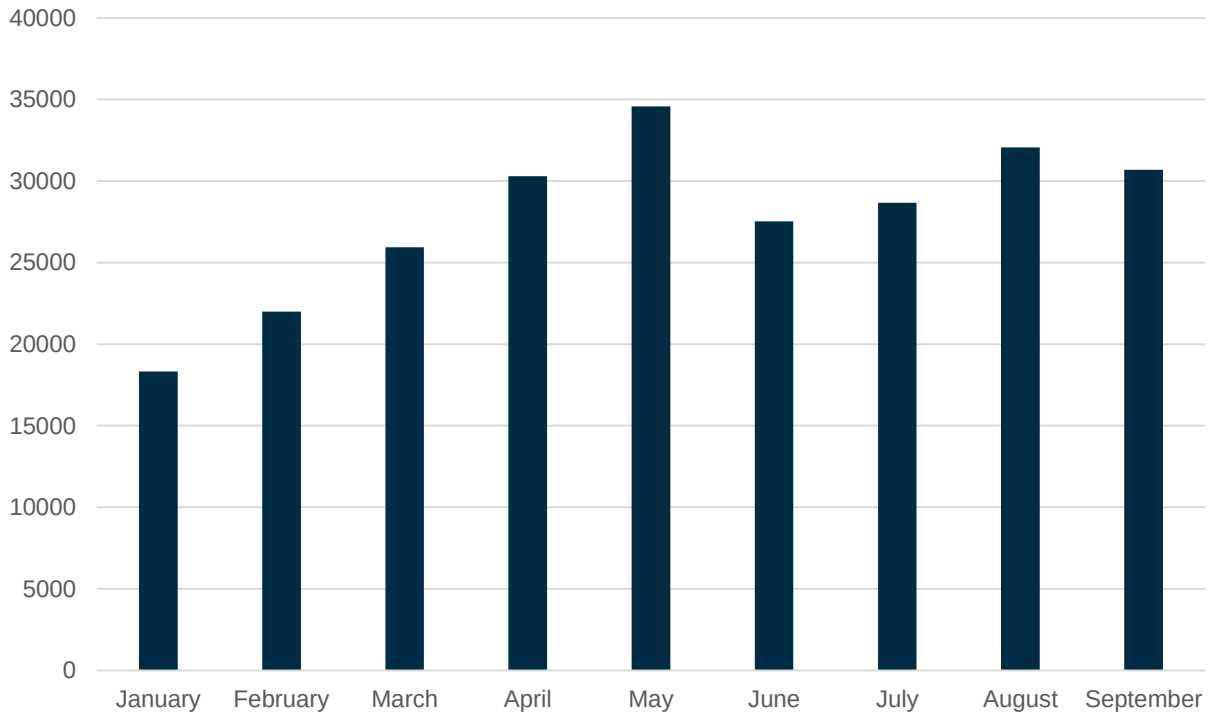



**Figure 7-51 Numbers of individuals passing through the gate between January 2015 and September 2015**

Several measures were put in place to facilitate access to land and to reduce risks related to mixed usage of the main road:

- the Timmins-Kivivik bypass road was upgraded in 2015 to improve access to land, at the request of First Nations. This now allows locals to avoid using the DSO Haul road and improves land access northwest of Schefferville. This road was upgraded in consultation with Aboriginal groups. As is the case with old mining roads, it will not be plowed in the winter, and the Proponent does not assume ownership of the road. However, the Timmins-Kivivik bypass road requires more time to access to some part of the territory (Rosemary Lake for example) which also involves an additional cost in fuel for the land-users;
- despite the possibility of using the Timmins-Kivivik bypass road, land-users still have the ability to use the DSO Haul road. However, for security reasons, land-users have to go through the HML security gate located at the entrance of the Timmins camp. From there, land-users who wish to continue on are escorted by security guards. While recognizing the needs for such an escort from a safety perspective, this measure is not appreciated by local land-users, who feel like they have to ask permission to circulate on their own land (Section 7.5.2.1). Users have also pointed out that the escort is sometimes not available when they need it, which causes delays. Also, there is sometimes no escort on their way back, as no mechanism has been put in place to communicate with security guards from afar; and
- the DSO Haul road is now open in the winter, which was not the case before. Aboriginal and non-Aboriginal residents now have road access to land year-round, and can access harvesting grounds without ski-doo or ATVs.

Currently, the speed limit is 70km/hour on the road leading to the Timmins camp. HML made a test by temporarily requesting its employees and contractors to reduce the speed limit to 50km per hour between Schefferville and the Timmins camp during summer, in order to reduce dust emissions and increase safety. After assessing the results of this measure, it was decided that the speed limit will be maintained at 70 km/hour on the main mining road north of the Schefferville landfill, and at 50 km/hour between the Schefferville landfill and the town of Schefferville. The speed limit will apply to all road users. Respect of applicable speed limits will be monitored by HML and by the Sûreté du Québec. Measures will be taken for detractors who are caught disobeying traffic laws.

Despite these measures, the local population continues to be concerned about the maintenance of their access to the local road network, as well as their safety while traveling on these roads. To this end, the Timmins-Kivivik bypass road was made availale starting in August 2015, as explained above. It begins just south of the Knob Lake-Timmins Railway crossing and extends to the Kivivic/Goodwood area, providing access to the Kivivic, Goodwood, Greenbush, Rosemary Lake and Howells River areas. This bypass had a positive effect for the population, particularly for land-users, since vehicle interactions with mining operations are now avoided, and since their displacements do not need to be controlled on the road anymore.

**Interaction of the Project with Access to the Local Transportation Network and Land and Road Safety and Potential Effects**

Site Preparation and Construction Phase

*No potential interaction*

- pit development.

*Potential interaction*

- upgrading/construction of the Howse haul road and upgrading of the bypass road;
- transportation and traffic.

The existing road network was built by the IOCC for the most part, and has been upgraded, in some locations, by recent mining operations. These roads were and continue to be used by the local Aboriginal

and non-Aboriginal population for subsistence activities and recreation. However, prior to the arrival of mining companies in the mid-2000s, these roads were not maintained and could only be used in summer. The traffic on these roads used to be very limited (NML and PFWA 2009), but the situation changed with the increase of mining-related traffic (NIMLJ Council, NNK Council, *personal communication*, 2014). In particular, vehicle traffic increased during DSO Project construction activities, and road safety concerns were raised by the population using the area (Chapter 4).

➔ The potential effects associated with Project activities during the site preparation and construction phase are due to conflicting types of usage that **limit road access and access to the land for the local population and cause safety issues**.

**The nature of the effect is indirect and the effect is adverse.**

Operation Phase

*No potential interaction*

- solid waste disposal;
- hazardous waste management;
- explosives waste management;
- treatment of sanitary wastewater;
- blasting and ore extraction;
- mineral processing;
- dewatering.

These activities do not require transportation by road.

*Potential interaction*

- removal and storage of remaining overburden and topsoil;
- operation of waste rock dumps;
- transportation of ore and traffic;
- ongoing site restoration.

These activities will take place throughout the operation phase and require transportation of materials by road.

➔ The potential effects associated with the Project activities during the operation phase is due to conflicting types of usage that will **limit road access and access to the land for the local population and cause safety issues**.

The nature of the effect during the Operation phase is direct and its direction is negative from the perspective of land-users.

As explained above, HML recorded 27 road incidents in 2014 (ranging mostly from slipping off the road to collisions). Although none of these accidents caused major injuries or fatalities, they are a reminder that prevention and safety measures are required. Access to the land will be limited in a similar way as described during the site preparation and construction phase. Land-users will use the DSO Haul road when possible, or go through HML's security gate and be escorted for safety. But access to the land northwest of Schefferville will remain available.

The availability of the passenger train in summer was raised by some residents consulted. However, TSH has indicated that passenger service is not affected by freight, as all waiting lanes are opened (Cordova, *personal communication*, 2014).

Decommissioning and Reclamation Phase

*No potential interaction*

All Project activities during the Decommissioning and Reclamation phase have an interaction with transportation and road safety.

*Potential interaction*

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic;
- final site restoration.

Demobilization of the Howse facilities may result in fewer disturbances caused by mining activities, but other significant mining activities will nonetheless occur nearby. The Howse access road will not be decommissioned, but the waste rock dumps will be revegetated. Locals will be able to use this road in the future.

➔ The potential effects associated with the Project activities during the Decommissioning and Reclamation phase is the progressive rehabilitation of **access to roads and land for the local population and a decrease in safety issues.**

The nature of the effect is direct and its direction is positive.

#### 7.5.3.4.3 Mitigation Measures

Standard Mitigation Measures

The EPP contains road maintenance measures: it provides for the access road to the workers' camp to be 12 m wide, and all other site roads to be 21 m wide to accommodate large 180-tonne trucks. All roads will have a maximum gradient of 8% to prevent for freezing and slippery conditions during winter. All site roads will require regular maintenance, including grading and ditching. Regular road maintenance should limit negative effects associated with road transportation (e.g., erosion, dust). These measures will also be applied to the northern bypass road which is now in operation.

The EPP also establishes procedures for ATVs, cars, trucks and heavy equipment required for operations activities. Notably, the plan specifies that appropriate speed limits and road signage will be established and enforced to minimize environmental disturbance and accidents, and that travel in areas outside designated work areas will not be permitted.

In addition, the Timmins-Kivivik bypass road was upgraded in collaboration with Aboriginal groups and will be maintained once or twice a year. However, the road will not be plowed in the winter.

Other measures that limit road traffic were cited above and include:

- The use of the Know Lake-Timmins Railway;
- The use of a bus for local workers transportation;
- Presence of safety point (gate) and availability of safety escorts on the main mining road when needed.

Measures specific to the Construction Phase

Several measures were put in place in order to limit the traffic for the construction phase:

- Workers living in Schefferville, MLJ or Kawawachikamach are transported to and from the camp by bus.
- Once the construction of the DSO facilities has been completed, a very limited number of workers will be accommodated in Schefferville (less than current number) which will considerably limit the number of pick-up trucks on the road between Schefferville and the workers' camp. Workers mobilized for the construction of the Howse Project will be accommodated at the Timmins camp.

- The construction of the Kerail (end of 2014) has limited the number of haul trucks on the road between Schefferville and TSMC's Dome. These trucks will be used between the Howse Project and the Dome only once the Project is in operation.

Specific Mitigation Measures

To ensure land-users access and safety, a series of other measures will be put in place from the outset of the site preparation and construction phase through to the end of the decommissioning and reclamation phase:

- blasting announcements will be made on the radio 48 hours in advance of blast periods, and band councils will also be notified. Prior to any blasting, security vehicles will be present on the bypass road to protect the local population. These methods mirror those currently in place for DSO project;
- access to the mine road network will continue to be controlled for safety reasons. The DSO Haul road should not be used by the land users since a bypass road is available. If a land user needs to use the mine road network to access a specific area not accessible with the Timmins-Kivivik bypass road, HML will provide a safety escort to the land users;
- speed limit will be maintained at 70 km/hour on the main mining road north of the Schefferville landfill, and at 50 km/hour between the Schefferville landfill and the town of Schefferville. The speed limit will apply to all road users. Respect of applicable speed limits will be monitored by HML and by the Sûreté du Québec;
- HML will raise awareness among workers on the importance of safe driving. Measures are taken for detractors who are caught disobeying traffic laws and witnesses of road safety violations are asked to report details of observations;
- additional road safety signs will be installed in the spring of 2016. HML and the Town of Schefferville will install speed limit and safe driving road signs between Schefferville and Timmins work site to reinforce driving laws. The signs will clearly indicate the speed limits, and will remind users of the necessity to drive carefully, to turn off safety lights when in town;
- the Timmins-Kivivik bypass road for land-users was completed by HML in 2015, which provides access to lands to the northwest of the DSO and Howse sites. While more travel time is required, using the bypass road to access certain areas of the territory (Rosemary Lake and Pinette Lake, for example). HML is assessing a way to improve access to this part of the land; and
- collaborate with responsible authorities for local road infrastructure within the Government of Québec (Secrétariat au Plan Nord, Ministère des Affaires municipales et Occupation du territoire, Ministère des Transports) and the Town of Schefferville regarding paving of streets, including chemin de la Gare.

Information on road access and safety measures will be included in HML's radio announcements and newsletter as required (Chapter 4).

#### 7.5.3.4.4 Residual Effect Significance Assessment

The Timmins-Kivivik bypass road was completed in August 2015 and resolved most of the issues related to conflicting usage of the mining road. The road plays an important part in ensuring the road safety of the users, as well as the other measures proposed above. However, the northern bypass road will not be maintained during winter time.

With the implementation of these measures, the magnitude of the effect on access to the local road network, access to land and road safety will be reduced during all project phases of the Howse project, since users will be avoiding industrial traffic.

The Howse Project is located in an area that has been used for mining activities since the 1950s. The road network that was built by the IOCC continues to be used by the local Aboriginal and non-Aboriginal population for subsistence activities and recreation. Importantly, the Howse Project will be inserted in a context already disturbed by mining activities. The socioeconomic context is one where the LSA will be little or not disturbed: a) the Howse Project uses a mining road located in between two mining

operations and b) a bypass road exists and is used by the local population to access the land on the northwest side of the Project, and another possibility for a bypass road is being assessed.

**Table 7-131 Assessment Criteria Applicable for Local Transportation Network, Access to Land and Road Safety**

| TIMING | | |
|---|---|---|
| **Inconsequential** | **Moderate** | **Considerable** |
| Will not have an effect | Will have a moderate effect at times | Will have an effect at all times during all phases of the Project |
| **GEOGRAPHIC EXTENT** | | |
| **Site specific** | **Local** | **Regional** |
| Effects are limited to the footprint of the Project. | Effects extend beyond the footprint, but do not extend outside the LSA. | Will affect a large geographic area and a significant portion of the VC within the RSA. |
| **DURATION** | | |
| **Short** | **Medium** | **Long** |
| During all or part of Construction phase, the start-up period, a single season | Construction phase and first 24 months of Operation phase. | Throughout Construction and Operation phases and beyond. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Full restoration of pre-development situation likely. | Partial restoration of pre-development situation likely. | Little/no restoration of pre-development situation likely. |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Affects few or no people in the RSA. | Affects 5%-15% of the population in the LSA or of the activity in question and a few people in the RSA. | Affects >15% of the population in the LSA or of the activity in question and more than a few people in the RSA. |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| ~Once per year | Occasional/intermittent | Year-round (continual) |

Timing

With the exception of brief moments whereby traffic will be blocked during periods of blasting (1-2 hours per week), timing of land access and road safety will be inconsequential because of the existence of the Timmins-Kivivik bypass road and the proponent's commitment to provide free access to Pinette Lake and the Howells River. (Value of 1).

Geographic Extent

The geographic extent will be local for the three phases of the project because it affects a limited portion of the VC in the LSA. (Value of 2).

Duration

The duration will be short for site preparation and construction phase, long for the operation phase and long for decommissioning and reclamation phase, as the road will remain in place for the users long after the project ends. Value of 1 for site preparation and construction; Value of 3 for operation (negative) and of 3 for decommissioning (positive).

Reversibility

The local population has been using the road network to access the territory during and after the different mining projects in the area. The negative effect is fully reversible considering the road network will remain available for the local population at the end of the project. The road network will also have been extended and made safer in some places. (Value of 1)

Magnitude

With the mitigation measures in place, the magnitude will be low (negative) for the site preparation and construction and for the operation phases given the presence of the Timmins-Kivivik bypass road. The magnitude will be moderate during and after the decommissioning phase as more locals may use the road to reach harvesting grounds. (Value of 1 for site preparation and construction and for operation (negative); Value of 2 for decommissioning (positive).

Frequency

The frequency is considered intermittent for all phases of the project. The land users access the territory seasonally (for example during the hunting season or on the week-end for recreational purpose) and usually for a short period of time (round trip in a single day). (Value of 2).

*7.5.3.4.4.1 Significance*

Based on the assessment, **the residual effects of the Howse Projet on Local Transportation Network, Access to Land and Road Safety will be non-significant** (value of 8, 10, and 11 for the site preparation and construction, operation and the decommissioning and reclamation phase, respectively). Further, the residual effects will be largely positive, considering that an access to roads and land for the local population will remain available and a decrease in safety issues will be noticed after the decommissioning and reclamation phase.

Likelihood

The likelihood of Howse having an effect on access to the Local Transportation Network, Access to Land, and Road Safety is low considering that the Timmins-Kivivik bypass road provides constant access to the land, and that safety escorts are available when needed on the main mining road. With the application of all measures, the likelihood of road safety incidents should be low.

### 7.5.3.5 Economy: Employment, Businesses and Labour Force Characteristics

Economic benefits, generally, represent the positive aspect of mining activities for affected communities. There are four subcomponents:

- availability of labour force;
- Newfoundland and Labrador benefits;
- local employment and training; and
- local contracting.

**Availability of labour force**

The *availability of labour force* is not retained as a VC given that most of the Howse Project labour needs will be filled by flying workers in from other regions of Québec, Labrador, and potentially other Canadian provinces. According to its NLBP, HML must to employ 60% of workers from NL. Workers already employed for the DSO will be mobilized for the Howse Project. All workers will be based at the Timmins camp.

**Newfoundland and Labrador Benefits**

*Newfoundland and Labrador Benefits* are covered under the NLBP signed with LIM, and this agreement will be updated for the Howse Project, as requested in the NL EPR guidelines. Therefore, *Newfoundland and Labrador Benefits* will not be considered as a VC.

It should be noted that the IN and NCC have their own IBA or economic partnership agreements with both LIM and TSMC, and they may join the labour force through the fly-in fly-out mode of operation.

Both *Local employment and training* and *Local contracting* are considered as VCs for the reasons explained below.

**Local Employment and Training**

Local employment and training is one of the most important benefits that the local population derives from mining projects, especially when taking into account the few employment opportunities available in remote areas such as Schefferville. It was one of the most important discussion themes that came up during the Howse Project consultations. Accordingly, the local employment and training subcomponent is considered as a VC.

**Local Contracting**

Local contracting is another way for the local population to benefit from mining projects, especially in areas where opportunities may be rare. Accordingly, the local contracting subcomponent is considered as a VC.

#### 7.5.3.5.1 Component Description

**LSA, RSA and Temporal Boundaries**

The LSA includes the following communities, located in the province of Québec:

- Naskapi Nation of Kawawachikamach (NNK);
- Nation Innu Matimekush – Lac John (NIMLJ);
- Town of Schefferville.

For this component, the RSA includes:

- Labrador West (Labrador City and Wabush);
- In Québec, the City of Sept-Îles, and Uashat and Mani-Utenam (ITUM).

The temporal boundary for this component includes up until the end of the Decommissioning and Reclamation phase of the Project, as this is when the Howse Project will no longer have an influence on the LSA as the sources of effects will not be operative.

**LSA**

Since HML has been in operation, it has been economically involved in Schefferville area through job creation, contract opportunities, and other large and small financial contributions or donations (arena renovation, elders' gatherings, sport events, health initiatives, etc.). According to HML, stakeholder benefits to Aboriginal groups, local businesses, and communities, have reached $250 million in the past three years (Section 2.1.3). For instance, $21 million was provided to TSH for the rehabilitation of the railway, thereby creating a spinoff of approximately 60 seasonal jobs. Part of this Aboriginal workforce was later retained by HML for the construction by Innu RailCantech of the Kerail spurlines (10 seasonal jobs). HML, for its DSO project, created 700 jobs during the site construction peak, with roughly 100 of these jobs filled by employees from the LSA on a yearly basis. Table 7-132 shows the number of people employed by HML and its contractors for the month of August 2015.

**Table 7-132 Number of Workers (TSMC and TSMC contractors) on the DSO Project, August 2015**

| | MEN | WOMEN | TOTAL |
|---|---|---|---|
| NL non-Aboriginal / Aboriginal residents | 588 | 37 | 625 |
| Québec Aboriginal residents (NNK, NIMLJ, ITUM) | 103 | 58 | 161 |
| All other | 396 | 36 | 432 |
| HML total employment (August 2015) | | | 1218 |

Source: HML, 2015.

In August of 2015, 1111 positions were based at the mine site. Women represented 11% of the total labour force (130 positions) (HML, September 2015).

The local Aboriginal workers from the LSA represent 13% of the total labour force (161 positions). When including the Aboriginal from NL (38 positions), this figure reaches 16%. Aboriginal women (from all Aboriginal groups of Québec) count for 55% of the local Aboriginal workforce.

If the Howse Project does not move forward, the current 161 jobs will be lost at the local level, as well as the jobs held workers from NL and from other locations.

Members from NNK, NIMLJ and ITUM occupied several types of jobs, as can be seen in Table 7-133. Very few occupy management positions, but 53% (86 positions) occupy technical positions. Of this number, 83% are men (73 positions). Hence, 47% of the Aboriginal workers occupy non-qualified jobs. Forty-six percent of these jobs are filled by women. The most important employer in the LSA is Sodexo, a company that offers services such as catering and cleaning. Other contractors include Mamu Construction, Naskapi Heavy Machinery, ASC Innu, Nirinnu, and Distribution Pétrolière Naskinnu. Most jobs are provided by contractors. HML works with over a dozen Aboriginal contractors (members of NNK, ITUM, NIMLJ, IN, NCC and with the Inuit of Québec). Most of these enterprises are joint ventures and business partnerships between Aboriginal and non-Aboriginal businesses.

**Table 7-133 Aboriginal Employees in the LSA by Job Category, August 2015**

| OCCUPATION | NOCC [1] | MEN | WOMEN | TOTAL |
|---|---|---|---|---|
| **Labrador – Menihek Area** | | | | |
| Cleaner (Light Duty/Housekeeping) | 6731 | 1 | 1 | 2 |
| Coordinator - Materials/Warehouse | 0731 | 1 | 0 | 1 |
| Labourer/Plant Helper | 7611 | 8 | 0 | 8 |
| Operator (Plant) | 9411 | 3 | 0 | 3 |
| Sampler | 7611 | 5 | 2 | 7 |
| Security Officer | 6541 | 3 | 0 | 3 |
| Supervisor | 711 | 1 | 0 | 1 |
| Driver | 7511 | 1 | 0 | 1 |
| Crane rigger | 7611 | 6 | 0 | 6 |
| Loader operator | 7521 | 2 | 0 | 2 |
| Laborer | 7611 | 1 | 0 | 1 |
| Fuel delivery person | 7511 | 5 | 1 | 6 |
| Supervisor | 7305 | 2 | 0 | 2 |

| OCCUPATION | NOCC [1] | MEN | WOMEN | TOTAL |
|---|---|---|---|---|
| Truck Driver | 7511 | 2 | 1 | 3 |
| Laborer | 7611 | 1 | 0 | 1 |
| Cleaner | 6731 | 2 | 1 | 3 |
| Dishwasher | 6711 | 4 | 2 | 5 |
| 2nd Cook | 6322 | 0 | 1 | 1 |
| Housekeeping | 6731 | 0 | 6 | 7 |
| Truck operator | 7511 | 3 | 3 | 6 |
| Loader/grader operator | 7521 | 5 | 1 | 5 |
| Manual worker | 7611 | 5 | 0 | 5 |
| Excavator operator | 7521 | 1 | 0 | 1 |
| Carpenter | 7271 | 2 | 0 | 2 |
| Heavy Equip Op | 7521 | 10 | 4 | 14 |
| H&S | 2263 | 2 | 0 | 2 |
| Laborer rigger | 7622 | 1 | 0 | 1 |
| Clerk | 1211 | 0 | 1 | 1 |
| Driver | 7512 | 0 | 2 | 2 |
| GH HSKP | 4412 | 4 | 11 | 15 |
| GH Kitchen | 6711 | 13 | 13 | 27 |
| Bus driver | 7512 | 1 | 0 | 1 |
| Director | 16 | 1 | 0 | 1 |
| **Québec – Menihek Area** | | | | |
| Admin | 1241 | 0 | 1 | 1 |
| Light Duty Cleaner | 6713 | 0 | 6 | 6 |
| Maintenance | 6663 | 1 | 0 | 1 |
| Senior Director - Govt & Stakeholder Rels | 0414 | 1 | 0 | 1 |
| Operator | 7421 | 1 | 0 | 1 |
| Laborer | 7611 | 1 | 0 | 1 |
| Foreman | 7217 | 3 | 0 | 3 |
| Operator Sept-Iles | 7511 | 1 | 0 | 1 |
| **Total** | | **103** | **58** | **161** |

[1] NOCC (National Occupation Classification Codes) can be found at http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/IndexOfTitles.aspx

When discussing the economy of the LSA, statistics on employment are a core indicator, but in this particular area, the cost of life is very high compared to other regions of Québec (Duhaime and Grenier, 2012). The analysis compared the prices of a total of 197 products, and the results show that prices in Sept-Îles and the city of Québec are similar, but that they are higher in Schefferville in the following proportions:

- food products are 64% higher;
- personal hygiene products are 84% higher; and
- domestic cleaning products are 106% higher.

These prices may partly be explained by the costs of transportation, as there is no road that connects Schefferville to the rest of the region. In fact, the costs of consumer goods in Schefferville were found to be similar to those in Nunavik, or to prices in other regions that are not connected by road to the rest of the province, such as Iles-de-la-Madeleine. Table 7-134 summarizes the prices of a selection of food items in both Sept-Îles and Schefferville.

**Table 7-134 Average Prices for Selected Food Products, Schefferville - Sept-Îles, 2012**

| PRODUCT CATEGORY | SEPT-ÎLES | SCHEFFERVILLE | DIFFERENCE | DIFFERENCE |
|---|---|---|---|---|
| | ($) | ($) | ($) | (%) |
| Fresh meat | 10.79 | 15.31 | 4.52 | 60.9% |
| Dairy and eggs | 3.40 | 4.81 | 1.41 | 40.6% |
| Fresh fruits | 1.83 | 3.56 | 1.87 | 103.3% |
| Fresh vegetables | 2.96 | 3.66 | 0.70 | 30.4% |
| Pasta | 1.95 | 3.58 | 1.63 | 80.8% |
| Cereals and other products | 6.81 | 12.92 | 6.10 | 88% |
| Fruit juice | 1.22 | 2.60 | 1.54 | 130.2% |
| Baby food | 30.00 | 49.91 | 19.91 | 68.2% |

Source: Duhaime and Grenier, 2012:46.

NNK

*Labour Force Characteristics*

In 2011, Kawawachikamach's labour force (i.e., population over 15 years of age) was 405 people, 48% of which were women. The participation rate was 58%, which is similar to the participation rate in the province of Québec (64.9%). However, the unemployment rate was 29.8%, which is much higher than the provincial unemployment rate of 7.2%. The unemployment rate of Naskapi women was 40%, six times higher than the provincial unemployment rate for women (6.5%) (Table 7-135).

The Naskapi average individual income is roughly one third less than the provincial average income ($24,152 compared to $36,352). However, Naskapi women earn, on average, about $4,000 more per year than their male counterparts. Naskapi men's income is composed of their wages (81.5%) and government transfers (18.1%). The proportion of government transfers is higher in women's income (32.4%) given the transfers they receive for childcare (Table 7-135).

The main industry in which the Naskapi are involved is public administration: 63% of Naskapi men, and 35% of Naskapi women. Smaller numbers of Naskapi men are also involved in mining and oil and gas, as well as in transportation and warehousing services (9% for each category). Naskapi women are also involved in healthcare and social assistance (25%), educational services (20%), and retail trade (10%) (Figure 7-52).

**Table 7-135 Labour Force Characteristics in the LSA, 2011**

| | KAWAWACHIKAMACH | | | MLJ | | | SCHEFFERVILLE | | | QUÉBEC (PROVINCE) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | M | F | TOTAL | M | F | TOTAL | M | F | TOTAL | M | F |
| Total population aged 15 years and over by labour force status | 405 | 210 | 195 | 375 | 170 | 205 | 175 | 95 | 85 | 6,474,590 | 3,170,640 | 3,303,950 |
| In the labour force | 235 | 125 | 105 | 250 | 120 | 125 | 155 | 80 | 70 | 4,183,445 | 2,188,555 | 1,994,885 |
| Employed | 165 | 75 | 85 | 185 | 90 | 95 | 140 | 75 | 65 | 3,880,425 | 2,014,810 | 1,865,610 |
| Unemployed | 70 | 50 | 20 | 65 | 35 | 30 | 15 | 10 | 0 | 303,020 | 173,745 | 129,275 |
| Participation rate (%) | 58.0 | 59.5 | 53.8 | 66.7 | 70.6 | 61.0 | 88.6 | 84.2 | 82.4 | 64.6 | 69.0 | 60.4 |
| Employment rate (%) | 40.7 | 35.7 | 43.6 | 49.3 | 52.9 | 46.3 | 80.0 | 78.9 | 76.5 | 59.9 | 63.5 | 56.5 |
| Unemployment rate (%) | 29.8 | 40.0 | 19.0 | 26.0 | 29.2 | 24.0 | 9.7 | 12.5 | 0.0 | 7.2 | 7.9 | 6.5 |
| Median income ($) | 17,108 | 16,129 | 19,190 | 19,745 | 17,274 | 19,824 | - | - | - | 28,099 | 33,148 | 23,598 |
| Average income ($) | 24,152 | 22,054 | 26,553 | 24,972 | 24,020 | 25,750 | - | - | - | 36,352 | 42,343 | 30,523 |
| *Total Income Composition of Population 15 Years and Over (%) in 2010* | | | | | | | | | | | | |
| Wages and salaries (%) | 73.2 | 81.5 | 68.3 | 71.2 | 82.0 | 65.4 | - | - | - | 66.8 | 69.2 | 63.6 |
| Self-employment income (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | 4.9 | 5.5 | 4.1 |
| Government transfer payments (%) | 25.1 | 18.1 | 32.4 | 24.4 | 13.1 | 31.6 | - | - | - | 15.0 | 11.1 | 20.3 |

Source: Statistics Canada, 2011.

Note: Numbers may not add up due to rounding.

*Public Sector*

The Band Council employed 26 people in 2012. Of this number, 61% are women (NNK, 2013). The Department of Public Works (DPW) is also an important employer in the community. In 2012-2013, it employed 35 people in the winter, and this number increased to 110 in the summer with the construction and maintenance of community buildings (NNK, 2013). A certain number of employment opportunities are reserved for students, and 19 of them participated in the Summer Employee Program in 2012-2013 (Table 7-136).

Seasonal employment in the summer can be offered to clean up lakes, to carry out mineral inventories, to accommodate companies for impact assessments and field surveys (for mining companies, for example) and to offer internships to students (NNK, 2010).

**Table 7-136 NNK Major Public Administration Employers**

| NAME OF EMPLOYER | NUMBER OF NASKAPI EMPLOYEES (Permanent and Seasonal) |
|---|---|
| Nation Office | 27 |
| DPW | 110 |
| CLSC* | 7 |
| NDC* | 76 |
| Jimmy Sandy Memorial School (JSMS) | 50 |
| Tshiuetin Rail Transportation Inc. (TSH) | 6 |
| Naskapi Heavy Machinery L.P. | 76 |
| Sachidun Childcare Centre | 17 |
| Kawawachikamach Energy Services Inc.(KESI) | 22 |
| Total | 322 |

Source: * NNK, 2012; TSH; 2014; NNK, 2014.

*Businesses*

There is a diversified range of economic activities in Kawawachikamach. The Naskapi Development Corporation (NDC) is administered by a board composed of Naskapi beneficiaries and directors and manages the compensation funds ensuing from the NEQA. The NDC's objectives are to improve the living conditions of the Naskapi, to encourage the development of Kawawachikamach, and to encourage the education of the Naskapi people, among others (NNK, 2014). For example, the NDC provided a $25,000 grant to the local school for cultural, recreational and educational activities (NNK, 2014). In addition, the NDC currently owns the following businesses:

- Tuktu Hunting and Fishing Club;
- Naskapi Management Services Inc;
- Manikin Centre (General Store);
- Naskapi Northern Wind Radio Station
- Naskapi Adoschaouna Services (Project Management Services) (NNK, 2014).

Kawawachikamach is also home to the businesses figuring in Table 7-137.

**Table 7-137 Businesses Owned in Whole or in Part by the NNK**

| NAME | SERVICES PROVIDED |
|---|---|
| Béton Naskinnu LP | Fresh concrete supply. Pre-fabricated concrete structures |
| Innu Namesu Ltd. | Drilling and blasting |
| Kawawachikamach Energy Services Inc. | Electrical line installation and maintenance |
| Naskapi Adoschaouna Services | Freight transportation and general construction contractor |
| Naskapi Catering Inc. | Catering and housekeeping services |
| Naskapi Heavy Machinery LP | Rock crushing. Civil works, landscaping. Road construction and maintenance. Mining (clearing, stripping, haulage, stockpiling, etc.) |
| Naskapi Imuun Inc. | Internet, telephone, radio and cellular services. Telecommunications infrastructure design and installation |
| Naskapi Waste Management | Collection and disposal of hazardous waste. Contaminated soil remediation. Distribution of safety products and gases (Linde) |
| Pimi Naskinnuk LP | Fuel supply and distribution. Construction and operation of tank farms |
| Tshiuetin Rail Transportation Inc. | Rail transportation (passenger, freight and ore) |
| X-Pijiit | Expediting and logistics services |

Source: Coggan (2013)

In addition, Naskapi Miiwaayimuun Miichiwaahp is a registered company that looks after the community's elders. Elders are escorted to the Sept-Îles hospital for medical care, where they can stay at a specialized residence. During its fifth year of operation, in 2012-2013, this company provided services to approximately 527 patients (NNK, 2014).

The Naskapi Landholding Corporation "was created to own and manage the Category 1B-N land and to discharge certain other responsibilities identified in the Northeastern Québec Agreement". The NLC held one meetings in 2013-2014 (NNK, 2014).

The Community Economic Development Organization (CEDO) "is mandated by Council to prioritize the business development needs of Naskapis and Naskapi organizations. CEDO administers funds allocated to the Nation by Aboriginal Affairs and Northern Development Canada under the auspices of the CEDO Program" (NNK, 2014). In 2013-2014, CEDO supported Ecolure, Naskapi Imuun Inc. – fiber optic link and the Naskapi Waste Management Inc. equipment expenses.

A number of businesses owned by the Naskapi Nation provide employment related to mining activity (Table 7-137), yet it is difficult to assess how many Naskapis work in the mining sector. NNK also has several mining companies on or near its territory, and has developed partnerships or signed IBAs with some of them. The NNK set up a Mining Work Group in 2012 which has the mandate to identify economic opportunities, to liaise with mining companies (NML/TSMC and LIM, mostly), to prepare and implement business plans and to propose solutions to issues related to mining, among other tasks. In 2012-2013, the Mining Work Group met once and made recommendations to the council on economic opportunities prioritization, but is seems that this group is no longer active (NNK, 2014). In addition, there is a Field Training and Liaison Officer whose responsibility is to oversee the integration of Naskapi workers into mining activities (NNK, 2014).

NML and NNK started working together in the context of the LabMag Iron Ore Project (LIOP) in 2006, and NNK owns 20% of the project (LabMag Limited Partnership). Naskapi people and businesses are hired on a priority basis by NML, and a 30-year budget has been negotiated for training and contractual

commitments with the Naskapis. NNK will also receive royalties on pellet production (0.3333%) (NNK, 2010). Work on the LIOP was suspended in late 2007 for political reasons, and resumed in 2011.

In 2010, NNK signed an IBA with TSMC. This IBA establishes terms for the sharing of benefits in terms of employment and business opportunities, among other things (NML, 2012). The IBA was amended in 2012 following the decision by TSMC to acquire an 80% interest in the DSO project (NNK, 2012). The Nation is benefiting from a growing number of performance-based contracts and employment opportunities with TSMC (NNK, 2014). NNK also signed an IBA with LIM in 2010 (Section 7.5.1.1).

NIMLJ

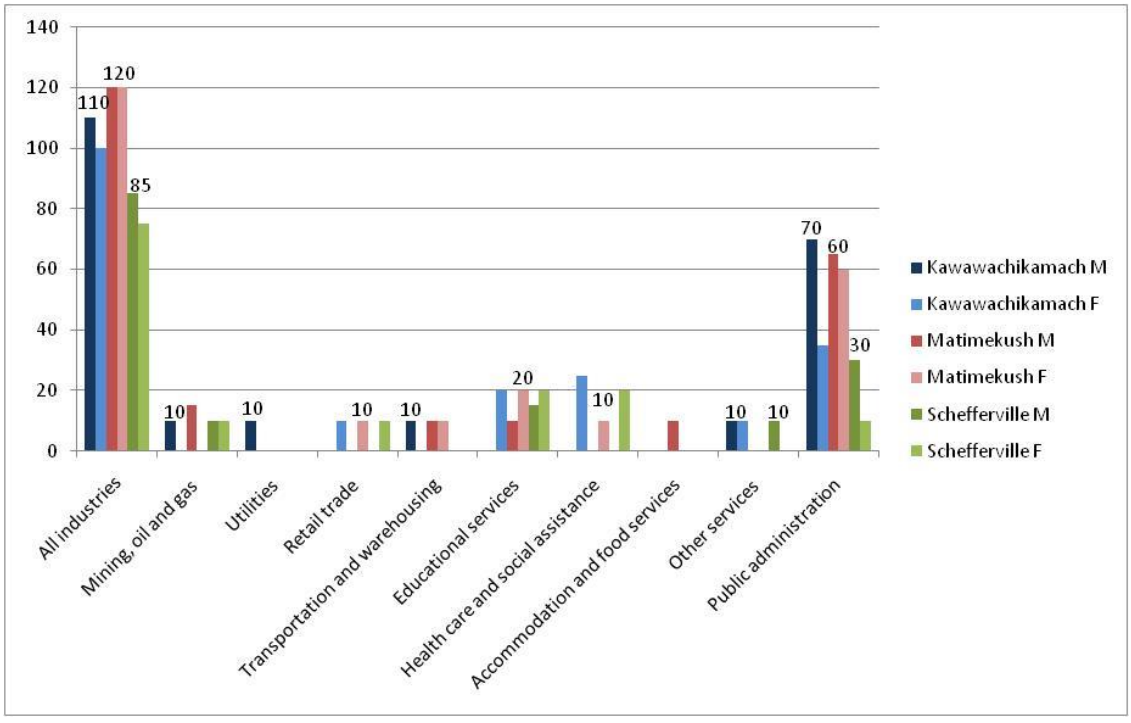
*Labour Force Characteristics*

The labour force in MLJ included 375 people in 2011, and 250 were "in" the labour force. This labour force is composed of almost equal percentages of men and women. The participation rate is 66.7%.

In MLJ, both men and women have a high unemployment rates: 29.2% for men and 24% for women (Table 7-135). This is higher than the average provincial unemployment rate, which is 7.9% for men and 6.5% for women for 2011.

The average individual income in MLJ is roughly one third less than the provincial average income ($24,972 compared to $36,352). Women earn slightly more than men, $25,750 compared to $24,020. Men's income is composed of their wages (82.0%) and government transfers (13.1%). The proportion of government transfers is higher in women's income (31.6%) given the transfers they receive for childcare (Table 7-135).

The main industry in which the Innu of MLJ are involved is public administration: 54% of Naskapi men, and 50% of Naskapi women. Smaller numbers of Naskapi men are also involved in mining, oil and gas (12.5%), as well as in transportation and warehousing services (8%), and educational services (8%). Naskapi women are also involved in educational services (16%), healthcare and social assistance (8%), and retail trade (8%) (Figure 7-52).




Source: Statistics Canada, 2011.

**Figure 7-52 Workforce Characteristics by Industry Sector and by Gender in the LSA, 2011**

*Public Sector*

The Band Council is the major employer of the Innu living in Matimekush-Lac John, with 80 employees from MLJ, and 60 non-Aboriginal employees, for a total of 140. Experienced labour is also hired for the health and education services provided in the community, as well as in the construction sector.

The *Corporation de Développement Économique Matimekush-Lac John* oversees the local economic development and offers programs to help create employment in the community, mostly in the public works sector.

*Businesses*

Businesses on the reserve include a convenience store, a pharmacy, a heavy equipment contractor, auto mechanics, camping equipment and supplies, plumbing, a gas station, outfitters, and video rental (NIMLJ, 2014).

Since 2005, NIMLJ, jointly with ITUM and NNK, manages a portion of the railway between Emeril Junction and Schefferville via TSH (TSH, 2009; Chapter 4). NIMLJ is also involved in the *Société aéroportuaire de Schefferville* for the operation and maintenance of the Schefferville Airport (NML and PFWA, 2009).

Other businesses owned or owned in part by the NIMLJ are shown in Table 7-138.

**Table 7-138 Businesses Owned in Whole or in Part by the NIMLJ**

| NAME | SERVICES PROVIDED |
|---|---|
| Tshiuetin Rail Transportation Inc. | Freight and passenger service between Emeril and Schefferville |
| Société de gestion Innu | Heavy machinery rental, construction and renovation, public works |
| Artisanat Innu | Innu craft sales |
| Dépanneur MLJ | Food and convenience store |
| Restaurant Chez Rita | Restaurant |
| Transport Montagnais | Trucking and passenger service (operations suspended) |
| Schefferville Airport Corporation | Airport operation and maintenance |
| Hotel Innutel | Accommodation services |

Source: Based on NML and PFWA (2009)

NIMLJ has signed two IBAs with mining companies: one with LIM (2010) and one with TSMC's DSO project (Section 7.5.1.1). It is difficult to accurately assess how many NIMLJ members are currently employed by the mining industry.

Schefferville

*Labour Force Characteristics*

The participation rate for Schefferville is higher compared to neighboring Aboriginal communities, as well as to the provincial rate: 88.6% of the population over 15 years old is involved in the labour force (Statistics Canada, 2006). This reflects the fact that Schefferville's residents live there for employment purposes. The unemployment rate in Schefferville was 9.7% in 2011 (Table 7-135). There are no statistics available regarding the income of Schefferville's residents due to its small population.

Schefferville's population is generally involved in the service sector. Women work in education and health services (27% for each), as well as in mining, oil and gas, retail trade, and public administration (8% each). Men living in Schefferville are involved in public administration (35%), the education sector (18%), mining, oil and gas (12.5%) and other services (12.5%) (Figure 7-52).

*Public Sector*

Since mining activities ended in 1982, Schefferville's resident population has dramatically decreased, and those who stayed became service providers to the Innu and Naskapi people, or found employment in outfitting businesses and mining exploration. Consequently, the public sector does not provide many job opportunities. However, Transport Canada, the municipality of Schefferville, and the CLSC provide a limited number of jobs, to provide healthcare, transportation and other services to the communities in the area. During the last five years, mining activity has helped to diversify the economy, which includes occupations in business, management, transportation and equipment services (Table 7-139). In parallel, the decline in the caribou population has lead a decrease in the employment created by outfitters, most of which have closed or have temporarily ceased their activities.

**Table 7-139 Schefferville Labour Force by Sector, 2011**

| OCCUPATION / SECTOR (SELECT) | EMPLOYED (#) |
|---|---|
| Health | 10 |
| Education, Law and Social, Community and Government Services | 45 |
| Manufacturing and Utilities | 0 |
| Sales and Services | 30 |
| Management | 15 |
| Business, Finance and Administration | 10 |
| Natural and Applied Sciences and Related Occupations | 0 |
| Art, Culture, Recreation and Sport | 0 |
| Trades, Transport and Equipment Operators and related | 25 |
| Natural Resources, Agriculture and Related Production | 0 |
| All Occupations | 135 |

Source: Statistics Canada, 2011

*Businesses*

Employers in Schefferville include, among others:

- The Northern Store;
- Corner stores (2);
- The Hotel Royal (hotel/restaurant);
- The Guest House;
- A gas station;
- The Société de Gestion Porlier;
- The Société Fortier inc.;
- Duberco inc. (plumbing and distribution of petroleum products);
- Location Pelletier (car rental);

- Théo Mazerolle (heavy equipment rental).

Aside from the companies that are currently operating in the area (Chapter 7), several mining companies are involved in exploration activities in the Schefferville area. However, it is difficult to know how many people from the Schefferville area are employed by some of these companies, which include the following:

- Century Iron Ore Mines Inc.;
- Labrador Iron Mines Ltd.;
- Adriana Resources Inc.; and
- CapEx Ventures.

**RSA**

Labrador West

At least 50% of the DSO project employees were from Labrador in November 2014 (Table 7-132), and the vast majority of all workers were based at the camp site or in the Schefferville area (85.6%).

*Labour Force Characteristics*

In Labrador City, the labour force is composed of 43.7% of women according to NHS (2011). The unemployment rate is 5.2%, almost three times lower than the provincial rate in 2011 (14.6%). The unemployment rate is, however, much lower for men (2.1%) compared to women (9.1%). On the other hand, women's unemployment rate in Labrador City is lower compared to the provincial rate of unemployment for women, which is 12.4%. The participation rate is 77.5%, compared to 59.4% for NL more generally (Table 7-140).

In Wabush, the 2006 data indicates that 48.6% of the labour force was composed of women. The unemployment rate was 8.6%, almost three times lower than the provincial rate, which was, at the time, 18.6%. The unemployment rate was, however, lower for men (3.9%) compared to women (14.8%). The participation rate was 71.6% (Table 7-140).

The median individual income in Labrador City is almost twice the median individual income for the province: $45,060 compared to $25,279. Men's average salaries in Labrador City are more than twice women's average salaries ($77,196 compared to $36,410). However, this discrepancy between men's and women's salaries is also seen at the provincial level. Men's income is mainly composed of their wages (87.4%) and government transfers (3.3%). The proportion of government transfers is higher in women's income (11.6%) given the transfers they receive for childcare (Table 7-140).

The median individual income in Wabush was $36,091, with an important discrepancy between the average individual salaries for men and women: $70,784 for men compared to $14,027 for women.

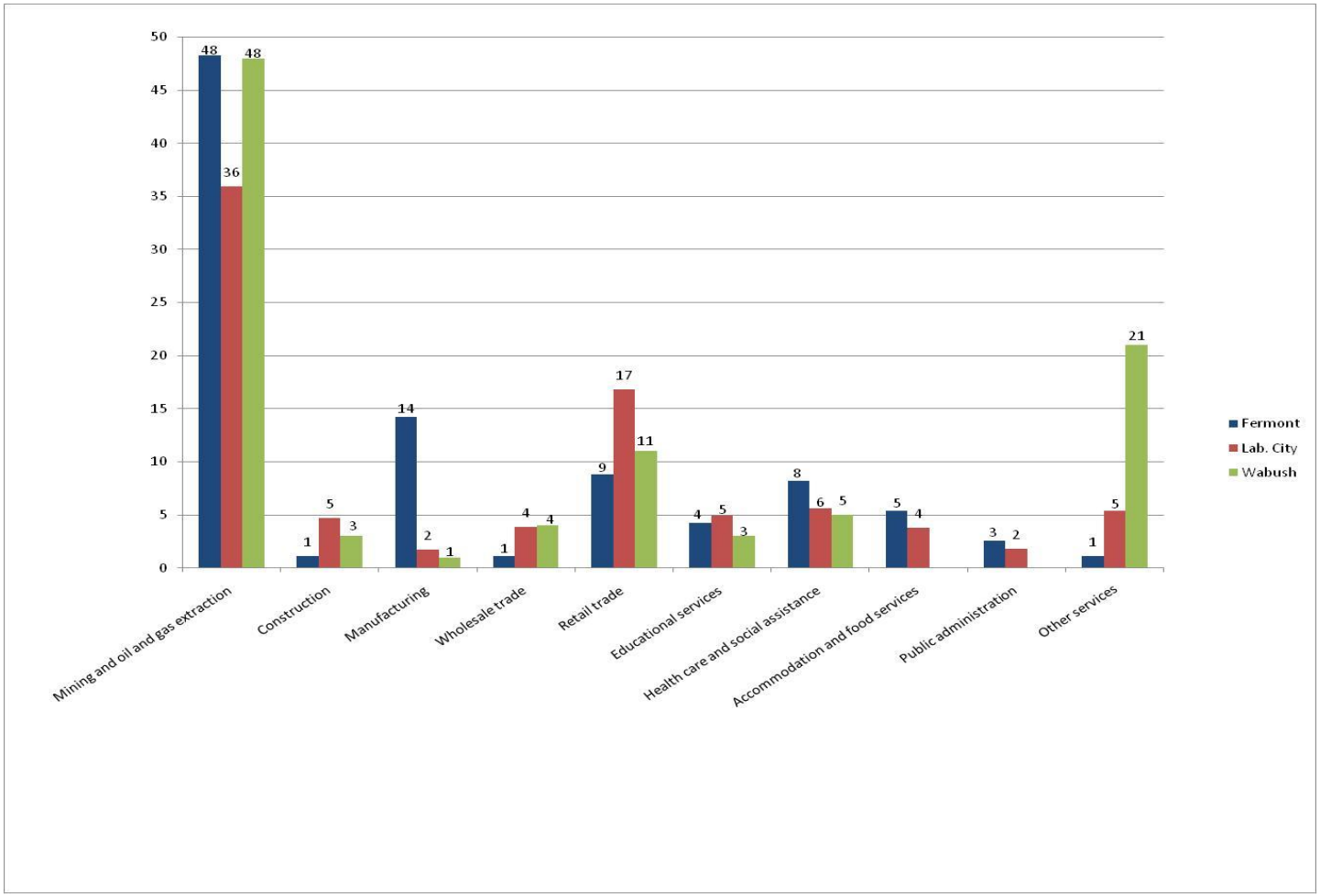
The main industry generating employment in Labrador City is by far mining and oil and gas extraction, which employed up to 36% of the population in 2011 (Figure 7-53). Retail trade is also important in Labrador City, as it occupies 17% of the workforce (Statistics Canada, 2006). The rest of the workforce is involved in similar proportions (5-6%) in the following sectors: construction, wholesale trade, education, healthcare, accommodation and food services, and other services.

The mining and oil and gas extraction is also the main employment sector in Wabush, which employed up to 48% of the population in 2006 (Figure 7-53). Other services (21%) and retail trade (11%) were also important in Wabush (Statistics Canada, 2006). The rest of the workforce was involved in similar proportions (5-6%) in the following sectors: construction, wholesale trade, education, and healthcare and social assistance.

**Table 7-140 Labour Force Characteristics, Labrador City and Wabush, 2011**

| | LABRADOR CITY | | | WABUSH* (2006 DATA) | | | NL (PROVINCE) | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | M | F | TOTAL | M | F | TOTAL | M | F |
| Total population aged 15 years and over by labour force status | 5,990 | 3,150 | 2,840 | 1,460 | 750 | 710 | 431,050 | 208,500 | 222,545 |
| In the labour force | 4,645 | 2,615 | 2,030 | 1,045 | 635 | 405 | 255,890 | 133,200 | 122,690 |
| Employed | 4,410 | 2,560 | 1,845 | 955 | 610 | 345 | 218,630 | 111,175 | 107,455 |
| Unemployed | 240 | 55 | 185 | 90 | 25 | 60 | 37,265 | 22,025 | 15,235 |
| Participation rate (%) | 77.5 | 83.0 | 71.5 | 71.6 | 84.7 | 57.0 | 59.4 | 63.9 | 55.1 |
| Employment rate (%) | 73.6 | 81.3 | 65.0 | 65.4 | 81.3 | 48.6 | 50.7 | 53.3 | 48.3 |
| Unemployment rate (%) | 5.2 | 2.1 | 9.1 | 8.6 | 3.9 | 14.8 | 14.6 | 16.5 | 12.4 |
| Median income ($) | 45,060 | 75,360 | 28,142 | 36,091 | 70,784 | 14,027 | 25,279 | 32,136 | 20,503 |
| Average income ($) | 58,041 | 77,196 | 36,410 | 44,467 | 64,675 | 20,958 | 35,089 | 42,479 | 28,062 |
| *Composition of total income in 2010 of population 15 years and over (%)* | | | | | | | | | |
| Wages and salaries (%) | 84.8 | 87.4 | 79.1 | 88.9 | - | - | 68.3 | 70.4 | 65.2 |
| Self-employment income (%) | 1.7 | 2.2 | 0.7 | - | - | - | 2.9 | 3.5 | 2.0 |
| Government transfer payments (%) | 5.8 | 3.3 | 11.6 | 4.7 | - | - | 19.3 | 16.2 | 23.8 |

Source: Statistics Canada, 2011.




Source: Statistics Canada, 2011

**Figure 7-53 Workforce Characteristics by Industry, Labrador West, 2011 (2006 for Wabush)**

*Public Sector*

The economy of the Québec-Labrador border region is dependent on a geological area known as the Labrador Trough. Interest in mining in this area continues to increase as a result of the global demand for mineral resources, but varies according to the cyclical prices of the iron ore resource.

HML and NML are currently investing in a number of projects in the Howells River area and the former IOCC site near Schefferville. As per the Benefits Plan Agreement signed with the GNL, residents from this province will continue to make up a majority of the workforce, and Newfoundland and Labrador businesses and particularly Labrador West businesses will continue to supply goods and services to support the mining industry in the region (HML 2013a). As an example, HML has spent over $800 million during the past three years, thereby generating revenues on which governments can collect various taxes, and the proponent should generate, $200 million/year from the Howse Project at a steady rate, from which governments will be able to collect various tax revenues. In addition, HML has created 700 direct and indirect jobs for the DSO project alone, and 60% of HML's employees are from NL.

However, the mining sector has boom and bust cycles, and the recent downsizing of operations at Cliffs' installations is an example. The mining sector, however, remains the most important employer in Labrador West (Table 7-141). The reader is cautioned that the Wabush Mines Project ceased activities in December 2015.

**Table 7-141 Employment in Mining Companies Operating in Labrador West**

| COMPANY | LOCATION | NUMBER OF EMPLOYEES |
|---|---|---|
| Rio Tinto IOCC – Carol Lake | Labrador City | 1,100 |
| Cliffs Natural Resources – Scully Mine | Wabush | 37 |

Source: Labrador West, 2014

The business community of Labrador City and Wabush includes approximately 491 companies, most of which operate in the following sectors:

- Construction (14);
- General contracting (11);
- Wholesale trade and distribution (5);
- Engineering (3);
- Transportation (10);
- Health (5);
- Food services (20);
- Public services (31); and
- Banks/financial services (Labrador West, 2014).

Uashat mak Mani-Utenam

*Labour Force Characteristics*

Both communities have much higher unemployment rates compared to the provincial average (7.2%) (Table 7-142). The unemployment rate is 21.4% in Uashat and 24% in Mani-Utenam. In Uashat, there are virtually no differences in the unemployment rates of men and women, but in Mani-Utenam, the discrepancy

between men and women is wider: the male unemployment rate is 32.1%, whereas the female unemployment rate is 17.4%. It should be mentioned that the unemployment rates in both communities have dropped since 2006, when it reached almost 40%, and was 41.5% for men in Mani-Utenam. These numbers show that the employment situation has greatly improved since 2006, and that it is possible to find labour force in ITUM (Statistics Canada, 2011).

In 2006, women in Uashat and Mani-Utenam earned slightly higher incomes than men (Statistics Canada, 2006). However, this situation had changed in 2011: in Uashat, men's average income was $24,566, and women earned an average of $19,316. In Mani-Utenam, men earned an average of $34,405, and women $21,656. This is perhaps due to the fact that men have taken on positions as qualified labour force, in the construction sector for example, whereas women continue to be involved in more traditional positions, in public administration or health and social services, for example, or in non-qualified jobs.

In Uashat and Mani-Utenam, both men and women are mostly employed in the public administration sector: 35% of women and 32% of men in Uashat, and 34% of women and 25% of men in Mani-Utenam. Women are also involved in healthcare and social assistance (18% in Uashat, 21% in Mani-Utenam), and in education services (6% in each community). In contrast, men are also mostly involved in construction (11% in Uashat, 15% in Mani-Utenam) and manufacturing (10% in each community).

**Table 7-142 Labour Force Characteristics, 2011**

| | SEPT-ÎLES | | | UASHAT | | | MANI-UTENAM | | | QUÉBEC (PROVINCE) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | M | F | TOTAL | M | F | TOTAL | M | F | TOTAL | M | F |
| Total population aged 15 years and over by labour force status | 22,865 | 11,455 | 11,410 | 1,020 | 500 | 525 | 900 | 450 | 455 | 6,474,590 | 3,170,640 | 3,303,950 |
| In the labour force | 14,930 | 8,035 | 6,890 | 490 | 265 | 225 | 500 | 265 | 230 | 4,183,445 | 2,188,555 | 1,994,885 |
| Employed | 13,865 | 7,375 | 6,485 | 380 | 205 | 180 | 380 | 185 | 190 | 3,880,425 | 2,014,810 | 1,865,610 |
| Unemployed | 1,070 | 660 | 405 | 105 | 60 | 50 | 120 | 85 | 40 | 303,020 | 173,745 | 129,275 |
| Participation rate (%) | 65.3 | 70.1 | 60.4 | 48.0 | 53.0 | 42.9 | 55.6 | 58.9 | 50.5 | 64.6 | 69.0 | 60.4 |
| Employment rate (%) | 60.6 | 64.4 | 56.8 | 37.3 | 41.0 | 34.3 | 42.2 | 41.1 | 41.8 | 59.9 | 63.5 | 56.5 |
| Unemployment rate (%) | 7.2 | 8.2 | 5.9 | 21.4 | 22.6 | 22.2 | 24.0 | 32.1 | 17.4 | 7.2 | 7.9 | 6.5 |
| Median income (individuals) | 28,416 | 34,870 | 23,763 | 15,097 | 15,334 | 14,814 | 17,094 | 17,387 | 17,037 | 28,099 | 33,148 | 23,598 |
| Average income ($) | 33,499 | 39,929 | 26,790 | 21,889 | 24,566 | 19,316 | 27,945 | 34,405 | 21,656 | 36,352 | 42,343 | 30,523 |
| *Composition of total income in 2010 of population 15 years and over (%)* | | | | | | | | | | | | |
| Wages and salaries (%) | 72.7 | 76.7 | 66.0 | 70.2 | 81.1 | 56.3 | 73.1 | 83.5 | 58.0 | 66.8 | 69.2 | 63.6 |
| Self-employment income (%) | 3.7 | 3.5 | 4.1 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 4.9 | 5.5 | 4.1 |
| Government transfer payments (%) | 13.9 | 9.6 | 21.3 | 28.2 | 16.3 | 42.8 | 24.1 | 13.5 | 40.7 | 15.0 | 11.1 | 20.3 |

Source: Statistics Canada, 2011

*Public Sector*

The Band Council oversees most economic activities, and is the most important employer in the ITUM, with approximately 400 employees (Castonguay, Dandenault and Ass., 2006). Of this number, 160 employees work in health and social services, and 87 in education.

Trapping, hunting, fishing and gathering activities are also important to the community's economy. Depending on the extent to which they are carried out, these activities may constitute significant sources of income for families (Castonguay, Dandenault and Ass., 2006).

Other public organizations that provide employment for ITUM members include the Innu culture museum, the *Musée Shaputuan*, which was founded in 1998, and the *Institut Culturel et Éducatif Montagnais* (AANDC, 2014),

*Businesses*

The economy in Uashat mak Mani-Utenam is mainly dependent on fishing, logging, trapping, construction, transportation, outfitting and arts and crafts. There are approximately 50 businesses (about 200 jobs) spread across Uashat and Mani-Utenam which provide goods and services in the following sectors: food industry, nutrition, tailoring, management services, landscaping, heavy equipment operation, beauty care, electrical, translation services, campground services, retail, canoe-making, commercial fishing and marine food processing, and arts and crafts.

Commercial fishing creates between 20 and 30 seasonal jobs. ITUM has a fishing fleet which is utilized in the crab, lobster, shrimp and demersal fisheries.

In December 2005, in collaboration with the Matimekush-Lac John and Kawawachikamach communities, the Uashat mak Mani-Utenam Band created Tshiuetin Rail Transportation Inc. in order to provide safe, reliable transportation services for individuals living in these Aboriginal communities (Section 7.5.2.2 for more details). The 217 km of railway connects Emeril Junction in Labrador to Schefferville in Québec (TSH, 2009). TSH employs 55 permanent and 35 seasonal staff (Cordova 2014, *personal communication*). Seasonal staff works from April to October on railway maintenance. TSH prioritizes the employment of Innu, as approximately 80% of employees are Innu. Five to six train drivers are trained every year in Sept-Îles.

Other projects are proposed by ITUM are a small-size hydropower dam, windmills, the construction of a bowling alley, a hotel, ecotourism businesses, and the renovations of Innu-owned shopping center Galeries Montagnaises. The development of tourism and recreational activities was identified as one of the most promising economic sectors. It should also be noted that ITUM has the option to develop the forestry sector given that following an agreement with the provincial government, they have 44,400 $m^3$ of forest that they could exploit (Castonguay, Dandenault et Ass., 2006).

<u>Sept-Îles</u>

As of November 2014, approximately seven individuals worked for TSMC for the port operations in Sept-Îles.

*Labour Force Characteristics*

Labour force participation in Sept-Îles is 65.3%, which is similar to that of the province of Québec (66.6%) (Table 7-142). When looking at the disaggregated data, the male participation rate is higher than for women (70.1% compared to 60.4%), but the women's unemployment rate is lower than the men's (5.9% vs 8.2%). This perhaps means that women represent a more mobile labour force that can easily find work. However, the difference between male and female average individual earnings is considerable: $39,929 for

men, compared to $26,790 for women. These numbers indicate that women probably occupy non-qualified positions, while men are employed as a professional or technical labour force in high-paying industries.

Men's income is mostly composed of their wages (76.7%) and government transfers (9.6%). The proportion of government transfers is higher in women's income (21.3%) given the transfers they receive for childcare (Table 7-140).

The Sept-Îles workforce is spread across several types of industries, which may be typical of regional service centres. The most predominant industries in Sept-Îles are retail trade and healthcare and social assistance, in a proportion of 13% each. Other important sectors are manufacturing (11%), public administration (9%), and educational services (7%). The mining and gas industry, construction, and accommodation and food services sectors all employ 6% of the workforce each.

*Public Sector*

Public and community organizations are numerous in Sept-Îles given that it acts as a regional center for several more remote localities of the Côte-Nord. The CSSS is a major employer, as well as the Cegep de Sept-Îles and the Ville de Sept-Îles itself (Table 7-143).

**Table 7-143 Top Public Sector Employers, Sept-Îles**

| COMPANY | NUMBER OF EMPLOYEES |
|---|---|
| Centre de Santé et Services Sociaux Sept-Iles: | |
| CLSC | 100 - 199 |
| Hospital and administration | 500 - 999 |
| Other services | 100 - 199 |
| Cégep de Sept-Îles | 200 - 499 |
| Centre de santé Uahsat | 100 - 199 |
| Ville de Sept-Îles | 200 - 499 |
| Hydro-Québec Trans-Énergie Manicougan Est (Sept-Îles-1925) | 200 - 499 |

Source: Emploi-Québec, 2015

The *Centre local d'emploi* (CLE) included 1,370 enterprises employing 14,736 people in Sept-Îles in 2009. A survey carried out in 2010 involving 374 enterprises showed that 79.3% of employers were private companies, and 21% were public administrations or non-profit organizations. About 64.7% of the companies surveyed employed fewer than 19 people, and employed a total of 21.1% of the workforce. In contrast, 12.6% employed 50 or more people, yet employed 56.8% of the workforce (Emploi-Québec,[27] 2010).

[27] Emploi-Québec conducted a workforce survey in 2009 in which 374 enterprises participated.

*Businesses*

The most important employment sectors were commerce (27.3%), education and health (18.7%) and the tourist and cultural accommodations and activities (17.1%). The mining and forestry sectors respectively employed 5% and 3% of the labour force. At the time, 42.8% of respondents reported difficulties recruiting personnel. This was explained by two factors: the lack of competent (42.2%) or experienced (36.6%) candidates. In addition, the location of the working station (far away or isolated) mattered and was cited as 32.4% of the causes associated with difficulties in recruitment. Sixty-eight percent of the companies offered training for most job positions to deal with the lack of a competent/experienced workforce. Difficulties in recruitment mostly concerned positions related to 1) retail services; 2) operation of heavy machinery and transportation vehicles, and 3) healthcare (Emploi-Québec, 2010).

Sept-Îles has a large number of manufacturing businesses to respond to different clientele needs. Many of these companies work abroad, offering their expertise in countries such as Mexico, USA, Brazil and Russia. These companies specialize in technology, products and services aimed at the mining sector (Ville de Sept-Îles, 2014) (Table 7-144).

**Table 7-144 Top Private Sector Employers in Sept-Îles, 2014**

| COMPANY | NUMBER OF EMPLOYEES |
|---|---|
| Aluminerie Alouette | 1,000 and over |
| Compagnie minière IOCC inc. / Chemin de Fer QNS&L | 500 to 999 |
| Cliffs Natural Resources Division | 200 to 499 |
| Pavage du Golfe Inc. | 200 to 499 |
| Groupe de Sécurité Garda inc. | 200 to 499 |

Source: Emploi-Québec, 2015.

The types of businesses available in Sept-Îles are listed in Table 7-144. With 54.1% of employment, aluminum fabrication and fusion businesses comprise the majority of small and medium businesses in Sept-Îles. Other important sectors include factory workshops, fish processing and metal embossing (Ville de Sept-Îles, 2014). It should be noted that TSMC invested $50 million in the multi-user dock, which translated in 1,000 jobs during its construction. With the upcoming mining projects and other projects under planning in Sept-Îles, it is expected that between 150 to 200 jobs will be created in the near future.

**Existing Literature**

The component description is based on literature review including recent official reports and statistics. Data sources were cited throughout the text where appropriate.

**Data Gaps**

The existing data provides a recent and exhaustive overview of the component.

#### 7.5.3.5.2 Effects Assessment

**VC Assessment**

**LOCAL EMPLOYMENT AND TRAINING**

The main concerns raised during public consultations (Chapter 4) were:

- employment is desired by local people. Some participants stated that TSMC does not respect agreements regarding employment and training. There are presently only 10 Innu working. In the end, there are few Natives involved. People who have jobs are proud and generally stay out of trouble;
- there is a perception that not enough local people are employed, and that the trained employees are not necessarily hired. Local people want jobs. In the first years, Innu workers were employed, but the number of employees decreases each year;
- project is seen as an opportunity for employment of the youth;
- more training opportunities would be appreciated. Some training has been carried out, mainly heavy machinery operation. Mamu has contracts, but they employ white outsiders. Young people from the community are not contacted;
- jobs and contracts have positive effects in the communities. Job postings require potential employees to speak English, which is very limiting for Innus;
- people who work on construction site come back at night. Some have left their jobs for racism issues. There does not seem to be clear complaint mechanism at the camp;
- some workers do not know their rights (e.g., CSST). There is no labour organization for Québec workers. Cross border problems are significant;
- there is no targeted training for women, most of the work is for men. Women could be used, for example, for construction finishing stage;
- many jobs go to external people; economic development – not many Naskapis have jobs;
- many mining companies are presently active (2014): Tata, LIM, NML – but yet not many Natives are working now;
- employment makes people proud of themselves, brings personal growth and better living standards. However, can lead a person to consume more alcohol;
- people that work normally stay out of trouble or will have isolated incidents;
- those that were trained did not get the jobs and there is little on-the-job training;
- better to have more people trained and working and to have contracts – positive effects;
- there are ongoing training programs – for example, heavy machinery. Would like to see the Naskapi in qualified positions, such as millwrights, mechanics and boilers;
- there is no facility for vocational training in the area. There is the new learning center, but it is small. A proper training facility may be built in the future. There were more vocational programs during the 2-3 first years of the mine. Training has to be rotational, not the same every year – not enough clientele; and
- to avoid some problems with racism between workers, there should also be local bosses.

For the Howse Project specifically, preliminary estimates of required manpower indicate that:

- About 20 jobs will be created for a period of one to two months during the construction period; and
- About 138 new direct full-time jobs will be created during the operation phase (Table 7-145). This represents a 15% increase compared to the current number of jobs for the DSO project.

All manpower is expected to be on contract, especially for the short construction phase. The proportion of apprentices should not exceed 30% in any trade. The contractor for both the mining and processing

operations will be advised to include the local population. HML and its contractors will continue to strive to employ a maximum number of Aboriginals on its Project workforce. The same targets established in HML's IBAs with the First Nations will apply to the Howse Project. If current proportions of Aboriginal employment are maintained (approximately 15%), this means that 21 additional job could be created locally during the operation phase. Table 7-145 shows that Aboriginal employees are already employed in similar positions (when compared to Table 7-133).

**Table 7-145 Estimated Number of Full-Time Employees per Job Categories, Operation Phase, Howse Project**

| JOB CATEGORIES | NATIONAL OCCUPATION CODES (NOC) | ESTIMATED NUMBER OF EMPLOYEES |
|---|---|---|
| Excavator Operators | 7521 | 8 |
| Truck Operators | 8411 | 40 |
| Drill Operators | 8231 | 4 |
| Dozer Operator | 7521 | 4 |
| Grader Operator | 7521 | 4 |
| Water Truck Driver | 7511 | 4 |
| Other Operators | 8411 / 7521 / 7371 | 24 |
| Heavy Equipment Supervisors | 7302 | 6 |
| Process Plant - Operation | 9211 | 24 |
| Process Plant - Maintenance | 9211 | 12 |
| Plant Supervisors | 8221 | 4 |
| Others | | 4 |
| **Sub-total** | | **138** |

Source: HML, personal comm.

It should be reiterated that HML is an equal opportunity employer. The WEP (Volume 1 Appendix X) signed between HML and the GNL will apply to the Howse Project. As mentioned above, over 10% of the current DSO Project workforce are women, including Aboriginal women. They are employed in both traditional and non-traditional occupations including heavy equipment operations, truck driving, surveying, metallurgy, accounting, catering and housekeeping, human resources, plant operations

In addition, bursaries from HML IBA funds are awarded to high school graduates. HML also participates at career fairs and makes in-class presentations to high school students. Furthermore, youths are also encouraged to stay in school by virtue of the fact that numerous jobs require post-secondary education and trades certification. Also, HML has in place a Cultural Awareness and Respectful Workplace training program for all its employees.

**Interaction of the Project with Local Employment and Training and Potential Effects**

Site Preparation and Construction Phase

All project activities have an interaction with local employment and training during the site preparation and construction phase, as all activities require a qualified labour force.

*Potential interaction*

- construction/upgrading of the Howse haul road and bypass road;
- pit development;
- transportation and traffic; and
- mine construction.

Considering the scale of the project and its duration, the required manpower during construction will be limited to about 20 jobs for a period of one to two months. It is expected that qualified Aboriginal and local manpower will be available to account for over 15% of the needs for the construction period.

➔ The potential effects associated with the Project activities during the site preparation and construction phase is the **maintenance of current levels of local Aboriginal employment in the LSA.**

For the site preparation and construction phase, the nature of the effect is direct and its direction is positive.

Operation Phase

All project phases have potential interactions with local employment and training.

*Potential interaction*

- solid waste disposal;
- hazardous waste management;
- explosives waste management;
- treatment of sanitary wastewater;
- blasting and ore extraction;
- mineral processing;
- dewatering;
- removal and storage of remaining overburden and topsoil;
- operation of waste rock dumps;
- transportation of ore and traffic; and
- ongoing site restoration.

As previously discussed, qualified labour in MLJ, NNK, and Schefferville is limited. The total population in the LSA is about 1,800 people, and the population aged 15 years old and above is 955 individuals (Statistics Canada, 2011; see Table 7-135). In August 2015, 160 Aboriginal people (from NNK, NILMJ and ITUM) were employed by HML or by contractors hired for the DSO project. However, there are challenges for Aboriginal employment: acquisition of essential skills, access to technical training, and recruitment and retention of Aboriginal workers (long working hours, zero tolerance policy, etc.). HML estimates that there will be a need for approximately 138 additional employees for the Howse Project operation, which means that about 20 jobs could be created locally if the current proportion of Aboriginal employment is maintained (15%). This proportion could reach up to 40% local Aboriginal employment, which would mean 55 additional local jobs.

The Aboriginal communities of the LSA are undergoing a demographic boom, and the populations of both Kawawachikamach and MLJ are young. Accordingly, there is a potential for the eventual recruitment of an Aboriginal labour force. However, care needs to be taken to ensure that young people complete their educational curriculum prior to being recruited and trained by mining companies (NML and PFWA 2009). Aboriginal women have a similar unemployment rate to Aboriginal men, and may be a promising labour

pool provided that training is offered. At the moment, Aboriginal women account for 56% of TSMC's local Aboriginal labour force, and 4% of the total labour force.

Training is a key issue in terms of Aboriginal employment. Opportunities for vocational training are sporadic in the Schefferville area, and trainees often lack essential skills before enrolling in technical training. There have been initiatives to train Aboriginal workers, yet acquiring competency cards, for example, might be difficult due to jurisdictional issues between the provinces.

Although the local population welcomes the possibilities for employment, many find that the promises made with regard to training and employment were not entirely fulfilled by companies (Chapter 4). However, HML and contractors are ultimately responsible for their hiring policy and objectives and are bound to comply with the IBA provisions pertaining to hiring local Aboriginals as much as possible.

➔ Overall, the Howse Project represents an opportunity for employment in the LSA, and the potential effects associated with the Project activities during the operation phase is the **maintenance, and potential increase, of current levels of local Aboriginal employment in the LSA.**

For the operation phase, the nature of the effect is direct and its direction is positive.

It is important to note that if the Howse Project does not go ahead, current jobs may be compromised, as well as the numerous positions at the regional level.

Decommissioning and Reclamation Phase

*No potential interaction*

All Project activities have an interaction with local employment and training during the decommissioning and reclamation phase.

*Potential interaction*

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic; and
- final site restoration.

For the decommissioning and reclamation phase, **employment will decrease**. However, in the case of the Howse Project, it is possible that most employees may be redirected to other potential mining projects including TSMC projects. This possibility, however, is theoretical and difficult to predict. Nonetheless, fewer workers will be required for the decommissioning and reclamation phase.

➔ The potential effects associated with the project activities during the decommissioning and reclamation phase is a **decrease in local employment.**

For the decommissioning and reclamation phase, the nature of the effect will be direct and its direction will be negative.

**LOCAL CONTRACTING**

The main concerns raised during public consultations (Chapter 4) were:

- economic development is a positive effects of the project. The construction sector is active again, through housing;
- mining has had a positive effect on living standards, but money has also amplified existing social problems;
- companies are investing locally but there is a perception that they could do more; and

- local people feel that most of the benefits are spent in Labrador, whereas the effects are felt in Québec.

**Interaction of the Project with Local Contracting and Potential Effects**

Site Preparation and Construction Phase

*No potential interaction*

All project activities have an interaction with local contracting during the site preparation and construction phase, as all sources of effects require qualified labour force.

*Potential interaction*

- construction/upgrading of Howse haul road and bypass road;
- pit development;
- transportation and traffic;
- mine construction.

As explained above, the labour force needs for the Howse Project site preparation and construction phase will be limited. The positive effects of the beginning of the Howse Project for contractors will mostly lie in the overall continuation of the DSO project.

➔ The potential effects associated with the Project activities during the site preparation and construction phase is the maintenance and potential increase of current levels of contracts for local businesses.

For the site preparation and construction phase, the nature of the effect is direct and its direction is positive.

Operation Phase

*No potential interaction*

All Project phases have potential interactions with local employment.

*Potential interaction*

- solid waste disposal;
- hazardous waste management;
- explosives waste management;
- treatment of sanitary wastewater;
- blasting and ore extraction;
- mineral processing;
- dewatering;
- removal and storage of remaining overburden and topsoil;
- operation of waste rock dumps;
- transportation of ore and traffic; and
- ongoing site restoration.

Several concerns were raised by NIMLJ, NNK and ITUM regarding contracting opportunities on the Project. One concern is that they are not prepared when competition is high, and do not always possess the required

equipment. They have mentioned that local businesses should benefit from the support of mining companies in terms of acquiring the skills and equipment to be prepared and to provide adequate services. Some have mentioned that Aboriginal companies, especially the small ones or the ones that are beginning, should forego the bidding process and be prioritized over external companies.

As it was expressed for employment, there is a widespread feeling in the LSA that local companies are not receiving their share of the contracting opportunities. More precisely, there is disappointment related to the observation that local Aboriginal groups receive "small" contracts compared to other contractors from Labrador. They would like to see more capacity building for the local contractors so that they may obtain these contracts eventually.

As explained above, the contracting opportunities for the Howse Project operation phase will be key in maintaining the overall number of contracts that are given out by TSMC for the DSO project. Again, if the Howse Project does not go ahead, the current contracts awarded by TSMC for its DSO project construction and operation may not be maintained.

➔ The potential effects associated with the Project activities during the operation phase is the **maintenance, and potential increase, of current levels of contracts for the local businesses.**

For the operation phase, the nature of the effect is direct and its direction is positive.

Decommissioning and Reclamation Phase

*No potential interaction*

All project activities have an interaction with local contracting during the decommissioning and reclamation phase.

*Potential interaction*

- demobilization of Howse facilities and heavy machinery;
- transportation and traffic;
- final site restoration.

A **lower number of contracts** will be given out for the decommissioning and reclamation phase as activities will generally be decreasing. In addition, decommissioning and reclamation work often calls for specialized types of firms and equipment that may not be available locally.

➔ The potential effects associated with the Project activities during the decommissioning and reclamation phase is a **decrease in the number of contracts for local businesses.**

For the decommissioning and reclamation phase, the nature of the effect is direct and its direction is negative.

#### 7.5.3.5.3 Mitigation Measures

**LOCAL EMPLOYMENT AND TRAINING**

Standard Measures

The agreements in force between HML and the GNL and with Aboriginal groups for the DSO Project provide for the maximization of employment and contracts for NL residents/NL suppliers and members/businesses of the NIMLJ, NNK, ITUM, IN, and NCC. Local Aboriginal residents (members of the NIMLJ and the NNK) with the qualifications and competencies required are given priority in employment opportunities by virtue

of their proximity to the project, while NL residents and members of the three other Aboriginal groups (ITUM, IN, NCC), with the qualifications and competencies required are given subsequent priority in employment. Similarly, NL and Aboriginal businesses are given the same priority, provided that they are technically competent and commercially competitive. The same hiring and contracting priorities will apply to the Howse Project, as well as the reporting requirements. To this effect, HML will update the existing Direct Shipping Ore Project NLBP and the WEP, and its IBAs and Cooperation Agreement to include the Howse Project, for which approval by the responsible authorities will be obtained prior to the beginning of the construction. In addition, HML provides training and internship opportunities, and many opportunities for on-the-job training of all workers on-site, including Aboriginal people and women.

Specific Mitigation Measures

Although local employment has a positive effects, the significance of this effects will be increased with the following specific measures:

- continue to support the essential skills training and other technical training according to job needs, via on-the-job training and institutional training, as per IBA and government funding available;
- provide mechanisms through which Aboriginal workers may access qualified positions and obtain promotions (in progress);
- work with communities to support the delivery of early training in areas that will be required. When the construction and operation phases begin, these workers will be fully prepared and trained;
- offer an alternate schedule to local workers when operational schedules allow it;
- continue to provide on-the-job training equitably for both male and female staff;
- continue to address issues relating to project construction and operation, including employment, training and contracting, via each individual community IBA Implementation Committee;
- continue to provide Cultural Awareness and Respectful Workplace training program for workers;
- HML will ensure that all new employees have their beginner's handbook and appropriate health and safety training;
- deliver a custom-designed training in Process Plant Operations to three Québec First Nations in spring 2015, which included English classes for Innu students. Many graduates have since been hired to work on the DSO Site;
- continue to employ women at a rate of over 10% of its Project Workforce and continue to favour women who have the required skills and qualifications;
- continue to employ Aboriginal women in non-traditional roles including heavy equipment operators, plant operators, security officers;
- continue to support Innu staff in improving their English skills on-the-job, given that the worksite is in Labrador and primarily English-speaking. English language courses will be offered on-site (to come);
- continue to prioritize Aboriginal and local contractors as much as possible;
- continue to adapt the bidding process to the size of some of the local businesses, where possible divide big contracts into smaller ones; and
- continue to provide support the creation of local businesses.

The work schedule (10 to 12 hours a day, 14 days on, 14 days off) may be difficult to deal with, especially for parents with young children. Certain employers, such as HML, may be able to offer a certain degree of flexibility in scheduling depending on, within reason, the needs of the employee and the needs of the specific department. Other options such as time-sharing between two First Nation employees are also

possible. However, such arrangements must be coordinated with the relevant supervisor and according to transportation schedules, and must be discussed on a case-by-case basis.

The perception that HML is not respecting the IBA in terms of employment is shared by many in the NIMLJ, ITUM and NNK (Chapter 4). This perception could be mitigated by increasing the information that is communicated regarding the employment situation (employment opportunities and current number of employees) of NIMLJ, NNK and ITUM members. HML newsletter and radio announcements should continue to be used, and the frequency of communications could be increased.

A decommissioning and closure plan will be prepared at least five years before the end of the Project to relocate workers where possible. This plan will be an opportunity to fund other types of businesses in the area. The plan could include initiatives to diversify the economy and to establish other opportunities for employment at the local level. The employment needs for the decommissioning and reclamation phase will certainly be lower, if not nil, once the site is decommissioned and restored. The only measure that would avoid the loss of jobs at the local level would be to redirect the workers to other mining projects.

#### LOCAL CONTRACTS

**Standard Measures**

As explained above, HML will respect all agreements in force. The effect of local contracting is positive, and HML has already put in place a range of measures to help Aboriginal businesses benefit from these contracts:

- Prioritize Aboriginal and local contractors as much as possible (in place);
- Adapt the bidding process to the size of some of the local businesses, where possible divide big contracts into smaller ones (in place);
- Support the creation of local businesses (in place, on an ad hoc basis);
- Provide start-up training for new business (in place, on an ad hoc basis);
- Provide cultural training for new enterprises (provided to all contractors hired by TSMC).

**Specific Mitigation Measures**

The measures cited above will be continued for the purpose of the Howse Project.

- Continue to prioritize Aboriginal and local contractors as much as possible;
- Continue to adapt the bidding process to the size of some of the local businesses, where possible divide big contracts into smaller ones;
- Continue to provide support the creation of local businesses;
- Continue to provide start-up training for new business (in place, on an ad hoc basis);
- Continue to provide cultural training for new enterprises (provided to all contractors hired by HML).

Consultations for the Howse Project EIS has brought to light the perception that HML is not respecting its commitments in terms of contracting (Chapter 4). However, given the numerous Aboriginal businesses that have had contracts with HML, amounting to hundreds of millions of dollars, it seems that this perception could be mitigated by circulating enhanced information on the contracting situation. HML has included information on the matter in its newsletter, and this practice will be continued.

For the decommissioning and reclamation phase, measures already presented for local employment and training also apply: support for planning of economic diversification of the LSA, in partnership with the local leadership, would secure a future for the local businesses. In addition, local businesses will be informed in

advance of the type of work and equipment that will be required for the decommissioning and reclamation phase.

#### 7.5.3.5.4 Residual Effects Significance Assessment

**LOCAL EMPLOYMENT AND TRAINING**

Table 7-146 presents the criteria applicable for local employment and training for the assessment of the residual effect significance.

The suggested measures will ensure that local employment of the Aboriginal population is prioritized when possible. However, the success of the mitigation measures will be highly dependent on the efforts made to provide adequate training, support, and access to meaningful employment. Considering that training will be provided in a timely manner and measures will be taken to increase trainee success, the magnitude of the effect would positively increase, given that more local and Aboriginal workers would be employed.

This situation differs for the decommissioning and reclamation phase. The measures would help decrease the magnitude of employment loss, as a plan would be put in place to diversify the economy so that employees would have other opportunities for employment.

**Table 7-146 Assessment Criteria Applicable for Local Employment and Training**

| TIMING | | |
|---|---|---|
| **Inconsequential** | **Moderate** | **Considerable** |
| Will not have an effect | Will have a moderate effect at times | Will have an effect at all times during all phases of the Project. |
| **GEOGRAPHIC EXTENT** | | |
| **Site specific** | **Local** | **Regional** |
| Affects only populations within or near the Project footprint (LSA). | Affects a limited portion of the populations within the RSA. | Affects a large geographic area and a significant portion of the populations within the RSA. |
| **DURATION** | | |
| **Short** | **Medium** | **Long** |
| During all or part of preparation/construction phase, the start-up period, a single season | Preparation/construction phase and first 24 months of operation phase. | Throughout preparation/construction/operation phases and beyond. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Majority of jobs created will be lost | Half of the jobs created will be preserved. | Majority of jobs created will be preserved. |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Affects <5% of the population in the LSA in question and few or no people in the RSA. | Affects 5%-15% of the population in the LSA and a few people in the RSA. | Affects >15% of the population in the LSA and more than a few people in the RSA. |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| ~once per year | Occasional/intermittent | Year-round (continual) |

Timing

The timing for local employment and training will be considerably affected (but positively) in the LSA as there will be numerous employment and training opportunities throughout construction and operations, though reduced during the decommissioning and reclamation phase, at a time when few if any jobs in the mining industry can be found locally. (Value of 1).

Geographic Extent

The geographic extent will be local for the three phases of the project because it affects a limited portion of the VC in the RSA. (Value of 2).

Duration

The duration will be short for the site preparation and construction phase (Value of 1), long for the operation phase (Value of 2) and short for the decommissioning and reclamation phase (Value of 1).

Reversibility

The positive effect on the local employment and training is reversible as jobs created will be lost when the Project comes to an end. (Value of 1)

Magnitude

The effect will be low for the site preparation and construction phase (Value of 1 - positive) and moderate for the operation phase (Value of 2 - positive). For the decommissioning and reclamation phase the effect is considered low and negative because of employment loss (Value of 1).

Frequency

The frequency will be continual for the site preparation and construction and operation phases (Value of 3) and intermittent for the decommissioning and reclamation, given that lay-offs should occur gradually (Value of 2).

*7.5.3.5.4.1 Significance*

Based on the assessment, the residual effect significance will be **low** (value of 9 and sometimes positive) for the construction phase, **moderate** (value of 11, and sometimes positive) during the operations phase and **very low** (value of 8) for the decommissioning and abandonment phase.

Likelihood

The likelihood of Howse having an effect on Local Employment and Training is high considering the manpower needs for the different phases of the project.

**LOCAL CONTRACTING**

Table 7-147 presents the criteria applicable for local contracting for the assessment of the residual effect significance.

The measures in place will secure contracts for the local population, both Aboriginal and non-Aboriginal. However, the success of the mitigation measures will be highly dependent on the efforts made to give priority to local enterprises when they are competitive and capable of meeting the requirements for a contract. HML has already taken appropriate means to favor local entrepreneurs, and will offer a continued support during the life cycle of the project.

**Table 7-147 Assessment Criteria Applicable for Local Contracting**

| TIMING | | |
|---|---|---|
| **Inconsequential** | **Moderate** | **Considerable** |
| Will not have an effect | Will have a moderate effect at times | Will have an effect at all times during all phases of the Project. |
| **GEOGRAPHIC EXTENT** | | |
| **Site specific** | **Local** | **Regional** |
| Affects a limited portion of the populations and local enterprises within the LSA. | Affects a limited portion of the populations and local enterprises within the RSA. | Affects a large geographic area and a significant portion of the populations and enterprises within the RSA. |
| **DURATION** | | |
| **Short** | **Medium** | **Long** |
| During all or part of preparation/construction phase, the start-up period, a single season | Preparation/construction phase and first 24 months of operation phase. | Throughout preparation/construction/operation phases and beyond. |
| **REVERSIBILITY** | | |
| **Reversible** | **Partially reversible** | **Not reversible** |
| Majority of the local contracts will be closed | Half of the local contracts will be preserved. | Majority the local contracts will be preserved |
| **MAGNITUDE** | | |
| **Low** | **Moderate** | **High** |
| Affects <5% of the population in the LSA in question and few businesses. | Affects 5%-15% of the population and some businesses in the LSA. | Affects >15% of the population in the LSA and the majority of local businesses. |
| **FREQUENCY** | | |
| **Once** | **Intermittent** | **Continual** |
| ~once per year | Occasional/intermittent | Year-round (continual) |

Timing

The timing of the Project's activities will affect local contracting (positively) in the LSA as there will be important contracting opportunities for local businesses throughout construction and operations, and the decommissioning and reclamation phases, at a time when few if any contracts in the mining industry can be found locally. (Value of 3, positive).

Geographic Extent

The geographic extent will be local for the three phases of the project because it affects a limited portion of the VC in the RSA (Value of 2).

Duration

The duration will be short for the site preparation and construction phase (Value of 1), long for the operation phase (Value of 3) and short for decommissioning and reclamation phase (Value of 1).

Reversibility

The effect on the local contracting will be reversible because the business opportunities will be very limited, or inexistent, when the Project comes to an end. (Value of 1)

Magnitude

The effect will be low for the site preparation and construction phase (Value of 1, positive) and moderate for the operation phase (Value of 2, positive). For the decommissioning and reclamation phase the effect is considered low because there needs in terms of local contracting will decrease (Value of 1).

Frequency

The frequency will by continual for the site preparation and construction and operation phases (Value of 3) and intermittent for the decommissioning and reclamation, given that the number of contract will decrease at this time (Value of 2).

Effect Significance

Based on the assessment, the residual effect significance will be **moderate** (Value of 11) during site preparation and construction phase and **high** during the operation phase (Value of 14). For the decommissioning and reclamation phase, the residual effect will be **low** (Value of 10).

In all cases, the effects of the Howse Project on local contracting are positive.

Likelihood

The likelihood of Howse having an effect on local contracting is high considering the needs for the different phases of the project and that TSMC has already put in place local procurements procedure for its current activities.