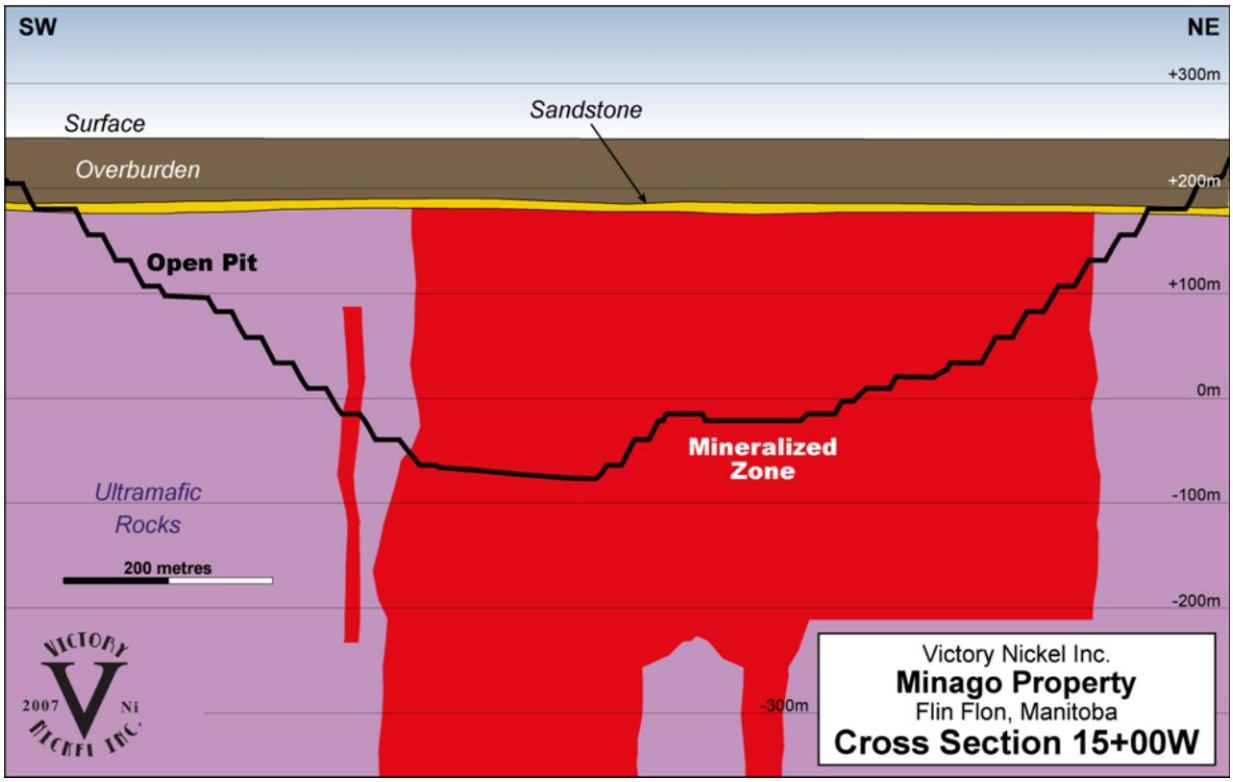

Chapter 4 – Project Setting

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4. PROJECT SETTING

4.1 Project Location

The Minago Nickel Property (Property) is located 485 km north-northwest of Winnipeg, Manitoba, Canada and 225 km south of Thompson, Manitoba on NTS map sheet 63J/3. The property is approximately 100 km north of Grand Rapids off Provincial Highway 6 in Manitoba. Provincial Highway 6 is a paved two-lane highway that serves as a major transportation route to northern Manitoba. The site location is shown in Figure 4.1-1. The location of the proposed Tailings and Waste Rock Management Facility is shown in Figure 4.1-2.

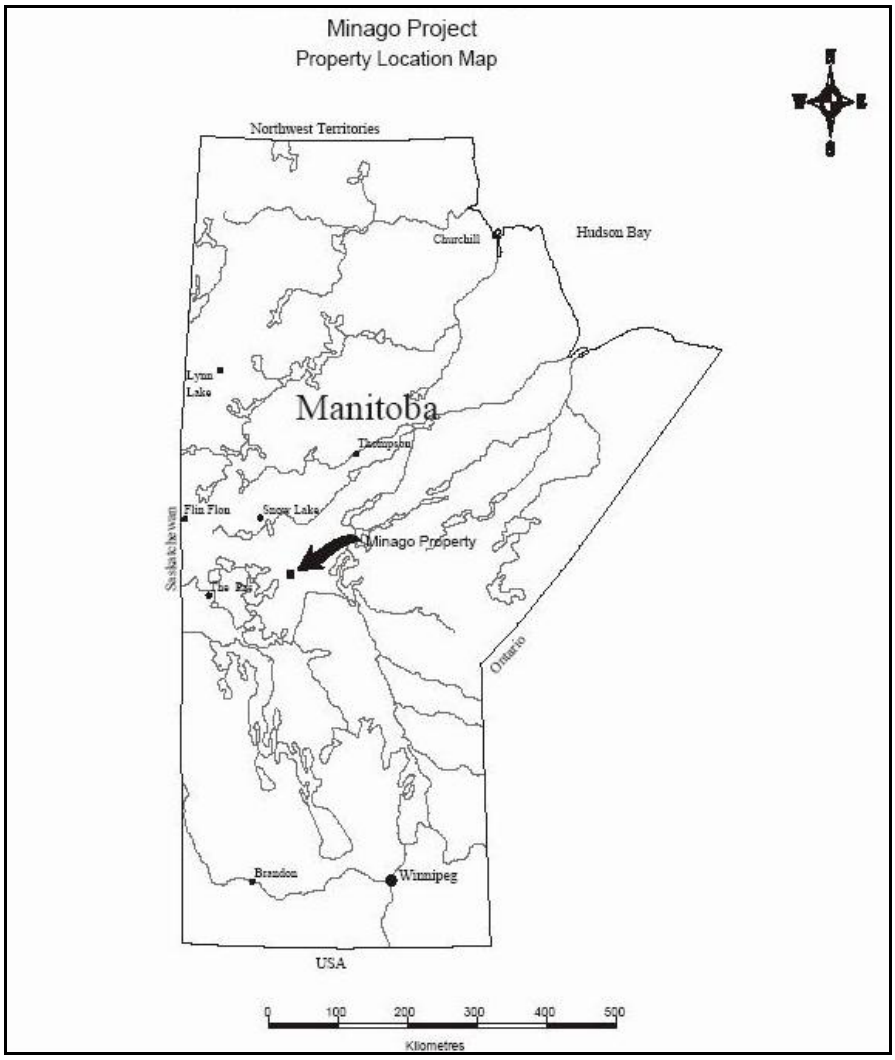
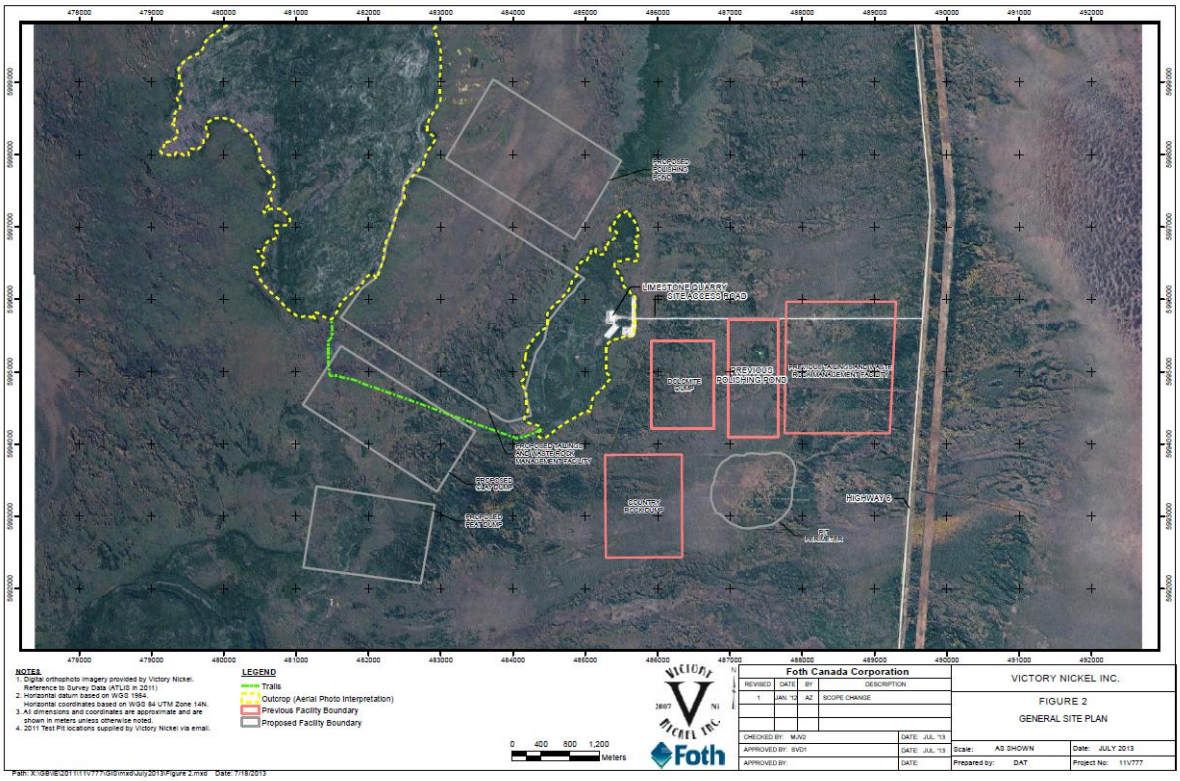


Figure 4.1-1 Property Location Map



Source: Wardrop, 2006

Figure 4.1-2 Site Plan for TWRMF and Other Site Components

4.2 Physical Environment

The Minago Project is located within the Nelson River sub-basin, which drains northeast into the southern end of the Hudson Bay. The Minago River and Hargrave River catchments, surrounding the Minago Project Site to the north, occur within the Nelson River sub-basin. The William River and Oakley Creek catchments at or surrounding the Minago Project Site to the south, occur within the Lake Winnipeg sub-basin, which flows northward into the Nelson River sub-basin. The topography in these watersheds varies between elevation 210 and 300 m.a.s.l.

The topography in the Minago Project Area is relatively flat with extensive low-lying areas containing wetlands covering approximately one-half the eco-region. Fens and bogs are poorly drained and frequently covered in tamarack and black spruce. Sites that are well drained consist mostly of plateaus above 265 m.a.s.l. covered by limestone, tills and fluvio-glacial sands. These plateaus are usually colonized by an open conifer forest (Roche, 2008a).

Surficial materials of the Minago Project site consist essentially of three types: fine grained glaciolacustrine, till blanket and organic deposits. Glaciolacustrine deposits are sediments deposited in glacial lakes, which formed when melt water was trapped between the front of a glacier and a moraine or rock wall that prevented drainage. Glaciolacustrine deposits consist primarily of well-stratified fine sand, silt and clay. Till is any sediment that was transported and deposited by a glacier without being sorted by melt water. It consists of clay, sand and large rock fragments that were deposited in irregular sheets or in ridges called moraines. Organic deposits are rich in partially decomposed plant matter. They usually form and accumulate in poorly drained environments such as swamps and peat bogs (Roche, 2008a).

The Minago Project Site is located within the sub-arctic climate zone (i.e., Dfc zone under the Koppen-Geiger climate classification; Peel et al., 2007). This zone is characterized by a cold climate with relatively humid winters and summers, and less than four months with average monthly temperature above 10 ºC (Kottek et al., 2006). At Minago, the annual mean temperature is expected to be about 0 ºC (Prowse, 1990), with significant seasonal variations. Mean monthly temperatures are expected to be between -20 and -25 ºC in January, and between 15 and 20 ºC in July (EMRC, 1995). Mean annual total precipitation is expected to be between 400 and 600 mm, with a mean annual snowfall between 1,000 and 2,000 mm (EMRC, 1995). It is noteworthy that the freshet or breakup of the snowpack in the vicinity of the Minago Project is also one of the driest periods of the year in terms of precipitation (Wardrop, 2009b).

The study area lies within the Localized Permafrost Zone, which was defined by Zoltai (1995). In that zone, permafrost occurs as small isolated lenses in peat. The hydrological and ecological impacts of their melting have been proven to have no significant effect on the surrounding area (Thibault and Payette, 2009). Moreover, Thibault and Payette (2009) have shown that over the last 50 years the southern limit of permafrost distribution has significantly migrated towards the north. Nowadays, it is therefore unlikely to observe permafrost in the Minago area.

Victory Nickel conducted Environmental Baseline Studies (EBS) as part of the Comprehensive Monitoring Program (CMP) to comply with the Environmental Act License (EAL) No.2981. As part of the CMP various EBS studies were undertaken beginning the fall of 2011. The EBS included Water Quality Studies, which followed the Minago Project Water Quality Sampling Standard Operating Procedure (Mchaina, 2011a) and the Victory Nickel Inc. Comprehensive Monitoring Program for the Minago Project Fall 2011 (Mchaina, 2011b). Victory Nickel Inc retained For&Enviro-Consult, in February 2012, to analyze water quality data from local watersheds within the Minago Project. The water quality monitoring program was undertaken as part of environmental baseline studies. The objectives of the surface water quality monitoring program were to:

- establish pre-mining baseline surface water quality monitoring database for the Minago Project and its surroundings;
- provide baseline surface water quality data for future water quality modeling for impact analysis with a goal to developing water management plans; and
- provide additional data to compliment the baseline data collected for the EAL application.

To assess water quality within and around the Minago Project, representative water samples were collected from ten (10) locations upstream and downstream of the water courses. Water samples were collected by VNI field team in October 2011 from Oakley Creek, Minago River, William River, Limestone Bay, Hill Lake, Drunken Lake, and Cross Lake. Additional information available in Appendix 4.2.

4.3 Sampling Stations

The surface water sampling program was carried out to assess water quality of Oakley Creek, Minago River, William River, Limestone Bay, Hill Lake, Drunken Lake and Cross Lake. For each of these water sources, sampling was carried out at or in the proximity of the permanent sampling stations that had been established during the 2007/2008 Baseline Studies for the EAL Application. Originally the sites were chosen based on local hydrology and accessibility. The same criteria were used during the fall 2011 field sampling expedition. The stations sampled for the Comprehensive Monitoring Program (CMP) are outlined below:

- Oakley Creek (2 stations, upstream and downstream of future discharge point);
- Minago River (2 stations, upstream and downstream of future discharge point);
- William River (2 stations, upstream and downstream of the future discharge point [upstream and downstream of the confluence point with Oakley Creek]);
- Limestone Bay (1 station, at the mouth of William River into Lake Winnipeg);
- Hill Lake (1 station, where Minago River flows into the Lake);

- Drunken Lake (1 station, where Minago River flows into the Lake);
- Cross Lake (1 station, where Minago River flows into the lake)

These sampling stations are depicted on the area map (Figure 4-1.) The station identification variables and other details are described in Table 4-1.

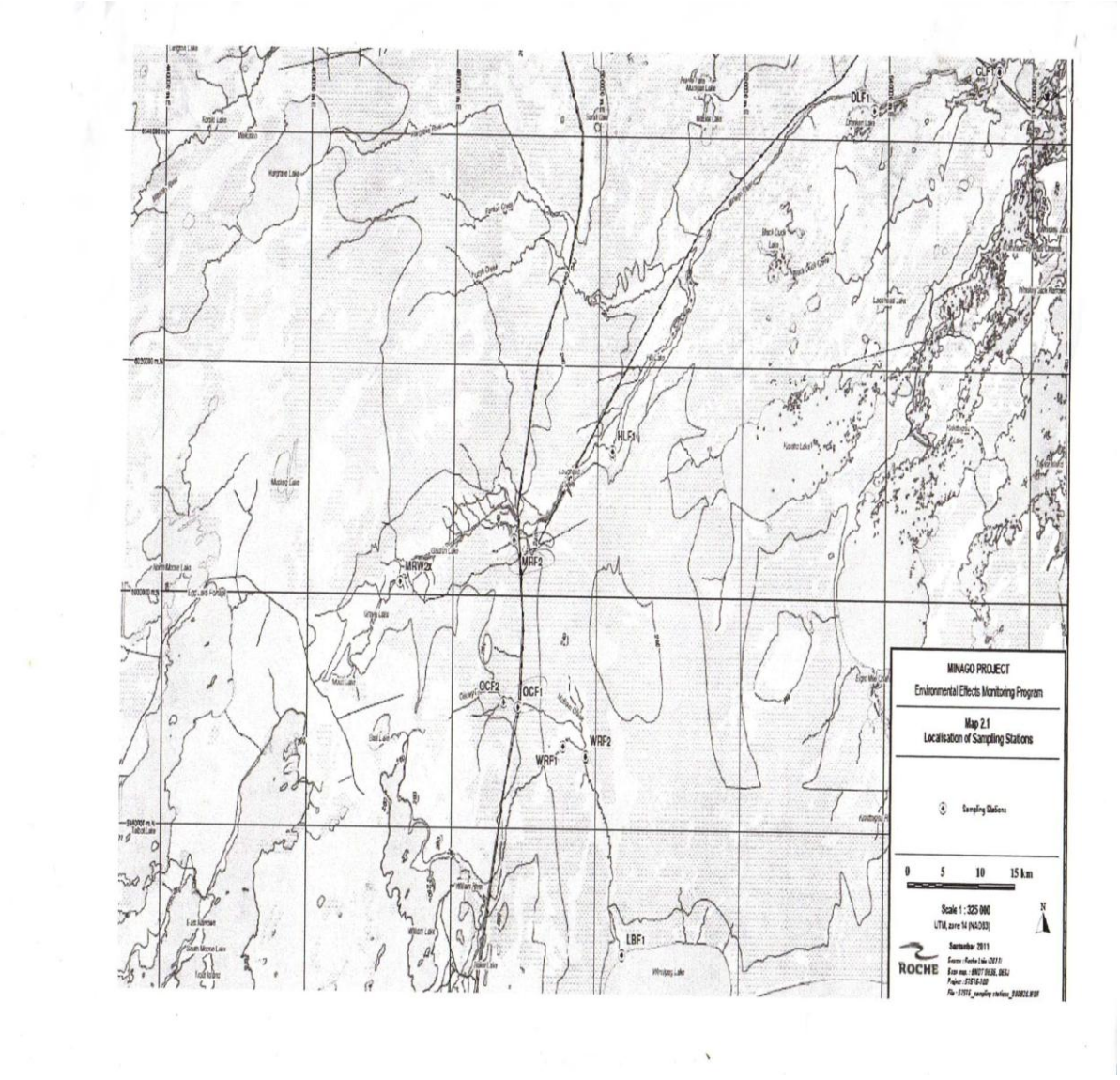


Figure 4-1 Map Area of the Minago Project Showing the Permanent Water Sampling Stations

Table 4-1 Site Identification and other Features of the Surface Water Quality Sampled Stations Showing Sites Potentially to be Impacted during Operations (PIDO) and Control Sites

Stations	Watershed	Type of stations	GPS coordinates (UTM, NAD83)	
			Permanent Station	Actual Sampled
Minago River				
MRW2X	Cross Lake	Control	472 465, 6 001 209	At permanent station
MRF2	Cross Lake	PIDO	488 562, 6 005 007	488 625, 6 005 297
Hill Lake				
HLF1	Cross Lake	PIDO	502 060, 6 012 816	At permanent station
Drunken Lake				
DLF1	Cross Lake	PIDO	538 349, 6 043 074	At permanent station
Cross Lake				
CLF1	Cross Lake	PIDO	555 324, 6 046 198	At permanent station
Oakley Creek				
OCF2	Lake Winnipeg	Control	487 235, 5 990 908	At permanent station
OCF1	Lake Winnipeg	PIDO	489 238, 5 990 528	489 294, 5 990 515
William River				
WRF1 (changed to (WRF1N)[a]	Lake Winnipeg	Control	495 419, 5 987 166	485 181, 5 973 773
WRF2	Lake Winnipeg	PIDO	498 578, 5 986 330	At permanent station
Limestone Bay				
LBF1	Lake Winnipeg	PIDO	503 911, 5 969 136	503 918, 5 969 164

[a] Sampling for this site was moved to an area more accessible by a vehicle (hence change of ID) – as the helicopter was involved in other field studies at a time

The baseline water quality sampling at Minago Project was undertaken in October 2011 as part of the CMP required under the EAL 2981. Though the project does not discharge any affluent in the receiving environment, for this sampling campaign, Manitoba Water Quality Standards, Objectives and Guidelines (MWQSOG) were applied to assess predevelopment baseline surface water quality conditions. For completeness, summaries of Minago Project surface water quality results also list guideline limits for the Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQGPAL) (CCME, 2011) and the Metal Mining Effluent Regulations (MMER) (Environment Canada, 2002a).

For the analyzed parameters, only iron concentrations were recorded at levels that exceeded Manitoba (Tier III for surface water) and CCEM regulations. Total iron concentrations ranged from 0.038 mg/L to 1.11 mg/L with an average of 0.3816 mg/L. Dissolved iron concentrations ranged between 0.014 mg/L and 0.532 mg/L with an average of 0.1225 mg/L. Some of the recorded iron values exceeded the Canadian Water Quality Guidelines for Protection of Aquatic Life (CCME, 2011) and Manitoba Tear III objectives both of which are 0.3 mg/L. The recorded iron concentrations are

likely due to eroded clay and silt particles, either by natural processes or by the current exploratory activities in the property. Caution must be exercised, therefore, to minimize deposition of eroded clays and silts from the site into the watercourses.

All water samples collected in the Minago Project were alkaline with a pH ranging from 7.68 to 8.36. All pH measurements met the Manitoba and Canada Water Quality Objectives and Guidelines. The average pH was 8.14. Considering all sampling stations and events, the total alkalinity ranged from 87.7 to 192 mg/L (as $CaCO_3$) with an average concentration of 143.86 mg/L. For all sampling stations conductivity (EC) ranged from 197 to 348 □ S/cm with an average value of 265.4 □ S/cm.

With the exception of the reported iron exceedances, the assessed parameters are well within acceptable limits of the Manitoba Water Quality Standards, Objectives, and Guidelines, which are the measurement and assessment criteria for Manitoba's policies and guidelines for the management of the province's water resources (Manitoba Water Stewardship, 2011). The parameters are also well within acceptable guideline limits for the Canadian Water Quality Guidelines for the Protection of Aquatic Life (CCME, 2011) and, therefore, the Metal Mining Effluent Regulations (MMER) (Environment Canada, 2002a).

To date, all surface water 2006-2008 samples collected from the vicinity of the Minago Project area were alkaline with a pH ranging from 7.01 to 8.84. The average and median field pH were 7.82 and 7.81, respectively. The total alkalinity ranged from 56.6 to 703.0 mg/L with average and median concentrations of 166.3 mg/L and 161.5 mg/L (as $CaCO_3$), respectively. The recorded hardness ranged from 61.5 to 715 mg/L and the average and median hardness were 173.9 mg/L and 170 mg/L (as $CaCO_3$), respectively. The field specific conductivity (conductivity measured at in situ water temperature corrected to 25^{o}C) ranged from 127 to 580 S/cm with average and median values of 214.2 and 215.5 S/cm, respectively.

4.4 Ecological Characterization

The Minago Project Area occupies approximately 2,428 hectares, west of Highway 6, and is located within the Mid-Boreal Lowland eco-region of the northern section of the Manitoba Plain with extensive wetlands covering approximately half the area (URS, 2008d). Underlain by flat-lying, limestone bedrock, the project site area is covered almost entirely by a glacial and lacustrine overburden of fine material, and extensive peat deposits. The cold and poorly drained fens and bogs are covered with tamarack and black spruce (URS, 2008d).

The Mid-Boreal Lowland eco-region is replaced to the north and east by the Hayes River Upland eco-region. Standing vegetation in this region consists predominantly of dense medium to tall black spruce and jack pine with some paper birch. The shrub layer is dominated by ericaceous shrubs, willow, and alder. The ground cover consists of mosses and lichens, low ericaceous shrubs, and some herbs (URS, 2008d).

Vegetative species diversion in the project area is relatively uniform. No rare, threatened, endangered, or special-status plant species were found. The Project Area contains vegetation

consisting of mostly evergreen trees (primarily black spruce and tamarack) of intermediate (>3-15 m) to dwarf (3 m) heights. Intermediate closed evergreen tree is most dominant (34%) vegetation classification, followed by dwarf open evergreen tree (25%).

Among the several wildlife species which are likely to occur in the area, including birds, mammals, reptiles and amphibians, none has a special status under provincial and/or federal legislations, except woodland caribou. A list of species potentially occurring in the Minago project Area was completed and it includes 136 birds, 39 mammals, 6 amphibians and 1 reptile. Among those, 45 birds, 17 mammals, 4 amphibians and 1 reptile were observed during field campaigns. A low density of furbearers was observed on the Project Site even if many beaver dams were observed. The Grand Rapids region is well-known for its caves and bat hibernacula; however, the nearest from the Project Site is located 16 km away.

The Minago Project area is underutilized by all wildlife species but shore birds, sharp-tailed grouse, small forest carnivores and black bear, beaver, and amphibians (and likely the red-sided garter snake) (URS, 2008e). None of the project area habitat is particularly critical to the survival of these species.

With rare exceptions, such as grouse, all of the birds that occur in the Minago Project vicinity are migratory and most occur at the Minago Project site only during their nesting seasons (URS, 2008e). None of the birds occurring in the Minago Project area have special status other than that conferred by the various treaties and conventions between Canada, the U.S., Japan, Mexico, and the former Soviet Union for the protection of migratory birds and by hunting seasons established by federal, provincial, and First Nations resource management agencies.

Moose populations in the Minago Project vicinity are concentrated north, south, and west of the Minago Project area. There is currently some summer and winter utilization of riparian habitat along Oakley Creek, bog habitat between the Moose Lake Winter Road and Oakley Creek, and bog and post-fire shrub habitat along the western edge of the Minago Project area.

Woodland Caribou (*Rangifer tarandus caribou*) was not observed in 2007 and 2008 wildlife surveys. The boreal population of woodland caribou is listed as “threatened” by the Committee on the Status of endangered Wildlife in Canada (COSEWIC) in the Species at Risk Act and Manitoba’s boreal woodland caribou populations were listed as “threatened” in The Manitoba Endangered Species Act in June, 2006.

The habitat at Minago is of limited value to woodland caribou because treed islands of black spruce do not occur within open muskegs and any individual caribou migrating south from the Wabowden herd would encounter a large area of burned-over land to the north and west of the project area that is occupied by moose, a species they are not competitive with (URS, 2008e). In addition, the moose population may have increased wolf densities and the primary forage in these areas is shrub habitat, rather than the niche forage of lichens utilized by woodland caribou. Any woodland caribou entering the Minago Project area are likely to be stray individuals from the main bodies of nearby herds (Wabowden and William Lake) and the project area is not likely to provide critical habitat for either herd (URS, 2008e).

The Environmental Baseline Studies that took place in the fall of 2011 were scoped out to the requirements of Clause 28 and Schedule B of the EAL to meet the following objectives:

- To establish the baseline condition for the fish community in Oakley Creek and the Minago River (Condition 4 (a));
- To ensure that the utilization of Oakley Creek and the Minago River by transitory species is understood and characterized (Condition 4 (b));
- To validate whether or not the fish community is impacted by the change in flows (Condition 4 (c)); and
- To determine the maximum in-stream flow requirements for fish habitat (Condition 4 (d)).

The overall objectives of the Aquatic Monitoring Program were:

- To establish the baseline condition for the fish community in Oakley Creek and the Minago River;
- To ensure that the utilization of Oakley Creek and the Minago River by transitory species is understood and characterized;
- To develop and implement a monitoring program for selenium that includes an initial baseline sampling of tissue and sediment at the following sites: Oakley Creek, Minago River, William River, Limestone Bay, Hill Lake, Drunken Lake and Cross Lake;
- To initiate an annual sediment sampling at each of those sites for total metal analysis;
- To assess benthic invertebrate communities in order to provide more knowledge on the habitat used by fish communities and to comply with Canada's *Metal Mining Effluent Regulations* (MMER).

The EBS included a Fish Resources and Habitat Survey; a Surface Water Assessment including Quality and Flow; Sediment Sampling in surface water bodies as stipulated in Condition 5 in Schedule B; and Benthic Invertebrate and Periphyton Sampling in water bodies as per Condition 5 in Schedule B. Additional information is available in Appendix 4.4

The stations that were targeted during the 2011 CMP are outlined below:

- Oakley Creek (2 stations, upstream and downstream of future discharge point);
- Minago River (2 stations, upstream and downstream of future discharge point);
- William River (2 stations, upstream and downstream of the future discharge point (upstream and downstream of the confluence point with Oakley Creek));
- Limestone Bay (1 station, at the mouth of William River);
- Hill Lake (1 station, where Minago River flows into the Lake);
- Drunken Lake (1 station, where Minago River flows into the Lake);

- Cross Lake (1 station, where Minago River flows into the Lake).

The Oakley Creek (upstream and downstream of future discharge point) and the Minago River (upstream and downstream of future discharge point) will serve as the EEM monitoring stations and the EAL No. 2981 monitoring stations. It is important to mention for the 2011 fall program, VNI objective is to comply with the EAL conditions and future campaigns will incorporate EEM requirements.

The locations of the ten (10) stations for the Local Study Areas (LSA) and Regional Study Areas (RSA) are shown on Figure 4-2 and the sampling effort described in Table 4-2.

4.5 Fish Community and Habitat Assessment

The 2011 Fish Community and Habitat Assessment Program will complement the previous Baseline Studies conducted for Environmental Impact Statement (EIS). The Local and Regional Study Areas established during the previous Baseline Studies of 2006, 2007 and 2008 have been included in the Fall Comprehensive Monitoring Program. The 2011 CMP program provides additional information on transitory species utilization of Oakley Creek and the Minago River systems.

The main aquatic habitats observed within the study areas were characterized in order to establish functions such as spawning, migration, feeding, etc. and to evaluate how those habitats are used by the various fish species occurring in the areas.

One of the approaches was to determine (as part of the 2011 fall EBS program) whether field sampling will be occurring within the whitefish spawning period. To ascertain this, gill nets were set up at Hill Lake - near where the Minago enters the Lake; and Limestone Bay - near the William River outlet. Best efforts were made to set up the gill nets over areas that whitefish might have been honing in. The objective is to strengthen the EIS fish data collected in the William and Oakley River and to verify whether top trophic level fish (including whitefish and walleye) are currently accessing these systems – particularly William River.

4.5.1 Objectives of the Fish Resource and Habitat Survey

The objectives of the Fish Resource and Habitat Survey were to:

- Provide a general description of aquatic habitats;
- Determine the composition of the fish communities in the freshwater system by documenting the presence/absence of fish species in water bodies that will likely be affected by the project;
- Determine the basic biological characteristics of major fish populations including abundance, and condition coefficient (mass/length ratio, etc.), and
- Determine the metal concentrations in muscle tissues of specimens of the major fish populations.

The approach and methodologies used are given in Table 4-2.

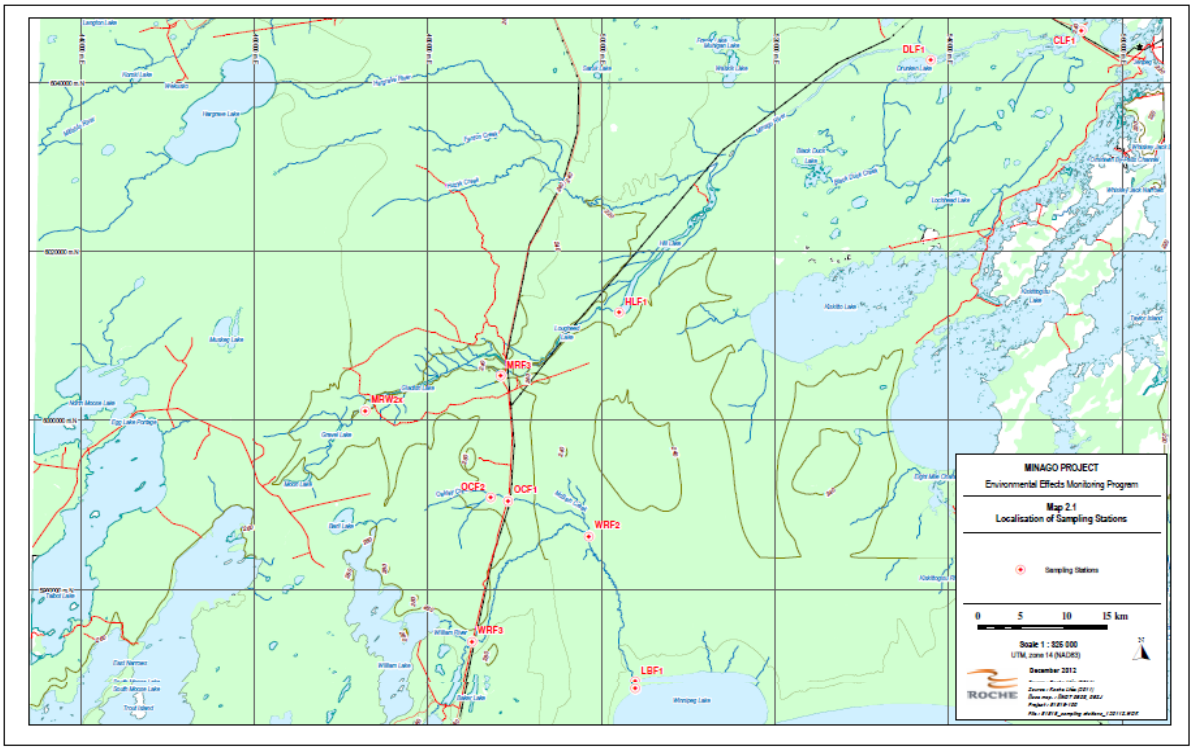


Figure 4-2 **Locations of the ten (10) stations for the Local Study Areas (LSA) and Regional Study Areas (RSA**

Table 4-2 Sampling Effort for the Program of Fall 2011

	Stations	Coordinates UTM (NAD83)	Fishing Techniques				Fish tissue	Habitat Characterization			
			Bait Traps	Fishing Nets	Electric Fishing	Fyke Net		Benthic invertebrates	Water Quality (*in situ*)*	Sediment Quality	Hydrology
Minago River Watershed	**Minago River**										
	MRF3	488350 6005312	3	1	1	1	8	x	x	x	x
	MRW2x	472490 6001214	4	1			5	x	x	x	x
	Hill Lake										
	HLF1	502096 6012951	3	1			10		x	x	
	Drunken Lake										
	DLF1	538498 6042781	3	1			10		x	x	
	Cross Lake										
	CLF1	555475 6046181	3	1			5		x	x	
William River Watershed	**Oakley Creek**										
	OCF1	489284 5990513			2	1	2	x	x	x	x
	OCF2	487465 5990964	5	1			0	x	x	x	x
	William River										
	WRF3	485224 5973748	7	1			0	x	x	x	x
	WRF2	498504 5986512	5	1			2	x	x	x	x
	Limestone Bay										
	LBF1	503896 5969237	3	1			9		x	x	
TOTAL			**36**	**9**	**3**	**2**	**51**	**6**	**10**	**10**	**6**

* Reported elsewhere

Table 4-3 Fisheries Survey – Results by Species and Stations

	HLF1	DLF1	MRF3	MRW2	WRF2	WRF3	LBF1	CLF	OCF1	OCF2	**Total**
Brook Stickleback									15	2	**17**
Burbot				1							**1**
Cisco		3									**3**
Golden Shiner								1			**1**
Northern Pike	12	11	8	4	2		14	6	2		**59**
Rainbow Smelt								1			**1**
Rock Bass	1										**1**
Sauger		1									**1**
Sucker sp.										1	**1**
Walleye		8									**8**
White sucker	5	1		1			1	2			**10**
Yellow Perch		13						5			**18**
Total	**18**	**37**	**8**	**6**	**2**	**0**	**15**	**15**	**17**	**3**	**121**

A total of 121 fishes were captured during the Fisheries Survey as shown in Table 4-3. The tools used are fishing nets, fyke nets, bait traps and electrofishing.. No fish specimen was captured at WRF3 where both fishing net and bait traps were unsuccessful. Among all captured specimens, 84 were from the Minago River watershed and 37 from the William River watershed. Twelve species were identified and the northern pike was the most abundant species, followed by the yellow perch and the smaller brook stickleback.

In comparison with the 2008 Fisheries Survey, four new species were captured including rock bass (*Ambloplites rupestris*), burbot (*Lota lota*), sauger (*Stizostedion canadense*) and cisco (*Coregonus artedi*). Considering that Fisheries Survey took place in mid-October, one would expect to have lake whitefish (*Coregonus clupeaformis*) in the watershed. However, timing could have been late or early considering that spawning period varies from year to year depending on various conditions and therefore one could not confirm the absence of whitefish.

Fish tissue metal content analyses revealed that arsenic (criteria: 3.5 mg/kg), lead (criteria: 0.5 mg/kg), nickel (none) and selenium (none), concentrations were in compliance with the Canadian Food Inspection Agency (CFIA) guideline and some were below the detection limit. Mercury content found in fish tissues exceeded the CFIA criteria of 0.5 mg/kg. Minago River watershed had 9.8% of samples exceeding the CFIA criteria for mercury while in the William River watershed, there was no exceedance.

The *Guidelines for the Consumption of Recreationally Angled Fish in Manitoba* were developed so that the nutritional benefits of consuming fish can be achieved without exceeding safe mercury concentrations levels. According to those guidelines, both watersheds (William and Minago rivers) would be considered as within Consumption Category 1 (less than or equal to 0.2 µg/g of mercury in fish fillet; Manitoba Water Stewardship, 2012).

Sixty percent (60%) of sediment samples exceeded the ISQGs for chromium and 10% of the samples exceeded the PELs for lead. However, currently, the degree to which Cr will be bioavailable at particular sites cannot be predicted conclusively from the physicochemical characteristics of the sediments or the attributes of endemic organisms (Environment Canada, 1998). Overall, results from the physicochemical characterization of sediments are consistent from 2008 to 2011.

The presence of high concentration of total organic carbon (TOC) in sediments was reported to be naturally occurring in the study area and could represent a limiting factor for aquatic life.

Simpson's Diversity Index were stable from 2008 to 2011, suggesting that benthic invertebrate communities were somehow stable with regards to density and taxonomic richness.

During the fish sampling program conducted in May/June 2007 after the spawning migrations of Walleye (*Sander vitreus)* and Northern pike (*Esox lucius*), the following species were encountered: Central mud minnow (*Umbra limi*), Brook stickleback (*Culaea inconstans*), both lake-run and dwarf resident White sucker (*Catostomus commersoni*), Pearl dace (*Margriscus margrita*), Iowa darter (*Etheostoma exile*), Emerald shiner (*Notropis atherinoides)*, Johnny darter (*Etheostoa nigrum*), Rainbow smelt (*Osmerus mardax*), and Blacknosed shiner (*Notropis heterolepis*) (URS, 2008b).

During a 2008 fisheries assessment program conducted between May 6-9, 2008, a total of 1,184 fishes were caught using experimental nets installed in Cross Lake, Hill Lake and Limestone Bay of Lake Winnipeg (Roche, 2008a). Rainbow smelts (*Osmerus mardax*) represented 86.8 % of all fishes caught in Limestone Bay and 86.99% of the overall May 2008 catch. Northern pikes (*Esox lucius*) were the second most abundant species, representing 9.5 % of the overall catch. Northern pikes (*Esox lucius*) represented 73.3% of the non Rainbow smelt species caught (Roche, 2008a).

4.6 Social and Cultural Environment

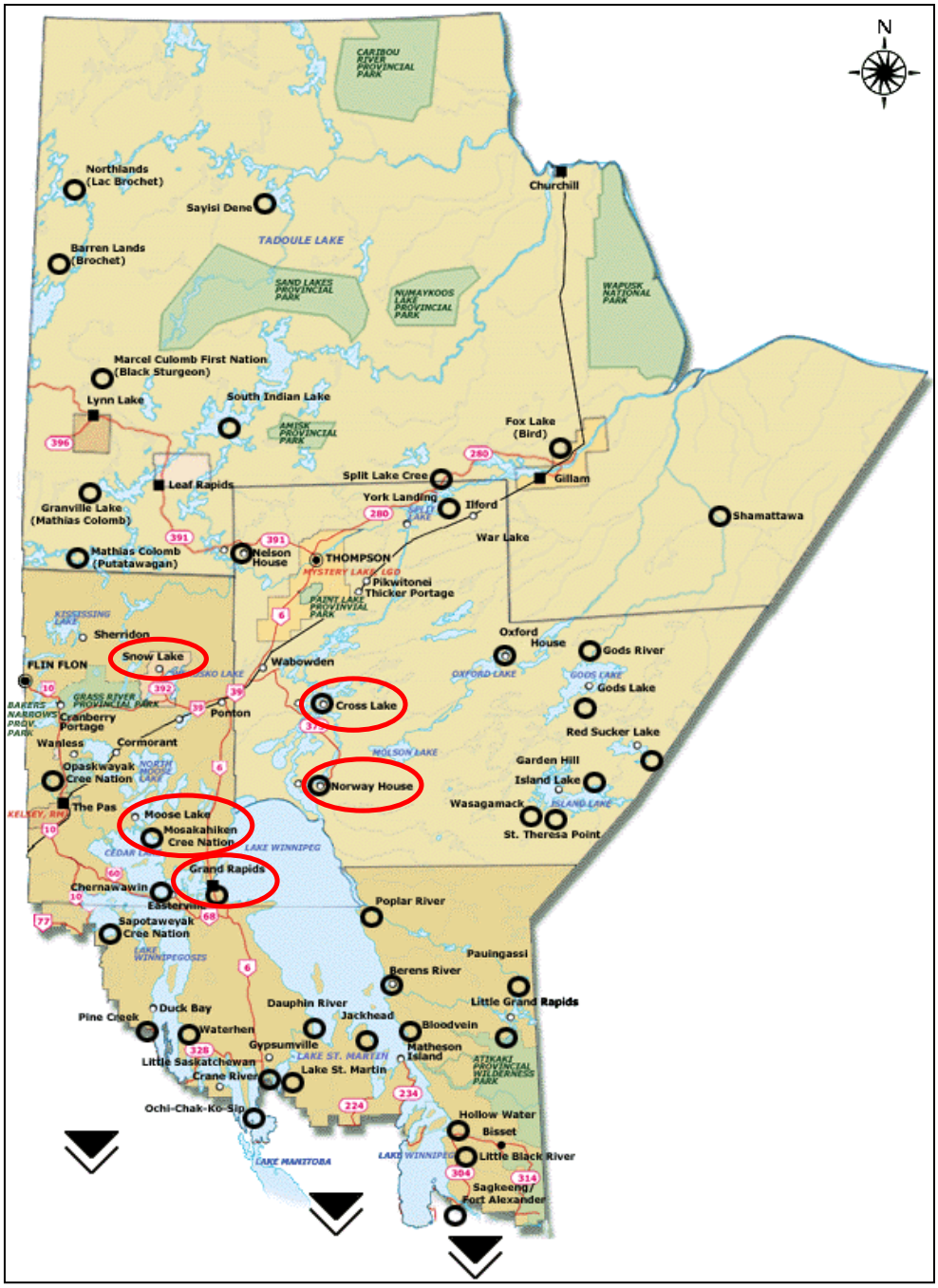
The Minago Project area falls within the Treaty 5 traditional territory and specifically is located in the Norway House Resource Management Area. Neighboring communities to the Minago Property include Grand Rapids (GR), Moose Lake (ML), Cross Lake (CL), Snow Lake (SL) and Norway House (NH). The closest community is Grand Rapids, approximately 100 km south of the site. All of these communities, with the exception of Snow Lake, are members of Treaty 5. The communities outside Treaty 5 have their own community councils and mayors. The First Nations are Cree and have their own governing structure with one Chief and several councilors. The Cree are Canada's largest native group, with 200,000 registered members and dozens of self-governed nations. Traditionally, the Cree were primarily hunting people.

As part of the Environmental Impact Assessment for the Minago Project, VNI conducted community engagement meetings and consultations with the First Nations, Métis, the government and the general public. Victory Nickel participated in community engagement in Norway House (Norway House Cree Nation (NHCN) and Norway House Community (NHC), Grand Rapids (Misipawistik Cree Nation) and Grand Rapids Community (GRC), Cross Lake (Pimicikamak Cree Nation) and Cross Lake Community (CLC), Moose Lake (Mosakahiken Cree Nation) and Moose Lake Community

(MLC), Snow Lake (public), and The Pas (Métis). Métis are of mixed-blood Cree, French, and other Canadian ancestry. There are more than 100,000 Métis in Canada (American Native Languages, 2010).

The assessed communities are illustrated in Figure 4-3 and include: Snow Lake (SL), Grand Rapids (GR), Cross Lake (CL), Moose Lake (ML), and Norway House (NH).

Based on the archaeological studies conducted at the site, it was concluded that it is virtually impossible that any use could have been made of the Minago Project area during Pre-contact times (Quaternary Consultants Ltd., 2008). The area is located at a considerable distance from lakes or navigable rivers and access at any time of the year would have been very difficult. Any use of this location that might have occurred would have happened during the winter months and probably would have been related to the fur trade. It is impossible to predict where such activity would have taken place as traplines are relocated every year to accommodate animal movement. Even if evidence from this activity were present, it would be buried deep in the sphagnum moss that covers the area and would be impossible to locate. The proposed TWRMF is located within the project area assessed by Quaternary Consultants Ltd in 2008. Therefore the findings by Quaternary Consultants apply.



Source: Manitoba Government, Manitoba Community Profiles

Figure 4-3 Communities of Interest Surveyed

The economic and social indicators for these communities studied are given in the Environmental Impact Statement (EIS) for the Minago Project (Victory Nickel Inc, 2010). The findings and conclusions made in the EIS are applicable for the proposed TWRMF since it is part of the Minago Project.