

APPENDIX A TO E

APPENDIX A: PLANNING PROCESS OVERVIEW

PROJECT TEAM AND COMMITTEES

Initiation of the process to develop an *Ecological Land Use and Resource Management Strategy* for the Lake Nipigon Basin Signature Site resulted in the formation of a number of planning committees/teams. The role of these groups included such things as providing input and advice, researching and writing planning documents, meeting with interest groups, industry and local communities, and review and approval functions.

PROJECT TEAM

The Project Team consisted of government staff (MNR, MNDM) and representatives from the environmental sector, Advisory Committee and local First Nations. (Table 38) The Project Team provided a planning and support role, which involved a wide array of responsibilities. Some of these duties included gathering and analyzing background

information; managing the planning process; supporting the Lake Nipigon Watershed Advisory Committee; meeting and consulting with the public and stakeholders; overseeing contractors and consultants; developing planning options for review and consultation; and preparing the Ecological Land Use and Resource Management Strategy.

STEERING COMMITTEE

A steering committee was required to ensure linkages between planning and implementation activities and to ensure that recommendations generated within the project were consistent with OLL and the government vision for the Lake Nipigon Basin. The steering committee provided direction to the Project Team when required and reviewed all final documents/recommendations prior to approval. (Table 39)

LAKE NIPIGON BASIN ABORIGINAL ADVISORY COMMITTEE

The eight Aboriginal communities within the Basin have strong ties with Lake Nipigon in terms of cultural heritage, economic

TABLE 38: LAKE NIPIGON BASIN SIGNATURE SITE PROJECT TEAM

POSITION / REPRESENTATION	NAME / AFFILIATION
Project Leader	Bob Pinder, MNR, Nipigon
Communications	Dave Barker, MNR, Nipigon
Planner	Peggy Bluth, MNR, Nipigon
Biologist	Rob Swainson, MNR, Nipigon
Clerk	Tracy Laird, MNR, Nipigon
Ontario Living Legacy Intern	Elizabeth Francis, MNR, Nipigon
Resource Technician	Lisa Ruotsalainen, MNR, Nipigon
Park Planner	Steve Kuntz, MNR, Nipigon
Ontario Parks NW Zone, MNR	Michele Proulx, MNR, Thunder Bay
Thunder Bay District, MNR	Jim Cameron, MNR, Thunder Bay
Tourism	Paul Pepe, Ministry of Northern Development and Mines
Mining	Peter Hinz, Ministry of Northern Development and Mines
Nipigon Watershed Advisory Committee	Dan Taisey, Nipigon Watershed Advisory Committee
Environment	Julian Hostenstein, Partnership for Public Lands
First Nation	Tom Borg, Red Rock First Nation

TABLE 39: LAKE NIPIGON BASIN SIGNATURE SITE STEERING COMMITTEE

NAME	POSITION
Charlie Lauer	Regional Director, Northwest Region
Ian Hagman	District Manager, Nipigon District
Bill Baker	District Manager, Thunder Bay District
Ron Waito	A/Manager, Northwest Region Planning Unit
Tim Sullivan	Northwest Zone Manager, Ontario Parks
Sergio Buonocorre	Ministry of Tourism
Colin Kelly	Ministry of Northern Development and Mines
John Mason	Ministry of Northern Development and Mines

investment and benefits, traditional activities, spiritual values and resource/tourism development opportunities. In recognition of these ties and the importance of protecting the Aboriginal culture and providing potential economic opportunities to the local native communities, the Project Team identified the need to develop an Aboriginal Advisory Committee to facilitate native input. The hope was to achieve agreement amongst the eight communities with regard to the Basin and the management direction that should be taken.

In the fall of 2000, two meetings were organized by the Project Team that were attended by some of the First Nations and Aboriginal groups. While these initial meetings were generally positive in nature, a Terms of Reference could not be agreed upon among the First Nations. As a result, the Aboriginal Advisory Committee was never created.

In the absence of a committee, the Project Team has provided a number of opportunities for First Nations and their members to participate in the development of the Strategy. In addition to the normal public information centers held across the area, Project Team staff have met individually with various Chiefs and individuals, provided materials and presentations to Band Council meetings and held information centres in and close to First Nations communities. This effort has helped to build awareness of the Lake Nipigon

project, and has resulted in sharing of information and views about the Basin.

NIPIGON WATERSHED ADVISORY COMMITTEE

The Nipigon Watershed Advisory Committee is involved in keeping the *Lake Nipigon Integrated Resource Management Plan* up to date and providing the Nipigon District Manager with advice regarding the management of Lake Nipigon and its watershed. The committee is active and meets monthly at the Nipigon District MNR office. (Table 40)

The existing committee membership was determined to be sufficient to meet the consultation and advisory needs of the Nipigon Signature Site initiative (Table 40). Responsibilities included consulting with the public and Lake Nipigon stakeholders, reviewing background information, evaluating various planning proposals and making recommendations back to the Lake Nipigon Basin Project Team. The committee provided a representative to sit as a member on the Planning Team, attend team meetings and open houses, and act as a link between the Basin initiative and the Advisory Committee.

PLANNING METHOD AND SCHEDULE

The *Lake Nipigon Basin Ecological Land Use and Resource Management Strategy* was developed over a two-year period starting in August of 2000.

TABLE 40: NIPIGON WATERSHED ADVISORY COMMITTEE MEMBERSHIP

MEMBERS / INVITED MEMBERS	REPRESENTATIVE
Chairman	Dave Nuttal
East Lake Nipigon Cottager's Association	Eric Rutherford
Lake Nipigon Tourist Outfitters	Art Jalkanen
Lake Nipigon Cruiser Operators	Tim Carroll
Ontario Power Generation	Brian Parceis
Red Rock Fish and Game Club	Pat McGuire
Forest Industry - Domtar	Rob Booth
Environmental Resource Group	Betty Brill
Lake Nipigon Metis Nation Commercial Fisherman's Association	Gerald Adams
South Bay Angler's Association	Henry Hogarrd / John Furtado
Lakes of Legends Tourism Association	Gord Brinkman
Lake Nipigon Charter Boat Association	Dan Taisey
Township of Nipigon	Ed Belanger
Township of Red Rock	Monty Kerr
Polly Lake Local Roads Board	John Chase
Gull Bay First Nation	Tony King
Biinjitwaabik Zaaging Anishinaabek	Harold Michon
Red Rock First Nation	Tom Borg
Sand Point	Paul Gladu
Whitesand First Nation	
Lake Nipigon Ojibway First Nation	Theresa Fowler
Poplar Point	Wilfred King
Local MPP Representative	Roy Taisey
Land of the Nipigon Waterways Development Association	
Bowater Forest Products Division	Ted Nyman / Jim Cassan

PLANNING APPROACH

With the establishment of the Project Team in August 2000, the first step in the planning process was to develop the Terms of Reference for the project. This was followed by a four-month period of data collection and literature research. Consultants were hired to conduct life science studies of the Basin. In order to meet future consultation requirements, efforts were also directed at establishing a comprehensive mailing list of all known stakeholders and interested members of the public. During a fall 2000 meeting, the Nipigon Watershed Advisory Committee was called upon to review the

existing mapped values information for the Basin and provide any corrections or new information that they were aware of.

In January 2001, an Invitation to Participate was sent out to all individuals/organizations on the mailing list advising of the start up of the project and the opportunity to get involved. From January through May 2001, a series of background information documents were written addressing various aspects of the Basin such as fisheries, wildlife, tourism, mining, history, water resources, etc. In addition, a comprehensive background document highlighting all the background information collected over the previous fall

and winter entitled Lake Nipigon Basin Background Document was written and published.

In June 2001 a series of open houses were held allowing the public to view the background information and provide any comments or information to the Project Team.

During the summer of 2001, consultants were hired to provide life science information for the Lake Nipigon Waters Conservation Reserve, and an earth science reconnaissance survey was conducted around the lake.

In addition, Project Team staff conducted fieldwork to obtain more information on caribou distribution, small mammal occurrences, bird species present and access point use and condition.

In September a facilitated Stakeholders Workshop was held to further define issues and objectives and brainstorm management ideas. Through the fall of 2001 preliminary management options were developed.

The Lake Nipigon Basin Signature Site Management Options Document was released to the public for comment via a series of open houses in December 2001.

Public input from the December open houses was analyzed and considered in conjunction with background information, Ontario's Living Legacy direction, government policy and provincial legislation, to select and refine the preferred management alternatives that appear in this Strategy. Once public input has been received on this draft document, a final Ecological Land Use and Resource Management Strategy will be written, approved and made available for public inspection in the fall of 2002.

SCHEDULE

The production of the *Ecological Land Use and Resource Management Strategy for the Lake Nipigon Basin* followed a two-year planning process as outlined in Table 41.

The Project Team managed to meet all of the planning milestones on schedule.

PUBLIC CONSULTATION

Public consultation for the Strategy followed a fairly standard process based on Provincial Park planning policy requirements. An invitation to participate issued in January 2001 was followed by the publication of a Background Information report in June 2001. Information packages were distributed and open houses were held providing the public with the opportunity to comment.

A stakeholder meeting was held in September 2001 to generate ideas and input for the development of management options.

In December, the Management Options document was published and released to the public through another series of open houses. Numerous meetings were held throughout the planning period with groups like the Local Citizen Committees, the Watershed Advisory Committee, Aboriginal communities/groups, tourism groups. During the course of this process, all newsletters, the Background Information document, Management Options document and this Strategy have been made available to the public on *Ontario's Living Legacy* web page at <http://ontarioslivinglegacy.com/nipigon.html>. Public notices were also placed on the *Environmental Bill of Rights Electronic Registry*.

Public input was collected throughout the planning process via a variety of means and by a diversity of organizations, stakeholders and individuals (Table 39, 40 & 43). All input was documented, analyzed and summarized in a number of unpublished reports on file at the Ministry of Natural Resources, Nipigon District Office.

INVITATION TO PARTICIPATE

An "Invitation to Participate" was provided to a mail list of about 1800 names, including First Nations, interest groups and members of the public in January 2001. Each invitation package included a letter encouraging people to get involved and provide any related background information, issues, ideas, or concerns, and a newsletter that provided

TABLE 41: PROJECT SCHEDULE

MILESTONE	DATE
Project Start-up, Staffing, Terms of Reference	Aug. to Dec. 2000
Collection of Background Information	Aug. 2000 to Jan. 2001
Invitation to Participate	Jan. 2001
Analysis and Documentation of Background Information	Jan to May 2001
Public Review of Background Information and Objectives	June 2001
Facilitated Stakeholders Workshop	Sept. 2001
Preparation of Management Options	Sept. to Dec. 2001
Public Review of Strategy Options	Dec. 2001 to Mar. 2002
Preparation of Preliminary Strategy	Jan. to June 2002
Public Review of Preliminary Strategy	Sept. to Nov 2002
Preparation of Final Strategy	Nov. to Dec. 2002
Public Inspection of Final Approved Strategy	Winter 2003

additional information about the Signature Site and upcoming events. Advertisements were placed in the Geraldton, Nipigon, Terrace Bay-Schreiber and two Thunder Bay newspapers. An announcement by MNR's Minister, John Snobelen and media conference was held in Thunder Bay on January 22, 2001. A notice was also placed on the *Environmental Bill of Rights Environmental Registry*.

NEWSLETTERS

At each stage of public consultation, a full colour newsletter was released to the public entitled Nipigon Signature. The newsletters provided the public and interested stakeholders with some additional, interesting information about the Lake Nipigon Basin Signature Site. The first newsletter detailed the project goals and the special features of the Basin; the June 2001 newsletter highlighted species at risk in the Basin; the November 2001 newsletter provided a look at the prehistory and history of the study area.

OPEN HOUSES

Public open houses were held between June 25th and June 29th 2001 and December 10th and December 13th 2001 in Nipigon, Beardmore, Armstrong, and Thunder Bay.

An additional Management Options open house was held January 8, 2002 in Biinjitiwaabik, Zaaging Anishinaabek (Rocky Bay). Advertisements appeared in several local newspapers (Geraldton, Nipigon, Thunder Bay and Terrace Bay-Schreiber). Posters advertising the event were placed in strategic locations in the four towns and in Thunder Bay. Postcards with open house information were mailed out and placed in all post office boxes in Nipigon, Red Rock, Beardmore, and Armstrong approximately ten days before the event. At each open house, attendees were provided with an information folder, comment sheet and a copy of the published planning document (Background Document in June, Management Options Document in December). Displays, presenting a summary of the information in the documents were available for viewing. Project Team staff were at hand to answer any questions.

FACILITATED STAKEHOLDER WORKSHOP

Seventy-one interest groups were invited to send one representative to a facilitated stakeholder workshop, held on September 18th, 2001 in Nipigon. A total of 24 individuals attended representing the forestry and mining sectors, Ontario Power Generation, Aboriginal communities,

TABLE 42: QUANTITATIVE ANALYSIS OF PUBLIC CONSULTATION EFFORTS UP TO DRAFT STRATEGY STAGE

DISTRIBUTION OF DOCUMENTS		NUMBER DISTRIBUTED			
<i>A. Newsletters and Postcards Distribution</i>		<i>Newsletter 1</i>	<i>Newsletter 2</i>	<i>Newsletter 3</i>	<i>Newsletter 4</i>
Distributed by Mail		1,789	3,203	3,787	2,053
Distributed at Office/Other Location		2,671	2,671	2,333	1,838
Distributed at Open House		689	689	452	207
Total		5,184	6,598	6,572	4,098
<i>B. Open House Attendance</i>		<i>June 2001</i>	<i>December 2001</i>	<i>September 2002</i>	
Nipigon		104	73	49	
Beardmore		39	43	28	
Armstrong		20	9	11	
Thunder Bay		88	122	119	
Biinjitiwaabik Zaaging Anishinaabek		N/A	35	N/A	
Total		251	282	207	
<i>C. Comment Sheet Distribution</i>		<i>June 2001</i>	<i>December 2001</i>	<i>September 2002</i>	
Distributed at Open House		237	400	207	
Distributed at Office/Other Location		20	178	15	
Distributed by Mail		0	0	0	
Total		257	578	222	
<i>D. Document Distribution</i>		<i>Background Document</i>	<i>Management Options Document</i>	<i>Preliminary Strategy Document</i>	
Distributed at Open House		300	445	200	
Sent by Mail		150	234	30	
Distributed at Office / Other Location		78	168	10	
Total		522	847	240	

recreational, tourism, conservation and cottaging, organizations, commercial fishing and trapping groups, angling and hunting organizations, and local municipalities and townships.

Group discussions focused on protection, development and access as they pertained to the various geographical components of the Basin. Comments made during the workshop were incorporated into a summary report. The summary report and a detailed list of participants can be viewed at the MNR's

Nipigon District Office.

MEDIA COVERAGE

Throughout the two year planning period there has been a fair amount of interest in the Nipigon Basin project by local media and in one instance, Toronto media (Table 44). Local newspaper, television and radio reporters have interviewed project staff about the initiative. This media attention has served to lift the profile of the project and allow more people to be aware of what is going on and to participate.

TABLE 43: TYPE OF INPUT BY REPRESENTATION CATEGORY UP TO STRATEGY STAGE

REPRESENTATION CATEGORY	TYPE OF INPUT								
	Letter	Email	Comment Form	Meeting	Visit to Office	Fax	Phone Call	Other Submission	Total
First Nation/Aboriginal	8	2	18	5	1	1	3	0	43
Environmental Groups	10	1	6	1	0	0	4	0	22
Members of Parliament	0	0	0	0	0	0	0	0	0
Mining Industry	3	0	1	0	0	2	1	0	7
Forest Industry	7	1	0	0	0	0	1	0	9
Anglers and Hunters	9	0	13	0	0	1	3	0	26
Government Agencies	0	2	3	0	0	0	0	0	5
Commercial Fish Industry	2	0	1	0	0	0	0	0	3
General Public	21	7	192	0	1	0	19	2	242
Tourist Industry Recreational Interest	10	7	4	2	0	0	3	0	26
Trapping Industry	0	0	3	0	0	0	0	0	3
Special Needs Interest Groups	3	0	2	0	0	0	0	1	6
Academia	1	0	2	0	0	0	0	0	3
Local Citizens Committee	4	0	8	0	0	1	0	0	12
Hydro-Electric Power Generation	2	0	0	0	0	0	0	0	2
Land Owners (Cottagers)	5	1	8	0	1	0	0	0	15
TOTAL	75	21	261	8	3	5	39	3	425

TABLE 44: MEDIA COVERAGE OF THE LAKE NIPIGON BASIN SIGNATURE SITE PLANNING INITIATIVE

MEDIA ORGANIZATION	DATE	SUBJECT OF RADIO / TELEVISION PROGRAM
Thunder Bay Chronicle Journal	Jan. 23/01 Jan. 27/01 Jun. 16/01 Sept. 24/01 Feb. 24/02 Mar. 15/02 Aug. 25/02 Sept. 5/02 Sept. 5/02	Lake Nipigon Living Legacy Nipigon's Magic Protected Nipigon at the Crossroads Public Chips in Ideas for Basin Project Nipigon Basin Plan Causes Concern Among Anglers Ice Climbing Needs A Place to Watch \$7M Project Has New Director Survey Yields Good News to Prospectors Basin Plan Goes Public-Lake Nipigon Basin Protection Plan Open House Set
Thunder Bay Post	Jan. 26/01 July 6/01 Sept. 6/02	Lake Nipigon Part of Ontario's Living Legacy Review of Open Houses Draft on Lake Nipigon Basin Land Use Strategy
Nipigon-Red Rock Gazette	Jan. 23/01 Sept. 25/01 Dec. 18/01 Oct. 22/02	Lake Nipigon Basin Chosen as a Signature Site Facilitated Workshop Highlights Highlights of the Options Open Houses Petition voices concern for Nipigon Basin Project
Toronto Star	Sept. 29/01	Lake Nipigon Days - Are They Numbered?
CJLB-FM Radio Thunder Bay	Jan. 22/01	News Item
CBQ-FM Radio Thunder Bay	Jan. 22/01 Jan. 22/01 Jan. 22/01 Jan. 23/01 Jan. 23/01 Jan. 23/01 Jun. 20/01	News Item Voyage North - First Nation Perspective on Lake Nipigon Basin Voyage North - Lake Nipigon Basin Concerns Over Signature Site Great Northwest - Lake Nipigon Basin Great Northwest - Ontario's Living Legacy
CBC Radio	Feb. 17/01	Fresh Air Program - Orient Bay Ice Climbs
CKPR - AM Radio Thunder Bay	Jan. 22/01 Jan. 22/01	News Item Late Edition - Lake Nipigon Signature Site
CKPR-TV Thunder Bay	Jan. 22/01 Jun. 28/01 Dec. 13/01 Dec. 14/01 Oct. 6/02 Oct. 13/02	Late Edition - Lake Nipigon Signature Site Evening News - Lake Nipigon Basin Evening News - Lake Nipigon Basin Open House News - Lake Nipigon Basin Options Presented to Public Northwest Newsweek - Living Legacy Strategy and Nipigon Northwest Newsweek - Campers concerned with government plan
Thunder Bay Source News	Feb. 26/01	Hunters, Anglers Worry about Lake Nipigon Plan
EBR Posting	Dec. 12/01 Mar. 18/01	Ecological Land Use and Resource Management Strategy for the Lake Nipigon Basin Signature Site Ecological Land Use and Resource Management Strategy for the Lake Nipigon Basin Signature Site An Invitation to Participate
Various Publications (Article) printed in more than one publication	May 29/01 Nov. 14/01 Feb. 22/02	First Information Centre Second Information Centre: LNBSS ELURMS Public Access at Risk: Land Usage May be Limited to Specific Groups
News Release	Jan. 19/01 Jan. 22/01 Jan. 22/01 Mar. 29/01 Feb. 21/02	Media Advisory: Ontario Moves Ahead on Implementation of Ontario's Living Legacy Ontario Moves Ahead on Third Signature Site Under Ontario's Living Legacy Northwestern Ontario Associated Chamber of Commerce President Welcomes Planning Initiative for the Lake Nipigon Basin Second Anniversary News Conference OLL Northwestern Ontario's Sportsman's Alliance

APPENDIX B: DESCRIPTION OF THE STUDY AREA

PREHISTORY

Since the last ice age, Aboriginal people have inhabited the Lake Nipigon Basin. About 9,000 years ago, during the Paleo-Indian Period (9,000 – 7,000 BP), people of the Plano culture migrated to the area from the south and west. Paleo-Indians lived as hunters and gatherers and used sophisticated chipped stone tools. From 7000 BP to the time of European contact the Lake Nipigon Basin was home to peoples from the Archaic Traditional, Laural Culture (Initial Woodland Period), Blackduck and Selkirk cultures (Terminal Woodland Period).

Although some archaeological research has been done in the Nipigon Basin, it is far from comprehensive or complete. Present archaeological site data for the Basin reveals that there are approximately 1 Paleo-Indian, 3 Archaic, 17 Initial Woodland and 20 Terminal Woodland sites as well as 42 sites where the cultural affiliation has not yet been determined (MNR, 2000). In some cases, evidence of two or three cultural affiliations as well as historical artifacts can be found at one location.

EUROPEAN CONTACT AND THE FUR TRADE

Europeans first recorded Lake Nipigon in 1656, when the governor of New France made a trading concession to Sieu Zachaire Dupuy, a colonial officer, for lands from the Gulf of St. Lawrence to Lake Nipigon. Some of the first Europeans to travel to the Nipigon Basin were Radisson and Groseilliers, two French fur traders whose travels led to the creation of the Hudson Bay Company in 1670.

Native traders traveled with their furs from Lake Nipigon up the Wabinosh, Pikitigushi, Jackfish, Ombabika, Onaman and Namewaminikan River systems to the Albany River and finally to Hudson Bay where they traded with the Hudson Bay Company traders. The French fur traders began building trading posts in the interior of Northern Ontario

which shortened the distance Natives had to travel to trade their furs. The French traders eventually banded together and became known as the North West Company. Fierce competition ensued between the two fur trading companies. The Lake Nipigon Basin was very much at the centre of this conflict and was the site of many fur trading posts. The competition between the English and the French eventually led to the merging of the two companies under the name “*Hudson Bay Company*” in 1821.

EARLY SETTLEMENT HISTORY

In 1865, the first gentlemen anglers came to the Nipigon River to fish. Red Rock House, at the mouth of the Nipigon River, was an important outfitting station between 1870 and 1880. In 1916 Dr. J.W. Cook of Fort William caught the world record brook trout (14.5 lbs.) at Rabbit Rapids on the Nipigon River. The legendary appeal of the area also led to visits by Royalty. However, by the early 1900’s fish sizes and numbers had begun to decline.

The Canadian Pacific Railway was constructed in 1883-85 along the shore of Lake Superior through the Nipigon region. In 1903, construction of a second transcontinental railway (C.N.R.) was started through the area north of Lake Nipigon. The 18 kilometer-long Nipigon Tramway was built along the Nipigon River to assist in transportation of equipment and supplies for the railway. Yet another railway (C.N.R.) was put in along the east shore of Pijitawabik Bay heading northeast toward Longlac. This railway was built by William Mackenzie and Donald Mann, owners of the Canadian Northern Railway, and was completed in 1914.

Commercial fishing on Lake Nipigon began in 1917 as a result of food shortages brought on by World War I. Icehouses were established at Macdiarmid, near the C.N.R. rail line and the newly built railway transported the fish to markets.

Hydro development and forestry began in the Nipigon Basin in the early 1900’s.

Three successive dams were built along the Nipigon River from 1918-1930 (Cameron Falls Dam, Virgin Falls Dam, Alexander Dam). By 1940, the Ogoki diversion began. The normally north-flowing Ogoki River was channeled southward into Lake Nipigon and down through the Great Lakes to increase the power output at Niagara Falls. In 1950, Pine Portage Dam was built, raising the water level of Lake Nipigon by 12 cm, flooding over the Virgin Falls Dam. The community of Cameron Falls, developed as a result of dam construction, is now a ghost town.

Early logging was done to obtain materials for building the railways, however pulpwood logging increased after 1915 to meet the needs of paper mills in Port Arthur,

SAULT STE. MARIE, NIPIGON AND RED ROCK.

In 1900 the first attempts were made to send logs down the Nipigon River, resulting in logjams, however log drives continued in this area until 1973. Remnants of old logging camps can still be found within the Lake Nipigon Basin.

Mining within the basin began in 1929 with the discovery of gold in the Beardmore area. The Beardmore (Northern Empire) Gold Mine produced gold and silver until 1941. The Leitch and Sand River mines were also located near Beardmore, and these mines became among the richest gold mines in the province. The mines closed in 1968 with total production of 847,690 ounces.

NATURAL ENVIRONMENT AND RESOURCES

CLIMATE

The Lake Nipigon Basin is characterized by a modified continental climate which is typified by long cold relatively dry winters and warm to hot and relatively humid summers. These temperatures are moderated by the effect of Lake Nipigon. The mean annual temperature for the area ranges from -2 degrees Celsius to + 2 degrees Celsius. Mean annual total precipitation ranges from 71 to 76 cm. The average length of the growing season in the basin is 140 - 155 days.

EARTH SCIENCES

The entire basin of Lake Nipigon lies within the Canadian Shield, which consists predominantly of Precambrian igneous, metamorphic and sedimentary rocks. The Southern Province bedrock is dominated by late Precambrian Logan and Nipigon diabase sills, which make up the famous "*Nipigon Plate*", a sub-province of the Southern Province of the Canadian Shield. The Nipigon Plate rocks form one of the more interesting observable features of the Lake Nipigon Basin. Over time, softer sedimentary strata have been eroded away, leaving spectacular displays of cliffs and outcrops, especially in Pijitawabik Bay and on the northwest shore of Lake Nipigon.

East-west trending belts of metavolcanic and metasedimentary rocks represent the oldest Precambrian rocks. These formations are commonly referred to as Greenstone Belts and were where early 1900s gold mining occurred near Beardmore.

The topography of the area varies from gently rolling to hilly and rugged terrain. Shoreline areas are composed of exposed bedrock and eroded cliffs, talus slopes and beaches. The north end of the Basin is composed of gently rolling to moderately hilly plains. By contrast, the west shore of Lake Nipigon, Black Sturgeon Bay, Pijitawabik Bay and Livingstone Point exhibit strongly broken plains with steep to precipitous cliffs. Islands are for the most part gently rolling, with the exception of Inner Barn and Outer Barn Islands, Locomotive Island, Undercliff Island and Hat Island. The highest elevation on the lake is Inner Barn Island at 170 metres above the level of Lake Nipigon.

VEGETATION

The majority of the Lake Nipigon Basin is located within the boreal forest. Tree species such as trembling aspen, white birch, black spruce and balsam fir predominate with some admixtures of red and white pine. White spruce, balsam fir and jack pine are also common species here. The Nipigon River and the Black Sturgeon waterway lie within the

transition zone between the boreal and the Great Lakes St. Lawrence Forest. In this area admixtures of white and red pine and white elm occur along with the boreal tree species. Lake Nipigon is dominated by a large number of islands, which are primarily forested by black and white spruce, white birch and balsam with trembling aspen and jack pine occurring less frequently.

Fire plays an important role in the local forest ecology, acting as the primary means of rejuvenating the boreal forest ecosystem. Fire swept through the area over 150 years ago leading to the evolution of the current forest types. Several more recent fires occurred during the 1940's and 1950's. The largest recent fires took place in the spring of 1999 near Beardmore and Black Sturgeon Lake. Current fire management strategies ensure that fire suppression will occur along the shorelines of Lake Nipigon to protect forest resources and ensure human safety. Fire suppression activities on the islands will only occur if fires are threatening human safety or structures.

The most common wetland types in the Nipigon Basin are marshes and swamps. The few bogs within the area are species poor due to a lack of nutrient-rich water and contain black spruce and tamarack.

One of the highlights within the Basin are narrow sand beaches located sporadically along the shoreline and islands of Lake Nipigon and on some inland lakes. Rock barrens and talus slopes dominate many shorelines. These sites have a high concentration of arctic/alpine plant species due to their exposure to extreme temperature and humidity fluctuations. Cliffs have vegetation composed of mosses, lichens and ferns as well as scattered stands of black spruce, birch and cedar.

The dune community is most apparent within the Windigo Bay Nature Reserve, where a sand plain exists adjacent to dunes treed by jack pine.

There are 18 provincially significant plant species and 57 regionally significant vascular

plants within the Lake Nipigon Basin (North-South Environmental, 2001).

BIRDS

The total number of breeding bird species within the study area ranges from 60 to 150 depending on the information source. More work is required to better establish the actual occurrence of breeding bird species in the Lake Nipigon Basin. Three significant bird species have been confirmed breeding within the study area: the American white pelican, the bald eagle and the great grey owl. These birds are also considered species at risk.

The American White Pelican, classified as endangered, was first observed nesting on Pretty Island in McIntyre Bay, Lake Nipigon in the 1970's. Numbers have since grown to 1000 birds (Swainson and McNaughton, 2001). West Bay, Wabinoosh Bay, Windigo Bay, Ombabika Bay and the mouth of most tributaries are currently key feeding habitat for pelicans on Lake Nipigon.

The peregrine falcon, currently classified as endangered, was successfully reintroduced into the Nipigon River area in 1991 through Project Peregrine. One pair of falcons has been breeding annually near the Nipigon River mouth since 1991. An abundance of suitable nest sites within the Basin have been mapped. It is likely that as peregrine numbers increase, utilization of these sites will occur.

Bald eagles are another endangered species recovering from the ravages of DDT and PCB poisoning. They are commonly sighted within the Basin. There are currently over 140 bald eagle nesting sites on Lake Nipigon and 7 nests along the Black Sturgeon River. Eagles congregate in the fall along the Nipigon River to feed on spawning Chinook salmon. During the fall of 2000, 60 eagles were seen at one time, in this area.

Black terns are another species at risk within the Basin and are designated as "vulnerable." Habitat loss and fragmentation are contributing to the bird's decline because they require wetlands over 5 ha in size.

In June of 1991, the Thunder Bay Field Naturalists observed a flock of 19 terns on Lake Nipigon. Some suitable wetland, nesting habitat for these birds can be found on Lake Nipigon.

The great grey owl, golden eagle, red-necked grebe and osprey are some other important wildlife species that have been observed within the basin. The golden eagle is classified as endangered and some have been observed near Armstrong with a potential nest site in the Basin. The red necked grebe has been sighted along the Nipigon River and Lake Nipigon during migration, however no nesting sites have been observed. The great grey owl has been observed during nesting season near Jessie Lake along the Nipigon River and near Wabinoosh Bay on Lake Nipigon although no confirmed nest sites have been found. There are a total of 17 osprey nests on Lake Nipigon and one nest on the Black Sturgeon River.

Since the banning of DDT, double-crested cormorants have made a strong comeback. During Thunder Bay Field Naturalist surveys in 1991 and 1992, over 2,500 nest sites were counted on Lake Nipigon and over 5,000 individuals were seen. Herring gulls and great blue herons are also seen within the basin. A total of six heronries have been observed on Lake Nipigon.

MAMMALS

The total number of mammal species occurring in the Lake Nipigon Basin ranges from 30 to 52 species depending on the information source consulted. More work is required to better establish the number of mammal species that occur. Three species at risk occur or have been observed in the Basin: the woodland caribou, eastern cougar and wolverine. Other mammals within the Basin and the boreal forest in general include the moose, white tailed deer, timber wolf, marten, lynx, otter, red fox, fisher, weasels, beaver, porcupine, snowshoe hare, woodchucks, two squirrel species, two chipmunk species, four vole species, five mouse species, six shrew species and six species of bats.

Woodland caribou are a threatened species. Since the 1850's caribou have retreated from their widespread range in the boreal forest and tundra areas to the northern half of the Lake Nipigon Basin. Caribou summer on small to mid-sized islands (ideally those 25-75 ha in size) of Lake Nipigon to minimize wolf predation during calving. They spend the winter on the mainland and utilize areas near Armstrong, Wabakimi, the Ogoki reservoir and Onaman Lake.

The eastern cougar is classified as endangered and has almost disappeared in eastern Canada, being intolerant of human disturbance. However, the Lake Nipigon Basin is considered an important area for sightings. A total of 150 sightings have been reported within and in close proximity to the Basin.

The wolverine is another animal that requires large tracts of undisturbed land and is intolerant of human disturbance. Its current range is thought to have receded to the Red Lake area and it is currently classified as "*vulnerable*". Some unconfirmed sightings have occurred within the Lake Nipigon Basin.

REPTILES AND AMPHIBIANS

Many of the reptiles and amphibians within the Basin are at the northern limits of their range. It is thought that 18 species of reptiles and amphibians occur within the Basin, although only 15 of these have actually been observed. These include the garter snake, American toad, spring peeper, wood frog, boreal chorus frog, mink frog, northern leopard frog, green frog, western painted turtle, eastern newt, and salamanders. Salamanders include the yellow spotted, blue-spotted and Jefferson complex types.

A mudpuppy was also recorded within the Basin.

FISH

The fish community of the Lake Nipigon Basin is dominated by trout and whitefish, which is typical of post-glacial landscapes dominated by deep, cold, nutrient poor, oligotrophic (cold water) lakes.

Approximately 50 fish species comprising 13 families occur within the planning area. Only nine non-native species inhabit the area, of these, six are primarily confined to the lower reaches of Nipigon and Black Sturgeon Rivers.

Lake Nipigon's fish community has remained relatively unchanged since the early 1900's with the exception of the introduction of smelt in 1976. The deep, cold, unpolluted water of Lake Nipigon supports trout, whitefish, cisco and sculpins and allows species at risk such as shortjaw cisco and deepwater sculpin to persist. Although additional studies are needed, recent research indicates that five species of deepwater cisco, considered to be a devastated group of North American fishes (Turgeon & Bernatchez, 2000), still exist within Lake Nipigon. Two of these species have never been found elsewhere. Lake Nipigon also provides habitat for warm water species such as walleye, northern pike, sauger, sturgeon, yellow perch, common white and longnose sucker.

The Black Sturgeon River provides habitat for a variety of cold water and warm water fish species and species composition has remained much the same for the past 76 years. Thirty species of fish have been found within the system (9 non-native) and one species at risk, the northern brook lamprey, a species ranked as "*vulnerable*" to extinction in Ontario.

The Nipigon River, famous for the quantity and size of its brook trout, is home to many fish species as well. Upstream from Alexander Dam, the river provides habitat for brook trout, lake trout, walleye, lake whitefish, northern pike and most recently, smelt. Alexander Dam blocks fish migration from Lake Superior. The lower section of Nipigon River is home to most of the species in Lake Superior including coaster brook trout, lake trout, walleye, northern pike, smelt, lake whitefish, sea lamprey, brown trout, rainbow trout and Pacific salmon species.

River tributaries flowing into Lake Nipigon provide important spawning habitat for brook trout, walleye, smelt, suckers and to a lesser extent, lake whitefish and sturgeon. Northern pike use the wetlands along the mouths of

many tributaries for spawning. Most of the inland lakes in the Basin are located primarily in the area south of Armstrong and are deep, cold-water lakes, surrounded by rugged terrain and high cliffs. Some shallow warm water lakes can be found in the area north of Lake Nipigon. Few of these lakes have been formally surveyed.

SOCIAL AND ECONOMIC ASPECT

COMMERCIAL FISHING

Large-scale, mechanized commercial fishing did not occur in the Lake Nipigon Basin until the early 1900's. Mechanization led quickly to over-fishing, with a harvest of 2.3 million pounds in 1919. Since that time, stock harvests have fluctuated depending on factors such as market price, weather, fishing effort and stock abundance. Lake whitefish are the mainstay of the fishery. Other fish species sought have included walleye, lake trout, sauger, cisco and northern pike species. Since the smelt arrival in Lake Nipigon in 1976, smelt fishing has skyrocketed to over half a million pounds reported harvest in 2000. Reported commercial harvests of whitefish and lake trout have remained relatively unchanged. Walleye and sauger reported harvest levels have remained low since a 1996, harvest decline and the subsequent closure of Ombabika Bay to commercial fishing.

SPORT FISHING

Sport fishing on Lake Nipigon began in the 1920's. Fish species targeted during the mid to late 1900's were mainly brook trout, walleye and northern pike. Lake trout represented approximately 4% of the angling harvest at that time. This changed in the 1990s when enhanced technology enabled the discovery and targeting of large lake trout. Increased fishing pressure on the lake trout led to a reduction in fishing quality. The stocks of walleye and northern pike had also begun a decline, so in 1997 a set of special fishing regulations were implemented for Lake Nipigon.

On the Nipigon River, over-fishing in the 1800s and the creation of dams from the 1920s to the 1950s, lead to habitat destruction and fluctuating water levels. A brook trout rehabilitation plan was developed in 1989, and various fisheries management programs have taken place since then in an effort to protect brook trout populations and improve water levels. Brook trout, northern pike, lake trout, Chinook salmon, whitefish and smelts are still commonly sought fish today.

Sport fishing also occurs on the Black Sturgeon River but fishing pressure is light, focused primarily on highly accessible locations.

Fishing charters are an important part of the local economy. A total of 10 tourist outfitters (charter boat operators and lodges, resorts and cabins) are located on Lake Nipigon. Areas accessible by road include Pijitawabik Bay, Poplar Point, High Hill Harbour, South Bay, Gull Bay, Chief Bay, Ombabika Bay, Humboldt Bay, Onaman River and the Poshkokagan River.

FORESTRY

Forestry has played a large role in the economy of the Lake Nipigon watershed since the early 1920s. The proximity to Thunder Bay and extensive river systems made sections of the forest accessible to early horse logging operations and river drives. Currently there are four Sustainable Forest Licenses (SFL's) that overlap with the signature site. Bowater Pulp and Paper Canada Inc. holds the license for the Black Sturgeon Forest Management Unit. Domtar Inc. holds the SFL for the Lake Nipigon Forest Management Unit as well as the Armstrong Forest Management Unit. Abitibi Consolidated holds the license for the Spruce River Forest management unit, located on the west side of the Basin.

According to the current 5-year forest management plans, harvest and salvage operations have been allocated in four of the five enhanced management areas. Forestry activities are an important source of employment for local people.

MINING

In the Beardmore area, the Beardmore-Geraldton Greenstone Belt transects the lower half of the Nipigon Basin running in a northeast to southwest direction. These older Precambrian rocks have high mineral potential for gold and base metal exploration.

A significant portion of the local economy in the Beardmore area is dependent on exploration activities. More than 40 active prospectors, along with junior and senior mining companies conduct exploration work in the area, with total expenditures of over \$400,000 per year.

In the southwest and western portions of the Lake Nipigon Basin, the Black Sturgeon Fault structure contains a variety of minerals. These include uranium, hematite, molybdenum and titanium, and are often associated with copper-gold deposits. The fault structures in the region also localize intrusions with PGE associations (Platinum Group Elements) which are also being explored by mining companies.

Lac des Iles Mine, an open pit palladium mine currently valued at 6 billion dollars, is located to the southwest of the Basin. This mine is currently undergoing expansion and demonstrates the potential of the Lake Nipigon Basin as a source for Palladium Group Element (PGE) metals.

HUNTING AND TRAPPING

Hunting has been and will continue to be an important social and economic activity in the study area. Moose are the principal big game animal in the district. The islands of Lake Nipigon are closed to hunting. During hunting season, moose in the rest of the basin are heavily targeted. There are seven wildlife management units and moose tags are allocated on a per unit basis. Aboriginal and treaty rights allow First Nation people to hunt for subsistence purposes. The extent to which subsistence hunting occurs within the Basin is unknown. Seven charter boat operators cater to moose and bear hunting. Black bear hunting is continually increasing in

popularity, with non-residents using local outfitter services. Other animals hunted in the area include upland game birds, white-tailed deer and waterfowl.

Trapping continues to provide some economic benefit to local people. There are 41 traplines partially or wholly within recommended protected areas within the Basin. Traplines held by non-natives within existing nature reserve class provincial parks will be phased out by January 1, 2010.

POWER DEVELOPMENT

Power development began in the Nipigon Signature Site in 1918 with the building of the Cameron Falls Dam on the Nipigon River. In 1925 and 1930 two more dams, the Virgin Falls and the Alexander Dams were built "to enable the total flow of the Nipigon River to be utilized for power development" (HEPC, 1972). The Ogoki River Diversion was initiated in 1940. The Waboose Dam, built on the Ogoki River in 1942, diverted water flowing north to the Albany River and directed it south through the Nipigon Basin to increase the power output at Niagara Falls. The existing power plants on the Nipigon River could not effectively harness this increased output, so the Pine Portage Dam was built in the 1950's. Ontario Power Generation (formerly Ontario Hydro) operates all of the dams.

In 1990 an interim flow agreement was reached to minimize damage to brook trout spawning beds. A Nipigon River Water Management Strategy was developed in 1994. A new water management plan for Lake Nipigon, its tributaries and the Ogoki Diversion is currently being prepared with a target implementation date of April 1, 2004.

A hydroelectric power dam was built at High Falls on the Namewaminikan (Sturgeon) River in 1992, creating a 7 kilometre long reservoir. It has never operated due to financial and technical difficulties.

TOURISM ACTIVITIES

Non-consumptive recreational resource use is increasing within the Lake Nipigon Basin.

Camping, swimming, canoeing and kayaking, wildlife viewing and ice/rock climbing are some of the most popular activities within the region. Organized camping occurs at Poplar Point campground and there are over 40 remote campsites being regularly used within the Basin. A number of excellent canoe routes occur on rivers flowing into Lake Nipigon. Commercial outfitters supplying guides and/or gear provide stimulus to the local economy. Cottage developments occur at Poplar Point, Orient Bay, McIntyre Bay and South Bay on Lake Nipigon and on two lakes south of Armstrong. Winter activities such as snowmobiling, ice climbing, dogsledding and winter camping add tourist dollars to the area. The Basin is traversed by the Trans-Ontario Provincial "A" and "AD" snowmobile trails. Tourists travel from as far away as Germany and Japan to ice climb in the Orient Bay area.

Market trends indicate that overseas visitors to Canada are growing, as is interest in remote adventure travel and outdoor recreation and conservation. Most tourists to the North of Superior region travel here by automobile for recreation and are from within the province. Research conducted by the Ministry of Tourism indicates that in the year 2000, the level of tourism in the Lake Nipigon Area was 73,000 person nights and 30,000 person day trips, producing \$4.3 million of direct tourism expenditures and 140 person years of employment.

APPENDIX C: ISSUES

ABORIGINAL COMMUNITIES

- Aboriginal communities have concerns with regard to Ontario's jurisdiction over resources and the allocation of those resources
- Some Aboriginal Communities want to have land claim issues resolved before any planning occurs in the Basin
- The need for more resources, time and support funding make it difficult for First Nations to participate in the process to the degree they desire
- A wide range of views exist among Aboriginal communities with regard to how the Basin should be managed
- There is a need to have all Aboriginal communities associated with the Basin come to consensus on management decisions

ACCESS TO LAKE NIPIGON

- Although a small number of access points exist on the lake, few have facilities such as parking, docking, boat ramps, garbage collection or washrooms. Some people want improved facilities and access while others are concerned of the resulting impact on the Lake ecosystem
- Need to address access point use and management for the following access points: Poshkokagan River, Chief Bay, South Bay (2 sites), Humboldt Bay (2 sites), Ombabika Bay, Gull Bay, Pine Portage and Pishidgi
- There is some concern about the creation of new or upgrading of old access points to Lake Nipigon through logging or mining activities
- Armstrong residents have a desire for new access to the north end of Lake Nipigon

- The remote and inaccessible character of the north half of Lake Nipigon is valued. There are different perspectives on what "*remote and inaccessible*" means. Access via Ferland, Mud River, Ombabika and the use of trails, waterways and boat caches needs to be addressed. The possibility of a connecting link (Pikitigushi Road and Auden Road) that would provide a circular access route around the north end of Lake Nipigon may increase recreational activity use and access to this "*remote*" area

FOREST MANAGEMENT

- Wood supply is limited in the Northwest Region of Ontario
- Forest management activities are ongoing in the enhanced management areas and may limit the management options for these areas
- Conflict may arise between the public and forest industry with regard to modifying operations for the achievement of protection (e.g. viewscapes, buffers)

WILDLIFE

- The need for detailed inventory work and monitoring for insects, birds, amphibians, reptiles or small mammals makes their management difficult
- Increasing human use of the Lake Nipigon Basin could result in declining nesting success of white pelican and bald eagle (both endangered), two species which require isolation
- White pelican, and cormorant populations are increasing in the Lake Nipigon Basin. Fishermen are concerned that these fish-eating birds are negatively impacting fish populations
- Some feel that island summer caribou habitat should be actively managed through use of prescribed burning whereas others want it to be left to nature

- Caribou are particularly subject to human disturbance and habitat destruction, and rely on the islands of Lake Nipigon for critical calving habitat. Increased use of the Lake Nipigon Basin for tourism and recreation may have a negative impact on the threatened caribou
- The interaction of caribou, moose and deer within the Basin is not clearly understood
- Orient Bay/Pijitawabik Palisades is a particularly significant area for bats. A hibernaculum is suspected in the area but has not been confirmed. Recreational use of the area could inadvertently lead to disturbance of the hibernating bats if the hibernaculum is not found
- The OLL Strategy references the option of introducing a primitive weapon hunting season for big game on the islands. The moose populations are low and may not be able to sustain additional hunting beyond the current level of subsistence hunting by Aboriginals

FISH AND FISHERIES

- Some sport fishermen would like to see the commercial fishing licences bought out. Commercial fishermen want to continue to commercial fish
- Commercial fishermen want to use gill nets while anglers are requesting that they use trap nets or pound nets
- Disposal of non-marketable fish on the ice may be keeping the wolf population artificially high. The impact this could be having on caribou, moose and deer populations is not clearly understood
- The existence of lake wide quotas as opposed to zone quotas limits management options
- Lack of detailed information on fish stock status, movement patterns and genetics hampers effective management. For example, the impact of smelt introductions on the aquatic ecosystem of Lake Nipigon is unknown
- Incidental catches of lake trout and non-marketable fish (ling, suckers) by commercial fishermen is unavoidable with current fishing techniques. Impact of incidental catches of brook trout by commercial fishermen is unknown
- Conflict exists between sport fishermen and commercial fishermen over the allocation of lake trout
- Commercial fishermen have requested to “trade” their northern pike quotas for additional commercial quotas of another species
- No rehabilitation efforts, studies or recovery plans have been initiated/completed for sturgeon (species of special concern), shortjaw cisco (threatened) or sculpin (threatened)
- There is currently no direct method to regulate the amount of fish killed by sport fishermen on Lake Nipigon
- Lack of angler education results in improper fish handling techniques and emphasis on traditional game species only
- Sport fishing quality on Lake Nipigon has deteriorated. The walleye and brook trout fishery is still degraded and requires further management
- There is a need to accurately estimate the level of subsistence harvest
- Black Sturgeon Lake is providing very few angling opportunities relative to its size
- The impact of the Black Sturgeon Dam on fish migration is unknown
- There is a need for more information about the tributaries and surrounding lakes in the Signature Site study area which hampers effective management, e.g. accurate location of barriers to fish migration

- Very little is known about the level of baitfish harvest within the Lake Nipigon Basin
- Introduction of Spiny waterflea has occurred; impact to aquatic ecosystem is unknown

TOURISM

- Conflict between development versus protection
- There is currently no control mechanism for the number of house boats/cruiser boats that use Lake Nipigon, however their impact may be significant
- There is a need for more information regarding the type and level of tourist activity in the Nipigon Basin

CROWN LAND USE

- Actual number of Crown land campsites within the Lake Nipigon Basin and their level of use are not known
- Impacts of current Crown land uses have not been fully inventoried (e.g. garbage, erosion, soil compaction, destruction of vegetation, wildlife habitat degradation, etc.) and types of use (hiking, camping, snowmobiling, etc.) have not been well assessed
- Requests for Land Use Permits for Crown land recreation may conflict with the need to protect the ecosystems of the Lake Nipigon Basin
- Boats from outside the Basin are being launched in Lake Nipigon, which increases the risk of the introduction of exotic species into the lake
- Creel surveys indicate that a large number of Crown land users in the Basin are non-residents. Some people feel that a fair return for the use of the resource is not currently being recognized

- Crown land use activities may be negatively impacting sensitive species (impact on colonial, shore bird nesting sites, spawning sites, caribou habitat)
- The Nipigon Palisades are accessed for ice/rock climbing activities. Currently, there is no safe parking facility to accommodate this use. As such, safety issues arise when recreationalists park on the side of Highway 11 to access the cliffs

COTTAGING

- Sale of Crown land for new cottage development may be considered in the Lake Nipigon–Beardmore and Gull Bay EMA's, on environmentally suitable sites. Conflict may arise between those who would like to see this development and those who don't want it. There may be pressures to develop elsewhere in the Lake Nipigon Basin aside from the EMA's
- Private land development could impact the sustainability of the basin's resources

WATER RESOURCES AND USE

- There is continued habitat degradation occurring in the Little Jackfish River and Ombabika Bay due to erosion from increased water flows
- Drawdown continues to impact the productivity of the Nipigon River by stranding fish and exposing aquatic invertebrates to desiccation
- There is no recent water quality, zooplankton or benthos information for Lake Nipigon tributaries, Black Sturgeon Lake, Black Sturgeon River and Nipigon River. Nor is there standardized sampling protocols or long term monitoring stations for these waters
- There are no formal water quality objectives linking Lake Nipigon with the Lake Superior Management Plan

- There is a need to improve interagency transfer of limnological and contaminant monitoring data
- The contaminant levels are elevated in at least some species of fish in all water systems in the study area. The public is not well aware of the consumption restrictions
- Proposals for hydroelectric development on tributaries to the Lake Nipigon Basin could have negative impacts on fish or fish habitat

APPENDIX D

Guidelines for Exploration Best Practices In Enhanced Management Areas in The Lake Nipigon Basin

INTRODUCTION

These guidelines affirm the mineral exploration industry's commitment to sustainable development, a concept that requires balancing the need for economic growth with good stewardship in the protection of human health and the natural environment. The guidelines offer practical methods and best practices which, when applied, will ensure that an exploration project is carried out with the lowest levels of disturbance possible to its natural surroundings within Enhanced Management Areas (EMA's). The suggested guidelines do not take precedence over Ontario statutes and regulations but rather comply with them by providing standard procedures for maintaining good environmental practice at the various stages in the exploration process.

Seven categories of EMA have been defined in Ontario Living Legacy Land Use Strategy. These are defined with the use of subscripts to the acronym EMA, as follows:

n – natural heritage
 g – Great Lakes coastal areas
 r – recreation
 t – resource based tourism
 a – remote access
 i – intensive forestry
 w – fish and wildlife

The following prescriptions are extracted from the OLL Land Use Strategy document released in July 1999:

LAND USE DESIGNATION ENHANCED MANAGEMENT AREA

“Enhanced Management Areas is a new land use category that has been established in order to provide more detailed land use direction in areas of special feature or values.....”

“Enhanced Management Areas may lead to modifications (e.g. timing, location, method, and access) in resource-management practices in order to recognize other land use values. These adjustments will be implemented with no impact on wood supply, and only in exceptional cases will wood costs be affected. EMAs will provide a specific focus for the application of guidelines and other planning and management strategies. More detailed implementation strategies will be developed with the participation of stakeholders.”

Explorationists should ensure that they have an up to date EMA Values Maps for the EMA within which they are conducting exploration activities. EMA Values Maps will be provided to the explorationist by the Ministry of Northern Development and Mines (MNDM) in cooperation with the Ministry of Natural Resources (MNR). The exploration community should ensure that they identify any natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values within their exploration area of interest. By following the suggested guidelines contained herein, members of the Ontario exploration industry may carry out their work in the search for new wealth in enhanced management areas with confidence that they are doing so in an environmentally sensitive manner.

PROTECTING VALUES IN ENHANCED MANAGEMENT AREAS

Careful regard and avoidance of impact is strongly recommended to protect all values in Enhanced Management Areas (EMA). This document includes Area of Concern (A.O.C.) prescriptions for protecting fish and wildlife values (Appendix 1). The A.O.C. prescriptions are found within forest management plans written for all forest management units in Ontario under the terms of the Crown Forest Sustainability Act. All EMA's are found within forest management units. The A.O.C. prescriptions are legally binding on forest companies as they conduct timber harvest, silviculture and forest regeneration activities. The A.O.C. prescriptions have been adopted for fish and wildlife values which may be

encountered by the exploration community in EMA's. To protect other values (e.g. cultural and heritage) encountered during exploration activities it is strongly recommended that site specific measures be developed on a case by case basis in consultation with the MNR.

Observe the following points in the management of your exploration program:

1. Be aware of the three R's of exploration and practice them at every stage of your exploration program **RESPECT** the environment in which you work. **REFRAIN** from unnecessarily disturbing the natural environment. **RESTORE** the natural setting of areas where you have worked.
2. Ensure that workers are familiar with environmental protection measures and industrial hygiene requirements. Make sure that they are aware of regulatory requirements and environmental codes and are also properly trained to carry out any procedures pertaining to environmentally related situations.
3. In the event of a proposed program of advanced exploration under Part 7 of the *Mining Act*, conduct environmental baseline studies, consisting of water, soil and, if necessary, lake bottom sampling, prior to any major disturbance of the natural surroundings. These baseline data are essential for the monitoring of the property during its later development.
4. Ensure that your exploration program is designed and budgeted to take into account all potential sensitivities associated with fish and fish habitat, wildlife, downstream water users, marshes and wetlands, native lands, archaeological sites and all other Crown land values and user groups. Be aware that exploration activities undertaken in or close to marshes, bogs, lakes, streams and rivers require special care and planning. Communication with the District Biologist at the local MNR office is strongly recommended.

Observe the following procedures and practices during each stage of your exploration program.

Field Reconnaissance

1. Be familiar with all statutes, regulations, amendments, and guidelines governing all aspects of mineral exploration in the area in which you are working (Appendix 2). In the event of proposed activities that exceed allowable disturbances under Part 7 of the Mining Act, consult with the Mineral Development Coordinator, MNDM. Before the start of an advanced exploration program, ensure that all necessary permits have been acquired and are in place. Be aware of the location of all natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values in the area of your proposed work operations. These are found on the EMA Values Maps as supplied through the Resident Geologist Office and the office of the Regional Land Use Geologist, MNDM, in cooperation with the MNR. Ensure that you have a copy of the EMA Values Map for your area even if you have not been contacted.
2. Ensure that all employees, including contractors, stakers etc. hired for an exploration project, are trained in and knowledgeable about identification of sensitive natural values, environmental protection measures and industrial hygiene requirements. Make sure that they are familiar with regulatory requirements and environmental codes (Appendix 1,2) and are properly trained to carry out procedures pertaining to environmental protection and remediation.
3. Ensure that contractors and subcontractors know their responsibilities and liabilities and that they discharge their duties correctly.
4. Minimize disturbance to forestry plantation areas by respecting fences and gates. Observe all signs posted by landowners, forestry licence holders and respect the rights of others.
5. Avoid unnecessary disturbance of vegetation and wildlife. Keep vehicles on established roads whenever possible. Obtain permission and guidance from landowners or forest licence holders when travel to off-road sites is necessary.
6. In principle, carry out what you carry in. Use proper receptacles for refuse and try to leave an area cleaner than it was upon your arrival. With proper approvals, reusable items such as lumber, frames, floors, etc., may be neatly piled and stored at the site.
7. Check for local MNR regulations governing the lighting of fires. The lighting of fires may be prohibited at certain times of the year. Ensure that appropriate fire fighting equipment in quantities appropriate to the number of personnel and type of activity is available on site.
8. Ensure that temporary work camps are located, constructed and operated in such a way that they will have the minimum impact on the environment. Always keep camps neat, orderly, safe and clean and in accordance with local regulations.
9. Avoid any disturbance to community watersheds, fisheries habitat, upwellings and spawning beds by familiarizing yourself with their location (Appendix 1). Do not operate vehicles or heavy equipment in streams or on stream or pond banks. Keep to a minimum any clearing, grubbing, excavating or other surface disturbances near streams and ponds. If such activity is proposed, preserve a natural buffer zone of undisturbed natural vegetation at least 10 metres wide or wider at the water's edge to prevent siltation. If in doubt, contact your local MNR Biologist.

10. Handle all fuel and hazardous materials with care and avoid spills by ensuring that they are stored properly. Control any spills and/or leaks by establishing berms around storage containment areas and by placing water pumps and portable operating equipment in metal drip trays. In the event of a spill, notify the Ministry of the Environment and MNR as soon as possible.
11. Use on-site field vehicles and equipment for exploration activities only. Avoid unnecessary disturbance to nearby residents and wildlife.

Property Acquisition

1. Investigate and understand the current status of surface and mineral rights before you take action to acquire a property. Be familiar with those regulations and mining laws governing the acquisition of property as outlined in the *Ontario Mining Act*. Be familiar with the *Ontario Living Legacy Land Use Strategy* provisions for withdrawal from staking of lands intended for new parks and conservation reserves.
2. Be aware of all regulations and laws relating to environmental liabilities before you acquire a property that has been previously mined, explored and/or developed. Consider documenting the environmental condition of the property at the time of acquisition with field notes and photographs.
3. Avoid any misunderstanding with surface rights owners by discussing your presence and plans in the area with them once you have acquired mineral rights. Ascribe to the notification and compensation requirements of Sections 78 and 79 of the *Mining Act*. Maintain a cordial relationship with local residents and keep them informed during the course of your program.

Campsites

1. Be familiar with and comply with all statutes, regulations, amendments and permit requirements governing the

operation of campsites. A temporary encampment may be erected on a mining claim for the purpose of conducting mineral exploration activities. If the campsite is not located on a mining claim, the maximum allowable time for resident camping on crown land is 21 days.

2. Locate your campsite away from watercourses and maintain it in a neat and orderly fashion.
3. Provide sewage treatment facilities capable of servicing the resident and visiting camp population. Ensure that pit privies, conventional septic tank/tile bed systems, and packaged sewage treatment plants are designed, installed, and, where necessary, disposed of in accordance with local regulations. Consult with the local health unit for details.
4. Select and use products that pose the least threat to the environment. Re-use containers as much as possible and whenever appropriate. Ensure that all products, which are recyclable, are taken to a recycling facility.
5. Compost organic kitchen waste. Remove inorganic domestic waste to approved municipal sites, to an approved landfill for the camp, or to a recycling facility. In regions populated by bears, establish a special containment system for kitchen wastes.
6. Confine fuels, lube oils and greases during storage and transportation. Ensure that used oil facilities are established at all permanent sites and are regularly monitored. Collect and remove hazardous substances used in machinery (such as batteries) to designated disposal facilities.
7. Provide proper first aid and fire protection equipment at the camp and make sure that the equipment complies with current regulations.
8. Make every effort to avoid attracting wildlife to the camp.

9. At the end of operations, dismantle campsites that are to be abandoned. Leave campsites that are to be used for future operations in a clean and tidy condition. Bury organic waste and remove all other refuse from the site, taking advantage of recycling facilities as much as possible. Backfill all pits in accordance with local regulations. Where possible, rip up a site that is to be abandoned to break surface compaction and allow natural revegetation to take place.
10. Avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNM.
 4. Provide for erosion and surface water control by installing culverts, bridges, waterbars, and ditches, whenever necessary. Keep insloping to a minimum, and provide for frequent water diversions off the road when necessary. Remove all unnecessary berms from road edges.
 5. Develop a reclamation plan following the detailed road construction guidelines and Work Permit requirements.
 6. Avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNM.

Road Building and Access

1. Consult with your local MNR office and initiate Work Permit process for new road construction (requiring roadbed improvement). Be sensitive to the needs of other land users; for example, tourist lodges and resort operators. Trail construction for access to mineral exploration workings (no road bed improvement and under 3 metres in width) does not require a Work Permit.
2. Plan and locate roads and trails to maximum advantage for your operations but with minimum levels of construction and disturbance. Take advantage of landform and vegetation to screen road locations whenever possible. Avoid impacting on all values defined on EMA Values Maps supplied by the Ontario MNR (Appendix 1).
3. Clear right-of-way timber and debris in an orderly manner. Dispose of debris by a) burning, if permitted; b) burying in off-road push piles, if practicable or c) in a manner prescribed by local regulations. Whenever possible, stack commercial timber so that it can be harvested by pulp or timber companies. Consult with the

licensed forest operator in the area prior to constructing your road or trail.

4. Provide for erosion and surface water control by installing culverts, bridges, waterbars, and ditches, whenever necessary. Keep insloping to a minimum, and provide for frequent water diversions off the road when necessary. Remove all unnecessary berms from road edges.
5. Develop a reclamation plan following the detailed road construction guidelines and Work Permit requirements.
6. Avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNM.

Geological, Geochemical and Geophysical Surveys

1. Avoid unnecessary brush cutting and blazing of trees while laying out grid lines. Cut grid lines at the minimum width possible.
2. Upon completion of a survey, remove any wire and other extraneous material that may endanger the lives of birds and other wildlife.
3. Avoid contaminating soil and water during the course of your work.
4. Avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNM.

Trenching and Stripping

1. Avoid any disturbance to community watersheds, fisheries habitat, upwellings and spawning beds by familiarizing yourself with their location (Appendix 1). Do not operate vehicles or heavy equipment in streams or on stream or pond banks. Keep to a minimum any

- clearing, grubbing, excavating or other surface disturbances near streams and ponds. If such activity is proposed, preserve a natural buffer zone of undisturbed natural vegetation at least 10 metres wide or wider at the water's edge to prevent siltation. If in doubt, contact your local MNR Biologist.
2. Clear timber and debris in an orderly manner. Dispose of debris by a) burning, if permitted; b) by burying it in off-road push piles, if practicable or c) in a manner prescribed by local regulation. Whenever possible, stack commercial timber so that it can be harvested by pulp or timber companies. Consult with the licensed forest operator in the area prior to constructing your road or trail.
 3. Backfill, cover and revegetate all excavations and other surface disturbances that have not exposed reusable geological information such as outcrop. Avoid excessive stripping by using backhoes or excavators rather than bulldozers whenever possible.
 4. If your proposed area of stripping exceeds an area 10,000m² or is within 100 metres of a waterbody and exceeds an area of 2,500m², you must file a closure plan under Part 7 of the Mining Act. Contact the Mineral Development Coordinator at the MNDM.
 5. Avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNDM.
2. Keep to a minimum any noise pollution produced by equipment.
 3. Ensure that contractors avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNDM.
 4. Locate drill sites and water lines in areas where access to them and their operation will create the least amount of disturbance. Take advantage of local landform and vegetation to screen drilling activities whenever possible.
 5. Eliminate the need for elaborate access roads by using the smallest size of drilling equipment and drill holes that will ensure an adequate sampling of the target that you are seeking.
 6. Ensure that proper receptacles for debris are provided and used at drill sites and that sites are cleaned up as soon as equipment has been removed.
 7. Do not allow drilling wastes to run uncontrolled over land or ice surfaces or into watercourses. Recycle as much drilling mud and water as possible by using tanks or sumps.
 8. Avoid wasting water by installing and using shut-off valves when water lines are not in use.
 9. Use biodegradable materials whenever possible.
 10. Keep on site oil-absorbent material and/or oil booms (depending on the amounts of fuel stored) for use in the event of a spill.
 11. Upon completion of drilling, remove the drill casing and cap or plug the drill hole.

Drilling

1. Ensure that drilling company workers under contract are aware of current environmental regulations and will comply with them in the course of their work. Clearly define all environmental and industrial hygiene responsibilities, duties and liabilities of the contractor in contractors' agreements.

Abandonment of Exploration Activity

1. Outslope and remove all berms from roads no longer needed, and install appropriate water barriers and other erosion control structures. Remove

- culverts, low bridges and other structures that may cause blockage or unwanted diversion of watercourses.
2. Backfill and grade all open excavations such as exploration trenches, adits and shaft waste dumps as close to the original contour as possible. Grade to contour or smooth out drill sites, building sites, roads, or other major disturbances resulting from construction during the exploration program.
 3. Cap or plug drill holes and close or otherwise make safe from unauthorized entry, all tunnels, shafts and other openings. Make sure that procedures on site abandonment contained in Part 7 of the Mining Act have been correctly followed.
 6. Remove all trash and other foreign material from the exploration area and dispose of in an approved waste disposal site.
 7. Where possible and at the proper time of the year, revegetate all disturbed surface areas by planting trees which are suitable for the area. In addition or as an alternative, prepare the disturbed surfaces in a way that will encourage maximum natural revegetation.
 6. Inspect gates and fences used for access to ensure that they have not been damaged.
 7. When abandoning exploration sites in claim-staked areas close to settled areas, remove any physical evidence of work such as ribbons and pickets. Be aware that most jurisdictions do not allow staking posts or survey monuments to be removed.
 8. Advise local residents, landowners, native groups and government officials that you are abandoning the site.
 9. Avoid impacting on natural heritage, recreational, fish and wildlife, tourism or forestry (e.g. plantation) values as defined by the Ontario MNR on EMA Values Maps, as supplied by the Resident Geologist Office, MNDM.

(Modified after the Prospectors and Developers Association of Canada Guidelines for Exploration Practice, 1998)

APPENDIX 1

Area Of Concern (A.O.C) Guidelines For Fishery And Wildlife Values In Enhanced Management Areas (EMA)

A. AREA OF CONCERN DESCRIPTION – Lakes, Ponds, Rivers and Streams

DESCRIPTION

Description of value(s):

- Cold water, cool water and unknown fish habitat
- Water quality

For Fisheries/Water Quality Values:

Fish Species Present

- Coldwater species (e.g. lake trout, brook trout, rainbow trout, lake whitefish, lake herring, pacific salmon)
- Coolwater species (e.g. walleye, perch, northern pike, bass, sucker species, minnow species)

Critical Fish Habitat

Locations of critical habitat may be known or unknown.

Slope Of Shoreline Areas

Slopes may vary throughout individual A.O.C.s.

The width of the reserve will be slope dependent and will be applied as per the following criteria:

30 metre reserve - 0-15% Slope

50 metre reserve - 16-30% Slope
 70 metre reserve - 31-45% Slope
 90 metre reserve - >45% Slope
 90 metre reserve - Unknown Slope

Dimensions Of A.O.C

30-90 metre reserve as measured from the normal high water mark.

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

PRESCRIPTION:

No mechanized mineral exploration is allowed within 30-90 metres of the water body depending on slope. Reserve width is measured from the high water mark.

Implementation Manual(s):

Timber Management Guidelines for the Protection of Fish Habitat. 1988. pp 1-3

Code of Practice for Timber Management Operations in Riparian Areas. 1991. pp 1-5

Environmental Guidelines for Access Roads and Water Crossings. 1988. pp 10-55

Monitoring Program:

Inspection of mineral exploration programs may occur.

B. AREA OF CONCERN DESCRIPTION – Stream Crossings

DESCRIPTION

Description of value(s):

- Cool water, cold water and unknown permanent and intermittent stream fish habitat
- Water quality

For Fisheries/Water Quality Values:

Fish Species Present

- Cool water species (e.g. walleye, perch, northern pike, bass, sucker species, minnow species)
- Cold water species (e.g. lake trout, brook trout, rainbow trout, lake whitefish, lake herring, pacific salmon)
- Unknown or unsurveyed waters will be assumed to have cold water species present

Critical Fish Habitat

Locations of critical habitat may be known or unknown.

Slope Of Shoreline Areas

Slopes may vary throughout individual A.O.C.s.

The width of the reserve will be slope dependent and will be applied as per the following criteria:

30 metre reserve - 0-15% Slope
 50 metre reserve - 16-30% Slope
 70 metre reserve - 31-45% Slope
 90 metre reserve - >45% Slope
 90 metre reserve - Unknown Slope

Dimensions Of A.O.C

Permanent streams will have 30-90 metre reserves depending on slope as measured from the normal high water mark.

Intermittent streams will have a 3 metre reserve.

In the field, a permanent stream is identified as having a natural defined channel without terrestrial vegetation in the streambed. Generally water flows throughout the year, although in dry, low water periods, flows may not be easily visible.

If the stream does not have a defined channel, or terrestrial vegetation is present in the streambed, the stream is intermittent.

Locations(s):

Stream crossings will require a site inspection by the MNR. Trails and roads will

be permitted to cross the streams at agreed to and mapped locations following consultation with the MNR. Refer to NRVIS Values Map for relevant EMA.

PRESCRIPTION

Permanent streams: No mechanical exploration activity is allowed within 30-90 metres depending on slope except for the purpose of crossing. Crossing location must be approved by the MNR.

Intermittent streams: No mechanical exploration activity is allowed within 3 metres of stream banks except for the purpose of crossing. Crossing location must be approved by the MNR.

All water crossings will be constructed in accordance with the MNR publication "*Environmental Guidelines for Access Roads and Water Crossings*, 1988."

All crossing structures will have water openings equal to or greater than the size proposed in watershed calculations.

Use materials construction practices, mitigation techniques and monitoring at every water crossing in order to prevent harmful alteration, disruption or destruction of fish habitat or the impairment of water quality. The following conditions will be adhered to:

- No instream activities will occur between Sept 1 and June 15 in coldwater and unknown or unsurveyed streams
- No instream activities will occur between April 1 and June 15 in coolwater streams
- Fording (crossing through or driving through) of any stream will only occur for watercrossing construction purposes and only after joint site inspection by the Company and MNR
- All temporary winter crossings will be removed by April 1
- The right-of-way will be cleared to the minimum width needed for construction

to a maximum width of 20 metres within 100 metres of the stream

- Grubbing and clearing of low vegetative cover within 100 metres of a water crossing will not occur unless absolutely necessary for construction and will only occur if effective erosion and sediment controls are in place
- Natural vegetation near water crossings will be retained as long as possible during construction
- Exposed mineral soil within 100 metres of the crossing must be graded to a stable repose (2:1 or flatter) and vegetated or otherwise protected from erosion so sediment will not enter the water after construction
- Materials removed or stockpiled during construction (e.g. grubbing, earth fills, earth cut materials) must be deposited in a manner so as to ensure that material does not enter any water body
- Drainage ditches will not normally discharge directly into waterways but will be diverted into the bush so the water filters through natural vegetation before entering the waterway
- Deleterious substances as defined in the *Canada Fisheries Act* must not be deposited in or allowed to enter any water body or water course
- All fill, in and around waterbodies will be earth free rock or clean, well-graded granular material. Where possible, in consultation with the local MNR biologist, appropriate sized materials will be chosen for use instream to improve fish habitat
- All culverts will be of sufficient length to support the road fill with stable side slopes
- If a washout occurs, the sediment is to be removed and the channel restored to its natural shape as soon as is practically possible. Requirements to remove downstream sediment not in the vicinity

of the crossing will be determined on a case by case basis

Every attempt will be made to mitigate the impacts of the crossing on fish habitat whenever possible:

- Avoiding removal, alteration or covering of substrates used for fish spawning, feeding, overwintering or nursery areas by:
 - selecting crossing locations in which sand, silt or clay substrates and aquatic vegetation is scarce or absent and by;
 - selecting structures that clearspan such as bridges or arched culverts, when crossing locations are in areas of riffles, cobbles or gravel substrate or aquatic vegetation is present. Maintaining fish passage by ensuring culverts are not perched when a culvert is chosen for a crossing
- Culverts will be installed a minimum of 10% below grade with a slope less than 0.5% and at least 20 cm of water in pipe during migration periods
- Maintaining water velocities through the pipe less than those outlined in the Roads Guidelines for various fish species and sizes
- Installing water crossings with proper erosion control techniques so the fill and ditch slopes are stable and the geomorphology of the watercourse is not altered through the chronic erosion of fill or through a washout

If any of the above four conditions are not satisfied, the crossing will be referred to the Federal Department of Fisheries and Oceans (DFO) for authorization.

To protect fish spawning areas, egg incubation and fry emergence periods in northwestern Ontario, no instream work is allowed between the dates indicated in the Table A.

(Source: OMNR, 1992. The problem of sediment in water for fish. Technical Note 21)

Implementation Manual(s):

Timber Management Guidelines for the Protection of Fish Habitat. 1988. pp 1-3

Code of Practice for Timber Management Operations in Riparian Areas. 1991. pp 1-5

Environmental Guidelines for Access Roads and Water Crossings. 1988. pp 10-55

Monitoring Program:

Inspection of mineral exploration operations may occur.

C. AREA OF CONCERN DESCRIPTION - Brook Trout Lakes, Streams and Adjacent Groundwater Recharge Zones

DESCRIPTION

Description of value(s):

- Brook trout lakes, streams and adjacent groundwater recharge zones

For Fisheries/Water Quality Values:

Fish Species Present

- Brook trout

Critical Fish Habitat

- Spawning area, groundwater recharge zones

Dimensions Of A.O.C

Variable depending on local conditions (soils, topography, location of groundwater discharge, slope). Special planning consideration outside the slope-based reserve.

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

TABLE A: INSTREAM WORK TIMING RESTRICTIONS TO PROTECT NORTHWESTERN ONTARIO FISH SPECIES

SPRING SPAWNERS		FALL SPAWNERS	
SPECIES PRESENT	TIMING RESTRICTION	SPECIES PRESENT	TIMING RESTRICTION
Walleye	Apr.1 - June 15 Apr. 1 - June 20 (late spring)	Lake Trout	Sept. 1 - May 30 (north) Sept. 15 - May 15 (south)
Northern Pike	Apr.1 - June 15	Brook Trout	Sept. 1 - June 15
Sturgeon	May 1 - June 30	Pacific Salmon	Sept. 1 - June 15
Large/Smallmouth Bass	May 15 - July 15	Lake Whitefish	Sept 15 - May 30 (north) Oct. 1 - May 15 (south)
Rainbow Trout	Apr.1 - June 15	Lake Herring	Oct. 1 - May 30 (north) Oct. 15 - May 15 (south)
Unknown species (warmwater or coolwater** stream)	Apr.1 - June 15*	Unknown species (coolwater stream)	Sept. 1 - June 15

* Can be later than June 15 if stream is within sturgeon, muskellunge or bass range, or if a late spring occurs.

** Coolwater term as used in plan text. If it is unknown whether a stream is coolwater or coldwater or what species are present in it, then it should be assumed to be coldwater (Sept. 1 - June 15)

(Source: OMNR, 1992. The problem of sediment in water for fish. Technical Note 21)

PRESCRIPTION

Brook trout spawn over very localized groundwater discharge areas in lakes and streams. Road construction and soil compaction may disrupt the flow of groundwater in these cold water recharge zones. Any change of groundwater flows could cause a harmful alteration, disruption or destruction of brook trout spawning areas.

It is believed that impacts can be mitigated through timing and access planning considerations. This prescription will allow mineral exploration while ensuring the protection of these recharge areas. In an attempt to avoid any alteration in areas adjacent to brook trout lakes and streams, mineral exploration activities will be carefully planned to protect these groundwater recharge and discharge zones. Whenever possible the local biologist will use the best

information available to predict the location of these areas. (i.e. topographical maps and Northern Ontario Geological Engineering Terrain Study Maps or thermography).

All roads and permanent trails in this A.O.C will be carefully located so as to not intercept shallow groundwater flow to the brook trout waters. A site inspection by MNR local biologist will be required prior to approval. Special attention will be given to ensuring that adequate cross drainage is installed. Intermittent streams in these A.O.C.s flowing into permanent waterbodies with no settling basin between the area of mechanized activity (drilling, stripping, trenching) and the permanent waterbody shall receive 30 metre reserves.

All crossings of brook trout streams will require a site inspection by MNR prior to approval. Where culverts are approved for

use they will normally be required to be installed 20% below grade.

Monitoring Program:

Inspection of mineral exploration programs may occur.

D. AREA OF CONCERN DESCRIPTION - Heronries

DESCRIPTION

Description of value(s):

- Heronries

Dimensions Of A.O.C

- 1000 metre radius from most peripheral nests in colony

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

PRESCRIPTION

0 to 300 metres from most peripheral nests in colony

- No mineral exploration activities will be allowed at any time

300 to 1000 metres [Heavy Development Zone (HDZ)]

- No mechanized mineral exploration or development will be permitted from April 1 to August 15

If the colony is not used for three years then it will be considered abandoned and the zoning restrictions will be removed.

Implementation Manual(s):

Management Guidelines for the Protection of Heronries in Ontario. 1984. pp 12-17

Monitoring Program:

Inspection of mineral exploration programs may occur.

E. AREA OF CONCERN DESCRIPTION - Moose Aquatic Feeding Area, Mineral Lick, Moose Calving Area

DESCRIPTION

Description of value(s):

- Moose aquatic feeding area
- Mineral lick
- Moose calving area

Dimensions Of A.O.C

- 120 metre reserve around calving areas, mineral licks and aquatic feeding areas
- Mineral licks and moose aquatic feeding area reserves will normally be measured from treed edge. "Treed edge" is considered to be any continuous stand of woody vegetation greater than 2 metres high. In locations where the feeding area is located greater than 120 metres from the treed edge (e.g. 120 metres of grassy vegetation exists between the waters edge and the treed edge) the reserve will be established on a case by case basis in consultation with the local MNR biologist

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

PRESCRIPTION

No mechanized mineral exploration activity is allowed within 120 metres of aquatic feeding areas, mineral licks and calving sites.

Implementation Manual(s):

Timber Management Guidelines for the Protection of Moose Habitat. 1988. pp 8

Selected Wildlife and Habitat Features Inventory Manual. 1993

Environmental Guidelines for Access Roads and Water Crossings. 1988. pp 10-55

Monitoring Program:

Inspections of mineral exploration activities may occur.

F. AREA OF CONCERN DESCRIPTION - Moose
Late Winter Habitat

DESCRIPTION**Description of value(s):**

- Moose late winter habitat

PRESCRIPTION

Variable with timing restrictions.

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

Prescription:

Because of the lack of moose winter habitat in the Lake Nipigon Basin, normally mechanized mineral exploration activities will not occur during the winter season. Some mechanized mineral exploration activities may occur on a case by case basis.

Implementation Manual(s):

Timber Management Guidelines for the Protection of Moose Habitat. 1988. pp 8

Selected Wildlife and Habitat Features Inventory Manual. 1993.

Monitoring Program:

Inspection of mineral exploration activities may occur.

G. AREA OF CONCERN DESCRIPTION - Eagle
Nests

DESCRIPTION**Description of value(s):**

- Eagle nests

Dimensions Of A.O.C

800 metre radius around nest.

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

PRESCRIPTION

0 to 100 metre (Primary Zone)

- No mineral exploration activities will be permitted at any time

100 to 200 metre (Secondary Zone)

- No mineral exploration activities of any kind will be permitted between February 15 – June 30

- No mineral exploration activities that result in significant changes to landscape will be permitted at any time, (e.g. mechanized stripping as defined in Part VII of the *Mining Act*, road construction)

200 to 400 metre (Tertiary Zone)

- No mechanized mineral exploration activities will be permitted between March 15 – May 31
- No mineral exploration activities that result in significant changes to landscape will be permitted at any time, (e.g. mechanized stripping as defined in Part VII of the *Mining Act*, road construction)

400 to 800 metre (Tertiary Zone)

- Normally no mechanized mineral exploration will be allowed within 800 metres of the nest. However, where there is no direct line of site between the nest and proposed exploration, exploration may be conducted as close as 400 metres. The tertiary zone boundary in this case must be jointly established through a site inspection involving the company and MNR

If after five (5) years the nest has not been used by eagles and is not being maintained or used in any way by eagles, only retain the 0-100 metre primary zone.

Eagles generally nest in the supercanopy trees. If the tree supporting the nest is

burned, leave reserves in place at least through next breeding season and monitor for use. If the area is not used then retain the 0-100 metre primary zone.

If the tree supporting the nest blows down all boundaries can be removed.

If the nest structure disappears but the tree remains the buffer zones should remain in effect through at least the following three (3) breeding seasons.

Implementation Manual(s):

Bald Eagle Management Guidelines. 1987. pp 4-14

Monitoring Program:

Inspection of mineral exploration activities may occur.

H. AREA OF CONCERN DESCRIPTION - Osprey Nests

DESCRIPTION

Description of value(s):

- Osprey nests

Dimensions Of A.O.C

- 800 metre radius around nest

Locations(s):

Refer to NRVIS Values Map for relevant EMA.

PRESCRIPTION

0 to 200 metre [Absolute Buffer Zone (ABZ)]

- No mechanized mineral exploration activities will be permitted at any time

200 to 800 m [Heavy Development Buffer Zone (HDZ)]

- No stripping as defined in Part VII of the *Mining Act* or road construction will be permitted at any time

- No mechanized mineral exploration activity is permitted between April 15-September 1

If after three (3) years the nest has not been used then retain only ABZ (200 metre reserve).

If the nest blows down but the tree remains retain ABZ (200 metre reserve) for three (3) years.

If fire burns the tree or nest but the tree remains standing, retain HDZ for three (3) years.

Implementation Manual(s):

Management Guidelines and Recommendations for Osprey in Ontario. 1983. pp 9-12

Monitoring Program:

Inspection of mineral exploration activities may occur.

TABLE B: LICENSING, WOOD ALLOCATION AND MEASUREMENT

05 LICENSING, WOOD ALLOCATION AND MEASUREMENT			
FOREST RESOURCE LICENSING AND MINERAL EXPLORATION (INTERIM)		PROCEDURE	FOR 05 03 18
Division (s):	Forests	Status:	Draft
Branch (es):	Industry Relations	Date Approved:	Changes to April 11, 2001 version
Approved by:	Director, Industry Relations Branch	Last Modified:	
Contact:	Manager, Wood Allocation and Measurement Section	Sunset Date:	October 2001

APPENDIX 2**VARIOUS LEGISLATION AND REGULATIONS GOVERNING MINERAL EXPLORATION AND DEVELOPMENT ACTIVITIES AROUND SHORELINES, WATERS AND SURFACE RIGHTS IN ONTARIO****CROWN FOREST SUSTAINABILITY ACT, 1994 S.O. 1994, c. 25****BACKGROUND:**

The purpose of this procedure is to provide guidance to Ministry staff responsible for:

- processing the issuance of forest resource licenses; and/or
- levying Crown charges for mineral exploration activities affecting Crown forests

The Crown Forest Sustainability Act (CFSA) is the provincial authority for determining forest management and forest resource licensing requirements on Ontario Crown lands.

The *Mining Act* determines requirements relative to the conditions under which an exploration company may cut Crown trees before conducting mineral exploration activities.

The CFSA provides authority for the Minister of Natural Resources to set prices to be charged for harvesting forest resources on Crown land. The Mining Act also has provisions for determining the prices to be charged, if any, for the trees cut on Crown land for mineral exploration purposes.

Given an environment where two pieces of legislation refer to opportunities to cut and pay Crown charges for trees, it is critical that forest resource licenses (FRL) are granted and that Crown charges are levied in a fair and consistent manner across the province. This procedure identifies how pricing of harvested trees is to be done.

OIC 993/95 provides for the Minister of Natural Resources to grant a forest resource licence for work on mining claims without a competitive process under s. 24 of the CFSA.

Although the mineral exploration industry does not usually contribute significantly to the harvest of Ontario's forests, occasionally exploration activities will result in the cutting of trees which are defined as being merchantable under the CFSA. While it is important for the Crown to receive a fair return for this timber, it is equally important for MNR staff to consider a pragmatic approach during the delivery of the Ministry's licensing and Crown charge collection procedures so as not to undermine other activities of the forest, such as mineral exploration.

DIRECTION:

FRLs should be granted to the mineral exploration industry and Crown charges collected for the forest resources (trees) that they harvest (cut) only when:

- Trees are harvested during construction of roads requiring work permits; or
- "Advanced exploration" is being performed

The *Mining Act* in subsection 139 (1) defines "Advanced exploration" as

"the excavation of an exploratory shaft, adit or decline, the extraction of prescribed material in excess of the prescribed quantity, whether the extraction involves the disturbance or movement of prescribed material located above or below the surface of the ground, the installation of a mill for test purposes or any other prescribed work."

Ontario Regulation 240/00 gives further interpretation of what "advanced exploration" includes as follows:

3. (1) For the purposes of Part VII of the [Mining] Act and this Regulation, "advanced exploration" includes the following types of work:

1. Exploration carried out underground involving the construction of new mine workings or expanding the dimensions of existing mine workings.
2. Exploration involving the reopening of

underground mine workings by the removal of fixed or permanently fastened caps or bulkheads, or involving the excavation of backfilled shafts, raises, adits or portals.

3. Exploration that may alter, destroy, remove or impair any rehabilitation work done in accordance with Part VII of the Act or a filed closure plan.
4. Excavation of material in excess of 1,000 tonnes;
5. Surface stripping on any mining lands of an area in excess of 10,000 square metres or volume in excess of 10,000 cubic metres.
6. Surface stripping carried out on mining lands whose area is greater than 2,500 square metres or that produces a volume of material greater than 2,500 cubic metres, if any surface stripping is carried out within 100 metres of a body of water. O. Reg. 240/00, s. 3 (1).

(2) In the definition of "advanced exploration" in subsection (1),

"material" means rock, ore or any other substance excavated during the process of developing, mining, evaluating or testing any mineral or mineral deposit, but does not include excavated overburden;

"surface stripping" means the removal of overburden to expose bedrock or other material.

For FRL licensing purposes, "advanced exploration" is only where trees are to be cleared for stripping as follows:

- An area in excess of 10,000 square metres (one hectare), or
- An area greater than 2,500 square metres (0.25 hectares) if the clearing is to be carried out within 100 metres of a body of water

Further, in the event that either of the above situations applies, a FRL must be granted to authorize the harvest of Crown forest

resources and to collect Crown charges when:

- the timber removed is merchantable, as defined by the Scaling Manual under the CFSA

Disputes that might arise between the mineral exploration company and the MNR concerning the value or quantity of trees cut or used may be resolved by the Minister of Northern Development and Mines in accordance with Section 92(5) or 92(7) of the *Mining Act*,

and/or;

- the forest company holding a current licence (FRL or sustainable forest licence) for the area in which trees are proposed to be harvested does not want to carry out the harvesting themselves

Note: Despite the direction given above, the Minister of Natural Resources reserves the right to require a FRL to be in place and Crown charges to be paid in other cases where material to be harvested can be utilized by the forest industry. [This allows for licensing in such situations as when a grid of wide trails is to be cleared for machine access to do exploration and the wood being harvested can be marketed to the forest industry.

Activities that are exempt from forest resource licensing requirements and Crown charges include those where incidental trees are cut or blazed for purposes such as: establishing survey lines or corner posts for mining claims, building trails to permit access of equipment or establishing soil pits. It is up to the District Manager to determine based on local circumstances, if the work is exempt from licensing requirements and Crown charges (e.g. when does a trail become a road). However it is the mineral exploration company's prerogative to use s. 92(5) or 92(7) of the *Mining Act* to resolve the dispute if the company believes the District Manager's decision is unfair (i.e. the dispute will be resolved by the Minister of Northern Development and Mines).

The mineral exploration company will be required to compensate the Crown for damages the mineral exploration company causes to trees or seedlings that have been

regenerated as a result of a silviculture prescription implemented in accordance with an approved FMP. Such compensation will be assessed by the District Manager who will take into consideration all costs associated with naturally or artificially re-establishing the regeneration to the standards to which it was growing when the damage took place. All compensation obtained by the Ministry in these situations (damage to regeneration) will be collected by the district and directed to the Ontario government Consolidated Revenue Fund. Note that there is no connection made to TREES or the Forest Renewal Trust in these situations.

Advanced exploration may include activities such as bulk sampling, stripping, trenching and establishing exploratory shafts. A closure (rehabilitation) plan is required under the *Mining Act* when advanced exploration work is carried out. The closure plan is filed with the Ministry of Northern Development and Mines and the MNR District may request a copy from the Exploration Company. Depending on the planned exploration activity and closure plan, the District may choose to include special conditions on the FRL to protect values in the area. In addition, District staff should review the closure plan before issuing a FRL and provide any comments to the Ministry of Northern Development and Mines.

PROCEDURE TO ENABLE A MINERAL EXPLORATION COMPANY TO HARVEST CROWN TREES:

Where the area proposed for a FRL for clearing is already licensed under a FRL or Sustainable Forest Licence (SFL) in accordance with an approved forest management plan (FMP):

- The FRL or SFL holder should be offered the opportunity to harvest the forest resources
- If the FRL or SFL holder agrees to harvest the forest resources, then that licensee will be assessed Crown charges for those forest resources that are harvested in accordance with the Ontario Stumpage Matrix

Where the FRL or SFL holder has harvested the forest resources and has been assessed the Crown charges for them, that licensee shall be compensated for the portion of the trees used for mining purposes by the mineral exploration company, in accordance with s. 92(6) of the *Mining Act*. Disputes that might arise between the mineral exploration company and the FRL or SFL holder concerning the value of trees harvested will be resolved by the Minister of Northern Development and Mines in accordance with s. 92(7) of the *Mining Act*. Section 92(7) of the *Mining Act* states: “*Where a dispute arises between the recorded holder, owner or lessee and the timber licensee or permittee as to the value or quantity of the trees cut or used under subsection (6), the Minister shall determine the dispute and his or her decision is final.*”.

- Where the FRL or SFL holder declines the opportunity to harvest the timber, an overlapping agreement is required and the FRL is to be issued to the mineral exploration company (or its contractor) in accordance with the procedures FOR 05 03 05 entitled “*Issuance of a Forest Resource Licence for Commercial Purposes under CFSA s. 27(1)*” and FOR 05 03 03 entitled “*Forest Resource Licenses on the Same Land*”
- The company or individual holding an SFL on the area where harvesting takes place must be offered the forest resources for use in facilities identified in section 3.1 or Appendix E of the SFL document. This may be addressed through a special condition on the licence

Where the area proposed for a FRL for clearing is NOT currently licensed under a FRL or SFL:

- Where an approved FMP has identified that the area may be harvested (i.e. it is allocated), a FRL may be issued to the exploration company in accordance with the procedure FOR 05 03 05 entitled “*Issuance of a Forest Resource Licence for Commercial Purposes under CFSA s. 27(1)*” or;

- Where the exploration activity is located within an area covered by a FMP but located outside of the areas allocated for harvesting in the approved FMP, a FRL may be issued to the exploration company subject to an exemption under s. 29(2) and 47 of the CFSA. Refer to the procedure FOR 05 03 14 entitled “*Exemptions from Requirements: Using CFSA section 29(2), 42(2) or 47*”, or;
- Where the exploration activity lies within an area on which there is no FMP, a FRL may be issued to the exploration company subject to an exemption under s. 47 of the CFSA. Refer to the procedure FOR 05 03 14 entitled “*Exemptions from Requirements: Using CFSA section 29(2), 42(2) or 47*”
- Where the proposed licence for clearing (harvesting) is proposed for an area where forest resources are committed to a forest resource processing facility, a condition must be included on the FRL directing the licensee to dispose of the wood in accordance with the terms of the commitment document

When a mineral exploration company is granted an FRL to harvest forest resources, that company will be responsible for paying all Crown charges that are levied on the forest resources on the area of that FRL in accordance with the Ontario Stumpage Matrix.

It is incumbent upon the Mineral Exploration Company to either utilize the commercially marketable Crown forest resources they harvest under a FRL or to sell the forest resources to a processing facility in Ontario. Where no condition or agreement is in place to the contrary, commercially marketable trees that are not utilized will be subject to compliance remedies in accordance with the CFSA.

Payment of Crown charges by the mineral exploration company in advance of the harvest should not be requested unless documentation on the client shows previous delinquency in payment of Crown charges anywhere in Ontario. The district should, however, inform the client of the estimated

amount of stumpage that would be anticipated using current rates and information that is available, such as: Forest Resources Inventory data, cruise information, etc. If the forest resources will not be scaled and the mineral exploration company intends to make one payment based on the estimated value of the forest resources, payment may be collected when the FRL is issued.

See procedure FOR 05 03 22 entitled “*Arrangements to Secure Payment of Crown Charges*” for other approaches to ensure payment of Crown charges.

Note: The internet Mining Claims Information website is managed by the Ministry of Northern Development and Mines and provides access to a database containing maps and information on all mining claims on nonpatented lands. The information is updated daily and would therefore be useful to update FMP mailing lists and to deliver on the Ministry’s responsibilities under para. 23.2 of the SFL which states: “*the Minister will advise all recorded and patented claim holders located within the proposed operating area...*”. See Procedure FOR 05 03 17 entitled “*Mining Claims*” for detailed notification requirements.

ENVIRONMENTAL PROTECTION ACT

R.S.O. 1990, c. E-19

1. (1) In this Act,

“*adverse effect*” means one or more of,

- (a) impairment of the quality of the natural environment for any use that can be made of it
- (b) injury or damage to property or to plant or animal life,
- (c) harm or material discomfort to any person
- (d) an adverse effect on the health of any person
- (e) impairment of the safety of any person
- (f) rendering any property or plant or animal life unfit for human use
- (g) loss of enjoyment of normal use of property, and
- (h) interference with the normal conduct of business

“*contaminant*” means any solid, liquid, gas, odor, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that may cause an adverse effect;

“*spill*”, when used with reference to a pollutant, means a discharge,

- (a) into the natural environment
- (b) from or out of a structure, vehicle or other container, and
- (c) that is abnormal in quality or quantity in light of all the circumstances of the discharge

6. (1) No person shall discharge into the natural environment any contaminant, and no person responsible for a source of contaminant shall permit the discharge into the natural environment of any contaminant from the source of contaminant, in an amount, concentration or level in excess of

that prescribed by the regulations.

13. (1) Every person,
- (a) who discharges into the natural environment; or
 - (b) who is the person responsible for a source of contaminant that discharges into the natural environment, any contaminant in an amount, concentration or level in excess of that prescribed by the regulations shall forthwith notify the Ministry of the discharge.

Exception

(2) Subsection (1) does not apply to animal wastes disposed of in accordance with normal farming practices. R.S.O. 1990, c. E.19, s. 13.

Prohibition

14. (1) Despite any other provision of this Act or the regulations, no person shall discharge a contaminant or cause or permit the discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect.

Extent of liability

99 (8) Where two or more persons are liable to pay compensation under this section, they are jointly and severally liable to the person suffering the loss, damage, cost or expense but as between themselves, in the absence of an express or implied contract, each is liable to make contribution to and indemnify the other in accordance with the following principles:

- 1 Where two or more persons are liable to pay compensation under this section and one or more of them caused or contributed to the loss, damage, cost or expense by fault or negligence, such one or more of them shall make contribution to and indemnify,
 - i. where one person is found at fault or negligent, any other person liable to pay compensation under this section, and
 - ii. where two or more persons are found at fault or negligent, each other and any

other person liable to pay compensation under this section in the degree in which each of such two or more persons caused or contributed to the loss, damage, cost or expense by fault or negligence.

- 2 For the purpose of subparagraph ii of paragraph 1, if it is not practicable to determine the respective degrees in which the fault or negligence of two or more persons liable to pay compensation under this section caused or contributed to the loss, damage, cost or expense, such two or more persons shall be deemed to be equally at fault or negligent.
- 3 Where no person liable to pay compensation under this section caused or contributed to the loss, damage, cost or expense by fault or negligence, each of the persons liable to pay compensation is liable to make contribution to and indemnify each other in such degree as is determined to be just and equitable in the circumstances.

FISHERIES ACT (FEDERAL)

FISH HABITAT MANAGEMENT BRANCH (FISHERIES ACT)

Exploration activities resulting in sediment deposition on or near a shoreline or construction of mine plant infrastructure could result in a harmful alteration of fish habitat, as defined in the *Fisheries Act*. In the event of shoreline modification resulting in fish habitat loss, a Fish Habitat Compensation Agreement would have to be negotiated with DFO (“no net loss” principle). The Fish Habitat Compensation Agreement constitutes an authorization from a federal agency and represents a trigger for a possible review under the *Canadian Environmental Assessment Act*.

LAKES AND RIVERS IMPROVEMENT ACT

R.S.O. 1990, c. L-3

Purposes of Act

2. The purposes of this Act are to provide for,

- (a) the management, protection, preservation and use of the waters of the lakes and rivers of Ontario and the land under them;
- (b) the protection and equitable exercise of public rights in or over the waters of the lakes and rivers of Ontario;
- (c) the protection of the interests of riparian owners;
- (d) the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers;
- (e) the protection of the natural amenities of the lakes and rivers and their shores and banks; and
- (f) the protection of persons and of property by ensuring that dams are suitably located, constructed, operated

and maintained and are of an appropriate nature with regard to the purposes of clauses (a) to (e). 1998, c.18, Sched. I, s. 23.

MINING ACT

R.S.O. 1990, c. M-14

30. (1) No mining claim shall be staked out or recorded on any land,

- (a) that, without reservation of the minerals, has been sold, located, leased or included in a licence of occupation; or
- (b) for which an application brought in good faith is pending in the Ministry of Natural Resources under the *Public Lands Act* or any other Act, and in which the applicant may acquire the minerals that are included in the application; or

39. (1) Where the Minister certifies that land is suitable for disposition for agricultural purposes, a mining claim staked thereon does not give the staker any right, title or interest in or to the surface rights. R.S.O. 1990, c. M.14, s. 39 (1).

Where surface rights necessary for mining operations

(2) Where surface rights on any such land are necessary to the carrying on of mining operations, the Minister may determine the part of the surface rights so required and, if not previously disposed of, may sell or award the surface rights or such part thereof to the claim holder as the Minister considers essential to the efficient carrying on of mining operations, and he or she may require the claim holder to have such surveys made at the expense of the claim holder as he or she considers proper. R.S.O. 1990, c. M.14, s. 39 (2).

Crown reservation

40. (1) Where a mining claim includes land covered with water or bordering on water, the surface rights over a width of no more than 120 metres from the high water mark may be

reserved for the Crown. 1999, c. 12, Sched. O, s. 15.

(2) Where a highway or road constructed or maintained by the Ministry of Transportation crosses a mining claim, the surface rights over a width of no more than 90 metres, measured from the outside limits of the right of way of the highway or road along both sides of the highway or road, may be reserved for the Crown. 1999, c. 12, Sched. O, s. 15.

Application of Crown reservation to unpatented mining claims

(3) The reservations of surface rights authorized by subsections (1) and (2) shall be deemed to apply to and to have been made on all unpatented mining claims unless such reservation or reservations are waived by the Minister. R.S.O. 1990, c. M.14, s. 40 (3).

- (c) where the surface rights have been subdivided, surveyed, sold or otherwise disposed of by the Ministry of Natural Resources for summer resort purposes, except where the Minister certifies in writing that in his or her opinion discovery of valuable mineral in place has been made; or
- (d) where the Minister or the Minister of Transportation certifies that land is required for the development of water power or for a highway or for some other purpose in the public interest and the Minister is satisfied that a discovery of mineral in place has not been made thereon; or
- (e) in an Indian reserve, except as provided by *The Indian Lands Act*, 1924; or
- (f) while proceedings in respect thereto are pending before the Commissioner or a recorder or until those proceedings are finally determined; or
- (g) until the proceeding has been finally determined, in the case of a proceeding that the Commissioner certifies is pending in a court in respect of the land. R.S.O. 1990, c. M.14, s. 30; 1994, c. 27, s.

134 (1); 2000, c. 26, Sched. M, s. 3 (1, 2).

Rights in claim

50. (1) The staking out or the filing of an application for or the recording of a mining claim, or the acquisition of any right or interest in a mining claim by any person or all or any of such acts, does not confer upon that person,

- (a) any right, title, interest or claim in or to the mining claim other than the right to proceed as is in this Act provided to perform the prescribed assessment work or to obtain a lease from the Crown and, prior to the performance, filing and approval of the first prescribed unit of assessment work, the person is merely a licensee of the Crown and after that period and until he or she obtains a lease the person is a tenant at will of the Crown in respect of the mining claim; or
- (b) any right to take, remove or otherwise dispose of any minerals found in, upon or under the mining claim. R.S.O. 1990, c. M.14, s. 50 (1).

Surface rights

(2) The holder of a mining claim does not have any right, title or claim to the surface rights of the claim other than the right to enter upon, use and occupy such part or parts thereof as are necessary for the purpose of prospecting and the efficient exploration, development and operation of the mines, minerals and mining rights therein. R.S.O. 1990, c. M.14, s. 50 (2).

Taxation

(3) The holder of an unpatented mining claim is not liable to assessment or taxation for municipal or school purposes in respect of such unpatented mining claim. R.S.O. 1990, c. M.14, s. 50 (3).

Same

(4) The holder of a licence of occupation issued under this Act or any predecessor Act is

not liable to assessment or taxation for municipal or school purposes in respect to the licence except with respect to improvements for which the holder would be liable to assessment or taxation if the lands were held under a patent. 1999, c. 12, Sched. O, s. 22.

Surface rights on unpatented mining claim

51. (1) Except as in this Act is otherwise provided, the holder of an unpatented mining claim has the right prior to any subsequent right to the user of the surface rights for prospecting and the efficient exploration, development and operation of the mines, minerals and mining rights. R.S.O. 1990, c. M.14, s. 51 (1).

Disposition of surface rights

(2) Where the holder of an unpatented mining claim consents to the disposition of surface rights under the Public Lands Act, the recorder shall make an entry on the record of the claim respecting the consent, and thereupon the surface rights may be dealt with as provided in the Public Lands Act. R.S.O. 1990, c. M.14, s. 51 (2).

Survey of surface rights

(3) Where the holder of an unpatented mining claim consents to the disposition of surface rights under subsection (2), the Minister may require a survey of such surface rights, and the survey shall be provided at the expense of the person who has acquired the surface rights. R.S.O. 1990, c. M.14, s. 51 (3).

Where holder does not consent to disposition of surface rights

(4) Where an application is made for disposition under the *Public Lands Act* of surface rights on an unpatented mining claim and the holder of the unpatented mining claim does not consent to the disposition and provision for the reservation or exclusion of the surface rights is not otherwise provided for in this Act or any other Act, the Minister may refer the application to the Commissioner. R.S.O. 1990, c. M.14, s. 51 (4).

Where application referred to Commissioner

(5) Where an application under subsection (4) is referred to the Commissioner, he or she shall, upon giving all interested persons at least ninety days' notice and after hearing such interested persons as appear, make an order based on the merits of the application. R.S.O. 1990, c. M.14, s. 51 (5).

Where surface rights required for public use

(6) Where surface rights on an unpatented mining claim are required for the use of the Crown or other public use, this section applies with necessary modifications. R.S.O. 1990, c. M.14, s. 51 (6).

SURFACE RIGHTS COMPENSATION

Notice of intention to perform assessment work

78. (1) A holder of a mining claim who first proposes to do ground assessment work on all or part of the land comprising a mining claim shall give notice of that intention in the prescribed form to the owner, if any, of the surface rights of the part of the land to be affected by the work. 1996, c. 1, Sched. O, s. 21.

Entry on land to perform work

(2) A person who has given notice under this section may enter on the land and perform the work at any time immediately following the day the notice is given. R.S.O. 1990, c. M.14, s. 78 (2).

Where work not to be recorded

(3) A recorder shall not record ground assessment work referred to in subsection (1) unless,

- (a) the holder files with the recorder the following evidence establishing that the holder gave the required notice: a certificate in the prescribed form and all further evidence that the recorder may require;

- (b) the recorder determines that it is not feasible in the circumstances to give notice to the owner of the surface rights; or
- (c) the owner of the surface rights gives written consent to the performance of the work after it has been performed. 1996, c. 1, Sched. O, s. 21; 1999, c. 12, Sched. O, s. 34; 2000, c. 26, Sched. M, s. 11.

Definition

79. (1) In this section and in section 78,

“owner of the surface rights” means a person to whom the surface rights of land have been granted, sold, leased or located. R.S.O. 1990, c. M.14, s. 79 (1).

Right of owner of surface rights to compensation

(2) Where there is an owner of surface rights of land or where land is occupied by a person who has made improvements thereon that, in the opinion of the Minister, entitles that person to compensation, a person who,

- (a) prospects, stakes out or causes to be staked out a mining claim or an area of land for a boring permit;
- (b) formerly held a mining claim or an area of land for a boring permit that has been cancelled, abandoned or forfeited;
- (c) is the holder of a mining claim or an area of land for a boring permit and who performs assessment work; or
- (d) is the lessee or owner of mining lands and who carries on mining operations, on such land, shall compensate the owner of the surface rights or the occupant of the lands, as the case may be, for damages sustained to the surface rights by such prospecting, staking out, assessment work or operations. R.S.O. 1990, c. M.14, s. 79 (2).

Right of holder of mining claim, etc., to compensation

(3) Every person who damages mineral exploration workings or claim posts, line posts, tags or surveyed boundary markers delineating mining lands shall compensate the holder of the mining claim or the owner or lessee of the mining lands, as the case may be, for damages sustained. R.S.O. 1990, c. M.14, s. 79 (3).

Determination of compensation by Commissioner

(4) In default of agreement and upon application made in the prescribed form by either party, the amount and the time and manner of payment of compensation under subsection (2) or (3) shall be determined by the Commissioner after a hearing and, subject to appeal to the Divisional Court where the amount claimed exceeds \$1,000, the Commissioner's order is final. R.S.O. 1990, c. M.14, s. 79 (4).

Prohibiting work pending settlement

(5) The Commissioner may order the giving of security for payment of the compensation and may prohibit, pending the determination of the proceeding or until the compensation is paid or secured, further prospecting, staking out or working by any person. R.S.O. 1990, c. M.14, s. 79 (5).

Lien for compensation

(6) The compensation is a special lien upon any mining claim or mining lands, as the case may be, and no further prospecting, staking out or performing of work, except by leave of the Commissioner, shall be done by any person after the time fixed for the payment or securing of the compensation, unless the compensation has been paid or secured as directed. R.S.O. 1990, c. M.14, s. 79 (6).

Power of Commissioner to vary, etc., order

(7) The Commissioner, on notice to all interested parties and for good cause shown, on such terms as seem just, may by subsequent order or award at any time

change, supplement, alter, vary or rescind any order made under this section. R.S.O. 1990, c. M.14, s. 79 (7).

Priorities

(8) In a hearing under subsection (4), the Commissioner shall take into account which of the rights was applied for first and, except where injustice would result, shall give the holder of those rights due priority in the consideration of the dispute between the parties. R.S.O. 1990, c. M.14, s. 79 (8).

Filing of agreement or order in office of recorder

(9) Where unpatented mining claims are affected by an agreement entered into in respect of the compensation referred to in subsection (2), or by an order made under subsection (4), the agreement or a certified copy of the order, as the case may be, may be filed by the person to whom the compensation is payable in the office of the recorder upon payment of the required fee. R.S.O. 1990, c. M.14, s. 79 (9); 1997, c. 40, s. 7.

Registration of order or agreement

(10) Where an unpatented mining claim is subsequently leased, the Minister shall cause any agreement or order filed in the recorder's office under subsection (9) that affects the leased lands to be registered against the lands in the proper land registry office and the person to whom the compensation is payable is entitled to enforce the terms of the agreement or order against the lessee and, subject to the Registry Act and the Land Titles Act, against any subsequent lessee of the land. R.S.O. 1990, c. M.14, s. 79 (10).

86. (1) Every lease issued under this Act shall contain the following reservations or provisions:

Reservation for roads

1 Provided that nothing whatsoever herein contained shall prevent or interfere with the free user of any public or traveled road or highway crossing the hereinbefore-described

premises.

Reservation for power, petroleum, etc.

2 Reserving unto Us, Our Heirs and Successors such use of the land hereby demised for all such works as may be necessary for the development of water power and the development, transmission and distribution of electrical power, natural gas, petroleum and petroleum products, including the construction, maintenance and operation of roads, railroads, transmission lines and stations, flumes, pipelines, dams, power houses and other works and structures without any liability by Us to the Lessee.

Reservation for railways

3 Reserving the right to grant without compensation to any person or corporation the right-of-way necessary for the construction and operation of one or more railways over or across the lands herein leased without let or hindrance from the Lessee where such railway or railways shall not manifestly or materially interfere with the mining operations carried on upon the said premises.

Reservation for navigable waters

4 Saving, Excepting and Reserving unto Us, Our Heirs and Successors the free use, passage and enjoyment of, in, over and upon all navigable waters which shall or may hereafter be found on or under or to be flowing through or upon any part of the said parcel or tract of land hereby demised as aforesaid and reserving also right of access to the shores of all rivers, streams and lakes for all vessels, boats and persons, together with the right to use so much of the banks thereof not exceeding one chain in depth from the high-water mark as may be necessary for fishery or public purposes.

Provided that, should the premises herein described or any part thereof be covered by navigable waters, this lease shall be subject to the provisions of the *Navigable Waters Protection Act* (Canada), the *Beds of*

Navigable Waters Act and the Lakes and Rivers Improvement Act.

Reservation for fishing

5 Provided that nothing herein contained shall in any manner restrict fishing or fishing rights in any navigable waters covering the premises hereby demised and that the Lessee shall not do any act resulting in damage to fishing or the fishing industry in the waters or to nets or other appliances used in fishing in the waters.

Reservation for land under navigable waters

6 Provided that these presents shall not vest in the Lessee any right, claim or title to the land under navigable waters which may be included within the limits of the herein described premises, but the Lessee shall have the exclusive right to extract the minerals therefrom during the term of these presents. R.S.O. 1990, c. M.14, s. 86 (1).

Holder, etc., of mining rights not to cut trees

92 (8) This section does not confer upon the recorded holder, owner or lessee of the mining rights any right to cut trees upon the lands on which the holder, owner or lessee has staked or acquired only the mining rights. R.S.O. 1990, c. M.14, s. 92 (8).

Rehabilitation Of Mining Lands (Part VII)

Definitions

139. (1) In this Part,

“*advanced exploration*” means the excavation of an exploratory shaft, adit or decline, the extraction of prescribed material in excess of the prescribed quantity, whether the extraction involves the disturbance or movement of prescribed material located above or below the surface of the ground, the installation of a mill for test purposes or any other prescribed work;

“*adverse effect*” means,

- (a) injury or damage to property,
- (b) harm or material discomfort to any person,
- (c) a detrimental effect on any person's health,
- (d) impairment of any person's safety,
- (e) a severe detrimental effect on the environment;

“*closed out*” means that the final stage of closure has been reached and that all the requirements of a closure plan have been complied with;

“*closure*” means the temporary suspension, inactivity or close out of advanced exploration, mining or mine production;

“*closure plan*” means a plan to rehabilitate a site or mine hazard that has been prepared in the prescribed manner and filed in accordance with this Act and that includes provision in the prescribed manner of financial assurance to the Crown for the performance of the closure plan requirements;

“*protective measures*” means steps taken in accordance with the prescribed standards to protect public health and safety, property and the environment;

“*rehabilitate*” means measures, including protective measures, taken in accordance with the prescribed standards to treat a site or mine hazard so that the use or condition of the site,

- (a) is restored to its former use or condition, or
- (b) is made suitable for a use that the Director sees fit

APPENDIX E: CLIMBERS' CODE OF CONDUCT

Each cliff is composed of three distinct cliff communities, including the base, the face and the edge. Each of these communities is sensitive to disturbance. Both rock and ice climbing activities may impact and degrade the cliff habitat of the flora and fauna of the area. Detrimental effects include the removal of lichens, mosses and other hydrophilic plants, and the possible disturbance of wildlife populations and habitats (i.e. nesting sites) around climbing sites. Other practices that threaten these communities include trampling and/or removal of vegetation, pruning trees, disturbance of boulders, and excessive trail development.

The following is a suggested list of recommendations for rock (and where applicable ice) climbers to follow to reduce their impact on the sensitive cliff communities within the Lake Nipigon Basin. Adherence to these guidelines will ensure that climbing activities have a minimal impact on the Lake Nipigon Basin cliff ecosystems. Management action, in consultation with the climbing community, will be undertaken should it be determined that climbing activity in the Pijitiwabik Palisades is negatively impacting the earth and life sciences for which this area was set aside.

1. Obey any climbing site closures or seasonal restrictions of climbing sites as determined by the OMNR.
2. Do not litter. Pack out your garbage, as well as garbage left behind by others.
3. Be courteous to the residents and user groups (hikers, tourists, mountain bikers, dog walkers, birders, etc.) in the area.
4. Avoid unnecessary/excessive noise.
5. Minimize disturbance of plants both at the cliff base and cliff edge as well as on the rock face. Avoid standing, sitting, placing packs or flaking your rope on the sensitive vegetation.
6. Avoid excess pruning of trees.
7. Avoid walking on exposed tree roots.
8. When using trees as anchors, padding is encouraged (i.e. canvas, carpet, towels, etc.).
9. Minimize disturbance of rocks in the talus slope.
10. Anything left on the cliff face should be as discrete as possible. Climbers are encouraged to paint bolt hangers to match the color of the rocks



LAKE NIPIGON BASIN SIGNATURE SITE

ECOLOGICAL LAND USE AND RESOURCE MANAGEMENT STRATEGY