

STRATÉGIE QUÉBÉCOISE SUR LES AIRES PROTÉGÉES



White Mountain (proposed Brador hills biodiversity reserve)



Proposed Guernesé lake biodiversity reserve

Proposed Conservation Plan for the Guernesé Lake Foothills and Brador Hills Biodiversity Reserves (Lower North Shore)

Public Consultation
Document



September 2006

**Proposed Conservation Plan for the
Guernesé Lake Foothills and Brador Hills
Biodiversity Reserves
(Lower North Shore)**

Public Consultation Document

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*Développement durable,
Environnement
et Parcs*

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Abbreviations and acronyms

- ✓ **ATV:** All-terrain vehicle
- ✓ **BAPE:** Bureau d'audiences publiques sur l'environnement
- ✓ **CCEQ:** Centre de contrôle environnemental du Québec of the Ministère du Développement durable, de l'Environnement et des Parcs
- ✓ **CDPNO:** Centre de données sur le patrimoine naturel du Québec
- ✓ **CRECN:** Conseil régional de l'environnement de la Côte-Nord
- ✓ **DPÉP:** Direction du patrimoine écologique et des parcs of the Ministère du Développement durable, de l'Environnement et des Parcs
- ✓ **DRAE:** Direction de l'analyse et de l'expertise régionales de la Côte-Nord of the Ministère du Développement durable, de l'Environnement et des Parcs
- ✓ **Faune Québec:** Wildlife branch of the Ministère des Ressources naturelles et de la Faune
- ✓ **FMU:** Forest management unit
- ✓ **MDDEP:** Ministère du Développement durable, de l'Environnement et des Parcs
- ✓ **MRNF:** Ministère des Ressources naturelles et de la Faune
- ✓ **NHCA:** Natural Heritage Conservation Act
- ✓ **RCM:** Regional county municipality
- ✓ **RSQ:** Revised statutes of Québec
- ✓ **RTA:** Regional tourism association
- ✓ **SIGF:** Système d'information sur la grande faune of the Ministère des Ressources naturelles et de la Faune (big game information system)
- ✓ **UGAF:** Management unit for fur-bearing animals ("fur management unit" under Wildlife Act)

Definitions

Biodiversity or biological diversity

Under the NHCA, it means "the variability among living organisms from all sources including terrestrial, marine, estuarial and freshwater ecosystems and the ecological complexes of which they are a part; those terms include diversity within species, between species and of ecosystems."

Biodiversity reserve

Permanent status attributed further to a public hearing to a territory previously protected under the status of proposed biodiversity reserve. An area mainly composed of terrestrial environments designated as a representative sample of the biodiversity of a given natural region in Québec¹.

This protection status is flexible. Depending on the area's ecological issues, it allows for such recreational activities as cottaging, hunting, fishing, hiking and canoeing.

Conservation

All efforts to protect, manage and restore biodiversity and ecological processes that allow for sustainable and compatible land use.

Ecological reference framework

A classification, mapping and interpretation system for hydrosystems and terrestrial ecosystems. Developed by the MDDEP, this tool is used to integrate and use ecological information for the purpose of sustainable and environmentally responsible management of the territory and its resources. It allows for recognizing land management problems at the scale at which the territory is being considered.

Natural province

Level 1 of Québec's Ecological Reference Framework (Li and Ducruc 1999). There are thirteen natural provinces in Québec. They are generally mapped at a scale of 1:1,000,000.

Natural region

A subdivision of the natural provinces, it is Level 2 of Québec's Ecological Reference Framework. There are 81 natural regions in Québec. They are generally mapped at a scale of 1:500,000.

Proposed biodiversity reserve

Protection status given to a territory created under the NHCA which enables land to be legally protected for a period of four years, during which time industrial

¹ Simplified version of the official definition given in the Natural Heritage Conservation Act (R.S.Q, c. C-61.01).

activities (forestry, energy and mining) are forbidden. During this period, the MDDEP may take any measures necessary to obtain permanent protection status for the territory, including conducting a public hearing.

This protection status is flexible. Depending on the area's ecological issues, it allows for such recreational activities as cottaging, hunting, fishing, hiking and canoeing.

Protected area

The NHCA defines **protected area** as a geographically defined area that is designated or regulated and managed to reach specific conservation objectives².

In Québec, there are twenty-six protected areas, eleven of which are managed by the MDDEP (aquatic reserve, biodiversity reserve, ecological reserve, natural reserve, flora habitat, man-made landscape and national park³) under the NHCA, which took effect on December 19, 2002, the Act respecting threatened or vulnerable species (R.S.Q., c. P-9) adopted in 1989, and the Parks Act (R.S.Q., c. P-9) adopted in 1977.

Representativeness

Accurately illustrating the full range of environment types within an area or at least an adequate sampling thereof. Networks of protected areas must have a balanced sampling of all existing ecosystems (IUCN, 2002).

² Simplified version of the official definition given in the Natural Heritage Conservation Act (R.S.Q., c. C-61.01).

³ The list also includes the following provisional conservation status categories: proposed aquatic status, proposed biodiversity reserve, proposed ecological reserve and proposed man-made landscape.

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Why protect the Guernesé lake foothills?

- The important contribution to the protection of the representative examples of the Lower North Shore Plateau natural province (16.2%):
 - old primary softwood forests (black spruce and balsam),
 - important salmon rivers,
 - landscapes shaped by glaciers;
- The protection of the upstream portions of the watersheds of three salmon rivers (Coxipi, Napetipi, Saint-Paul);
- The protection of land historically occupied by the St. Augustin woodland caribou herd;
- The historical absence of any heavy industrial activity likely to have irreparably damaged the ecosystems and landscapes;
- The protection of the biodiversity of the various ecosystems;
- The upkeep of quality habitats for the sustainable wildlife management of furbearing animals;
- The addition of 2,022 km² (0.12%) to the network of protected areas in Québec and 1.97% to the network of the natural province of the Lower North Shore Plateau.



Why protect the Brador hills?

- The contribution to the representativeness of the natural province of the Lower North Shore (0.5%);
- The rare tabular hills of carbonate rock emerging from the Precambrian basement;
- The particular floral elements associated with limestone outcroppings;
- The protection of a portion of the watershed of the Brador Est salmon river;
- The addition of 32 km² (0.002%) to the network of protected areas in Québec and 0.03% to the natural province of the Lower North Shore Plateau.



1. Context

1.1 Background

At the Rio de Janeiro Earth Summit held in 1992, the Canadian government signed the Convention on Biodiversity. In November 1992, the Québec government subscribed to the Convention's objectives and decided to implement them in its territory. In this way, the two governments made a commitment to conservation, notably by establishing a network of protected areas in their territory and developing guidelines for selecting and creating protected areas for which special measures are required to protect the biodiversity.

In view of reaching this objective, the Québec government adopted a biodiversity strategy and action plan in 1996 and 2004. It is also within the perspective of the Convention's implementation that in 1999 it drew up a profile of Québec's network of protected areas. This profile showed Québec significantly lagging behind in biodiversity conservation. In fact, in 1999, protected areas totalled less than 3% of Québec's territory. Most of them were recently created, of small size, established on public land and concentrated in the St. Lawrence Valley. The profile also revealed the absence of a strategy for establishing the network.

This finding led the Québec government to adopt several key directions in June 2000, namely:

- Set aside 8% of the land in Québec by⁴ 2005 for the creation of protected areas;
- Implement a network of protected areas that are representative of Québec's biodiversity;
- Take the socioeconomic concerns of local populations into account.

⁴ In *Shine among the best*, released in March 2004, the government committed to increasing protected areas from 5% to 8% by the end of its mandate.

In 2002, the National Assembly adopted the Natural Heritage Conservation Act. This law marked a turning point in the history of conservation in Québec by creating new statuses for protected areas (biodiversity reserves, aquatic reserves and man-made landscapes) which enabled a different approach to be taken to protect the biodiversity of vast territories based on their ecological and social specificities, while allowing sustainable use of some of their constituent elements.

Further to a decision of the government, the *Ministre du Développement durable, de l'Environnement et des Parcs* on June 19, 2003, assigned the status of proposed biodiversity reserve to the Guernesé lake foothills and Brador hills on account of their ecological and landscape interest. This decision served to prohibit industrial activities (forestry, energy and mining) likely to alter the natural character of these territories.

The *Ministre du Développement durable, de l'Environnement et des Parcs* is responsible for the coordination of Québec's strategy for protected areas and application of the Natural Heritage Conservation Act. It works closely with the other government departments and organizations concerned.

1.2 Status on the two proposed biodiversity reserves

Since setting aside the two proposed biodiversity reserves, the *Ministère* organized information sessions with target groups (municipalities, RCMs, local parties, outfitters and citizens) for two reasons: to explain the reasons for designating the reserves and to get a better idea of local concerns in order to take them into account in the draft conservation plan it is submitting to the public.

The MDDEP also kept the Pakuashipi Innu community abreast of the situation to get feedback on their concerns and expectations regarding the two biodiversity reserves. As such, the relevant documents were sent to the community. Despite several scheduling attempts, however, the parties have not met to discuss the matter.

1.3 Consultation provided for under the Natural Heritage Conservation Act

Under the Natural Heritage Conservation Act (R.S.Q., c. C-61.01, s. 39), before proposing permanent protection status for a territory set aside as a proposed biodiversity reserve, the Ministre du Développement durable, de l'Environnement et des Parcs must mandate either the Bureau d'audiences publiques sur l'environnement (BAPE) or one or more designated commissioners to hold a public hearing.

1.4 Objective of the consultation document

The consultation document presents the conservation plan proposal for the two territories. The document includes the ecological description and social profile of the immediate vicinity, state of the knowledge, conservation issues and management terms and conditions that the MDDEP considers important in guaranteeing the perennity of the biodiversity and protecting the Guernesé lake foothills and Brador hills.

These questions will be addressed during the consultation process in order to further define and clarify them.

This document does not attempt to answer all the questions arising from the creation and management of a biodiversity reserve. Accordingly, consultation is an important part of the decision-making process undertaken by the Ministère and local communities regarding the conservation and biodiversity of these territories.

2. Geography of the two proposed biodiversity reserves

2.1 Network of protected areas on the North Shore

Since June 2002, the network of protected areas on the North Shore has increased considerably. At the moment, in the natural province of the Lower North Shore Plateau (eastern part of the regions), 10.5% of the area is protected. There are seven proposed biodiversity reserves, one proposed ecological reserve, one ecological reserve, one Parks Canada national reserve and other protected areas (with other statuses) created previously.

Currently, there are two national park projects⁵ under study.

This group, once complete, will protect a wide diversity of terrestrial and aquatic ecosystems of the natural province of the Lower North Shore Plateau.

2.2 Location

The two projected biodiversity reserves are both located in the hinterland of the Lower North Shore.

2.2.1 Proposed Guernesé lake foothills biodiversity reserve

The proposed Guernesé lake foothills biodiversity reserve is located in the North Shore administrative region, between 51°38' and 52°00' north latitude and 57°15' and 58°32' west longitude. It is situated approximately 30 km north of the Saint-Paul river coastal village (schedule 4).

It lies within the unorganized territory of Petit-Mécatina, in the regional municipal county of Minganie.

The proposed biodiversity reserve covers a total area of 2,022 km². It corresponds to the physiographic

⁵ Part of the study areas for the Harrington Harbour and Natashquan national park projects are included in the two proposed biodiversity reserves. The final status intended by the government for these two territories is that of national park.

units⁶ of the Guernesé lake foothills and Bujéault river, except in the east, where the boundary runs along the eastern slope of the Nord-Est river valley, including Capannan and Mont Rye lakes. In the north, the boundary is the 1927 delineation established by the Privy Council decision (not final) between Québec and Labrador.

2.2.2 The proposed Brador hills biodiversity reserve

The proposed Brador hills biodiversity reserve is located in the North Shore administrative region, between 51°32' and 51°36' north latitude and 57°07' and 57°13' west longitude. It is situated approximately 15 km north of Lourdes-de-Blanc-Sablon.

The northern quarter of the reserve lies within the unorganized territory of Petit-Mécatina and is part of regional municipal county of Minganie. The remainder of the territory is in the municipality of Blanc-Sablon and is part of the territory of the North Shore of the Gulf of St. Lawrence.

The biodiversity reserve covers a total area of 32.3 km².

2.3 Access

Access to these two territories is easier in winter when the lakes and rivers freeze over and snowmobiles, the region's main means of transportation, can be used.

2.3.1 The proposed Guernesé lake foothills biodiversity reserve

Access to the Guernesé lake foothills biodiversity reserve is possible by air (hydroplane), water (motorcraft) and in winter by snowmobile. The Saint-Paul river and some lakes including Guernesé lake are big enough to land hydroplanes. The large rivers (Saint-Paul, Napetipi) are navigable from the coast and allow access to the southern sectors of the projected biodiversity reserve.

The localities closest to the Guernesé lake foothills biodiversity reserve are Saint-Augustin, Vieux-Fort,

⁶ The physiographic units are the third level of the Québec ecological reference framework. For more information: <http://www.mddep.gouv.qc.ca/biodiversite/cadre-ecologique/niveaux.htm>

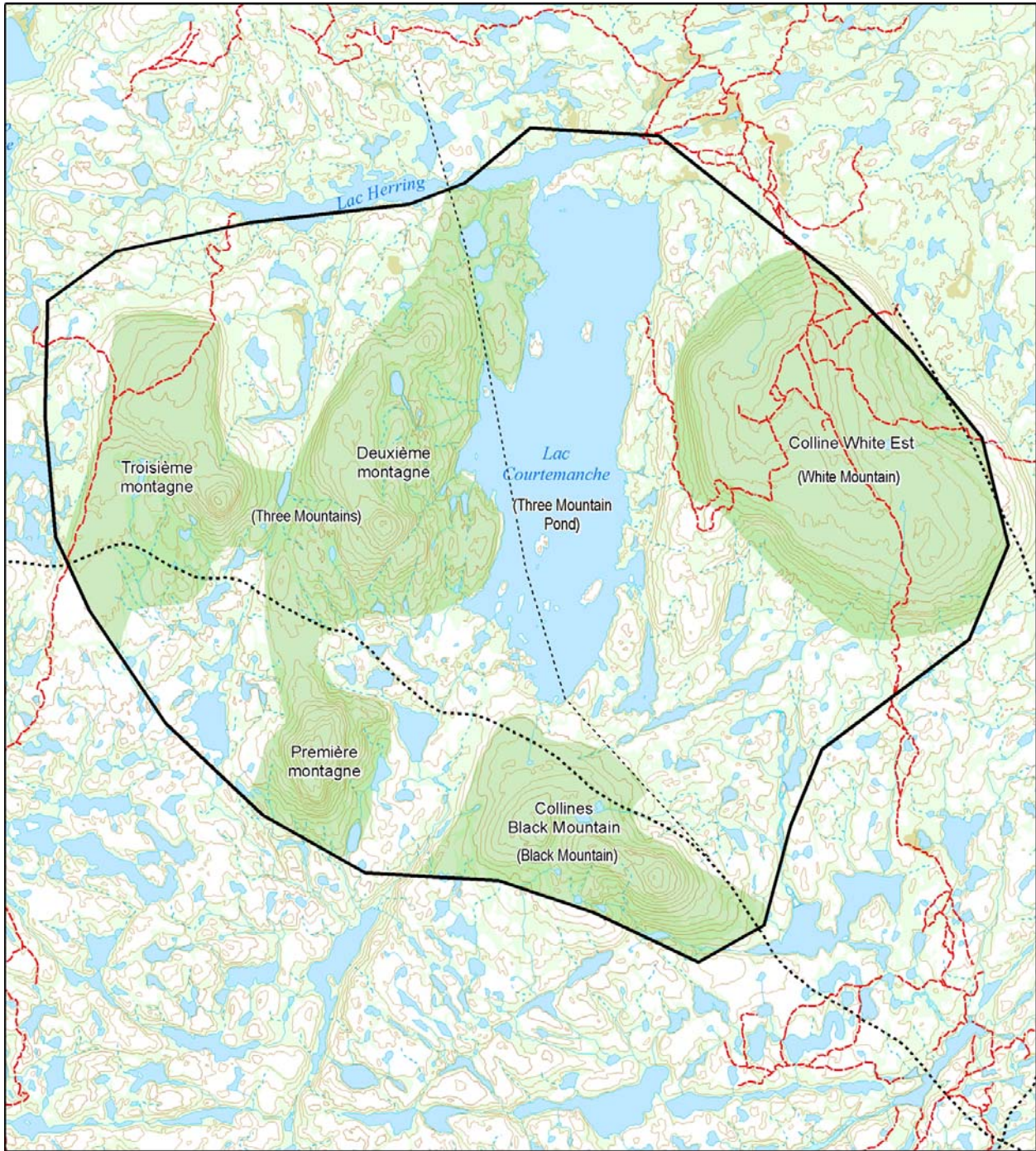
Rivière Saint-Paul, Middle Bay, Brador, Blanc-Sablon and Lourdes-de-Blanc-Sablon. There is also the native community of Pakuashipi. They are located between approximately thirty and fifty km south of the proposed biodiversity reserve (schedule 4).

2.3.2 The proposed Brador hills biodiversity reserve

Other than during winter, the proposed Brador hills biodiversity reserve is hard to reach and, as a result, not highly frequented. The proposed biodiversity reserve is accessible by air (Courtemanche lake⁷), and land (ATV and snowmobile). An ATV trail allows access to White Est hill, which can be crossed from north to south. To the north, the trails are not as well defined. Two marked snowmobile trails (one official, one not) cross the proposed biodiversity reserve through the valleys separating the Three Mountains, namely Courtemanche lake (figure 1). These snowmobile trails are located in the northern areas where there are cottaging activities as well as wildlife harvesting activities such as hunting and fishing.

Lourdes-de-Blanc-Sablon and Blanc-Sablon are the two locations closest to the proposed Brador hills biodiversity reserve. They are located approximately ten km south of this area (schedule 4).

⁷ Vernacular name used locally for Courtemanche lake is Three Mountain Pond.



Proposed Brador hills biodiversity reserve Land use map

-  Brador hills
-  Hill
-  Snowmobile trail
-  Snowmobile trail (non-official)
-  Road unsuited for vehicles
-  Vernacular toponymy
(Three Mountains)

Scale 1/40,000
0 250 500 1 000 1 500 m

Figure 1: Location and uses of the proposed Brador hills biodiversity reserve

3. Ecological description

3.1 Selection method

The Québec government uses the ecological reference framework to characterize and map Québec's ecosystems, the basis for biodiversity knowledge (Gerardin *et al*, 2002). This tool was developed over the last thirty years by the Service des écosystèmes et de la biodiversité of the Ministère du Développement durable, de l'Environnement et des Parcs⁸.

3.2 General information

Geology and geomorphology

The two proposed biodiversity reserves are wholly within the Grenville geologic province in the extreme east of the Canadian Shield.

Climate

The two proposed biodiversity reserves are characterized by a subpolar, humid climate with a short growing season. (Gerardin and McKenney, 2001). In other words, the winters are long and harsh and summers are cool and relatively short. They belong to the bioclimatic field of mossy spruce stands.

Ecological reference framework

The two proposed biodiversity reserves are located in the natural province of the Lower North Shore Plateau, which has the following features:

- area of 130,000 km²;
- two plateau levels separated by a string of hills and, locally, by a coastal plain (west of Natashquan);
- The basement rocks are mainly gneiss in the east and anorthosite in the west. Thin glacial deposits alternate with rock outcrops, except the coastal plain, which is covered in thick layers of glaciofluvial sand and gravel associated with vast peat bogs;

- The drainage system is well-developed; the main rivers are the Romaine, Natashquan and Petit Mécatina. The lakes, which are rather small, are often located at the bottom of narrow encased valleys;
- The cold, humid climate favours forest vegetation dominated by black spruce. The dense spruce-moss forest in the south slowly gives way to less dense lichen bogs to the north.

The physical elements of the area (geology, relief and main Quaternary deposits) are the basis for the characterization of these two proposed biodiversity reserves and the definition of the ecological units that make it up.

3.3 Proposed Guernesé lake foothills biodiversity reserve

Geology and geomorphology

The basement rocks are mainly felsic rock, particularly granite and pegmatite. They are also formed of metamorphic rock, in this instance gneiss, paragneiss and granulite.

In terms of its geomorphology, the dominant landscape is that of a highly dissected plateau the surface of which is formed by hills separated by encased valleys. The substratum of the foothills, with outcroppings in some areas, is covered by a thin layer of well-drained till. The few knolls at their periphery are covered by well-drained moraine or till deposits. Colluvial deposits are found at the foot of the steepest slopes while the valley bottoms are covered with glaciofluvial sand and gravel. The altitude varies from 25 m to 550 m.

Hydrography

The drainage system is well-developed. The largest watercourse is the Saint-Paul river, a Strahler 5 river⁹. The collector watercourses are subparallel, relatively straight and in a general north-south orientation.

⁸ For more information: <http://www.mddep.gouv.qc.ca/biodiversite/cadre-ecologique/index.htm>

⁹ The Strahler Stream Order is a system used to define stream size based on its position in a watershed. First order streams are located in the upper portion of a watershed and the closer the streams are to the outlet of the watershed the higher their order. The biggest rivers in Québec are an "8".

The proposed biodiversity reserve also encompasses 44 lakes, which cover 40 km², or 2% of the total area. The lakes are small and mostly located in the southern part of the area. The largest lakes are Gallet and Guernesé lakes, which cover an area of 5.5 and 4.2 km² respectively.

Vegetation

To the west, the territory is essentially covered by a softwood forest. To the east, the slopes and peaks of the foothills are mainly occupied by dry heathland, a plant formation almost devoid of trees that develops in poor, shallow and well-drained soils. These plant formations make up 64% and 28% of the vegetation respectively. Most of the forest communities are over 90 years old, the dominating species being black spruce (*Picea mariana*) and balsam fir (*Abies balsamea*). The poorly-drained valley bottoms are occupied by peat bogs which cover 6% of the protected area. Several areas have been affected by forest fires and insect epidemics, particularly near Saint-Paul river.



Source: Olivier Bérard

Plants that are or likely to be designated threatened or vulnerable

There is no flora species with a particular status registered in the CDPNQ (Centre de données sur le patrimoine naturel du Québec) database within the boundaries of or near the proposed Guernesé lake foothills biodiversity reserve. This does not mean that the species are absent, but rather that they have not been inventoried.

Ecological units

This foothill complex comprises ten different “ecological units” distinguished by the organization of their physical components (schedule 5).

Ecological unit of the Coxipi river valley

This unit is made up of two valleys. The western branch, in the upstream portion, is a V-shaped valley with more or less steep sides thinly covered in till. There are a number of rapids and waterfalls along the river. At a third of the course, the valley and watercourse widen in a glaciofluvial deposit. An esker stretches along the bank, with kettle lakes¹⁰ located between its west bank and the side of the valley. Terraces of glaciofluvial sands with boggy patches occur on the left bank of the river, which empties into Gallet lake and then onto a terrace of glaciofluvial sand bordered by an esker.

The eastern branch also flows through a glaciofluvial deposit with numerous bogs occurring in depressions in the sand terrace. The presence of meanders in the upstream segment indicates weak flow.

Terrestrial ecological unit 1

Less pronounced to the north, the relief of this unit becomes more apparent toward the south. The basement rocks are composed of granite and gneiss in equal proportions.

In the north-east part of the unit the terrain is uneven and scattered with lakes and bogs. As the ice melted, the glacier arbitrarily released all the debris it contained. Blocks of ice locked in a mass of sand and gravel melted to form depressions now filled with water or peat. This formation is characteristic of what is called a disintegration moraine.

The northern half is occupied by numerous small valleys in which rivers flow through fluvioglacial deposits. Organic deposits occur where the bottom widens out.

In the south, two embankments are separated by the eastern branch of the Coxipi river. The western embankment corresponds to a string of low hills covered in a thin layer of till, interspersed with depressions occupied by lakes or rivers. The embankment is more tabular where the larger depressions are occupied by peat bogs.

¹⁰ A kettle lake is a lake in the shape of a kettle created by glacial ice as it melts and accumulates in a specific area.

The altitudinal gradient explains the vegetation succession of the spruce-moss forest on the lower slopes to the summital spruce and *Alectoria sp.*, which give way to stunted fir or krummholz in areas most exposed to the wind.

Ecological unit of the Napetipi river valley

The upstream portion of this unit is a relatively large V-shaped valley whose 150 m slopes are covered in colluvium. The river snakes along over a glaciofluvial deposit. Where the valley narrows, the river flows in a straight line over the rock. The valley widens downstream over a glaciofluvial terrace of which certain parts have been eroded by the river. Old meanders which are now filled with organic deposits occur on a second terrace level formed by fluvial deposits from the old river. Here emerges a string of three hills over 100 metres high covered in till.

Terrestrial ecological unit 2

This unit is bound by the valley slopes of the Napetipi and Saint-Paul rivers. Based on its shape and topographical position, it may be defined as an undulated plateau peak with a succession of ripples and bumps over gneissic rocks. The dips are occupied by a complex of watercourses, lakes, till deposits that are more or less thick and peat bogs. The bumps are knolls (< 100 m) covered in thin till.

The north-east and south-east parts of the unit have a more pronounced relief, foothills (>100 m) and narrow valley bottoms.

Ecological unit of the Saint-Paul river valley

In this unit, the riverbed occupies the entire valley bottom. Steep sides (20 to 50% slope) are covered in softwood forests on colluvium. Upstream, the river winds around an embankment, making a broad turn with a series of ridges. As the bed straightens it widens again and sandy islands appear, and the river flows along a glaciofluvial sand terrace that is more or less ravined.

Terrestrial ecological unit 3

The terrain of this unit is much rougher than the previous ones. The relief is higher (>100 metres). The vegetation cover, non-existent in many areas,

exposes granite and pegmatite. There are many relatively large depressions and valley bottoms, mostly with organic deposits.

Ecological unit of the Chanion stream valley

The streambed in the upstream portion flows between two pronounced reliefs. The valley is narrow and deep. The slopes are high (150 m), covered in softwood forests on colluvium and scattered with rocky cliffs at the peak. The stream runs straight with a succession of rapids. Downstream, the valley widens and the streambed becomes sinuous.

Terrestrial ecological unit 4

This rangy unit greatly resembles the preceding terrestrial ecological unit. The peaks of the hills, over 100 metres high, are often barren with gneiss outcrops, whereas the depressions are occupied by lakes and peat bogs.

Ecological unit of the Bugeault river valley

The first part is the junction of three watercourses that flow at the foot of gentle slopes (5%) through a large flat valley covered in organic deposits, but in which occasionally emerges thick till at the bottom of the slopes. The river enters a zone where the valley bottom is very wide (500 m) alongside hills covered in till. The valley then narrows and the river is intersected with numerous rapids before emptying into Maxwell lake.

Terrestrial ecological unit 5

The northern part of the unit has hills over 100 metres high, often barren, with gneiss outcrops and depressions occupied by lakes and peat bogs.

The southern part on the other side has a very particular landscape. Forest stands have disappeared, replaced with a grass heath on gneissic rocks.

Fauna

Mammals

The main mammal species found in the boreal forest are present in this proposed biodiversity reserve,

including black bear, grey wolf, red fox, American martin, beaver, muskrat, otter, hare, porcupine and moose. Woodland caribou are also likely to be present. No precise wildlife inventory is available for the territory covering the proposed biodiversity reserve.

Between 1989 and 2003, according to the Système d'information sur la Grande Faune (SIGF), only three moose were killed by sport hunters in the proposed Guernesé lake foothills biodiversity reserve (1993, 1995, 1999). This can be an indicator of both low population numbers and infrequent hunting in the area.



Photos: Pierre Pouliot, MLCP

Fish

The fish inventoried in the watersheds of the Coxipi, Napetipi and Saint-Paul rivers are listed in tables 1, 2 and 3. The proposed Guernesé foothills biodiversity reserve protects part of the watersheds of these rivers.

The limits of the upstream migration of the Atlantic salmon on the Napetipi and Saint-Paul rivers are inside the territory. The salmon of the Saint-Paul river travel upstream to spawn beyond the Québec-Labrador border (non-definitive delineation of the 1927 Privy Council). However, the limit of the upstream migration on the Coxipi river is downstream from the proposed biodiversity reserve. It is important to note that not all the upstream migration limits were validated with a wildlife inventory. Most were determined by photo interpretation. It is therefore possible that these limits occur higher up. Also, they were not identified on the secondary tributaries (Labonté, 2005).

Table 1: List of fish species identified in the Coxipi river watershed

English Name	Latin Name
Rainbow smelt	<i>Osmerus mordax</i>
White sucker	<i>Catostomus commersoni</i>
Longnose sucker	<i>Catostomus catostomus</i>
Arctic char	<i>Salvelinus alpinus</i>
Brook trout	<i>Salvelinus fontinalis</i>
Atlantic salmon	<i>Salmo salar</i>

Source: Johanne Labonté, *Faune Québec - Direction de l'aménagement de la faune de la Côte-Nord*, July 2005

Table 2: List of fish species identified in the Saint-Paul river watershed

English Name	Latin Name
Northern pike	<i>Esox lucius</i>
Brook trout	<i>Salvelinus fontinalis</i>
Atlantic salmon	<i>Salmo salar</i>

Source: Johanne Labonté, *Faune Québec - Direction de l'aménagement de la faune de la Côte-Nord*, July 2005

Table 3: List of fish species identified in the Napetipi river watershed

English Name	Latin Name
Rainbow smelt	<i>Osmerus mordax</i>
White sucker	<i>Catostomus commersoni</i>
Longnose sucker	<i>Catostomus catostomus</i>
Arctic char	<i>Salvelinus alpinus</i>
Brook trout	<i>Salvelinus fontinalis</i>
Atlantic salmon	<i>Salmo salar</i>

Source: Johanne Labonté, Faune Québec - Direction de l'aménagement de la faune de la Côte-Nord, July 2005

Fauna species that are or likely to be designated threatened or vulnerable

The CDPNQ does not identify any species that are or likely to be designated threatened or vulnerable in or close to the proposed biodiversity reserve. Lack of information does not necessarily indicate an absence of the species. It is possible that they have not been inventoried in the sectors under study.

Woodland Caribou

The two proposed biodiversity reserves are in the distribution range of the woodland caribou. One part of the two territories overlaps the area traditionally used by the Saint-Augustin¹¹ herd.

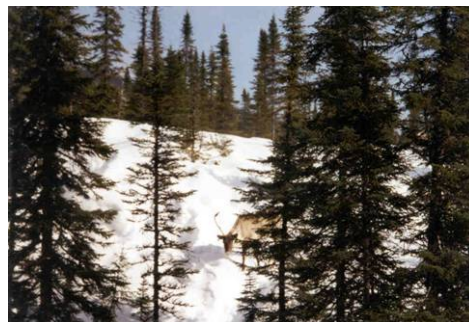
Woodland caribou are declining almost throughout their range. They are vulnerable to predation and hunting. Increased disturbances linked to forestry activities are also of concern. Caribou numbers appear to have decreased substantially in certain sectors, notably on the Lower North Shore, apparently because of excessive hunting (Courtois et al. 2003).

Because of the serious situation with the woodland caribou throughout the North Shore, sport hunting has been forbidden since 1979 in zone 19 south, east of the Moisie river. As a result there are no harvesting results recorded in the SIGF.

Saint-Augustin herd (Courtois et al, 2001)

"The presence of caribou along the Strait of Belle Isle was reported by the first European visitors. The species did not appear very abundant, however, and its winter migration patterns appeared irregular. The presence of caribou along the coast appeared to vary depending on snow conditions further inland. They were mostly observed in January, sometimes until the end of April or even later (Folinsbee 1979). They were hunted and cases of predation were reported. Caribou were still present in the St. Augustin region at the beginning of the 20th century. Brassard inventoried 461 caribou in 1972, but the herd was not seen afterwards. There appeared to be heavy subsistence hunting of caribou (Le Hénaff 1972; Folinsbee 1979). Bergerud (1967) also estimated that caribou were rare in south-east Labrador, with the few captured individuals possibly originating from herds further west or perhaps the Mealy Mountains herd in Labrador, for which significant decreases in numbers were reported. The St. Augustin herd, next to the Mount Mealy herd and perhaps originating from it, probably had a similar outcome (Brassard 1972). Legal and illegal hunting appeared to be the main factors in the decline of these herds (Bergerud 1967; Le Hénaff 1972; Folinsbee 1979)."

According to available data, the St. Augustin herd appears to have diminished considerably. Natives practice subsistence hunting in the region. It is not known which sectors are occupied nor the number of animals harvested each year. Available information for this region of Québec, which is hard to access and not highly populated, is not known (Labonté, 2005).



Photos: Pierre Pouliot (MLCP)

¹¹ Courtois, R., J.-P. Ouellet, A. Gingras, C. Dussault, L. Breton and J. Maltais, 2001. Changements historiques et répartition actuelle du caribou au Québec. Société de la faune et des parcs du Québec, Direction de la recherche sur la faune et Direction de l'aménagement de la faune, Université du Québec à Rimouski et ministère des Ressources naturelles du Québec. 44 pp.

3.4 Proposed Brador hills biodiversity reserve

An inventory was carried out on this territory in July 2005. Data was collected in different areas on various ecological aspects (fauna and flora) and on human use and occupation.

Geology and geomorphology

The landscape consists of low tabular hills of carbonate rock (limestone and dolomite) emerging from the Precambrian basement. Embedded in a felsic matrix (granite), this geological formation is rare in the natural province of the Lower North Shore Plateau. In the south, the substratum is also formed of metamorphic rock, namely gneiss and paragneiss.

Elevation

The altitude in the protected area varies between 170 m and 370 m.

Hydrography

Courtemanche lake has an area of approximately 3.8 km² and occupies the depression at the centre of the protected area. This headwater lake feeds the Brador Est river, which is a Strahler 2 river.

Vegetation

The territory of the protected area, depending on altitude, slope, snow cover and humidity of the soil, is composed of the following habitats: krummholz¹² fir, low, shrubby heath, low shrubs with lichen, and creeping shrubs with lichen. During the inventory, 154 taxons were observed.

Dominant species of trees are black or white spruce, balsam and dwarf birch. Overall, the flora is composed of relatively common species of which some are typical of an arctic or subarctic environment.

Calcicole or calciphyte species

¹² A krummholz is a dense thicket of stunted fir. The height of the krummholz is limited by the thickness of the snow. Locally, they are called "brush."

Twenty-two taxons whose distribution is linked preferentially to limey soils were observed on two of the hills explored. In all, these species were inventoried at eight sites. The first seven are on a plateau at the top of White Est hill and the eighth on the Black Mountain hills. These sites are extremely localized and most have very small populations. None of these species were seen on Three Mountains hill (figure 1).

Note that these species are not all strictly calcicole plants in that they require calcium to grow and survive. They may be plants that prefer a neutral or slightly alkaline soil. They may be plants whose presence is linked to calcium on the Lower North Shore or in the area of the Strait of Belle Isle, but that can be found elsewhere in other types of soil.



Clastic limestone rocks (Black Mountain hills)

The table below gives the list of calcicole or calciphyte vascular plants inventoried in July 2005 (table 4).

Table 4: List of calcicole or calciphyte vascular plants observed on the Brador hills in 2005 (Source: Pierre Morisset)

	White Est hill	Black Mountain hill
<i>Alchemilla filicaulis</i>	+	+
<i>Arabis alpina</i>		+
<i>Armeria maritima</i>	+	
<i>Asplenium viride</i>		+
<i>Campanula rotundifolia</i>	+	+
<i>Carex atratiformis</i>	+	+
<i>Carex capillaris</i>		+
<i>Carex vaginata</i>	+	
<i>Cerastium alpinum</i>	+	
<i>Cerastium arvense</i>		+
<i>Euphrasia oakesii</i>	+	+
<i>Festuca brachyphylla</i>		+
<i>Festuca frederikseniae</i> ¹	+	
<i>Juncus triglumis</i> var. <i>albescens</i>	+	
<i>Minuartia rubella</i>		+
<i>Oxytropis campestris</i>	+	+
<i>Packera pauciflora</i> ²	+	
<i>Poa glauca</i>	+	+
<i>Salix candida</i>	+	
<i>Salix glauca</i> ssp. <i>callicarpaea</i>	+	
<i>Salix vestita</i>	+	+
<i>Silene acaulis</i>	+	

¹ = *Festuca vivipara* ssp. *hirsuta*.

² = *Senecio pauciflorus*.

There is no mention of flora species with a particular status recorded in the CDPNQ database inside the boundaries of the proposed Brador hills biodiversity reserve. This does not mean that such species are not present. It would be appropriate to conduct a more in-depth field inventory to complete the flora knowledge for this territory.

The inventory carried out in summer 2005 served to identify a single species that may be considered likely to be designated: *Alchemilla filicaulis*. It is the variety with pubescent stems, however, considered to be a distinct sub-species (ssp. *vestita*) of the one presented in a document by Labrecque and Lavoie (2002). It occurs in a small snow-accumulation zone near the peak of White Est hill. It is also found at the foot of a small escarpment in the Black Mountain hills.

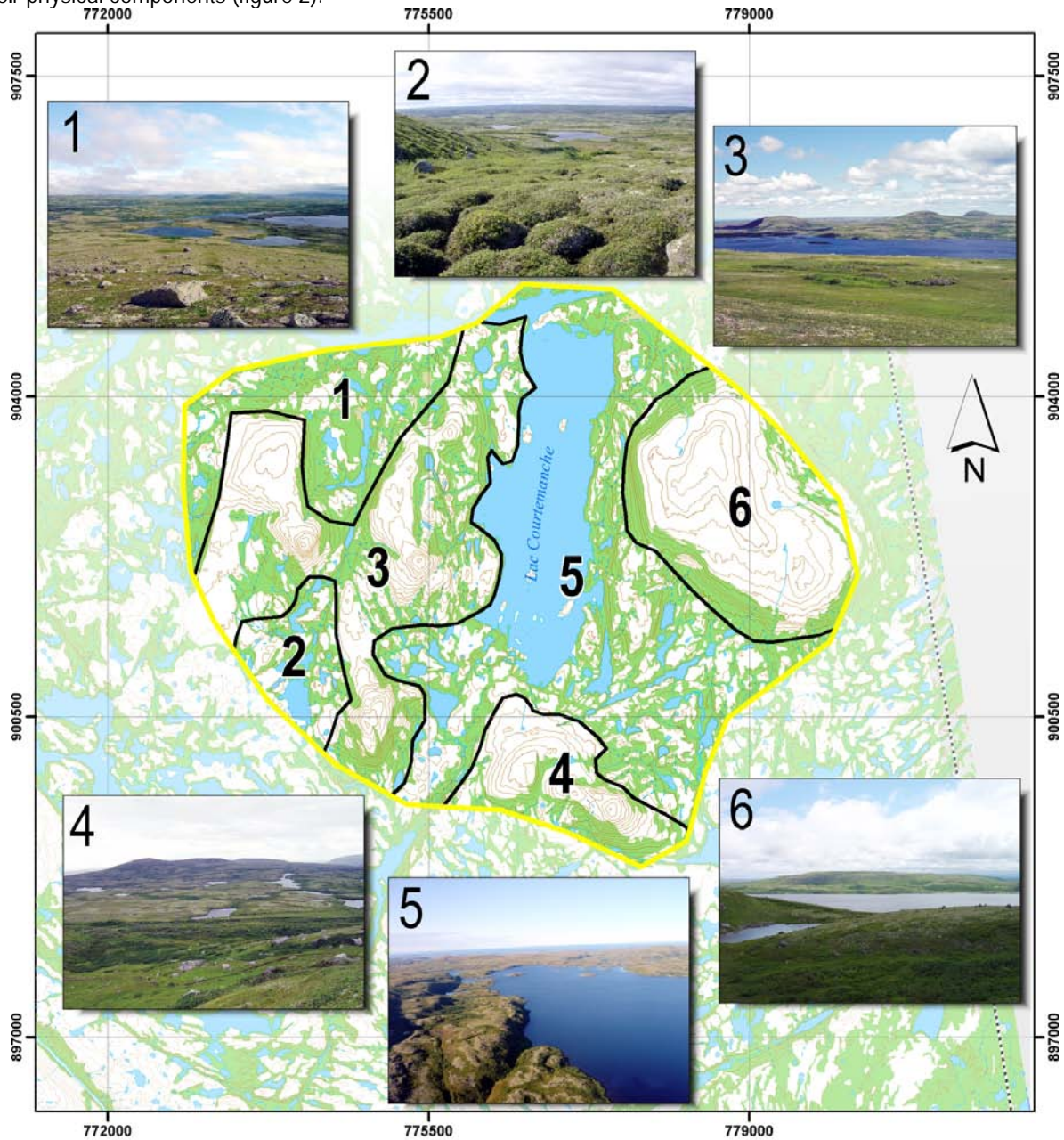
Plants worthy of regional interest

Also, the CDPNQ database indicates the presence of flora species that are or likely to be designated threatened or vulnerable south of the proposed biodiversity reserve.

South of the proposed biodiversity reserve there are two non-calcicole, arctic-alpine flora species worthy of mention: *Cassiope hypnoides* and *Salix herbacea*. They grow in small crevices of a rocky escarpment near the peak of Three Mountains hill. This station constitutes the southern limit for these two species in the Québec-Labrador peninsula.

Ecological units

There are six ecological units in the proposed Brador hills biodiversity reserve, distinguished by the organization of their physical components (figure 2).



Proposed Brador hills biodiversity reserve

Ecological units

- | | |
|--------------------|-------------------------|
| 1. Low slopes zone | 4. Black Mountain hills |
| 2. Low slopes zone | 5. Courtemanche lake |
| 3. Three Mountains | 6. White Est hill |



Figure 2: Ecological units of the proposed Brador hills biodiversity reserve

Ecological unit of White Est hill

This ecological unit is a massive tabular hill with steep sides to the west and south. Colluvium and slumping occur on the steep sides, while the peak is occupied by thin deposits of till with clastic limestone rocks in some areas.

On the steeper west and north-west facing slopes there are communities typical of snowbeds. Because of the late melting of the snow, flowering of herbaceous plants may be delayed by several weeks compared to other adjacent sites; also, there is one species that is typical of these deep snow habitats, *Phyllodoce caerulea*.

Prostrate shrubs with lichen, the same as those found on exposed slopes at lower altitudes, occupy most of the peak of this hill.

Ecological unit of the Black Mountain hills

This unit is another hill that is narrower and longer than the White Est hill. It is composed of a west-east succession of three hills, each one higher than the next. There are also localized clastic limestone rocks. The close slopes are mostly covered in shrubs consisting mainly of krummholz in the depressions.

On the east side of this peak, there is a small limestone outcrop. Thirteen calcicole species were inventoried on this site of a few square metres in size. Just below the outcrop, there is a small vertical cut in the limestone strates, where ten or so *Asplenium viride* ferns grow, the only recorded occurrence in Québec east of the Mingan Archipelago.

Botanically, this is the richest site visited during the inventory in terms of the limestone related flora.

Three Mountains ecological unit

This ecological unit is a complex of three hills. They are mainly oriented north-south. They are characterized by a progressive north to south elevation, with a flatter middle section and a narrower and more abrupt peak.

The region of the peak of Three Mountains hill is a narrow north-south plateau about one kilometre long

ending with the peak. The plateau is covered in the same prostrate lichen shrubs as those found at the peak of the White Est hill. Exposure appears greater here, especially near the peak edges, the vegetation cover is often eroded, exposing sections of rock where there are *Diapensia lapponica*, *Empetrum eamesii* and *Loiseleuria procumbens*.

Just north of the peak as such, herbaceous vegetation typical of areas where snow accumulates occupies the foot of the escarpment.

Ecological unit of the low slopes

This ecological unit is made up of two units separated by the Three Mountains ecological unit.

It corresponds to the bottom of the hill slopes, which are generally not steep, where there are many lakes and peat bogs in the depressions.

Depending on exposure and, as a result, snow cover, the lake shores are occupied by either krummholz fir or low lichen shrub heaths. On the rocks exposed along the banks, there is a community of low growing shrubs accompanied by a few herbaceous varieties in the depressions and holes between the rocks. In more sheltered areas, such as at the end of the bays, or where snow can accumulate, these low growing shrubs form a very narrow and discontinuous band, which is immediately replaced by thickets of evergreens. On the more exposed banks, grow prostrate lichen shrubs that are very similar to those covering the peaks.

In certain areas, notably on the peak edges, mineral material is found on the surface when the layer of peat is disturbed or thin. With one exception, this material appears to be made up of debris from acidic Precambrian rocks and is colonized by common acidophile species: *Diapensia lapponica*, *Salix uva-ursi*, *Sibbaldiopsis tridentata*, *Luzula confusa*, *Hierochloe alpina*, *Carex bigelowii*. The following calcicole species were observed: *Euphrasia oakesii*, *Oxytropis campestris*, *Poa glauca* and *Silene acaulis*.

Courtemanche lake ecological unit

This unit is characterized by a large proportion of lakes and wetlands including Courtemanche lake.

This unit is located at the centre of the Brador hills complex. The peat bogs occupy depressions and weak flow areas whereas the better drained and sheltered areas are occupied by krummholz.

Fauna

Mammals

Few wildlife inventories specific to the territory have been conducted. The following mammals, mainly sought for trapping, are present: red fox, American martin, beaver, muskrat, river otter, black bear and grey wolf. The black bear is also hunted, as well as moose, an animal that is rather rare on the territory. Caribou appear to be absent.

Based on the SIGF, between 1989 and 2003, only one black bear was captured in a trap in 1991 in the proposed Brador hills biodiversity reserve.

Fish

Regarding aquatic fauna, there is brook trout in Courtemanche lake. The species inventoried in the Brador Est watershed are listed in Table 5. The proposed Brador hills biodiversity reserve occupies a part of this river's watershed.

The limit of the upstream migration of the Atlantic salmon is upstream from the territory. It is important to remember that the upstream migration limit has not been validated by means of a wildlife inventory. It was determined by photo interpretation. It is therefore possible that this limit is further upstream. Also, the limits have not been established for the secondary tributaries (Labonté, 2005).

Birds

Thirteen species of birds were observed during the inventory (table 6).



Savannah's sparrow (Rodolph Balej)

None of these species has been designated threatened or vulnerable or is on the list of species likely to be designated threatened in Québec, under the provincial law in effect, nor in peril, according to the federal law for species in peril.

The willow ptarmigan was not directly observed in the projected biodiversity reserve during the inventory (it must be said that the species is particularly discrete in summer, when they are caring for their young. However, it was observed further south in habitats similar to those found in the protected area. This is why it is very likely that the species occupies the territory. Several people have confirmed that the species once occupied the White Est hill sector in large numbers.

Table 5: List of fish species identified in the Brador Est river watershed

English Name	Latin Name
Threespine stickleback	<i>Gasterosteus aculeatus</i>
Brook trout	<i>Salvelinus fontinalis</i>
Tomcod	<i>Microgadus tomcod</i>
Atlantic salmon	<i>Salmo salar</i>

Source: Johanne Labonté, Faune Québec - Direction de l'aménagement de la faune de la Côte-Nord, July 2005

Table 6: List of birds identified in the Brador hills in August 2005

Ecological Unit	Habitat	Species	Abundance
Peaks	Heaths and rock outcrops	- Horned lark	++
		- American pipit	+
Slopes	Spruce krummolz and balsam groves	- Lincoln's sparrow	+
		- Savannah sparrow	+++
		- White-crowned sparrow	++
		- American robin	+
		- White-winged crossbill	+
Valley bottoms	Peat bogs, alder stands	- Northern waterthrush	+
		- Yellow warbler	+
		- Swamp sparrow	+
	Lakes and rivers	- Herring gull	++
		- Common loon	+
		- Black duck	+

Source: Rodolph Balej. MDDEP - Direction du patrimoine écologique et des parcs, July and August 2005

4. Land occupation

4.1 Historical occupation¹³

The first vestiges discovered indicating that the territory was occupied in the Blanc-Sablon area date back approximately 8,500 years BT¹⁴. Historically, occupation of the territory was concentrated along the coasts and shore due to the allure and harvest of aquatic and marine resources. Archeological research has been limited so far to the shore areas, particularly the Strait of Belle Isle and Blanc-Sablon.

Occupation of the Lower North Shore began at about 6,000 years BT, when occupants mostly harvested the marine resources (Maritime Archaic period).

The territory located east of Blanc-Sablon appeared to be used more than the western side.

Between 4,000 and 2,000 years BT, the indirect ancestors of the Inuit (Dorsetians) arrived and frequented the region, mainly between Blanc-Sablon and Saint-Paul river. This sector represents the western boundary of the territory in use. Their diet was based on marine and land resources (caribou).

The entire territory was occupied by small multi-family groups who harvested the natural resources and for whom land exploration was an important activity.

At the beginning of the 1600s, several groups of natives occupied the territory. They are distinguished according to the portion of the coast they occupied and rivers they used to travel on.

Some wintered in the Mount Mealy mountains by way of Saint-Paul river. Others used the Pakua hipu (Saint-Augustin) river. The river mouths were often used as an area to trade with various European groups.

Although, during this period, the fur trade was growing in importance in North America, it remained for a long time a seasonal activity on the Lower North Shore. The fur trade completed the growing harvest

of marine resources by numerous fishermen of different origins.

In the 19th century, the turning point in the permanent settling of the area was truly the fishing stations set up to harvest marine resources (seal, Atlantic salmon) (Charest, 1972). Among them, three stations were set up between 1820 and 1830 at Saint-Augustin, Salmon Bay and Brador.

This sedentary initiative led to a significant increase in the population. The 1848 population of 250 rose to 546 in 1871. Successively, English, Scottish, Jerseyan, Nova-Scotian, French Canadian and Newfoundland immigrants made up the three official population waves of the Lower North Shore.

Before 1870, the main source of income came from hunting seal and fishing salmon. Salmon fishing was practiced mainly along the mouths of the Saint-Augustin, Saint-Paul and Salmon Bay rivers. As of 1870, cod fishing became the key source of income for residents of the Lower North Shore.

Gathering, hunting, and wood cutting and harvesting activities complete those mentioned above.

In the 20th century, while the rest of the North Shore was becoming industrialized (mining and forestry), the Lower North Shore continued on with fishing. In 1941, 2,369 people, mostly Anglophones, fished in small groups along the shore and on the islands.

Economic activity based on natural resources led to a particular form of seasonal lifestyle referred to as dual residence. In summer, people lived on the islands to be close to the fishing grounds and in winter they returned to the mainland to be closer to the forest resources. The dual residence system has been declining for several decades

4.2 Current occupation

The main characteristics of this area are:

- Subregion situated east of the north shore of the Gulf of St. Lawrence;
- Extends approximately 500 km from Natashquan to the Labrador border beyond Blanc-Sablon; it is composed of 15

¹³ This section is based on a history of the North Shore written by Frénette et al.(1996).

¹⁴ BT: before today

communities (in five municipalities) and two Inuit reserves spread along the coast;

- Most of the villages have no connecting road;
- The region is characterized by uneven relief and barren windswept land; winters are cold and summers cool;
- It is expensive to travel into and out of the region, and travelling between villages within the territory is difficult;
- The economic base is mainly marine resources, particularly fishing;
- Due to the region's isolation, a good number of services are hard to access and certain important services (specialized medical services) are only available outside the region, in Sept-Îles;
- The most popular means of winter transportation is the snowmobile, which can be used to travel long distances because the territory is more accessible at that period;
- A significant portion of the population is Anglophone.

The Innu community of Pakuashipi

The Innu community of Pakuashipi, situated at the mouth of the Saint-Augustin river, is a small community of 275 residents (Mamit Innuat, 2003). It represents the last group of Innus to become sedentary in the region.

In 1961, roughly ten Innu families from the St. Augustin area were welcomed by the Innu community of La Romaine. After two years at La Romaine, the families decided to return to the mouth of their river¹⁵.

The major rivers running north-south enable them to access their traditional territory. These rivers are the Saint-Augustin (Pakua hipu), Coxipi (Kâku hipu), Napetipi and Saint-Paul (Aiassimeu hipu).

The current annual cycle of occupation by the Innu communities of the Lower North Shore is divided into seven steps. Schedule 1 summarizes the seven steps of the annual cycle that applies to the Innu community of Pakuashipi.

Other communities

All the communities are located along the coast of the Gulf of St. Lawrence. The communities most directly concerned by the two proposed biodiversity reserves are east and west: St. Augustin, Vieux-Fort, Rivière-St-Paul, Brador, Lourdes-de-Blanc-Sablon and Blanc-Sablon.

While historically, all the economic activity of these villages was linked to coastal fishing, the north coasters hunt, fish and trap inland, mainly in fall and winter when access is easier.

The Lower North Shore is under the jurisdiction of Québec, but it remains strongly influenced by its proximity to and historical ties with Newfoundland and Labrador.

¹⁵ Pakuashipi is a native North Shore community situated on the western bank of the mouth of the St. Augustin river. Pakuashipi is not a reserve, simply an area occupied by Montagnais, with no official legal title. Source: Répertoire de toponymie du Québec. www.toponymie.gouv.qc.ca

5. Land use

5.1 Land rights granted

5.1.1 Commercial land rights

There is a lease of exclusive rights for outfitters inside the boundaries of the proposed Guernesé lake foothills biodiversity reserve for the Club de pêche au saumon de la rivière Saint-Paul (schedule 4).

The territory of the proposed Guernesé lake foothills biodiversity reserve also overlaps two areas likely to be developed by outfitters with exclusive rights (Coxipi and Napetipi rivers).

5.1.2 Rights for personal purposes

No land rights have been granted within the perimeter of the proposed Guernesé lake foothills biodiversity reserve for personal purposes.

No land rights have been granted within the perimeter of the proposed Guernesé lake foothills biodiversity reserve. There are, however, trapping camps whose construction was authorized under the Act respecting the conservation and development of wildlife.

5.1.3 Rights of way

Rights of way have been granted for two trails on the territory of the proposed Brador hills biodiversity reserve: a multifunctional trail situated east of the Brador river and a snowmobile trail situated west of the same river (figure 1).

5.1.4 Non-registered occupations

There are a number of constructions in the two proposed biodiversity reserves that are not registered with the MRNF – cottages, camps, cabins or rough shelters – mainly south-east of the proposed biodiversity reserve along the lakeshores and river banks. An overview conducted in 2005 revealed that several sectors are characterized by dispersed “non-registered” occupation, notably:

- Hammone lake
- Capanann lake

- Mont-Rye lake
- Napetipi and Saint-Paul rivers



Source: Olivier Bérard

An overview by helicopter was conducted by the MRNF Secteur Territoire in March 2006. It served to locate roughly twenty permanent installations, in spite of difficult observation conditions.

5.2 Wildlife harvesting

5.2.1 Trapping

The two territories in reserve are located within the Saguenay beaver reserve. This reserve is not exclusive to natives.

The two territories are within fur-bearing management unit (FAMU) 66. Wildlife harvesting is authorized for several species¹⁶. According to game wardens in the sector, the main species trapped are fox, martin, beaver, muskrat, otter and wolf.

Proposed Guernesé lake foothills biodiversity reserve

Eight trapping lines cross this territory. Certain trapping leases were not renewed, but former leaseholders retain the right to use their trapping

¹⁶ For more information:
<http://www.mrnf.gouv.qc.ca/publications/enligne/faune/reglementation-piegeage/index.asp>

camps and may trap on these territories provided they respect the regulations in force. When a lease is not renewed, the land becomes a trapping free zone. Three trapping camps are located inside the territory and two others on the outskirts of the protected area.

Proposed Brador hills biodiversity reserve

The proposed biodiversity reserve covers two registered trapping territories with active leases. However, trapping camps are located on the outskirts of the protected area.

5.2.2 Sport hunting

There is little information on the sport hunting activities conducted in the two proposed biodiversity reserves. They are free-access territories for which there is no particular follow-up. According to the game wardens in the sector, black bear is the main big game species that is hunted.

The two proposed biodiversity reserves are situated in hunting zone 19 south. Harvesting activities are authorized for several species¹⁷. Caribou hunting in this zone has been forbidden since 1979. Subsistence hunting is practiced by the natives (Labonté, 2005).

Specific rules apply to non-residents who wish to hunt in the region. They are required to use the services of outfitters to hunt black bear or any species allowed under the regulations east of the St. Augustin river (Société de la faune et des parcs, 2001).

5.2.3 Sport fishing¹⁸

The two proposed biodiversity reserves are within fishing zone 19 south. Wildlife sampling activities are authorized for several species.

There is little information available on fishing activities on the territories of the two proposed biodiversity reserves (with the exception of the Club de pêche au

saumon de la rivière Saint-Paul sector). Other than the outfitter, they are free-access territories for which there is no wildlife followup.

The Club de pêche au saumon de la rivière Saint-Paul

This is an outfitting operation with exclusive rights established in part within the proposed Guernesé foothills biodiversity reserve.

It is active for an eight- to ten-week period during the year, with accommodations for ten people per week. The club offers only salmon sport fishing packages with compulsory catch and release. This is a measure voluntarily put in place by the outfitter administrators, who consider that this practice has had a positive impact on the river's salmon population. This conservation measure is not applied everywhere on the Saint-Paul river. It is estimated that voluntary catch and release for the entire river is 80%. According to available indicators, the Atlantic salmon population is healthy (Labonté, 2005).



Source: Olivier Bérard

5.3 Traditional native activities

According to information supplied by the Secrétariat aux Affaires autochtones, there are burial grounds, permanent tent bases, summer meeting sites, and heritage rivers including the Coxipi, Napetipi and Saint-Paul on the Guernesé foothills biodiversity reserve.

The Innu of Pakuashipi practice traditional activities like hunting, fishing, trapping and gathering for food, rituals and social reasons. This community's isolation has served to preserve a lifestyle in which traditional artisan activities play a big role.

¹⁷ For more information:
<http://www.mrnf.gouv.qc.ca/publications/enligne/faune/reglementation-chasse/index.asp>

¹⁸ For more information:
<http://www.mrnf.gouv.qc.ca/publications/enligne/faune/reglementation-peche/index.asp>

5.4 Other activities on the outskirts

5.4.1 Berry gathering

It is worth noting that there are commercial berry gathering zones, particularly cloudberry, on the outskirts of the proposed Brador hills biodiversity reserve.

An emblematic fruit: the chicoutai

In October 2000, the Québec government, represented by the Ministère des Régions and member departments of the Conférence administrative régionale (CAR) in cooperation with local representatives adopted the *Stratégie de rattrapage et de relance de la Basse-Côte-Nord*.

One of the orientations of the strategy was to promote the development of the berry industry on the Lower North Shore.



Chicoutai



Commercial gathering zone

This measure aims to support the action of the Office des baies sauvages de la Basse-Côte-Nord to promote the gathering, packaging, marketing and on site processing of small wild berries growing in the area, such as the chicoutai.

Studies were undertaken a few years ago by the Centre de recherche les Buissons and are currently ongoing to develop this activity. Potential harvesting sectors were identified near the proposed Brador hills biodiversity reserve.

5.4.2 Forestry activities

No forest supply and management contract (CAAF) has been attributed in situ on the two proposed biodiversity reserves. No forest cuts have therefore occurred and can not currently be carried out. South of the proposed Guernesé foothills biodiversity reserve, there is a forest management agreement which ended in October 2005. Before the territory was placed in reserve, the sector identified by the Forest Management Agreement (FMA) was modified to exclude it.

However, since the annual permit program for forest activities came into effect in July 2004, owners of small sawmills in the area no longer have to hold an FMA. They simply need to hold an annual forest management permit. The MRNF delivered such a permit in September 2005 with an annual volume of 100 m³.

What is an annual permit ?

The annual forest management permit for wood processing plants is issued by the Ministère des Ressources naturelles et de la Faune to meet the needs of processing plants for rough or partially milled lumber (schedule 2). The permit authorizes the holder to carry out management activities outlined in his annual management plan. This work includes silvicultural treatments intended to reach yield objectives, silvicultural treatments for harvest and infrastructures to be built.

One of the conditions that must be respected is the preparation of a general plan and a five-year forest management plan, an annual forest management plan and an annual activity report, all of which must be submitted to the Ministère des Ressources naturelles et de la Faune.

Source: <http://www.mrn.gouv.qc.ca/forets/entreprises/entreprises-permis-approvisionnement.jsp>

5.4.3 Mining activities

There are no active mines near the two proposed biodiversity reserves. The two proposed biodiversity reserves have been withdrawn from staking, designation on a map, mining exploration or mining operations under the Mining Act.

5.4.4 Recreational and tourism activities

Since access is difficult and there are no hosting infrastructures except for the Club de pêche de la rivière Saint-Paul) or roads, there are few recreational and tourism activities.

6. Conservation issues

6.1 Ecological issues

Issue 1 ~ Maintain the biodiversity of the protected ecosystems

The creation of these biodiversity reserves serves to protect the representative samples of the ecosystems described above. Their protection must allow for their natural evolution while minimizing human related disturbances.

This is why the protection status of biodiversity reserve prohibits industrial activities that could have an important impact on the ecosystems of this territory.

In some cases, it allows the pursuit and development of non-industrial activities such as recreational, traditional and cultural activities. It is therefore necessary to provide an adequate framework for these lighter activities to be able to maintain the integrity of these ecosystems.

At the moment, these two proposed biodiversity reserves are used very little. However, the issue is to maintain the integrity of protected ecosystems in the future even if existing activities intensify or new activities are authorized.

For example, the development of recreational and tourism activities must be done within the support capacity of the ecosystems.

The **support capacity** is defined as “within the perspective of sustainable development, the support capacity of the ecosystems of a given territory is the maximum pressure human activity can put on an ecosystem without affecting its integrity in order to guarantee its perennity.

Source: MDDEP scientific and technical committee

Directions

- Frame the activities allowed in the biodiversity reserves so that they may be carried out in respect of the support capacity of the environments and ensure that they are compatible with the conservation objectives;

- Encourage the setting up of an evaluation procedure for projects that would essentially take into account the biodiversity, the support capacity of ecosystems and the harmonization of uses;
- Ensure the conservation of the habitats of sensitive species and pay particular attention to their protection (woodland caribou, Atlantic salmon, calcicole flora species).

Proposals

- Propose an analysis framework for assessing activities and building projects subject to authorization;
- Encourage the implementation of a follow-up system for wildlife harvesting activities carried out in the biodiversity reserves;
- Agree with Faune Québec on measures to be taken for the caribou recovery strategy, if applicable, following the recommendations of the implementation committee.

Issue 2 ~ Encourage knowledge acquisition and the raising of awareness of users

Low use due to the remoteness of these territories has served to protect them but at the same time has limited the acquisition of in-depth knowledge. Knowledge of the natural environment is necessary.

It will ensure that activities allowed in the biodiversity reserves are conducted without compromising efforts to maintain their biodiversity. It would also be useful to follow up on activities that take place on the outskirts of the biodiversity reserves due to their potential impacts.

To reach the conservation objectives, it is necessary to know the territories well but also to properly inform and communicate with users and the population as well as raise their awareness. This communication effort may take different forms, but the objective must be to properly explain the purpose of these territories, the reasons behind their protection and also the different projects in the works and the objectives sought.

Awareness raising may be done through recreational activities that are compatible with the conservation objectives on the territories themselves to increase appreciation of these protected natural environments.

Directions

- Encourage the implementation of a knowledge acquisition program and follow-up on activities and biodiversity;
- Focus on educational and awareness raising actions within and outside the two biodiversity reserves.

Proposals

- Encourage scientific research, compilation of historical, human, social and traditional ecological data;
- Participate in the updating of data on the state of the Saint-Augustin woodland caribou herd or more generally on the presence of caribou in the sector of the two biodiversity reserves;
- Document the impacts of activities allowed in the biodiversity reserves and existing activities on the outskirts to enable follow-up on biodiversity and on allowed activities;
- Make the particularities and remarkable aspects of these territories known in order to raise interest and encourage users to subscribe to conservation and development objectives;
- Integrate educational, communication, awareness raising and interpretation components into the action plan to come¹⁹.

6.2 Socioeconomic issues

Issue 3 ~ Involve local representatives

The participation of local users is a key element in guaranteeing the implementation of conservation and

development objectives for these two biodiversity reserves.

Among these users are the following:

- Innu community of Pakuashipi;
- Municipalité régionale de comté (MRC) de la Minganie;
- Local communities (Saint-Augustin, Vieux Fort, Rivière-Saint-Paul, Middle Bay, Brador, Lourdes-de-Blanc-Sablon, Blanc-Sablon);
- Conseil régional de l'environnement de la Côte-Nord (CRECN);
- Club de pêche au saumon de la rivière Saint-Paul;
- Association touristique régionale de Duplessis (ATR);
- Fondation Québec-Labrador.

Local representatives are spokespersons for the MDDEP in the management of these territories because they frequent and use them on a regular basis. Their participation will be useful in finding solutions and alternatives for reaching the conservation objectives sought.

This participation will also encourage collective and social commitment of the population to the conservation objectives sought.

The traditional lifestyle of the inhabitants of the Lower North Shore translates into a specific use of the territory. Still today, life is conditioned by the seasons. This lifestyle has led to land occupation and use of natural resources that is largely domestic (camps, trapping, ATV, snowmobile, firewood harvesting). This particular aspect must be taken into account in the creation of the two biodiversity reserves.

Directions

- Involve the main Innu community concerned, the Pakuashipi;
- Support the management of the two territories by getting the key users to participate;
- Take into account the particular lifestyle practices of the inhabitants of the Lower

¹⁹ See the section on the management terms and conditions.

North Shore while respecting the conservation objectives of the status of biodiversity reserve.

Proposals

- Complete the inventory of territory occupation and uses;
- Encourage integration of the non-registered occupations currently present in the two proposed biodiversity reserves in accordance with government standards and policies in force.

Issue 4 - Promote sustainable development

The MDDEP's objective is not to develop services or activities for these two territories. However, it goes without saying that new uses may be proposed by local representatives and authorized by the Ministère. Due to the territory's conservation status, the management terms and conditions of certain activities might be adapted to the conservation context.

The territory, especially because of its natural character and the quality of its landscape, has potential for the practice and development of ecotourism activities

Directions

- Encourage the sustainable development of the two biodiversity reserves while taking into account the fragility of certain environments and the support capacity of ecosystems.

7. Management terms and conditions

7.1 Legal status

The two proposed biodiversity reserves were created under the Natural Heritage Conservation Act. The status of permanent protection that is sought is that of biodiversity reserve.

The ministère du Développement durable, de l'Environnement et des Parcs is responsible for the management of the protection statuses assigned to public land. The other departments that also have responsibilities on public land continue to exercise them.

7.2 Management principles of the two biodiversity reserves

The MDDEP defined seven guiding principles for the management of biodiversity reserves.

Specifically, the principles are as follows:

The **7 principles** for the management of the two biodiversity reserves:

- Ecosystemic management;
- Regionalized management;
- Participatory management;
- Coherent management;
- Responsible management;
- Flexible management;
- Minimal management.

Ecosystemic management

In the two biodiversity reserves, ecosystemic management will aim to respect the following conservation principles:

- Maintaining the natural dynamic of ecosystems;

- Restoring disturbed ecosystems, as needed and over the long term;
- Allowing activities and land management in keeping with the support capacity of the ecosystem and without hindering biodiversity protection objectives;
- Authorizing harvesting activities for non-commercial purposes, but without supporting them;
- Encouraging the acquisition and dissemination of natural and cultural heritage knowledge;
- Harmonizing the management of land located around the protected area with the biodiversity reserve's conservation objectives.

Regionalized management

Operational management of the two biodiversity reserves will be the responsibility of the Direction de l'analyse et de l'expertise régionales de la Côte-Nord of the MDDEP.

Participatory management

The Direction de l'analyse et de l'expertise régionales de la Côte-Nord du MDDEP in cooperation with local representatives will establish the terms and conditions for the participation of local parties concerned with the future of the two biodiversity reserves.

Local organizations will be invited to participate in developing an action plan that will establish the priorities for short-, medium-, and long-term conservation and development objectives.

The action plan could be drawn up immediately following the obtaining of permanent status as a biodiversity reserve. If necessary, it can be revised at the same time as the conservation plan, that is, the seventh year after its initial approval and then at least every ten years as provided for under section 50 of the Natural Heritage Conservation Act.

Coherent management

The Direction de l'analyse et de l'expertise régionales de la Côte-Nord of the MDDEP is responsible for reaching the conservation objectives of the two biodiversity reserves. The Direction du patrimoine écologique et des parcs of the MDDEP will provide the scientific and technical support it may need in this regard.

The MDDEP is responsible for the application of the Natural Heritage Conservation Act, which governs the two biodiversity reserves. Certain activities will also continue to be regulated by other government representatives under the legislation they administer in cooperation with the MDDEP. They will also be responsible for respecting and meeting the conservation objectives. These responsibilities must be specified in the action plan.

Responsible management

Throughout the decision-making process, the MDDEP will rely on rigorous scientific data. The principle of precaution will also be applied to ensure responsible management.

What is the principle of precaution?

When there is are threats of serious or irreversible damage, lack of full scientific certainty must not be used as a reason for postponing the adoption of effective measures to prevent environmental degradation.

Source: Sustainable Development Act, 2006.

Flexible management

A mechanism will be put in place to follow up on the conservation objectives and, if necessary, make adjustments to the strategies put in place to reach them.

An annual review will be conducted of the action plan to make adjustments if necessary.

Minimal management

The two biodiversity reserves will be managed minimally to guarantee that the conservation plan

objectives are met. This management may consist in taking action in the following areas:

- Information and communication
- Drafting of an action plan
- Signposting
- Monitoring
- Regulatory application
- Regulatory control
- Monitoring of the natural environment

7.3 Responsibilities of the two other departments

The MRNF will work with the MDDEP to reach the biodiversity conservation objectives and ensure the application of the laws and regulations for which it is responsible on the protected territories.

The MRNF's area of activity and responsibilities are, for example:

- For the MRNF Secteur du territoire:
 - Management of public land (attribution and renewal of land rights).
- For MRNF Secteur Faune Québec:
 - Wildlife management (hunting and fishing regulations, outfitter management, attribution of wildlife rights, follow-up on wildlife populations).

7.4 Activity schedule for the two proposed biodiversity reserves²⁰

Activities practiced within the biodiversity reserve are currently governed by the provisions of the Natural Heritage Conservation Act:

- Mining, and gas or petroleum development;
- Mining, gas or petroleum exploration, brine and underground reservoir exploration,

²⁰ The following section presents key elements of the activity schedule effective on the territory of the two biodiversity reserves. These elements have been made accessible to general public understanding and therefore do not replace legal provisions. For further precisions, please refer to legal dispositions and documents.

prospecting, and digging or boring, where such activities necessitate stripping, the digging of trenches, excavation or deforestation;

- Forest management within the meaning of section 3 of the Forest Act (R.S.Q., c. F-4.1);
- The development of hydraulic resources and any production of energy on a commercial or industrial basis;
- Earthwork or construction work;
- Any new allocation of a right to occupy land for cottaging purposes.

Furthermore, to specify the framework for activities allowed or prohibited in proposed biodiversity and aquatic reserves and resolve certain problems that have arisen since their creation, the Ministère proposed amendments, for which a draft regulation was published in the *Gazette Officielle du Québec* on July 6, 2005, for general consultation (schedule 3).

This draft regulation is currently under review in consideration of the comments received during consultations. Once the comments have been integrated and the final version adopted by the government, the regulation will apply to all existing and future proposed biodiversity and aquatic reserves.

The activity schedule, which will apply to both biodiversity reserves, once the permanent protection status has been allocated, should be similar on the whole to the draft regulation (schedule 3).

Plan provisions for activities, which is currently being revised, set forth three distinct categories:

- Prohibited activities;
- Activities submitted for authorization;
- Allowed activities.

They aim to adequately ensure the protection of natural environments while allowing for activities that are compatible with the protection objectives.

7.4.1 Prohibited activities

Under the Natural Heritage Conservation Act, the following activities, which are incompatible with the conservation objectives, are and will remain prohibited:

- Mining, and gas or petroleum development;
- Forest management within the meaning of section 3 of the Forest Act (R.S.Q., c. F-4.1);
- The development of hydraulic resources and any production of energy on a commercial or industrial bases.

Under the draft regulation presented in schedule 3, the following will also be prohibited:

- Stocking of a watercourse or body of water for development or commercial purposes;
- The disposal of waste and other residual material in areas other than those provided for or authorized by the Minister.

7.4.2 Activities requiring authorization

In order to avoid damage to the natural environment, certain activities likely to have negative repercussions will be subject to prior authorization from the Minister. Authorizations may also include conditions.

All activities subject to prior authorization from the Minister are presented in Schedule 3. Included among them are the following:

- Introduction of non-native flora or fauna species;
- Intervention in a wetland, watercourse or body of water;
- Soil development work;
- Erection or installation of new structures;
- Creation of new trails, roads or routes;
- Stays of more than three months on the same site on the territory;
- Educational or research activity likely to damage or disturb the natural environment;

- Wood cutting for domestic purposes or to maintain biodiversity.

7.4.3 Permitted activities

The draft regulation recognizes existing rights already authorized on the territory when the status of proposed biodiversity reserve is granted, notably:

- Trapping camps and rough shelters;
- Cottages, sheds, power or telephone lines, trails, roads, launch ramps, etc.;
- Firewood for domestic purposes for rough shelters and trapping camps on the territory of the proposed biodiversity reserve;
- Firewood for domestic purposes harvested by a person holding a permit.

Moreover, the draft regulation does not require authorization for the following activities:

- Wood harvesting for outdoor campfires;
- Maintaining or rebuilding existing rough shelters, trapping camps or cottages;
- Maintaining or upgrading existing trails or roads;
- Emergency activities or interventions required to protect the health or safety of individuals;
- Hydro-Québec operations already covered by the Environment Quality Act, particularly as part of preliminary work or studies required to obtain an authorization under the Environment Quality Act and for the purpose of electricity transportation and distribution.

Rules of conduct for users are also provided for under schedule 3. Among them are the following:

- Safe conduct when making campfires;
- Respectful conduct toward other users (noise, etc.);
- Respect for property (signs, panels, notices, etc.);
- Respect for signposting in place to restrict access to a sector to protect the public, flora or fauna from danger.

Finally, any other activity not mentioned in schedule 3 are allowed, notably:

- Hunting, fishing and trapping and the use of machinery or materials required for these activities;
- Gathering small berries or flora species for domestic purposes;
- Occupation of the same site for a period of three months or less (ecotourism, hunting, fishing, camping, etc.);
- Marine activities (kayaking, canoeing, rafting etc.);
- Hiking, skiing or snowshoing;
- Nature observation activities;
- Educational activities that do not involve harvesting;
- Use of motorized vehicles such as ATVs, snowmobiles and motorcraft.

7.4.4 Other legislative and regulatory provisions

Certain activities likely to be carried out within the boundaries of the proposed biodiversity reserve are also governed by other applicable legislative and regulatory provisions, including those requiring a permit or authorization or the payment of certain fees. The practice of certain activities may also be prohibited or limited under other laws or regulations applicable to the territory of the proposed biodiversity reserve.

Schedule 3 identifies activities that may be subject to a specific and additional legal framework.

7.5 Complementary conservation measures

Caribou recovery plan

Woodland caribou were designated as vulnerable in March 2005. The term vulnerable is employed when the survival of a species is deemed precarious even if its disappearance is not expected in the short or medium term. When the designation of a species in a vulnerable position has been established, its degree of precariousness may require quick measures. The measures identified to put forth to avoid their

disappearance are presented in a recovery plan developed by a multi-disciplinary team made up of key parties concerned by the species, and coordinated by Faune Québec.

This approach aims to obtain a consensus among all representatives (researchers, administrators, stakeholders, users, etc.). It is also intended as the first step taken by each representative in the implementation of measures that will be specified in the plan. Under the coordination of the committee set up to implement the recovery plan, measures will be implemented by representatives according to their fields of expertise and available financial means. The caribou recovery plan is slated for release sometime in 2006.

8. Conclusion

The status of biodiversity reserve can allow for the practice of non-commercial activities (hunting, fishing, trapping, hiking, traditional native activities) provided they do not have a significant impact on biodiversity. The exclusion of all industrial activities allows for conserving landscapes and ecosystems that are not or hardly degraded, and whose ecological value and potential as a backdrop for light development initiatives (recreotourism, hunting, fishing and trapping) are important assets for the diversification of the region's assets and its economy in turn.

The objective of the two biodiversity reserves is to protect territories that are diverse, representative and remarkable examples of the natural and cultural heritage, while trying to harmonize the territory's use with the conservation objectives. With sustainable development a reality, it is a challenge that must be met.

These two territories present diverse characteristics that raise conservation and management issues. Their common ground is maintaining biodiversity while allowing for the sustainable development of the North Shore's assets. While protecting wildlife habitats, it is possible to allow harvesting activities, which are very common on the North Shore, to guarantee the long-term practice of these activities while increasing the level of protection of the biodiversity.

The management framework proposed by the MDDEP allows local representatives to participate directly in the conservation and development activities of these remarkable territories. Local representatives can participate in the conservation and development planning initiatives while ensuring that concerns and recommendations are compatible with the biodiversity protection objectives of the conservation plans and regulations in force.

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10. Schedules

Schedule 1: Annual cycle of land use by the Innu

Steps	Period of the Year	Activities	Species	Food	Particulars	Sectors
Move inland	Mid-August	Movement Subsistence hunting Gathering		Small game, fish and berries Less common: big game	Camp sites and portage Setting up blinds	Main means of travel inland (rivers)
Fall hunting	Just before the rivers and lakes freeze over (for about two months) November	Hunting for food needed for the trip Hunting for bait for trapping Trapping (installation of trap lines)	Beaver, caribou, moose (more recently) and bear Aquatic animals Beaver, muskrat, mink and otter, martin, ermine, lynx, wolf and fox	Beaver, caribou, moose (more recently) and bear	Setting up the main camp near firewood, fishing lake and game and where contact is possible with the other hunting parties The presence of caribou and moose directly influences the quality and duration of the following steps	Territories along the tributaries of the main rivers used for travel inland
Return to coastal areas	Mid-December	Return to coast or move closer to main rivers Removal of traps		Small game and stocking		
Winter hunting	January-February	Snaring Hunting (short periods) Preparation of firewood	Hare Caribou	Hare Caribou Partridge Porcupine		
Winter-spring hunting	Mid-February to end-April	Trapping Hunting	Terrestrial species (lynx, martin, fox) Aquatic species (during the thaw): otter, mink, beaver and muskrat)	Migratory birds		Tributaries of main rivers
Spring hunting	Mid-April to mid-May	Hunting	Beaver and muskrat	Migratory birds Fish		Along the coasts and within a 40 km ribbon
Summer activities	Mid-June to end-August	Canoe construction Fishing Hunting Rest	Seal	Salmon Seal		

Source: Mamit Innuat memoire, January 2003

Schedule 2: Program pertaining to the granting of permits for the supply of small wood processing plants for the harvest of wood available in forests in the public domain situated in the regional municipal counties of Minganie and Caniapiscau, on the territory of the Lower North Shore and in the forests situated north of the northern limit established by the Minister.

1. OBJECTIVE OF THE PROGRAM

To enable the annual harvest of a volume of roundwood by owners of small wood processing plants whose authorized annual consumption does not exceed 2,000 cubic metres of wood for the purpose of supplying local communities, in keeping with forest production and according to terms and conditions that take local socioeconomic conditions into account to ensure the protection and sustainable development of the forest environment.

2. DEFINITIONS

2.1 "Forest management activities" include timber felling and harvesting, the installation and maintenance of infrastructures, the carrying out of silvicultural treatments including reforestation and the use of fire, the repression of insect epidemics, cryptogamic diseases and competing vegetation, and all other activities affecting the productivity of a forest area.

2.2 "Authorized annual volume" is the maximum volume of wood authorized for harvest each year by the holder of an operating permit for a small wood processing plant.

2.3 "Minister" is the Minister of Natural Resources, Wildlife and Parks.

2.4 "Small wood processing plant" is a plant whose authorized annual volume is equal to or less than 2,000 cubic metres of wood.

2.5 "Program" is this program as defined under sections 17.13 and 17.14 of the

Act respecting the Ministère des Ressources naturelles (R.S.Q., c. M-25.2), amended by chapters 8 and 16 of the laws of 2003.

2.6 "Territory" as defined in section 4.

2.7 "Holder" is the eligible person who, as defined under section 3 of the program, and following the conditions of section 5, obtains an annual permit to supply small wood processing plants.

3. ELIGIBLE PERSONS

Owners of small wood processing plants established on the territory identified by the program are eligible for the program.

4. APPLICATION

The program applies to:

- forest reserves in the domain of the state situated within the limits of the regional municipal counties of Minganie and Caniapiscau;
- in the forest reserves situated on the territory of the Lower North Shore;
- on the territory situated north of the forest management units.

5. ISSUANCE OF THE PERMIT

The Minister issues an annual forest management permit to supply a small wood processing plant if forest production determined for the sector in question is sufficient and so far as the following conditions are met:

- the eligible person has made an application in writing to the Direction régionale de Forêt Québec for an annual forest management permit, specifying: 1) harvest year; 2) volume of roundwood requested to ensure the plant's operation up to 2,000 cubic

metres of wood; 3) location of harvest operations;

- the applicant who has already obtained a permit from the Minister in a previous year has fulfilled his past obligations to the Minister's satisfaction;
- the applicant submits documents with his application demonstrating that he is the owner of a plant that meets the program requirements.

The issued permit is valid for a maximum period of twelve months ending no later than March 31 following the issue date. The permit determines the sectors where the harvest of wood is authorized, the volumes allowed for harvest, silvicultural treatments required to return the forest to production, forest management activities to be carried out and all conditions that the holder must respect (scaling, activity report, etc.).

6. OBLIGATIONS OF THE HOLDER OF A FOREST MANAGEMENT PERMIT TO OPERATE A SMALL WOOD PROCESSING PLANT

6.1 All holders must carry out forest management activities related to his forest management permit in accordance with the forest management practices in force and applicable to his activities and in accordance with the other conditions specified on the permit to ensure the protection of the forest environment and sustainable management of the forests.

6.2 All holders must pay the dues prescribed by the Minister in accordance with section 105 of the Forest Act. Dues are payable in money, in silvicultural treatments or by the carrying out of other activities intended to promote the protection or development of forest resources.

6.3 All holders must scale the harvested wood in accordance with his permit provisions.

6.4 Every three months following the permit's expiry, all holders must submit the following to the Minister:

- location on a map with a scale of 1/20,000 of the sites where the wood was harvested and or other forest management activities that were carried out;
- the result of the scaling of the harvested wood is carried out according to the permit's instructions.

6.5 At the Minister's request and following his instructions, all holders must perform an evaluation of the silvicultural treatments carried out during the year of the permit or a previous year and submit the results to the Minister.

7. FINAL PROVISIONS

7.1 The program takes effect upon adoption by the Executive Council.

7.2 Following the program taking effect, the Minister will terminate all forest management agreements already agreed with an eligible person after having given him the opportunity to present his observations.

Schedule 3: Amendments to the conservation plans for the proposed biodiversity reserves (Fall 2005)

Natural Heritage Conservation Act
(R.S.Q., c. C-61.01, ss. 31, 33, 34 and 36)

1. Subject to the special measures provided for in sections 2 to 4, Division 3 of the conservation plans for the proposed biodiversity and aquatic reserves listed in the schedule¹ is replaced by the following:

3. Activities within the reserve

§1. Introduction

The activities carried on within the proposed reserve are governed for the most part by the provisions of the Natural Heritage Conservation Act.

This Division prohibits activities in addition to those prohibited under the Act and provides a framework for the carrying on of certain permitted activities so as to better ensure the protection of the natural environment. Accordingly, certain

¹ The conservation plans for the proposed biodiversity reserves listed in paragraphs 1 to 10 of the Schedule, approved by Order in Council 1269-2003 dated 3 December 2003, were published with the Order in Council on 17 December 2003 (2003, G.O. 2, 3495) and have not been amended since.

- The conservation plans for the proposed biodiversity and aquatic reserves listed in paragraphs 11 to 20 of the Schedule, approved by Orders in Council 109-2003 and 110-2003 dated 6 February 2003 (2003, G.O. 2, 951 and 1049), were published on 7 May 2003 with the notice of the establishment of the reserves (2003, G.O. 2, 1553) and have not been amended since, except the plans of the proposed reserves in paragraphs 14, 17 and 18, the text of which was revised by Order in Council 637-2005 dated 23 June 2005 (2005, G.O. 2, 2615) to reflect modifications to the boundaries of the proposed reserves.

- The conservation plans for the proposed biodiversity and aquatic reserves listed in paragraphs 21 to 28 of the Schedule, approved by Order in Council 484-2004 dated 19 May 2004 (2004, G.O. 2, 1745), were published on 4 August 2004 with the notice of the establishment of the reserves (erratum) (2004, G.O. 2, 2417) and have not been amended since, except the plans of the proposed reserves in paragraphs 24 and 25, the text of which was revised by Orders in Council 1069-2004 dated 16 November 2004 (2004, G.O. 2, 3257) and 637-2005 dated 23 June 2005 (2005, G.O. 2, 2615) to reflect modifications to the boundaries of the proposed reserves.

- The conservation plans for the proposed biodiversity and aquatic reserves listed in paragraphs 29 to 46 of the Schedule, approved by Order in Council 636-2005 dated 23 June 2005 (2005, G.O. 2, 2503), amended by Order in Council 1051-2005 dated 9 November 2005 (2005, G.O. 2, 4931), were published on 7 September 2005 with the notice of establishment of the proposed reserves (2005, G.O. 2, 3799) and have not been amended since.

activities require the prior authorization of the Minister and compliance with the conditions determined by the Minister.

As provided in the Natural Heritage Conservation Act, the main activities prohibited in an area to which status as a proposed biodiversity or aquatic reserve has been assigned are

- mining, and gas or petroleum development;
- forest management within the meaning of section 3 of the Forest Act (R.S.Q., c. F-4.1); and
- the development of hydraulic resources and any production of energy on a commercial or industrial basis.

§2. Prohibitions, prior authorizations and conditions on which certain activities may be carried on in the proposed reserve

§2.1. Protection of resources and the natural environment

3.1. Unless the person has been authorized by the Minister and carries on the activity in compliance with the conditions the Minister determines, no person may introduce non-native species of flora or fauna into the proposed reserve.

3.2. No person may stock a watercourse or body of water

(1) for aquaculture, sports or commercial fishing or any other commercial purpose; or

(2) for any other purpose, if the fish stocked are not from a genetic strain originating from the proposed reserve.

3.3. No person may bury, abandon or dispose of waste, snow or other residual materials other than in waste disposal containers, facilities or sites determined by the Minister or elsewhere, with the authorization of the Minister and in compliance with the conditions the Minister determines.

Despite the first paragraph, no authorization need be obtained by an outfitting operation to use a disposal facility or site in compliance with

the Environment Quality Act and its regulations if the outfitting operation was already using the facility or site on the date on which the protection status as a proposed reserve takes effect.

3.4. No person may, unless the person has been authorized by the Minister and carries on the activity in compliance with the conditions the Minister determines,

(1) intervene in a wetland area;

(2) dig, fill, obstruct or divert a watercourse or body of water; or

(3) carry on another activity likely to degrade their bed, banks or shores or to otherwise directly and substantially alter their bio-chemical characteristics or the quality of the watercourse, body of water or wetland area, including by discharging or dumping waste or other pollutant into the watercourse, body of water or wetland area.

§2.2. Rules of conduct for users

3.5. Every person staying, carrying on an activity or travelling about within the proposed reserve is required to maintain the premises in a satisfactory state and before leaving, return the premises to their natural state to the extent possible.

3.6. Every person who makes a campfire must

(1) clear an area around the fire site sufficient to prevent the fire from spreading, namely by removing all branches, scrub, dry leaves and other combustible materials;

(2) see that there is always a person on the premises to attend the fire; and

(3) ensure that the fire is completely extinguished before leaving the premises.

3.7. In the proposed reserve, no person may

(1) cause any excessive noise; or

(2) behave in a manner that unduly disturbs other persons in the reserve or interferes with their enjoyment of the reserve.

3.8. No person may destroy, remove, move or damage any poster, sign, notice or other type of signage posted by the Minister within the proposed reserve.

3.9. No person may enter, carry on an activity in or operate a vehicle in a given sector of the proposed reserve unless the person has been authorized by the Minister and complies with the conditions determined, if the signage erected by the Minister restricts access, traffic or the carrying on of certain activities so as to protect the public from a danger or to avoid placing the fauna, flora or other components of the natural environment at risk.

§2.3. Activities requiring an authorization

3.10. No person may, unless the person has been authorized by the Minister and complies with the conditions the Minister determines, stay or reside on or otherwise occupy the same site within the proposed reserve for a period of more than three months in the same year. No authorization need be obtained by a person who,

(1) on the date on which the protection status as a proposed reserve takes effect, was a party to a lease or had another right or authorization allowing the person to legally occupy the land under the Act respecting the lands in the domain of the State (R.S.Q., c. T-8.1) or, if applicable, the Act respecting the conservation and development of wildlife (R.S.Q., c. C-61.1), and whose right to occupy the land is renewed or extended;

(2) in accordance with the applicable provisions of law, has entitlement under a sublease, an assignment of a lease or a transfer of a right or authorization, as referred to in paragraph 1, and whose right to occupy the land is renewed or extended; or

(3) takes advantage of the possibility of acquiring the land the person legally occupies on the date on which the protection status as a proposed

reserve takes effect, pursuant to the Act respecting the lands in the domain of the State.

3.11. (1) No person may carry on forest management activities to meet domestic needs or for the purpose of maintaining biodiversity unless the person has been authorized by the Minister and carries on the activities in compliance with the conditions the Minister determines.

The conditions of that authorization may pertain, among other things, to species of trees or shrubs, the size of the stems that may be cut, the quantities authorized and the places where the activities may be carried on.

(2) Despite subsection 1, the authorization of the Minister under this plan need not be obtained by a person staying or residing in the proposed reserve who collects wood to make a campfire.

No such authorization need be obtained by a person to collect wood to meet domestic needs if

(a) the wood is collected to supply a trapping camp or a rough shelter permitted on the territory of the proposed reserve, provided that

- i. the wood is collected by a person in accordance with the conditions set out in the permit for the harvest of firewood for domestic purposes issued by the Minister of Natural Resources and Wildlife under the Forest Act, and
- ii. the quantity of wood collected does not exceed 7 apparent cubic metres per year; and

(b) in all other cases if

- i. the wood is collected within a sector reserved by the Minister of Natural Resources and Wildlife as a sector for which a permit for the harvest of firewood for domestic purposes under the Forest Act may be issued and which has already been reserved as such by the Minister on the date on which the protection

status as a proposed reserve takes effect,

- ii. the wood is collected by a person who, on the date on which the protection status as a proposed reserve takes effect or in any of the three preceding years, held a permit for the harvest of firewood for domestic purposes allowing the person to harvest firewood within the proposed reserve, or
- iii. the wood is collected by a person in accordance with the conditions set out in the permit for the harvest of firewood for domestic purposes issued by the Minister of Natural Resources and Wildlife under the Forest Act.

(3) Despite subsection 1, no authorization need be obtained by a person authorized by lease to occupy land within the proposed reserve, pursuant to this plan, to carry on a forest management activity for the purpose of

(a) clearing permitted harvested areas, maintaining them or creating visual openings, and any other similar removal purposes permitted under the regulation that applies to the sale, lease and granting of immovable rights made under the Act respecting the lands in the domain of the State;

(b) creating and maintaining access roads, stairways or other trails permitted under that regulation; or

(c) clearing the necessary area for the installation, connection, maintenance and repair of power, water, sewer or telecommunication lines, facilities and mains.

When the work referred to in subparagraph c of subsection 3 is carried out for or under the responsibility of an enterprise providing any of those services, the work requires the prior authorization of the Minister, other than in the case of the exemptions provided for in sections 3.13 and 3.14.

(4) Despite subsection 1, no authorization need be obtained by a person to carry on a forest management activity to maintain a sugar bush and harvest maple products for domestic purposes if

(a) the activity is carried on by a person who, on the date on which the protection status as a proposed reserve takes effect or in any of the three preceding years, held a sugar bush management permit issued by the Minister of Natural Resources and Wildlife under the Forest Act allowing the person to carry on the activities of a sugar bush operator within the proposed reserve;

(b) the activity is carried on within a zone for which the permit obtained allowed the carrying on of sugar bush operations on the date on which the protection status as a proposed reserve takes effect or in any of the three preceding years; or (c) the activity is carried on by a person in compliance with the conditions set out in the sugar bush management permit issued by the Minister of Natural Resources and Wildlife under the Forest Act.

3.12. No person may, unless the person has been authorized by the Minister and carries on the activity in compliance with the conditions the Minister determines,

(1) carry out soil development work, including any fill, burial, earthwork, removal or displacement of surface materials or vegetation cover, for any purpose including recreational and tourism purposes such as the development of trails;

(2) install or construct a new structure, infrastructure or works;

(3) reconstruct or demolish an existing structure, infrastructure or works, although no authorization is required in the case of a trapping camp, a rough shelter or a building used for vacation purposes;

(4) use a pesticide, although no authorization is required for the use of insect repellent for personal purposes

(5) carry on an activity that is likely to severely degrade the soil or a geological formation or damage the vegetation cover, such as stripping, the digging of trenches or excavation work; or

(6) carry on educational or research-related activities if the activities are likely to significantly damage or disturb the natural environment, in particular by reason of the nature or size of the samples taken or by reason of the invasive character of the method or process used.

The conditions determined by the Minister for authorization of the work may pertain to the location of the authorized activity, the methods used, the areas that may be cleared or deforested, the types of material that may be used including the material taken from the site, and the presence of ancillary works or facilities. The conditions may also include a requirement to ensure periodic follow-up or to report to the Minister, in particular as regards the results obtained from the research to which subparagraph 6 of the first paragraph refers.

Subject to the conditions determined in the authorization, work to repair or maintain trails authorized by the Minister or trails existing on the date on which the protection status as a proposed reserve takes effect may be carried on without an authorization under subparagraph 1 of the first paragraph.

Work to repair or maintain forest roads or roads authorized under the Act respecting the lands in the domain of the State carried on in accordance with the Forest Act and its regulations that concern standards of forest management may be carried on without an authorization under subparagraph 1 of the first paragraph.

§ 2.4. Authorization exemptions

3.13. Despite the preceding provisions, no authorization need be obtained by a person to carry on an activity or for any other form of intervention within the proposed reserve if urgent

action is required to prevent endangering the health or safety of persons, or to repair or prevent damage caused by a real or apprehended catastrophe. The person concerned must, however, immediately inform the Minister of the activity or intervention that has taken place.

3.14. Despite the preceding provisions, the following activities and interventions involving the production, transmission and distribution of electricity carried out by Hydro-Québec (Société) or by any other person for Hydro-Québec do not require the prior authorization of the Minister under this plan:

(1) any activity or intervention required within the proposed reserve to complete a project which was previously expressly authorized by the Government and the Minister, or only by the latter, in accordance with the requirements of the Environment Quality Act (R.S.Q., c. Q-2), if the activity or intervention is carried out in compliance with the authorizations issued;

(2) any activity or intervention necessary for the preparation and presentation of a pre-project report for a project requiring an authorization under the Environment Quality Act;

(3) any activity or intervention relating to a project requiring the prior authorization of the Minister under the Environment Quality Act, if the activity or intervention is in response to a request for a clarification or for additional information made by the Minister to the Société and it is carried out in accordance with the request; and

(4) any activity or intervention by the Société, if the conditions for the carrying out of the activity or intervention have been determined in an agreement between the Minister and the Société and the activity or intervention is carried out in compliance with those conditions.

For the purposes of this section, the activities and interventions of the Société include pre-project studies, analysis work or field research, work required to study and monitor the impact of power transmission and distribution line corridors and rights-of-way, geological or geophysical

surveys and survey lines, and the opening and maintenance of roads required for the purpose of access, construction or equipment movement necessary for the carrying on of such work.

§2.5. General provisions

3.15. Every person who applies to the Minister for an individual authorization or for an authorization for a group or for a number of persons must provide any information or document requested by the Minister for the examination of the application.

3.16. The Minister's authorization, which is general and can be used by more than one person, may be communicated to the persons concerned by any appropriate means including by a posted notice or appropriate signage at the reception centre or any other location within the proposed reserve that is readily accessible to the public. The Minister is to provide a copy to any person concerned.

§3. Activities governed by other statutes

Certain activities likely to be carried on within the proposed reserve are also governed by other applicable legislative and regulatory provisions, including those that require the issue of a permit or authorization or the payment of fees. The carrying on of certain activities may also be prohibited or limited by other Acts or regulations applicable within the boundaries of the proposed reserve.

A special legal framework may govern permitted and prohibited activities within the proposed reserve in connection with the following matters:

- Environmental protection: measures set out in particular in the Environment Quality Act (R.S.Q., c. Q-2);

- Archaeological research: measures set out in particular in the Cultural Property Act (R.S.Q., c. B-4);

- Development of wildlife resources: measures set out in particular in the Act respecting the conservation and development of

wildlife (R.S.Q., c. C-61.1), including the provisions pertaining to outfitting operations and beaver reserves and the measures contained in applicable federal legislation, including the fishery regulations;

- Removal of species of fauna or flora that are threatened or vulnerable or are likely to be designated as such: measures prohibiting the removal of the species under the Act respecting threatened or vulnerable species (R.S.Q., c. E-12.01);

- Access and land rights: measures set out in particular in the Act respecting the lands in the domain of the State (R.S.Q., c. T-8.1);

- Operation of vehicles: measures set out in particular in the Act respecting the lands in the domain of the State (R.S.Q., c. T-8.1) and in the regulation on motor vehicle traffic in certain fragile environments made under the Environment Quality Act (R.S.Q., c. Q-2)."

