



Lake Kipawa Concerted Management Plan

First Progress Report:

Profile of territory, documented issues and concerns

By

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Organisme de bassin versant du Témiscamingue

Ville-Marie (QC), July 2013.

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Acknowledgements

The MRC de Témiscamingue and the OBVT's editing team wish to thank the people directly or indirectly involved in the development of this document.

All the actors and citizens who contributed to the enrichment of the territory's profile by sharing their concerns, the Steering Committee members and the representatives of the Consultative Committee have devoted valuable time to the project.

Thanks to a mobilisation of collective intelligence, Lake Kipawa will be managed in the best possible way.

Introduction

Since the 1980's, there is a moratorium on Lake Kipawa due to its exceptional features and the precariousness of the wildlife populations. Initially, the moratorium imposed limits to the outfitters' accommodation capacity and was then applied to the whole development of vacationing and cottages on public land. The lifting of the moratorium is made possible following the drafting of a concerted development plan guided by a consultative committee. In the present case, the document will be called the Lake Kipawa Concerted Management Plan as it goes beyond a mere development planning process. For the administrative aspects, the Ministry of Natural Resources will use the name of Concerted Development Plan.

The purpose of this first progress report is to identify and assess the lake's specific characteristics and existing problems as well as the concerns of the stakeholders and the public. The main objective will then be, through the Concerted Management Plan, to maintain and improve the quality of the water body by ensuring a long-term management. The lifting of the moratorium is not a priority and it will be done conditional to the preservation of the resource.

Following the drafting of this profile, the objectives will be determined. Ultimately, an action plan and measures will be proposed to ensure a sound management of the lake.

The project was initiated by the MRC de Témiscamingue who called upon the OBVT* to draft the document and organise the consultation process. Partners such as the CRÉAT and MRN are involved through a Steering Committee that sees to the proper functioning of the process (keeping to allocated budgets, achieving the objectives, etc.).

Once the document is finalised, it will be approved by the MRC de Témiscamingue and submitted to the MRN which is the decision-making body.

The process objectives and description are detailed in the Project Plan in **Appendix 1**.

*: see the List of Acronyms at the end of the document.

1. Methodology

1.1 Profile of the Territory

The following section is aimed at drawing a profile of the territory and presenting the documented issues concerning Lake Kipawa; it is the result of a comprehensive literature review, consultation with regional experts (MRN, MDDEFP, universities, MRC, municipalities, etc.) and contributions from stakeholders and local population. In no case the raised issues result from the authors' personal reflections. The analysis was done based on the available information; some information may have been omitted unintentionally and suggestions are welcome.

In the consultation phase, it is of prime importance to take this information into account.

1.2 Consultation and Joint Process

In addition to the information obtained from the literature review and consultations with the experts on the territory, the project managers wanted to involve as much as possible the territory's users and more generally the people interested in it.

The purpose of this second phase of the process is to clearly identify the actors' and stakeholders' vision. The ultimate objective is to seek a form of development that respects the quality of the environment.

Through continuous communication regarding the project, people who feel concerned can participate. The public consultation workshops, the online survey and the petition were merged to identify developmental concerns and intents.

At the same time, a Users Consultative Committee was formed to closely monitor the different stages by providing opinions and enhancing the document (and to produce a document consistent with the local reality).

The different planned stages of communication are as follows:

- Press conference for the official launching of the project on March 27, 2013, releasing of the Project Plan;
- Public consultation meeting on April 18;
- Users Consultative Committee on the stakeholders' and population's concerns on June 4;
- Users Consultative Committee on the objectives and Lake Kipawa's vocation on July 22;
- Users Consultative Committee on the Action Plan and Zoning Plan in October;
- Other meetings could be held if deemed necessary by the stakeholders and the public.

All these meetings will be summarised in a report and will also be made public, translated in English and published on the OBVT website at: <http://obvt.ca/activites/concertation>.

Regular publications in local papers will also allow keeping the public informed.

Aboriginal communities located on the shores of Lake Kipawa have been met at the beginning of the project to explain the process and ask them how they would like to take part in that process. It is also the MRN's mandate to officially and separately consult the Aboriginal communities.

2. Profile of the Territory

The territory profile is divided into two main subsections:

- First, we will describe the territory and its human occupation.
- Secondly, we will describe the natural environment, flora and fauna.

2.1 Location and Description of Lake Kipawa

2.1.1 Location of Lake Kipawa

Lake Kipawa, with a surface area of 300.4 km², is located in the southwestern part of Abitibi-Témiscamingue, bordering Ontario.

The territory considered in this document corresponds to the area of wildlife interest on which the MRN has established a moratorium; it includes Lake Kipawa with a 300-metre riparian buffer zone and the following lakes with the same buffer zone:

- Lake Desquerac
- Lake Grindstone
- Lake Hunter's Point
- Lake Mclachlin
- Lake Audoin
- Lake Mungo
- Lake Hunter
- Lake Bedout

The perimeter of this area of wildlife interest (length of shorelines) is 891.9 km. If we also take into account the length of the islands' shorelines, it adds up to a perimeter of 1513.4 km.

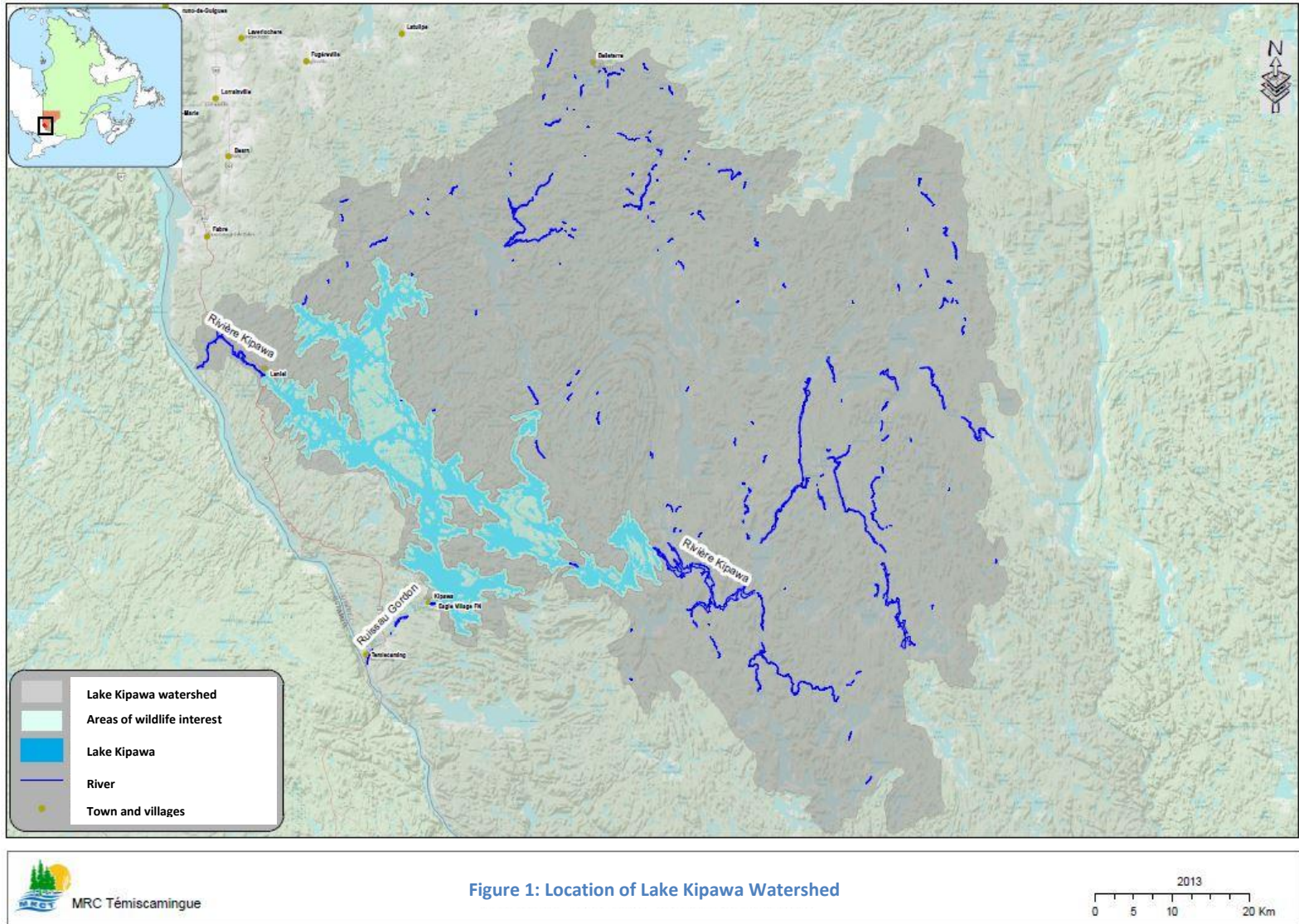
The total surface of the area of wildlife interest is 419 km² (MRCT, 2013). Nevertheless, we cannot ignore the major problems observed on the whole watershed of a surface area of 6064 km² that extends from Belleterre in the north to the unorganised territory (TNO) of *Les Lacs-du-Témiscamingue* in the east. See **Figure 1**: Location of Lake Kipawa Watershed

2.1.2 Description of Lake Kipawa

In Québec, there are 89 lakes of more than 100 km². About two thirds of them are found in arctic Quebec (Nunavik) and are hardly accessible, contrary to the nine lakes in Abitibi-Témiscamingue. These are Lake Abitibi, Parent, Simard, Des Quinze, Kipawa, Témiscamingue, Grand Lake Victoria and the Dozois and Decelles reservoirs (Société de la faune et des parcs, 2002).

Lake Kipawa's two (2) outlets are the Kipawa River flowing out of the lake in Laniel, and Gordon Creek in Kipawa. Both are dammed, thus giving the lake a reservoir status.

The Kipawa River, upstream of the lake, as well as countless creeks and underground springs feed the lake (MRCT, 2013). Many islands, sometimes sizeable, are found on Lake Kipawa (for example, MacKenzie Island and Corbeau Island).



2.2 Land Allocation and Use

2.2.1 Land Allocation

The municipalities of Béarn, Laniel, Kipawa and Témiscamingue extend around the lake. The unorganised territory of Les Lacs-du-Témiscamingue includes the eastern part of the lake. The communities of Eagle Village First Nation and Wolf Lake First Nation represent the resident Aboriginal population of the lake, and they live in the neighbourhood of Témiscamingue and Kipawa. See **Figure 2**: Administrative Divisions on Lake Kipawa.

It is to be noted that in addition to the year-round resident population in the immediate neighbourhood, there is an important summer population and visitors that are difficult to quantify (no existing data).

Most of the area is public land, and private lots accounts for 3.4 km² enclaved around the lake: around the municipalities of Laniel and Kipawa, but also at the Red Pine Chute and scattered lots here and there.

Outside of the inhabited areas, most of the land is forest used for wood production (stove wood for domestic use or industrial processing). See **Figure 3**: Main Land Allocations in the Area of Wildlife Interest on Lake Kipawa.

The Opémican National Park will be implemented northwest of the lake. Most of the territory is located along the Ottawa River and a smaller part extends on the shores of Lake Kipawa. The territory outlined on the map (draft) is subject to changes that were not available at the time of writing this report. McKenzie Island and Pointe du Rocher au Corbeau, for example, have been withdrawn from the initial park project; they will become biodiversity reserves, so hunting will be allowed in them.

The Opémican Regional Park is located within the territory limits. It covers an area of 6.5 square kilometres and it was made official in 2000. It was implemented by the MRC de Témiscamingue, essentially to develop recreational activities around the Opémican Point where buildings that are part of site classified as cultural property in 1983 are found. This is a former operation facility for log driving. On March 21, 2013, the Québec government announced the creation of the Opémican National Park on a large tract of land including the Regional Park, which made the latter's status obsolete.

Nine (9) biological refuges: mature or overmature forests representative of Québec's forest heritage are found around the lake. **Figure 4** shows the different locations of these protected areas.

2.2.2 Land Use

- Three (3) controlled harvesting zones (ZECs) are found not far from the lake, but do not overlap the area of wildlife interest (Kipawa, Restigo, Maganasipi)
- The Beauchêne outfitting operation, with exclusive rights, is located south of the lake without touching it.
- Twenty-one (21) outfitters were present in 2013 on the shores of Lake Kipawa, including 126 camps (FPQ, 2013). The whole Témiscamingue region accounts for a total of 52 outfitting operations (Bonjourquebec.com)
- 25 registered traplines are distributed around Lake Kipawa
- 14 shelters (hunting camps) within the perimeter of the area of wildlife interest
- 462 cottages currently around the lake including 84 on rented public land, 359 on private land and 19 occupants without permit or title.

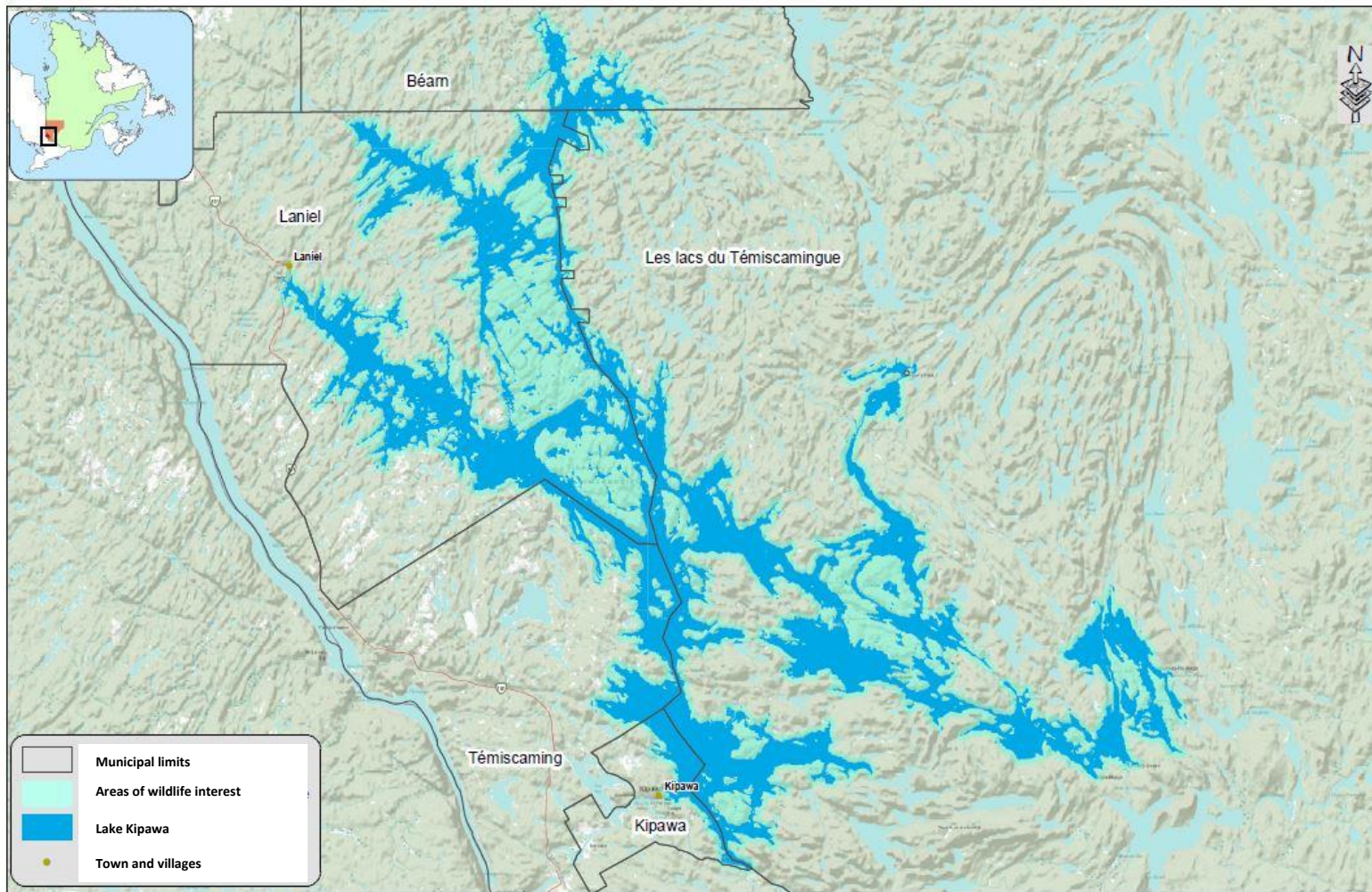
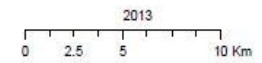


Figure 2: Administrative Divisions on Lake Kipawa



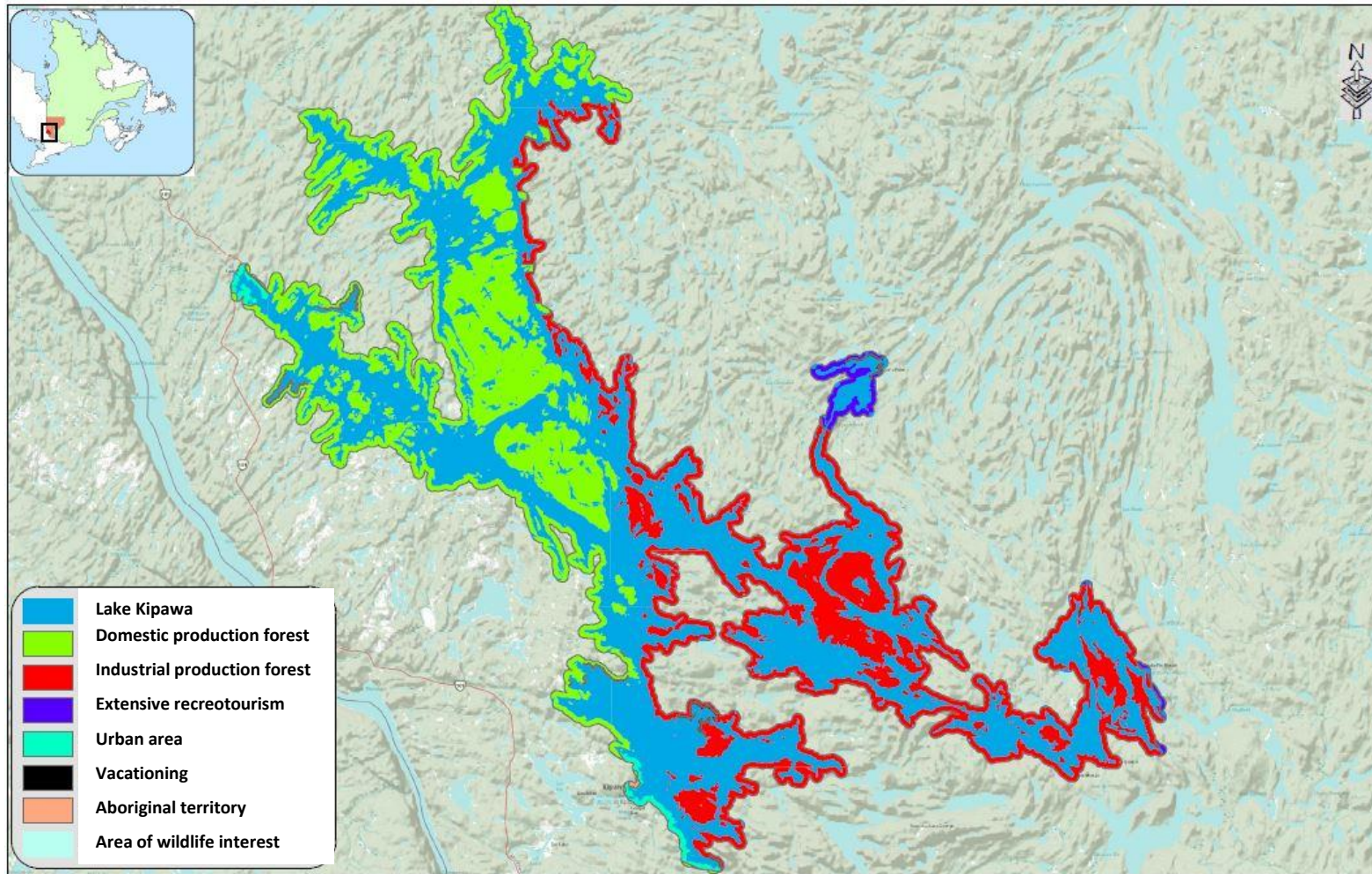


Figure 3: Main Land Allocations in the Area of Wildlife Interest on Lake Kipawa

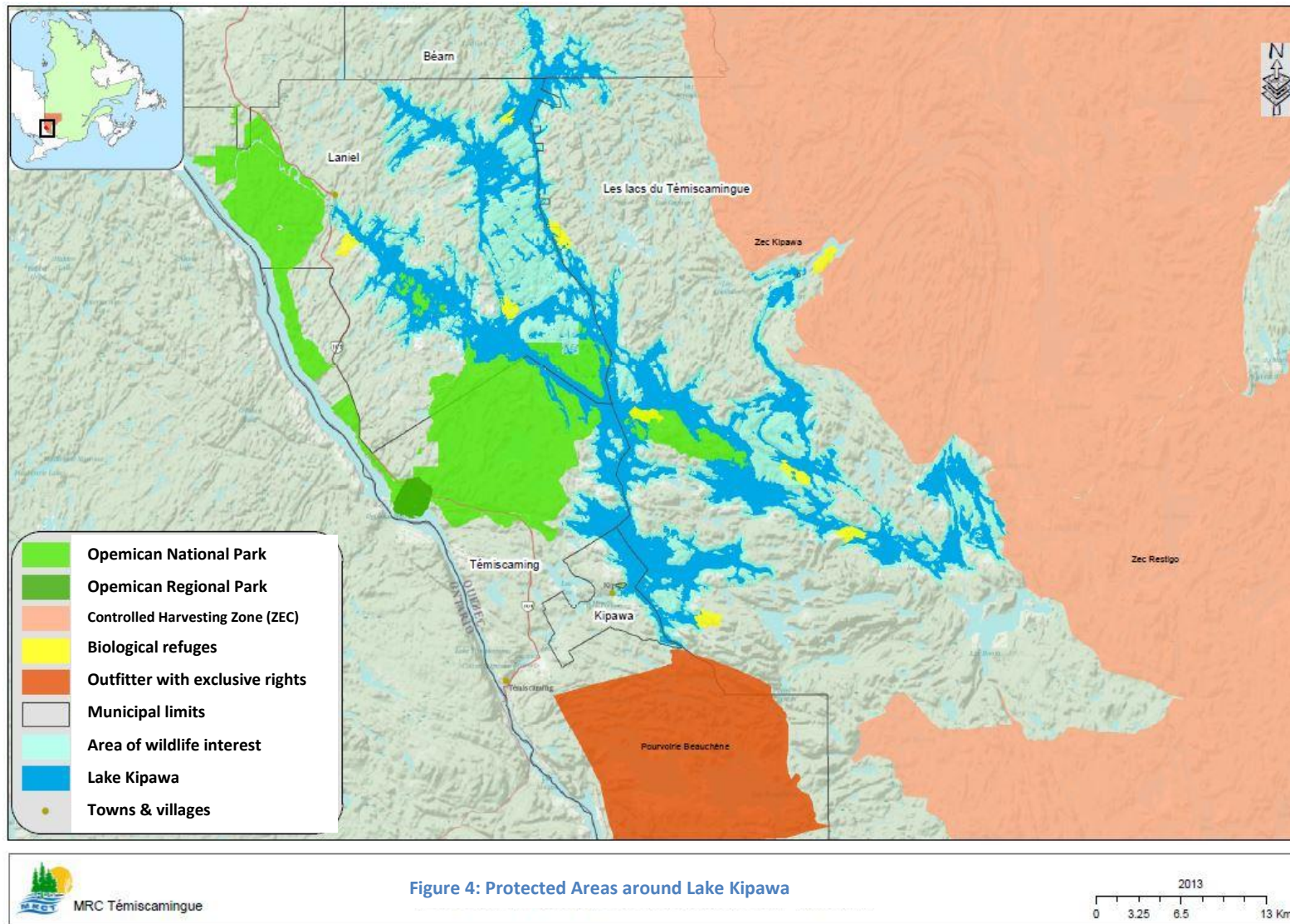


Figure 4: Protected Areas around Lake Kipawa

319 cottages are found on Laniel's territory and the unorganised territory of Les Lacs-du-Témiscamingue, 8 within the municipal limits of Béarn, 10 in Témiscaming and 126 in Kipawa.

- 241 residences are located on private lots, 1 on leased public land and 1 occupant without permit or title: 77 on Laniel's territory and the unorganised territory of Les Lacs-du-Témiscamingue, 32 in Témiscaming and 134 in Kipawa (MRN, 2010; MRC, 2013).
- 112 vacant lots intended for all types of uses are located around the lake (for building, exploitation, other activities such as public access, electrical control facilities, etc.). These lots have been surveyed before the moratorium and their development for vacationing and outfitting purposes was frozen by the MRN. Should the moratorium be lifted, they should not all be considered as constructible (MRCT, 2013).

All this information is visually represented in **Figure 5**: Distribution of owners, lessees and occupants without permit or title on Lake Kipawa.

The lake was used in the past for log driving.

The industrial and service sectors are served by:

- 1 lease for helicopter landing (Laniel)
- 1 lease for parking purposes
- 8 surface mineral substances sites: gravel pits, sand pits, etc. (abandoned, planned or in operation)
- Mining claims in the central and southeast area (52.3 km²)

Mining exploration projects

Concerning the area's mining potential, Pierre Doucet, a geologist with the Ministry of Natural Resources, provided the following information (personal communication):

- The Zeus project, held by Matamec Explorations, is by far the most advanced; feasibility and impact studies are underway. The preliminary study suggests an open-pit operation of 5072 t of rare earth oxide concentrate per year, over 12.9 years and the beginning of production in the second quarter of 2016. This implementation scenario remains to be confirmed.
- The Lake Sairs project, owned by Fieldex Exploration, is located a few kilometres southeast of the Matamec ore body.
- The Turner Falls project, held by Les Entreprises minières Globex, is located north of the Zeus project.
- The Kipawa West project, held by Mines Aurizon and Forum Uranium Corporation, is located northeast of the Matamec property.

Other projects, such as that of Hinterland Metals, located 30 km west of the Matamec project, are at the stage of very preliminary exploration work.

Other companies and individuals hold claims in the surroundings of these projects, but there is no additional information available.

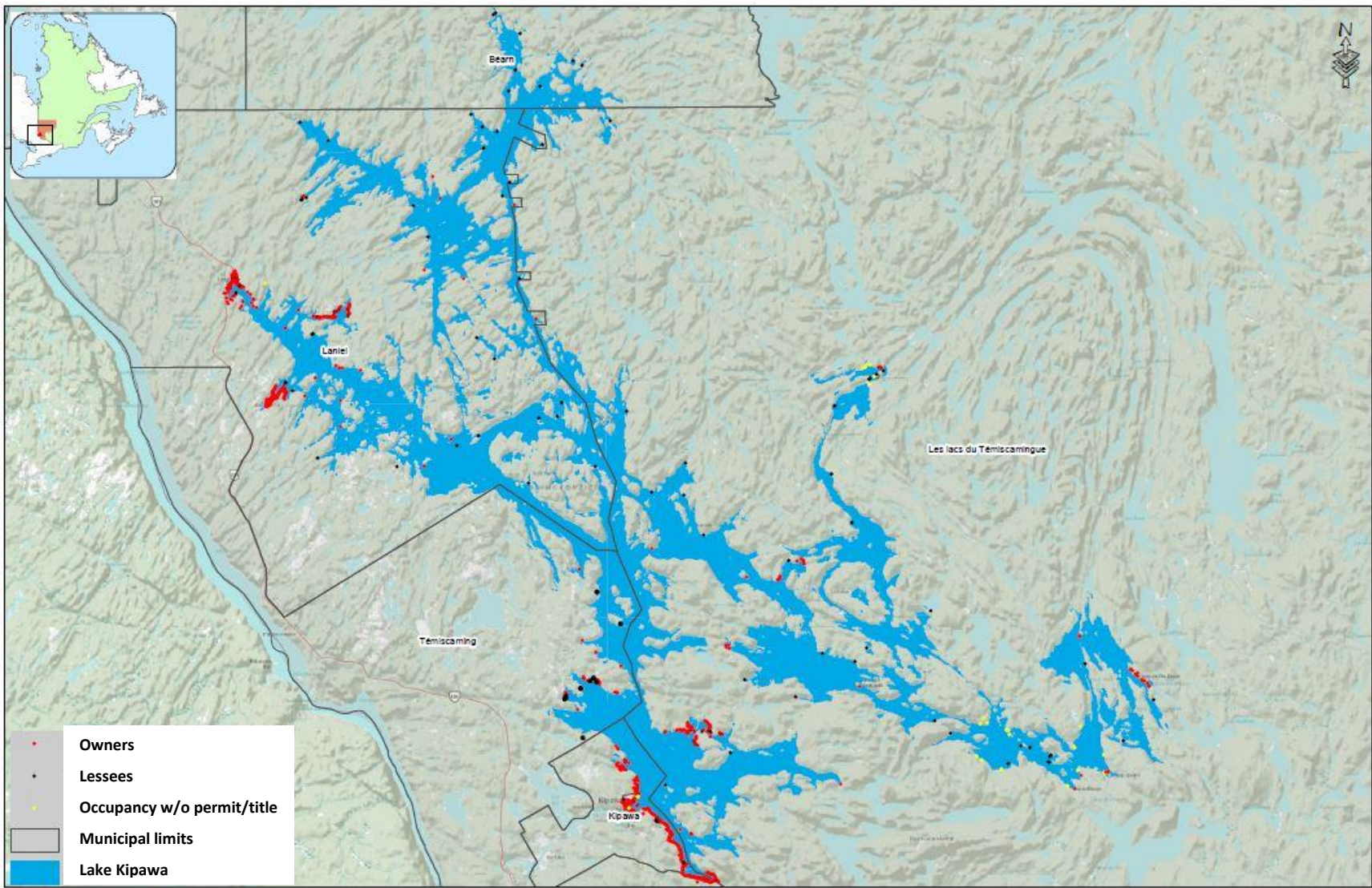


Figure 5: Distribution of owners, lessees and occupants without permit or title on Lake Kipawa

2.2.3 Zoning of the Riparian Buffer Strip

A zoning of the riparian strips was done by the MRN (Patrick Raymond and Daniel Riopel, September 1988, validated in August 2004), but only around Lake Kipawa as such (not on the whole area of wildlife interest). The satellite lakes are not included in the zoning; special attention must be paid to the map to see the sampled perimeter, which is different from the area of wildlife interest.

Carried out in compliance with the standards described in the *Guide de développement de la villégiature sur les terres du domaine public* (guide to cottage development on public land) and the PRDTP (regional public land development plan), the lake zoning is a development plan for recreational and tourism purposes for the benefit of the general public. Concretely in the field, the work consisted in assessing the lakeshores' potential by measuring different parameters such as slope, type of soil and vegetation.

For the inventoried area, the preliminary results, which may still be refined in the field, suggest that 88.11% (in red on the map) of the riparian zone is dedicated to conservation. The rest of the territory may potentially be developed (but no development planned for the time being): 12.6 km² (88.25 km of shoreline, in green on the map) where conditions theoretically allow for constructions (for the land is not too rugged or sloped) and 0.44 km² can be used for public access.

Important note: this potentially manageable linear area is not necessarily intended for constructions or development; the fieldwork simply allowed identifying the favourable zones. Sectors with a recreational and tourism potential were also identified. The percentages are not related to the area of wildlife interest, but they are rather proportions of the territory inventoried through the fieldwork. This information is presented in **Figure 6: Zoning of the Riparian Buffer Strip** (source: MRN, 2004).

2.3 Public Infrastructures

- Lake Kipawa has two (2) managed public accesses, the municipal dock located in Laniel and that of Kipawa. In addition to these two accesses, 4 other public launching ramps are known. In the past few years, bush roads built for forest operations have allowed a number of cottagers to access their site. Therefore, certain water accesses are unknown and not inventoried.
- 1 lease for a lookout
- 1 lease for a holiday camp
- 1 lease for a rest area
- 1 lease for a managed camping ground
- 3 leases for picnic grounds
- 1 lease for an entrance kiosk (MRN, 2010, 2013).

2.4 Recreation and Tourism Services and Companies

Tourism related to wildlife and generally to outdoor activities is very important on Lake Kipawa. A building used for community activities and holiday camp is found on the lake. Sites are available to all for recreational, sports or educational activities for non-profit community use, for example, basic camping facilities on Laniel's territory.

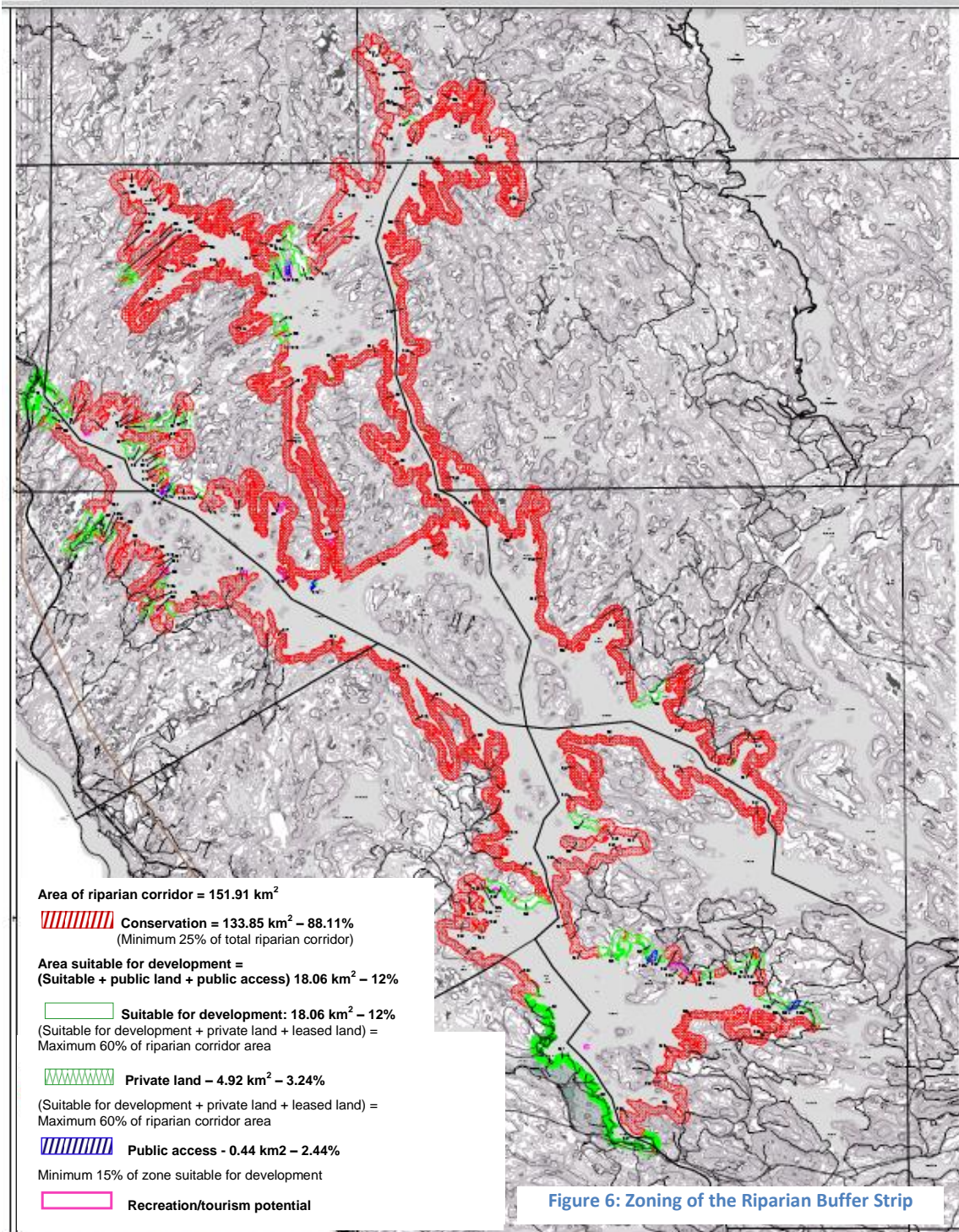


Figure 6: Zoning of the Riparian Buffer Strip

Source: MRN, 2004

Services

Different routes allow practicing outdoor activities at Lake Kipawa; the sections in the area of wildlife interest are the following:

- *Route verte* (Green Road) (3 km), for cycling
- Snowmobile trails (4,3 km)
- Quad trails (9,4 km)
- Cross-country ski trails (1,8 km)
- A stretch of 120 km of canoe-kayak route crosses a number of lakes – McLachlin, Grindstone, Bedout, Audoin and Hunter’s Point. This route is recognised by the Fédération québécoise du canot et du kayak (FQCK) and features landscapes qualified as pleasant. Lake Kipawa is identified as a potential site for sea kayak.

Companies

- Houseboat rental
Houseboats can be rented at Lake Kipawa.
- Algonquin Canoe Company
This company has a network of portages, trails and camping sites and offers boat rental and guided tours services (Web page, July 2013).
- The services offered by outfitters (total of 21 whose activity is not always known) at Lake Kipawa allow enjoying hunting and fishing as well as escaping to the wilds.
- Surf On School
This company offers wakeboard, wakeskate, wakesurf courses and guided tours on Lake Kipawa.

2.5 Throughput

Land use for recreation/tourist activities (boating, canoeing, hunting and fishing, in outfitting camps or not, etc.) and the residents around the lake represent the throughput of the water body.

Data on anglers throughput are summarised in the table below.

	YEAR					
	1975	1982-1984	1989	1994	1999	2006
Number of rod days	28,600	39,043	64,697	38,851	31,692	36,411
ORIGIN	%	%	%	%	%	%
Québec	10.6	24.8	32.5	33	31	30
Ontario	26.4	40.1	41.7	38	30	36
USA	63.0	35.1	25.8	29	39	34
TYPE OF STAY	%	%	%	%	%	%

	YEAR					
	1975	1982-1984	1989	1994	1999	2006
Outfitter	78.0	72.1	60.0	58	63	48
Cottage	14.0	17.0	22.3	26	18	36
Camping	8.0	6.1	3.8	7	2	3
Day-by-day fishing	--	4.8	12.9	7	5	5
Houseboat	--	N/A	N/A	2	12	4

Table1: Anglers Throughput on Lake Kipawa from 1975 to 2006 (source: Nadeau, D., Trudeau, C., 2012)

An estimate of the lake’s total throughput for all types of uses would have been interesting, but the information does not exist on that scale. However, the outfitters’ accommodation capacity gives a good indication of the throughput: it is 706 guests per day (FPQ, 2013, personal communication), to which we must add many other occasional visitors.

To have a idea (unofficial data), we could extrapolate the following: on Lake Kipawa in 1999, there were 31,692 rod days; in 2000, there were 1,254,270 rod days spent in Abitibi-Témiscamingue (MRN, 2000; Fisheries and Oceans Canada, 2003). Lake Kipawa therefore accounts for approximately 2.5% of the fishing activity at the regional level.

According to FAPAQ, this is the most important public water body for sports fishing in the region; it would represent a good potential for wildlife development (FAPAQ, 2002).

2.6 Existing Regulatory and Planning Tools

2.6.1 Regulatory Tools

Different regulatory tools already exist to allow regulating activities on Lake Kipawa; however, the extent of their enforcement and compliance are not known:

- ☞ The MRN’s PRDTP, recreation/tourism section, provides guidelines and objectives for cottage development on Abitibi-Témiscamingue’s public land. This plan indicates that Lake Kipawa is a wildlife territory where cottage development will eventually be permitted but only with a concerted development plan.
- ☞ The PATP provides guidelines for the interventions of the various actors and defines the government’s policy directions for public land use and protection (MRN, 2013, online).
- ☞ Fishing regulations: a regulatory change in the lake trout and walleye fishing period was adopted, but the anticipated effect was not achieved. The opening period for lake trout is now from the 4th Friday of April to Monday, September 15 or the nearest for the whole province. As for walleye fishing, it is closed from April 1 to the third Friday of May (during spawning season).

Discussions on lake trout size limits, catch and possession limits, catch-and-release and ice fishing are underway (A. Fort, personal communication).

Sustenance fishing practiced by First Nations is not subject to these regulations.

☞ There exists a regulation on water protection against leisure craft waste in the Environment Quality Act, particularly Chapter Q-2. It provides for heavy penalties in case of non compliance (Éditeur officiel du Québec, 2013)

☞ A municipal bylaw also applies, based on the MRCT's development plan, within the limits of Kipawa, Témiscaming, Béarn, Laniel and the unorganised territory of Les Lacs-du-Témiscamingue; its enforcement is under the municipalities' responsibility (D. Dufault, MRCT, personal communication):

- Minimum lot size

To be constructible, lots located within 300 metres from the lake must be 50 metre wide, 60 to 75 metre long and have a minimal surface area of 4000 square metres. However, any lot of smaller size and described in a contract prior to 1984, may still be constructible, considering it has an acquired right.

- Forest cuts

A visual and forested buffer zone applies from the shore of Lake Kipawa. This buffer corresponds to the visible landscape based on topography, up to a distance of 1.5 kilometres. Clear cuts are forbidden in the visual buffer zone, but partial cuts are allowed.

- Banks and littoral protection

Provincial regulations, i.e. the Policy for the protection of riverbanks, littoral zones and floodplains, apply. The bank corresponds to a protective strip of 10 to 15 metres around the lake. To sum it up, it must remain in its natural state. Municipalities are mandated to enforce these regulations. In Laniel, boathouses are subject to special roofing criteria (look and harmonisation with the environment). As for docks, only floating, pillared or piled docks are allowed.

- Septic system

Cottages and residences bordering the lake must be connected to a personal septic system. In case of environmental pollution by septic spill, the municipality may require the owner to upgrade his septic system to standards.

As for outfitting facilities, they must be connected to a commercial system that is monitored by MDDEFP. Only a certified professional can determine the type of septic system based on soil characteristics.

- Restriction to boating

In Dorval, MacAdam and Canal bays, near the heron colony, Clermont and Huard islands, speed is limited to 10 km/h within 30 metres from the shore.

The municipality of Lanier also has special directives mainly aimed at ensuring a year-round residential development on its land. See **Appendix 2: Main Regulations in Lanier for Residential Development around Lake Kipawa**.

2.6.2 Planning Tools

Concerning vacation site development, we can refer to the “guide to cottage development on public land” (MRN, 1994). The guide distinguishes between private, commercial and community vacation sites as well as between dispersed and grouped development or between permanent and temporary vacationing sites. Finally, a distinction is made between waterfront and inland vacation sites (proximity to a lake or river). Different modalities apply to these different categories. Furthermore, the guide mentions that pursuant to the regulations on land zoning on sites intended for waterfront vacation sites, islands less than 10 hectares are excluded from any land subdivision projects for vacationing purposes. These islands are included in the conservation area. Islands of 10 hectares or over can support cottage development, but under certain conditions.

The MRC de Témiscamingue initiated a pilot project, called *Forêt De Chez Nous*, to develop forest resources in Témiscamingue’s local forest. This project was submitted to MRN under the Sustainable Forest Management Act on August 23, 2010. Certain portions could cover the shores of Lake Kipawa.

Approximately 77 % of the public section of the area is targeted for forest management up to 2018 as shown in **Figure 7: Land Assignment for Forest Management Purposes**, but discussions and public consultations are still necessary. More specific areas have been targeted for potential silvicultural development in the coming years, and this is also at the discussion stage: see **Figure 8: Potential Logging Areas up to 2018**.

2.7 Lake Kipawa Water Quality and Level

2.7.1 Water Quality

Various data on water quality are available for Lake Kipawa, but none focused particularly on this issue for now.

Lake Kipawa’s water is generally of good quality and is used as drinking water by the Aboriginal community of Eagle Village, among others (MRN, 2012). However, a decrease in water quality is observed with the presence of blue-green algae officially reported near Kipawa (MDDEFP, 2012).

Yet, Lake Kipawa is qualified as oligotrophic, i.e. normally poor in nutrients as shown by the composition of the phytoplankton community (Moreau, C., 2005). Water is even qualified as pure and the study area was pollution free (Edwards Pass). There seemed to be no problem with water quality in 1999, transparency was high (approx. 7 metres in certain sectors), pH slightly acidic (6.4), and dissolved oxygen seemed adequate even in depth. Conductivity is about 20 µmhos (MRN, 2012) and dissolved salts are limited (Lamontagne, 1981). In the past years, many riparian owners deplored the decrease in water quality (personal communication). However, there exists no study on phosphorus concentration. Studies were carried out by MDDEFP

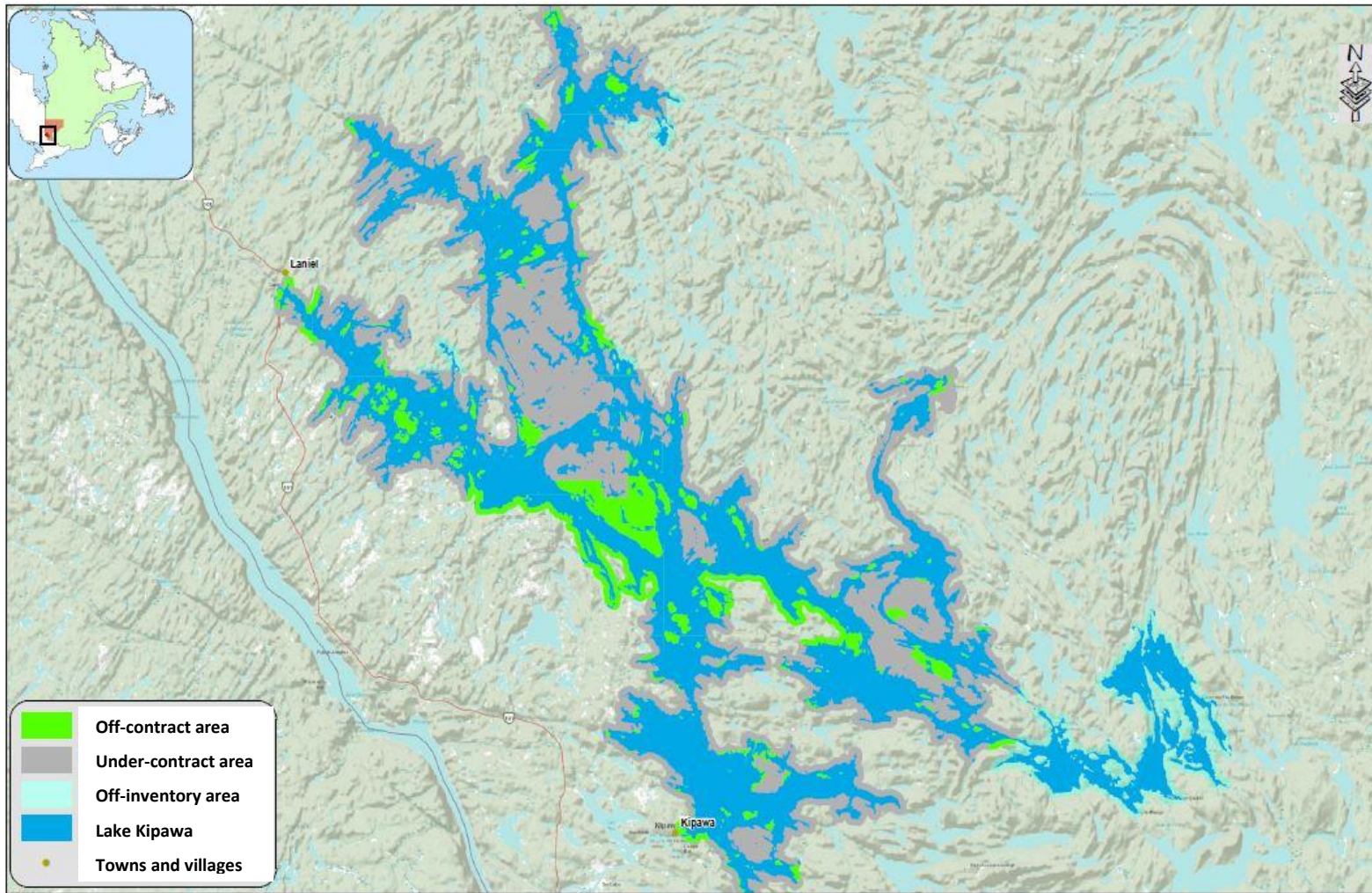


Figure 7: Land Assignment for Forest Management Purposes

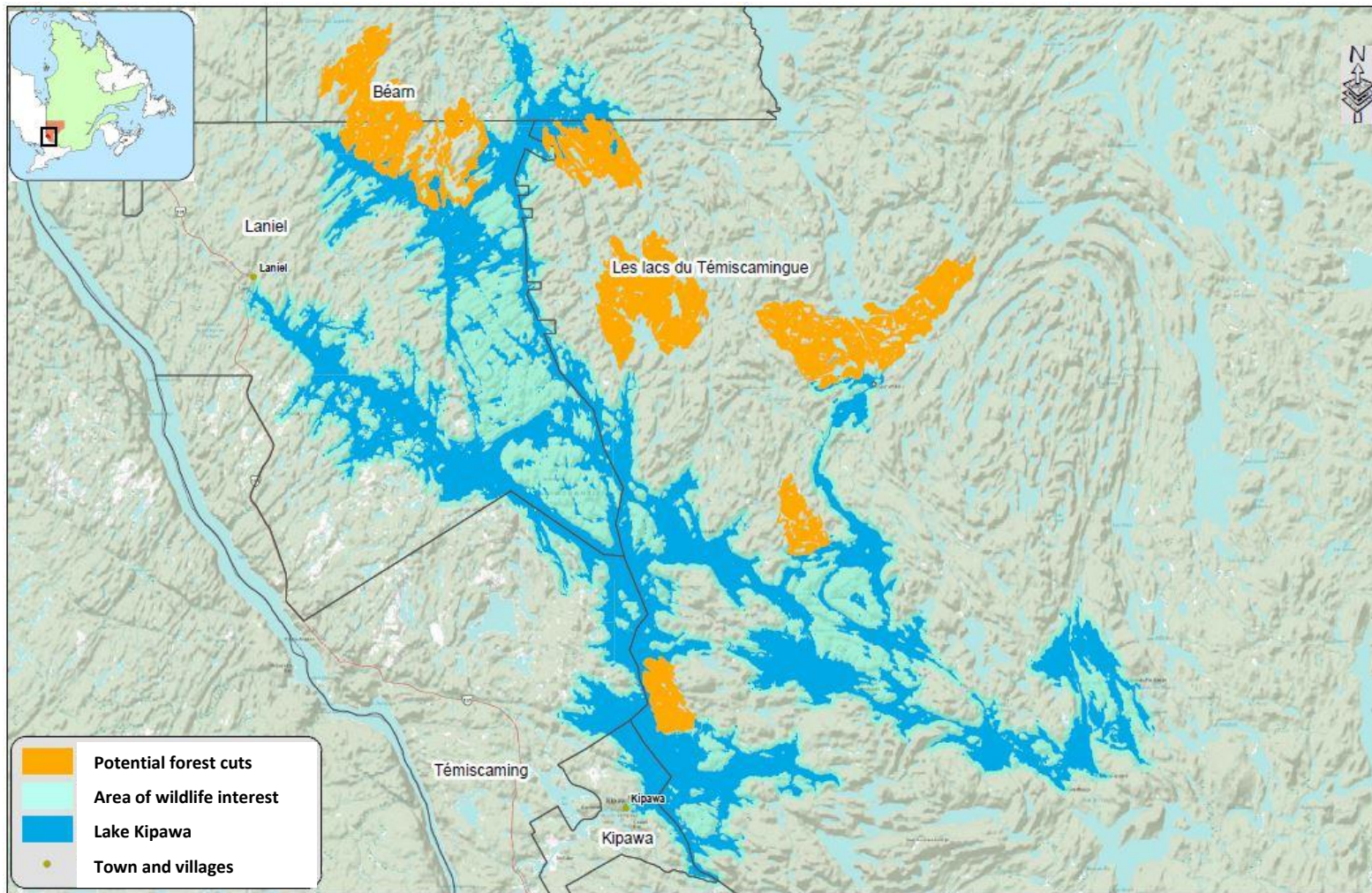


Figure 8: Potential Logging Areas up to 2018

(MDDEFP, 2013 and Denis Laliberté, personal communication) on the accumulation of toxic compounds in fish flesh in Lake Kipawa (southwest of Crow Island, McLaren Bay, Lake Bedout). In 2010 and 2011, the mean mercury content exceeded MDDEFP's directive of 0.5 mg/kg for lake trout and yellow walleye. In lake trout, content was slightly higher than the median content for the whole province and similar to the median content in yellow walleye.

Based on these concentrations, recommendations are made for consumption of these species based on fish size (for example, it is recommended to eat a maximum of 4 walleyes 30-40 cm long per month with this level of mercury content).

The mean arsenic content in lake trout is slightly higher than that of the Chibougamau area (region of reference for metals). The mean content for other metals in lake trout and yellow walleye is approximately the same as in that region.

In 2011, the mean content in PCB, PBDE (polybrominated diphenyl ether) and toxics equivalent to 2,3,7,8-TCDD in lake trout (1.1 ng/kg) are considered as low.

A pilot project carried out by the OBVT in the municipality of Kipawa (Baie-de-Kipawa Road and Miwapanee Road, 2012) showed that 60% of the observed septic systems (on a total of 37 systems for 260 waterfront cottages and residences) are in a worrying state or are a source of direct contamination. In this same study, it was determined that the state of the riparian strip of more than 60% of visited residences was composed of less than 40% of natural vegetation and was therefore generally in poor condition.

A lot of work remains to be done to determine whether all cottages and residences have septic systems and whether these systems are in good operating condition. Riparian strips should also be monitored.

The municipality of Laniel has the only pumping station in operation for Lake Kipawa, which is an interesting service and rarely offered in Québec. Located at the municipal dock, it costs \$ 30 per boat wastewater disposal.

2.7.2 Water Levels

The dams of the Kipawa reservoir are operated by the Centre d'expertise hydrique du Québec (CEHQ). CEHQ is an agency of the Ministry of Sustainable Development, Environment, Wildlife and Parks. Furthermore, given the complexity of the Ottawa River watershed and the numerous operators, the river is managed in an integrated way through the Ottawa River Regulation Planning Board (ORRPB), made up of representatives from the Canadian, Ontario and Québec governments. The Commission's mandate is to establish the general principles, priorities and policies for the main reservoirs in the watershed and to implement them. A secretariat was also formed and it constitutes the Commission's executive arm as well as the Coordination Centre for issues concerning the management of the Ottawa River Basin. The operational arm of the Board is the Ottawa River Regulating Committee (ORRC). The Committee members are employees of the Canadian, Québec and Ontario governments, Ontario Power Generation and Hydro-Québec. The Committee is responsible for the operation of the reservoirs while respecting the general policies established by the Board (A. Bilodeau, personal communication).

The annual drawdown (difference in water level) is approximately 2 metres. This is a very delicate situation as it involves various conflicting interests: water level management for the whole Ottawa River watershed, lake trout spawning, water level for boats and docks, shoreline erosion. Table 2 below shows a summary of requirements.

		Requirement		
	Dam managers	Lake trout	Boat - docks	
Spring	Low level in early spring, then raising the level to absorb spring flood	Mean level	Mean level	
Summer	Mean level	Mean level	Mean level	
Fall	Raising the level to have reserves for winter	Low level to avoid spawning in areas to be later uncovered and possible raise of level after fish eggs have been laid	No lowering of level to allow boats to go out (optimal navigation level: 269.5 m)	
Winter	Lowering the level for hydroelectric supply and in anticipation of spring flood	No lowering of level below the elevation reached during spawning	N.A.	

Table 2: Summary of Requirements for Lake Kipawa Water Level

A general summary of CEHQ’s water management is presented in Table 3 below (Andrée Bilodeau, CEHQ, 2013):

Management information
GENERAL
<ul style="list-style-type: none"> - The Kipawa reservoir management objectives are to provide protection against flooding, maintain water level for recreation and regulate water for hydro-energy production. - The Kipawa reservoir is one of the main reservoirs of the Ottawa River Basin and is the subject of integrated management by the Ottawa River Regulation Planning Board (http://rivieredesoutaouais.ca). - The water levels of the Kipawa reservoir and flows of the Kipawa River and Gordon Creek are available on the CEHQ website http://www.cehq.gouv.qc.ca.
WINTER
<ul style="list-style-type: none"> - During winter, the reservoir is emptied gradually in anticipation of spring flooding. This drawdown ensures the safety of people upstream and downstream of the dam and also allows to regulate water for hydro-electric energy production.
SPRING
<ul style="list-style-type: none"> - In the spring, we gradually reach the level of 269,50 m for the start of summer season while minimizing downstream flooding.
SUMMER
<ul style="list-style-type: none"> - During the summer season, we maintain the water level between 269,50 m and 269,55 m.

<u>Management information</u>
During flood periods, we aim to stabilize the water level between 269,50 m and 269,75 m.
FALL
- In the fall, the Lake level may drop below 269,50 m which allows greater flexibility in the management of fall rain events. In early December, before the drawdown, the target levels is around 269,50 m.

Table 3: General Information on Water Level Management in Lake Kipawa (CEHQ, 2013)

The summary of levels reached during the year was produced by the CEHQ; levels were relatively constant throughout the years:

Level	Data	Comments
Drawdown target:	267,60 m	Drawdown level reached an average before the start of the freshet.
Minimum summer operation level:	269,50 m	
Summer operation level:	Between 269,50 m and 269,55 m	
Maximum operation level:	269,75 m	Maximum water level target during freshet.
Discharge –Kipawa River	Data	Comments
Minimum discharge:	15 m ³ /s	Aquatic habitat constraint.
Minor flooding threshold:	300 m ³ /s	At this flow, a field and a garage belonging to a local resident are affected.
Discharge –Gordon Creek	Data	Comments
Minimum discharge:	10 m ³ /s	The gates of the Kipawa dam are left at a constant opening to provide this flow.
Minor flooding threshold:	28 m ³ /s	Minor flooding threshold in the municipality of Kipawa.

Table 4: Summary of Water Levels Controlled by CEHQ at Lake Kipawa (CEHQ, 2013)

The optimal navigation elevation is 269.5 metres; below that level, docks are no longer in optimal operating condition.

Negotiations are underway between MRN and dam managers to reach an agreement; tests could be made in fall 2013. The level reached during lake trout spawning would be 40 cm lower than the one reached to this day. This would prevent fish from laying their eggs too high on the banks (sites that are then uncovered in winter, which causes egg loss by freezing). This situation should be monitored to determine the extent to which this change in fall drawdown helps fish reproduction.

2.8 Habitats to be Protected and Sites of Interest

2.8.1 Forest Habitats

An exceptional forest (Lake Kipawa's ancient forest, Hemlock-yellow birch forest) is adjoining Lake Kipawa to the south, at the Latour Bay level.

A descriptive sheet of the PATP (public land use plan) was produced for the proposed exceptional forest ecosystems of Abitibi-Témiscamingue (zone No. 08-009). Twenty-nine (29) sites are found across the region for a total of 18.7 km² and a sector of Turtle Island on Lake Kipawa is part it. The objective is the total protection of these exceptional environments.

Islands less than 250 ha are automatically excluded from timber allocations. The largest ones are also excluded for now, essentially for operational reasons. However, these potential logging areas remain part of the Forest Management Units; they could therefore be harvested should the strategies change.

2.8.2 Sites of Wildlife Interest

Particularly sensitive zones are to be excluded from the zoning plan (MRN, 2013):

- Spawning grounds (lake trout, yellow walleye, northern pike); details are provided in section 2.10 *State of Faunal Populations*;
- Prey birds (3 bald eagle nests and 1 peregrine falcon nest).

Concerning the bald eagle, a 700-metre protection zone ensures the nest's protection (integral 300 metre protection zone and 400 metre buffer zone).

No forest management activity is allowed within the integral protection zone. Activities are allowed in the buffer zone from September 1 to March 15, i.e. outside the species' nesting period. However, these activities must exclude the construction of permanent infrastructures (roads, buildings, etc.).

As for the peregrine falcon, a species at risk, an integral protection zone of 250 metres on each side of the nest on the whole height of the rock wall or escarpment and a 50-metre strip from the limit of the slope break up and down the rock wall or escarpment must be respected. Additionally, there is a 100-metre buffer zone surrounding the integral protection zone. No forest management activity is allowed within the integral protection zone.

Activities are allowed in the buffer zone from September 1 to the end of February, i.e. outside the species' nesting period.

- A heron colony on Lake Kipawa is also legally protected (MDDEP, 2012) to ensure the sustainability of this breeding site. It is also listed in a PATP descriptive sheet, zone No. 08-011 among 29 other sites in the region.

It is mentioned that the wildlife habitats present an interest for bird watching and that they must be respected.

2.8.3 Peatland

The PATP description mentions 2 km² of peatland in zone 08-048, representing 0.3% of its surface area. The exact location is not mentioned and this figure is an indication only.

2.8.4 Sites of Archaeological Interest

According to MRN, the zone has an archaeological potential (7 known archaeological sites), but we have no information on the location, surface area or the type of archaeological artefacts.

2.8.5 Cultural Sites

An Aboriginal burial site and a church are found in Hunter's Point. To this day, we obtained no information on the existence of other cultural sites.

2.8.6 Beaches

Many beaches of different sizes are found around the lake, but they have never been accurately mapped. So we do not know about their condition and accommodation potential.

2.9 State of Plant Populations

Lake Kipawa belongs to the Southern Laurentians natural region, bioclimatic domain of the sugar maple-yellow birch forest (MDDEFP, 2011).

A complete description of vascular plants was done as part of an inventory done for the proposed Opémican National Park (MDDEFP, 2011).

We will mention only the floristic elements of interest to the extent that they represent issues for the Management Plan and can be located on the lake's wildlife territory. A total of 10 species likely to be declared endangered or threatened have been inventoried.

LATIN NAME	ENGLISH NAME
<i>Arethusa bulbosa</i>	Dragon's mouth
<i>Astragalus australis</i>	Indian milkvetch
<i>Boechea retrofracta</i>	Reflexed rockcress
<i>Ceanothus herbaceus</i>	Prairie redroot
<i>Elaeagnus commutata</i>	Wolf-willow
<i>Gratiola aurea</i>	Golden hedge-hyssop
<i>Lathyrus ochroleucus</i>	Cream-coloured vetchling
<i>Platanthera blephariglottis</i> var. <i>blephariglottis</i>	White fringed orchid
<i>Polygonella articulata</i>	Northern jointweed
<i>Utricularia geminiscapa</i>	Hidden-fruit bladderwort

Table 5: Floristic Species Likely to be Declared Endangered or Threatened in the Opémican National Park (Source: Dignard, 2010)

2.10 State of Faunal Populations

2.10.1 Birds

Species needing protection nest in the lake area: peregrine falcon, bald eagle and great blue heron (see paragraph 2.8.2 in the *Sites of Wildlife Interest* section).

An inventory was carried out as part of the *Atlas des oiseaux nicheurs du Québec* (Quebec nesting birds atlas) in the surroundings of the municipality of Kipawa: common nighthawk¹, chimney swift¹, olive-sided flycatcher¹ and rusty blackbird² have the following status: 1- *Likely to be declared* in Québec, *Endangered* in Canada; 2- *Likely to be declared* in Québec and *Special concern* in Canada (Sylvain Giguère, Environment Canada, personal communication).

2.10.2 Amphibians and Reptiles

Prospection work was carried out in search of herpetofaunal species (Environment Canada, 2010) on the Algonquins' ancestral land with Louis-Philippe Dénomme. Potential sites for Blanding's turtle and wood turtle were identified, but no individuals were observed.

Painted turtles and snapping turtles were seen or captured as well as many amphibians. None of these has a protection status except for the snapping turtle that has a *Special concern* status across Canada. For certain species, the geographical location represents the limit of the species range.

2.10.3 Fish Populations

The most interesting species for sports fishing are lake trout, yellow walleye and northern pike. Many pike spawning grounds were identified by the MRN in the shallow waters of the islands. Other species are also present: lake herring, lake whitefish, perch, sucker, common catfish, smallmouth bass and burbot (MRN, personal communication). Lamontagne mentioned 18 species from 9 families. The latter are important as forage species, but also for fishing to a lesser extent. In the early 20th century, commercial fishing was practiced on Lake Kipawa, mainly for yellow walleye and whitefish (Lamontagne, 1981).

We have good knowledge on Lake Kipawa's fish populations for it is part of the provincial lake monitoring network.

For information, a theoretical optimal harvest was assessed in 1975 (Lamontagne, 1981): 33,963 kg (Rounsefell formula) or 44,615 kg (Ryder formula) for the whole lake. Even though no longer valid today, these figures remind us that there exists a limit below which fish populations cannot reproduce naturally.

A problem raised is the barotrauma phenomenon: Literature reports that the impact of rod fishing on fish survival may be significant due to barotrauma. This phenomenon occurs mainly when fish are pulled from deep water and brought very quickly to the surface; swim bladders are squeezed and this compromises their survival in case of release (Faculty of fishing, 2013). Public education needs to be done, but injuries caused by fishing hooks are certainly more damageable (A. Fort, personal communication).

2.10.4 Lake Trout Situation

Lake trout is a salmonid broadly distributed in North America. It particularly enjoys cold (10°C), clear and well oxygenated water (MRNF, 2012).

In Lake Kipawa, lake trout has long been part of the most appreciated species for sports fishing. But fishing and all the demographic factors related to the species (late sexual maturity,

reproduction on shores subject to drawdown, etc.) have made the populations more fragile. Its popularity was such that the species was designated as overharvested in its whole range in the 1980's.

Year	1982-84	1989	1994	1999	2006	2009	2010	2011	2012
Number of lake trout harvested	12,600 ¹	26,300 ¹	5100 ¹	2800 ¹	1018 ¹	1758 ²	1991 ²	1683 ²	2070 ²

Table 6: Lake Trout Harvested in Lake Kipawa (¹: MRN, 2012 total sports fishing. ²: MRN, 2013, personal communication, represents only lake trout harvested in outfitting operations)

Source 1 is the estimated harvest by total sports fishing while source 2 represents only the lake trout fishing in outfitting operations.

The situation remains a concern and harvesting must be controlled and reasonable.

Other factors such as changes in the fish community or the habitat are also affecting lake trout. The most recent estimates for Lake Kipawa show that the number of sampled adults is low, but the immature individuals are well represented (following stocking): the situation should improve in the coming years when immature individuals reproduce, provided that the eggs are not affected by drawdown (Nadeau, D., 2008).

Stocking programs were carried out in 1992: 37,500 fry or 34% of the stock, 94: 33,500 or 37%, 96: 14,000 or 12% and 98: 42,300 or 50% (MRNF, 2012). The success of these campaigns will ideally be known in the coming years. The MRN is considering a new recovery plan, possibly this time with fish from outside the lake (A. Fort, personal communication).

2.10.5 Yellow Walleye Situation

Yellow walleye is part of the second group of most popular fish for sports fishing after the salmonid group.

Nadeau and Trudeau (2012) reported that the different catch size adjustment measures (> to 32 cm after 1999) and a good population recruitment allow the latter to be still abundant today. The reproductive potential seems to be sufficient to ensure the stock's self-perpetuation.

However, in recent inventories, a majority of fish were small size. Harvesting is responsible for a 50% mortality rate, which is clearly higher than the allowable maximum under these latitudes (38%).

Recruitment is ensured only by a limited number of spawners, which makes the stock vulnerable in case of disturbance (poor climate conditions, low larvae survival rate, for example). According to the authors, the current harvesting rate seems too high.

3. Individual Concerns

Two means allowed the public and stakeholders to express their concerns regarding the proposed development of Lake Kipawa:

- Consultation workshops during the public information meeting (approximately 100 participants)
- Online survey (**Appendix 3**), 140 respondents

Furthermore, the population and the stakeholders have communicated directly with the project manager.

A petition on the Web is aimed at maintaining the moratorium imposed in the 1980's, opposing the rare earths mining project and the hydroelectric projects. This petition allowed identifying fears towards the project (being processed in June 2013, more than 1800 signatures as of July 29, 2013).

The information was summarised into main groups of ideas as presented below.

3.1 Concerns

Concerns may be broken down into 11 groups of ideas and 44 subgroups from an initial number of 284.

- Land occupancy
- Invading species
- Water level
- Water quality
- Fish
- Fishing
- Maintening quality
- Protection
- On-going project follow-up
- Post-project
- Others

The main groups of ideas are detailed below:

Main groups of ideas	Subgroups of ideas
❖ Land occupancy	Risk of limiting access to the land by privatising and losing one of the last major public water body
	Regularise the Lake Grindstone situation
	Unauthorised cottages, including where recorded projects were already planned
❖ Invading species	Have more information (zebra mussel and others)
	Preventive control to avoid their introduction
❖ Water level	Priority action on this point
	Impacts on fish populations
	Level control (supervised by local people)
	It causes erosion
	Current levels are not consistent with population's needs.
❖ Water quality	Need to maintain and ensure compliance of septic systems and install new compliant ones in new constructions
	Need for emptying and cleaning stations for boats
	Protect the whole watershed to preserve water

Main groups of ideas	Subgroups of ideas
❖ Water quality	resources
	No additional use as it would pose a threat to water quality
	Monitor quality
	Need to have shoreline buffer strips (important role of municipalities).
❖ Fish	Need for additional and innovative protection measures
	Decrease of already fragile populations, avoid additional pressure
	Drawdown effect
❖ Fishing	Overfishing, including the use of nets: to be controlled
	Maintain and restore fishing quality: maintain stocking programs, resolve drawdown problems, impose new limits for fish size and quota, catch-and-release
	What will happen with ice fishing?
❖ Maintaining quality	Keep the lake as it is now: beautiful, quiet, natural, wildlife supportive, sufficiently accessible and visited, with its Aboriginal richness, no additional hunting and fishing, maintain the moratorium's positive impact
	Be able to maintain current activities (swimming, fishing, exploring, water-skiing, etc.)
	Avoid mistakes made on other lakes that lost their initial quality
	Protect this important canoeable waterway (notably between Lake Temagami and Lake Dumoine)
	Increased supervision by wildlife officers.
❖ Protection	Protect fauna and flora, the environment, landscapes and the whole ecosystem, leaving no ecological footprints
	Protect beauty, quietness
	Protect against deforestation, overcutting and replant trees after harvesting
	Protect the lake against pollution
	Enforce current regulations
❖ On-going project follow-up through regular communication on the	

Main groups of ideas	Subgroups of ideas
project and providing updates to the general public.	
❖ Others	Visual and noise pollution
	Regulate boating on the lake and in marinas for safety purposes. For example, regulate speed and enforce regulations
	Avoid unfair competition by cottage owners against outfitters
	Fight against tax increase
	Enhance relations with Aboriginal people
	Inform the public and the actors on the lake's condition
	Improve knowledge on the local environment
	Develop a short and long term management plan
	Anticipate and manage the increasing demand, considering the proximity with Ontario and the national park
	Take into account the operation of gravel and sand pits in the study area
❖ After the project, efforts will need to be made to involve the population including after January 31, 2014.	

Table 7: Concerns Regarding Lake Kipawa

3.2 Reasons for Refusing Development

From the 130 suggestions, 8 of these reasons for opposing development emerged, with 16 rationales.

- Adverse effect on lake's integrity and quality of life
- Negative impacts
- Against industrial development (mining, hydro development, etc.)
- Against cottage rental
- Maintaining the lake as is now
- Against Opémican Park
- Against outfitting development and commercial development
- Against vacationing sector development

Reasons to oppose development	Rationales for refusing development
❖ Adverse effect on lake's integrity and quality of life	The lake will no longer be what it is now if developed
	Current beauty of the lake makes it attractive

Reasons to oppose development	Rationales for refusing development
	Preserve quietness, low number of users, limited traffic (road and waterway) and fishing at current levels
❖ Negative impacts	Traffic increase
More development could result in...	Increased wood cutting
	Decreased or increased property value (depending on beneficial or detrimental land development)
	Overfishing and illegal fishing trade
	Pollution causing decrease in water and air quality
	Decreased lake popularity (ensured by low development)
	Development of new camping grounds would adversely affect the existing one.
❖ Against industrial development (mining, hydro development, etc.) that could threaten water quality and lake viability.	
❖ Against cottage rental that causes unfair competition to outfitters.	
❖ Maintaining the lake as is now.	
❖ Against Opémican Park.	
❖ Against outfitting development and commercial development: there is already enough and a number of outfitters can hardly make it.	
❖ Against vacationing sector development (including Aboriginal): would put pressure on lake, water, fauna and flora.	

Table 8: Reasons for Opposing Lake Kipawa's Development

3.3 Type of Development Considered

A total of 74 development ideas are considered and they were broken down into 10 main groups and 27 modalities.

- Development
- Development based on outdoor activities and respect for nature
- Development in already developed sectors
- Fish farming development
- Limited and controlled development
- To be developed for boating
- Other type of development
- Positive impact on the economy
- Legislation

- Compliance

Main groups of ideas for Modalities development	
❖ Development of new building lots	Develop because it's impossible to build in ZECs and parks
	Give access to new lots
❖ Development based on outdoor activities and respect for nature	Lake Kipawa could become a preferred destination for hunting and fishing
	Create a park with the whole lake
	Maintain the lake's history
	If there is development, it must respect nature and even try to enhance its value.
Development in already developed sectors: Kipawa, Laniel, Dorval Bay, MacAdam Bay, Lake Grindstone.	
❖ Fish farming development	May represent a solution for certain people, for example, by using fishing license fees for funding.
❖ Limited and controlled development	Implement rules and develop in accordance with legislation (compliance ensured by MRC and MRN)
	Develop with limited number of projects per year
	Develop 10 to 20 cottages in 50 sectors
	Develop an additional 10-20%, that's all
	Develop at least at a distance of 500 metres from camping or portage sites
	Improved reception facilities by opening public beaches, avoid privatising everything, implement quality recreational infrastructures
	Control the purchase of outfitting businesses by individuals, promote controlled commercial development, based on what already exists (reinforce outfitting facilities, among others)
	Develop progressively and supported by the necessary infrastructures (roads, garbage pick-up, septic tanks, etc.)
	Develop to be able to take care of the lake and avoid its deterioration
	Create an independent organisation mandated

Main groups of ideas for Modalities development	
❖ Limited and controlled development	<p>to ensure the protection and monitoring of the environment's quality</p> <hr/> <p>Manage economic spinoffs with a welcoming attitude towards people and not by developing constructions</p> <hr/> <p>Control access to hunting and fishing and develop in collaboration with First Nations</p>
❖ To be developed for boating	<p>Washing and pumping/emptying stations</p> <hr/> <p>Other islands developed to accommodate boaters and canoeists</p>
❖ Other type of development	<p>Hotels, restaurants, canoe and kayak rental</p> <hr/> <p>Commercial sector</p>
❖ Positive impact on the Témiscamingue economy that needs it	
❖ Legislation: toughen up the laws on septic tanks and other effective legislations at Lake Kipawa	
❖ Ensuring compliance of illegal housing units	

Table 9: Type of Development Considered for Lake Kipawa

3.4 Problems to be Resolved before Developing

At the public consultation meeting and then through the survey, 4 important problems were identified and must be resolved before proceeding with development.

- Stabilise water level before any further development
- Be informed on tax rate changes, risk of seeing residents' tax increase if new infrastructures are built (roads, power lines, etc.)
- Document the current situation and find solutions to current problems before considering new developments
- Implement control measures and regulate sewers and pollution.

4. Group Concerns

4.1. Municipalities

Béarn: Luc Lalonde

No answer.

Laniel: Yvon Gagnon

The president of Laniel's Municipal Committee, Mr Yvon Gagnon, speaking on behalf of his fellow citizens, summarised their concerns as follows:

Drawdown tests could allow reaching levels more consistent with the needs.

As for fishing, the new regulations proposed by the Department should be decided with the outfitters to maintain the interest of clients and other users. These regulations must be respected. The impact of net fishing must be better documented. Finally, logging should be monitored more rigorously.

Tourism development could be a good opportunity if it is controlled to avoid reaching too high a density (for example, number and capacity of outfitting facilities must not be excessively high).

Residential and vacationing development should be left to the municipalities' discretion. Harmonising regulations between municipalities for shoreline development and septic tanks must be part of the management plan.

Kipawa: Norman Young

The mayor of Kipawa, Mr Norman Young, summarised the concerns of his fellow citizens as follows:

The health condition of Lake Kipawa is not presently at its best and yet, it's a real treasure. We need to make a good assessment of its current condition in order to plan for the future.

We need to look at Lake Kipawa as a rich asset to be preserved and not as an opportunity for revenues. It's important to promote tourism.

The future of the lake's users depends on its healthy condition; if it deteriorates, many sectors would suffer (municipalities, industries, Aboriginal communities, etc.). The choices we make at this time are crucial.

Consulting and providing advice to local residents is an important process to be developed by government authorities.

Témiscaming: Philippe Barette

The mayor of Témiscaming, Mr Philippe Barette, summarised the concerns of his fellow citizens as follows:

The consensus to be reached is allowing development, desired by many, without adversely affecting the quality of one of the 10 most beautiful lakes in Québec. A loss of quality would result in a decrease in Lake Kipawa's monetary and environmental value. Development can't be undertaken before developing a good knowledge of the territory and resolving existing problems.

It's important to ensure public awareness and education of all users on how to behave to preserve the resource.

4.2. Environmental and community sector

Environmental association: Association pour l'avenir des ressources témiscamiennes, Johanne Descoteaux

The environmental sector, supported by Johanne Descoteaux, is of the opinion that it's not possible to take a position now on the relevancy of any type of development. It's preferable to

document the existing problems and identify the unknown factors. Determining what type of development would be possible would allow providing a more informed opinion.

We absolutely need to avoid a form of development that would result in a loss of Lake Kipawa's many qualities. Knowing that there are already existing problems, it seems difficult to consider more development. The precautionary principle is a must if we want to be able to develop our resources without threatening them.

Shoreline owners association: Henri Laforest

As the shoreline owners associations' representative, Henri Laforest shared many of his group's concerns:

The price of land has skyrocketed in the past decades, which leads to the repurchase of property by people from outside the region.

Development must not be detrimental to the lake's quality and must be well organised.

Compliance with regulations must be monitored by municipalities.

Users association: vacationers and Témiscaming-Kipawa Chamber of Commerce: Daniel Goulet

After having consulted his nautical recreation company's clients, many of Lake Kipawa boaters and residents, Daniel Goulet presented the following concerns:

The implementation of riparian buffer strips and the preservation of the landscape (against deforestation for example) are essential.

According to this group, when we talk about development, we can't just say yes or no:

Yes to the development of marinas equipped with pumping stations, public beaches with wharfs and washrooms, stopovers all around the lake with minimum camping services (washrooms, etc.)

No to the development of new residences for the time being (if such development in the future, make sure to have strict standards). Before initiating new real estate projects, make sure that current residents respect certain criteria: septic fields, shoreline buffer strips, maximum of two wharfs per property so as not to disfigure the landscape.

No to the mining project that does not reflect the idea of preserving water quality.

For the Témiscaming-Kipawa Chamber of Commerce, also represented by Daniel Goulet, development that could have beneficial impacts on the economy is desirable. Mining and other development projects are acceptable only if they are nature and environment friendly. Comprehensive studies must be completed prior to each project.

Fédération des Chasseurs-pêcheurs: Gino Lafrenière

No answer.

Citizens:

- Claude Bérubé

As a citizen and frequent user of Lake Kipawa, Claude Bérubé agreed with many concerns already expressed.

The priority to focus on is water quality.

Actions and projects must be well prioritised to avoid being overwhelmed.

- **André Lapierre**

As a citizen, André Lapierre said that the important thing is to preserve the quality of the water, which is threatened by human and industrial activities.

Obsolete septic tanks and the use of two-stroke motor vehicles are threats to water quality while there should be no industrial activity at all near the lake.

It would be important to improve the current situation and control it before going ahead with new developments (which must be sustainable, if this is the case).

- **Clyde Mongrain**

As a citizen and member of the Aboriginal community of Eagle Village, Clyde Mongrain believes that the massive arrival of residents from outside the territory and the province is a problem, particularly when they don't want to follow the rules in place. Causing problems and then leaving cannot be excused without financial penalties.

He described many cases where existing rules were bent. The rules must be better enforced to limit abuse (fishing beyond quotas, tree cutting for private use, etc.).

He mentioned that there is a difference between Aboriginal and non Aboriginal people which is still not recognised.

- **Thomas Mongrain**

As a resident of Kipawa, Thomas Mongrain is mainly concerned by the fish resource: fishing by individuals and First Nations is not the main problem (the latter fish mostly walleye and pike, and lake trout to a lesser degree); it's the outfitters who threaten the fish populations the most.

There is a real problem of relations between First Nations and non Natives.

Concerning the potential development, the Department of Natural Resources can oppose development carried out in the wrong places. If there is development, tourism and camping grounds are desirable, but no new cottages.

- **Karen Kowalchuk & Stephen Kilburn**

As owners and users of the lake, Karen Kowalchuk and Stephen Kilburn greatly appreciate Lake Kipawa's preserved biological quality and quietness.

Everything that could have an impact on the existing qualities and characteristics is a concern for them.

There is a need to have more knowledge in order to make good decisions on what can possibly be done for the lake; existing standards must also be respected. Public education and awareness are of prime importance.

4.3. Economic sector

Outfitters (economic and tourism sector): Yves Bouthillette

After having consulted many outfitters on Lake Kipawa, but also clients, Mr Bouthillette summarised the economic sector's opinion as follows:

We must not proceed with development before current problems are resolved, and they are many. One example is the impossibility for outfitters to purchase the lots where their facilities are located while they sell to non residents.

Wildlife remains the priority as well as the natural environment on and around the lake.

Fight against water, visual and noise pollution.

If there is development, it should be done by consolidating the existing tourism infrastructures before anything else (including the outfitting facilities).

Development must be done with a guarantee of sustainable and environmentally friendly development.

It is high time to set up a group (committee or association), dedicated particularly to Lake Kipawa, that could be the preferred interlocutor with specialists, among others.

Tourism: Simon Laquerre-Dany Gareau

From a tourism perspective, Lake Kipawa is an underdeveloped treasure that is one of the 10 most beautiful lakes in Québec. It must be protected from pollution (gas, non-compliant residential septic tanks, etc.), overfishing, negative impacts of drawdown and industrial development, to name a few.

Development is possible, but based on recreation and tourism (companies and the future Opémican Park represent a good support rather than starting new projects). It should be centralised under an official entity (Community Wildlife Area, for example). Allowing the largest number of people (local and visitors) to discover Témiscamingue and the Lake Kipawa area would promote a better knowledge and, consequently, its conservation. Concerted management is desirable as well as the development of adventure tourism.

Industrial sector: Claude Brisson

Matamec Explorations wished to summarise its involvement in two main points:

For the time being, Matamec is proposing a mining project that won't go into production before 18 to 24 months, which allows the public to clearly understand the project and to conduct a complete environmental assessment.

Matamec will try to limit the project's impacts as much as possible and, in return, the positive effects could be many: for example, studies on the knowledge of the territory that will be made available, funds available for the rehabilitation of obsolete septic facilities or houseboat pumping stations. The economic benefits for the MRC in the form of property tax could immediately benefit the region.

Témis-accord Chamber of Commerce: Robin Larochelle

The region's development is important, but must not result in wasting resources.

The mining project is a concern, but if it goes ahead, it must respect the environment and allow investing funds for the lake's protection.

Existing septic facilities must be made to comply with regulations and the new ones should be strictly monitored.

Real estate development must benefit the residents and not people from outside the province.

4.4. Aboriginal Communities

Without having taken part in the process, the Aboriginal communities of Eagle Village, Wolf Lake and Timiskaming have made public a Statement of Asserted Aboriginal Rights and Title (Algonquin Nation, 2013). The following paragraphs summarise the content of this Statement with a view to presenting as accurately as possible the issues and concerns of these Algonquin communities.

The document is intended to set out the evidence that these three communities are all descended from the Algonquin Bands who traditionally used and occupied a territory that includes Lake Kipawa since time immemorial, thus justifying their claims to land titles and rights. According to the document, these communities have never surrendered their rights and titles, which therefore continue to exist to this present day.

They deem necessary to give their free, prior and informed consent before any development activities within these traditional territories take place.

Their fear towards Lake Kipawa's potential development is to see the lake's resources and quality threatened for ever (personal communication).

The lake is the main source of drinking for the First Nation community of Eagle Village.

The Hunter's Point Aboriginal settlement and the Indian reserve of Kebaowek are enclaved in the zone.

The Aboriginal community members use the area to practice the traditional activities.

5. Summary of Issues and Concerns

In this section, we will review the issues at stake to better identify the impacts based on literature and experts' reports. For each theme, the concerns expressed in the consultation are presented. However, let us keep in mind that there exist current problems that are not addressed for the time being and that there are sometimes information gaps (non existing data).

Four (4) main themes encompassing all the issues:

- Permanent and temporary residence
- Fishing and fish stocks
- Leisure boating and use of Lake Kipawa
- Commercial and industrial activities

5.1 Permanent and Temporary Residence

This section takes into account the issues and concerns related to permanent housing (residences) and private vacationing infrastructures (seasonal cottages for example). To sum it up, any type of construction on the shores, except for outfitting operations and other businesses, which will be addressed in the *Industrial and Commercial Development* section.

5.1.1 Documented Issues and Problems Raised

☞ Year-round residents and seasonal population:

The year-round residents and seasonal population live in a total of 243 residences and 462 cottages within the 300-metre riparian strip. With the available data, it is impossible to determine whether the lake's support capacity has been reached. This being said, the recent occurrence of blue-green algae in the lake could indicate a deterioration of the water quality possibly caused by vacationing.

Occupants without permit or title are found in many places. This occupancy and its impacts must be taken into account.

☞ Potential residential development:

On private land:

- Red Pine Chute

Land adjoining Red Pine Fall were transferred to Commonwealth Plywood at the turn of the last century to allow for the implementation of a sawmill and infrastructures for employees and operations. Consequently, this land was owned by the company who developed 40 constructible lots. Other sites might also be sold in the southwest sector of Red Pine Fall.

- Laniel

The same happened in the municipality of Laniel. The land belongs to real estate promoter Jolatem. 18 lots were up for sale and some of them are still available (approximately 10 in May 2013).

On public land:

- Kipawa

The municipality of Kipawa has a residential development project since 2011 that would consist in extending Kipawa Road and laying out 16 lots for residential development on public land.

There seems to be a total of 100 vacant lots within the 300-metre shoreline of the Lake Kipawa Concerted Management Plan. Few details were provided as to what end these lots would be used: there are no buildings, but the lots are not necessarily available; they may be used for various purposes (MRCT, 2013).

☞ Documented and likely impacts of residences and cottages

The management, follow-up and upgrading to standards of the residences' and cottages' septic systems are important elements to consider for they may represent a source of water pollution. For future development, septic tanks should comply with the regulatory requirements. Very little information is available on the condition of the residences' existing septic systems around the lake except for surveys by the municipality of Kipawa indicating that a majority of septic systems are of special concern (OBVT, 2012).

Cottages may also have an impact on the riparian strip, which must be kept in good condition for various reasons:

- Protect water and aquatic ecosystems (riparian buffer strips are a good water filter, they limit algae proliferation, help maintain water transparency, stabilise the banks, etc.);
- These strips act as an interface between the aquatic and terrestrial environments, and they promote biodiversity;
- Abundant riparian strips are a guarantee of landscape quality.

Information on the state of riparian strips in already inhabited sectors is not available except for the Kipawa sector where most of them have been highly artificialised and are therefore in poor condition from an environmental and landscape perspective.

The occupation of new lots may encroach upon sites of significant archaeological value or of interest to First Nations, which sites should be identified in advance and preserved. This occupancy must also take into account the other available local data (spawning grounds, threatened species, etc.).

Finally, an increase in vacationing/cottages would necessarily mean increased throughput and use of the water body in certain sectors with the potential impacts discussed in the *Fishing and Fish Stocks* and *Pleasure Boating and use of Lake Kipawa* sections.

5.1.2 Concerns

People have diverging concerns regarding housing. Some say that development should be halted and the moratorium maintained because any development would be detrimental to the lake's protection and its main attraction which is its low occupancy. Others say that development is possible and demand is real, but there must be no impact on the natural environment. In all cases, harmonised management is necessary for the lake as a whole.

Many people are of the opinion that septic tanks, riparian strips, type of constructions, landscape maintenance, assurance of not causing visual and sound pollution are all parameters to be rigorously monitored.

An important factor would seem to be managing the increased impact that would result from these potential new constructions. Boats, docks, polluting emissions are all factors that were mentioned. Furthermore, certain people are concerned about the development of new building lots for they would become private and therefore inaccessible to a majority; this could also result in a property tax increase.

Another concern is competition by people renting their cottages versus outfitters who have higher standards. For some, it is the municipalities' responsibility and jurisdiction to decide on desirable development.

5.2 Fishing and Fish Stocks

5.2.1 Documented Issues and Problems Raised

The state of fish stocks was described in a previous section: *2.10 State of Faunal Populations*, but it is worth repeating that it is a major issue for the lake. We can sum up the issue by saying that the fish stocks, and more particularly the popular sports species, are intensively harvested since the beginning of the 20th century.

Many actions are currently being assessed to improve fish stocks, including changes to fall drawdown and additional monitoring measures for fishing.

☞ Documented and likely impacts

Many issues influence fish populations and consequently the available stocks for fishing. Water levels influence fish stocks, particularly lake trout. The introduction of invasive exotic species and poor water quality are also potential threats to fish stock and fishing quality.

Pressure exerted on fish is obviously too strong on certain species. However, it represents a true attraction for the lake, which confers a lot of importance to fish populations.

An increase in fishing would necessarily mean an increase in the lake's users throughput with the potential impacts discussed in the *Pleasure Boating and Use of Lake Kipawa* section.

5.2.2 Concerns

Many of those who expressed their view on this matter believe that fish stocks are overfished, which could be detrimental to the anglers' interest. Anglers are of the opinion that fish populations are decreasing in both number and size. For others, Lake Kipawa could become a preferred fishing destination and this asset could be enhanced.

Certain respondents believe that fishing activities and collateral impacts on both fish and the environment (introduction of invasive exotic species, pollution by boats, etc.) should be monitored. Water levels are incompatible with anglers' expectation. A number of anglers wish to maintain ice fishing. Other lake users fear the effect of fishing that could cause visual and sound pollution.

To ensure a consistent management, a water body must be managed from a global perspective.

5.3 Pleasure Boating and Use of Lake Kipawa

5.3.1 Documented Issues and Problems Raised

Lake Kipawa is renowned and used by people coming from outside Québec (Ontario, USA and, to a lesser extent, Europe). These people are to be taken into account in the discussions leading to the Action Plan because all activities may have an impact on the lake's protection and also represent a potential economic generator.

☞ Documented and likely impacts

The growing use of Lake Kipawa is a factor in the introduction of invasive exotic species, changes in the lake's quietness, waste production, water pollution or simply an increased pressure on the natural environment.

The existing boat launching ramps are partly unknown and one of the challenges is to control these infrastructures, to equip them with septic disposal systems and washing stations. There are no boat washing stations in Témiscamingue and only one septic disposal unit on Lake Kipawa (Laniel). Without these facilities, it is common to observe pollution by boats and the proliferation of undesirable species.

5.3.2 Concerns

A number of people wish recreotourism to be supported through a better access to quality infrastructures. The Opémican National Park offers an opportunity, but infrastructures are required on the whole lake, according to these respondents. Many said that development could take the form of an increase in environmentally low-impact recreotourism. There are many possible uses for visitors: boating, canoe-kayak, surf, etc., but each one has impacts people are concerned about.

A number of users are concerned about the introduction of invasive exotic species, visual and sound pollution and pollutants in general (waste, oil, gas, etc.). During the consultations, certain people complained about the negative impact of water levels on these activities.

Concerted management of all these activities is necessary for the whole lake.

5.4 Commercial and Industrial Activities

5.4.1 Documented Issues and Problems Raised

☞ Mining activities

Matamec is assessing the feasibility of mining a rare earth deposit southeast of Lake Kipawa. The prospect of exploiting this type of lowly mined mineral in North America causes concerns about the impact it could have on the environment (radioactive potential, landscape, dust emission, water quality (surface and underground), use of water volumes for processing, waste rock treatment, truck traffic, etc.).

Claims and exploration activities by many companies are present near the lake and could result in more mining operations.

☞ Forestry

Forest cuts are planned around Lake Kipawa and MRN now takes into account landscape preservation based on an established protocol.

☞ Hydro-electricity

The development of two mini hydro-electric power stations was considered on the lake's outlets. The aboriginal project in Kipawa (approx. 45 MW), on Gordon Creek (a follow-up will be done by the editor during the year 2013), as well as Hydro-Québec's Tabaret project (approx. 145 MW) on Kipawa River, which was abandoned. The potential impact would be mainly on the rivers as such, but would not be absent on Lake Kipawa. Levels may be affected by the use of a minimum flow for the power stations operation.

☞ Opémican National Park

The National Park was officially commissioned in March 2013; it ensures a strict protection combined with recreotourism development generating economic benefits on an area of approximately 250 km².

☞ Outfitting development

With 21 outfitting operations and a 706-place accommodation capacity in 126 camps, the Lake Kipawa outfitters generate economic benefits and tourist traffic. Requests are made by the outfitters to increase their accommodation capacity (MRN, personal communication), which was prohibited by the moratorium. Should this possibility materialise, it would increase tourist traffic and fishing on Lake Kipawa with the above mentioned impacts.

☞ Documented and likely impacts

If not adequately controlled, each commercial and industrial activity may have a major impact on the environment, including water quality. Consultations and consideration for social acceptance are provided for in the procedures of industrial projects. As for commercial projects, the choice must be rational and take into account the impact it will have on the lake.

5.4.2 Concerns

Many citizens have concerns about the potential effects of commercial and industrial activities (see petition) and, in certain cases, they categorically refuse them. A significant concern emerged from the consultations regarding industrial activities. Many choose to bluntly oppose

industrial development while others wait for evidence that any negative impact can be limited or avoided.

A number of respondents look forward to commercial development and see an opportunity for regional economic development. Others do not want commercial projects to be detrimental to the natural and social environment.

Harmonised interventions at the lake scale is necessary.

5.5 Aboriginal Claims

The Aboriginal communities of Eagle Village and Wolf Lake have expressed a number of concerns:

- They reiterated their Aboriginal rights and titles (Algonquin Nation, 2013) to the land. They deem necessary to give their free, prior and informed consent before any development activities;
- Their main fear is to see the resource threatened by excessive development;
- They consider they have not been adequately consulted on the Opémican National Park project (Press release, March 25, 2013)
- The rare earths mining project will significantly affect their territory (as stated in the Statement of Asserted Aboriginal Rights and Title and in a letter to Peter Kent, federal Minister of the Environment (Chief Harry Saint-Denis, Chief Madeleine Paul, 2013). They say the mine would not allow achieving their objective to protect land, water and the environment for current and future generations.

List of acronyms

- AGZAT: Association des gestionnaires de zecs d’Abitibi-Témiscamingue (ZEC managers association)
- APAT: Association des pourvoyeurs d’Abitibi-Témiscamingue (outfitters association)
- APART: Association pour l’avenir des ressources témiscamiennes (association for the future of Témiscamingue’s resource)
- ATRAT: Association touristique régionale de l’Abitibi-Témiscamingue
- CEHQ: Centre d’expertise hydrique du Québec (Quebec water expertise centre). An agency of the Ministry of Sustainable Development, Environment, Wildlife and Parks.
- CREAT: Conseil régional de l’environnement d’Abitibi-Témiscamingue (regional environmental board)
- CRÉAT: Conférence régionale des élus d’Abitibi-Témiscamingue (regional board of elected officials)
- CRRNT: Commission régionale des ressources naturelles et du territoire (regional board on land and natural resources)
- FAPAQ: Commonly known as Société de la faune et des parcs in French
- FQCK: Fédération québécoise du canot et du kayak
- MLCP: ministère des Loisirs, de la Chasse et de la Pêche (former Québec ministry of recreation, hunting and fishing)
- MRCT: Municipalité régionale de comté de Témiscamingue (Témiscamingue regional county municipality)
- MDDEP: ministère du Développement durable, de l’Environnement et des Parcs (Ministry of Sustainable Development, Environment and Parks)
- MRN: ministère des Ressources naturelles (Ministry of Natural Resources)
- OBVT: Organisme de bassin versant du Témiscamingue (watershed management organisation)
- ORRPB: Ottawa River Regulation Planning Board
- PATP: Plan d’affectation du territoire public (public land use plan)
- PBDE: Polybrominated Diphenyl Ethers
- PCB: Polychlorinated Biphenyls
- PDRRF: Plan de développement régional associé aux ressources fauniques (regional development plan for wildlife resources)
- PRDTP: Plan régional de développement du territoire public (regional public land development plan)
- QOF: Québec Outfitters Federation
- PRDIRT: Plan régional de développement intégré des ressources et du territoire (regional plan for integrated land and natural resource development)
- SÉPAQ: Société des établissements de plein air du Québec

- SDT: Société de développement du Témiscamingue (Témiscamingue development corporation)
- TCDD: 2,3,7,8- tetrachlorodibenzo-p-dioxin
- TCF: Territoire à caractère faunique (area of wildlife interest)

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Appendices

Appendix 1: Project Plan – Lake Kipawa Concerted Management Plan

The Project Plan is available at the following address: http://obvt.ca/fichiers/Project-Plan_Lake_Kipawa.pdf

Appendix 2: Main regulations in Laniel for residential development around Lake Kipawa.
(Source: Laniel Municipal Committee)

SIZE OF MAIN BUILDING:

The main building must have a minimum habitable surface area (floor area) of 53.7 square metres (580 square feet) for residences.

MAIN BUILDING LAYOUT:

The main building must be located more than 15 metres (50 feet) from the natural high water line.

SIZE OF SECONDARY BUILDINGS:

Secondary buildings including storage sheds, hangars, garages, car ports and greenhouses must comply with the following criteria:

- The combined area of secondary buildings, annexes and accessory buildings must not exceed 10% of the lot's surface area.
- A maximum of 3 secondary buildings per property
- The height of the secondary buildings' must not exceed the height of the main building.

SECONDARY BUILDING LAYOUT:

Secondary buildings must be located more than 10.5 metres (35 feet) from the natural high water line and 1 metre (3.3 feet) from any lot line outlining the property.

Gazebos and decks may be located at less than 1 metre (3.3 feet) from the natural high water line, provided they comply with the following conditions:

- rest on pilings (the floor must not be in contact with the soil)
- have a maximum area of 18.5 square metres (200 square feet)
- the walls must not exceed a height of 1 metre (3.3 feet)
- the building must have an aesthetic look and not deface the surrounding landscape

Important phone numbers:

Martial Perreault, municipal inspector, Laniel, 819-634-2066

Susie Trudel, municipal manager, 819-634-3123

Henri Laforest, septic system consultant, 819-634-3612

BOATHOUSE SIZE:

Boathouses must comply with the following conditions:

- maximum length: 10 metres (33 feet) or 10% of the water body width
- maximum width: 8 metres (26.4 feet)
- Maximum height: 2.5 metres (8.3 feet)

- That provincial, federal and municipal regulations are complied with.
- The boathouse must not impede free circulation.
- One boathouse per property
- The construction of boathouses is allowed in all sectors of Lake Kipawa within Laniel's limits.
- The boathouse must have a roof only (sides open).
- Materials used for roof must be new and permitted materials are: pre-painted sheet metal, asphalt shingles, canvas or vinyl.

DOCK CONSTRUCTION:

A permit is required for building a dock. For new constructions, only floating docks, pillared or piled docks are permitted. If the dock exceeds 20 m², permission from the Centre hydrique du Québec is required in addition to the municipal permit.

PERMIT OR AUTHORISATION FOR WORKS ON BANKS AND LITTORAL ZONE:

For all constructions, works and all works likely to destroy, modify the banks' vegetation cover, or to bare the soil, or affect its stability, or encroaching on the littoral zone, an authorisation or permit must be obtained from the municipality or the government.

However, the following constructions and works related to vegetation may be permitted:

Pruning and trimming required to make a 5 metre (16 feet) opening, when the bank slope is over 30%, as well as to cut a trail or build stairs providing access to the water body. However, the stairs width must not exceed 2.4 metres (7.8 feet) and rest on pilings on most of its length, so as to allow vegetation to grow under it.

SEPTIC SYSTEM:

Since January 2005, a new regulation on septic systems by the Ministry of Environment is effective. A soil survey, location plan and a recommendation for the septic system are mandatory.

Upon reception of this information, the municipal inspector will deliver a permit to install a septic system.

Appendix 3: Sondage sur le Lake Kipawa – Survey about Lake Kipawa

Survey about Lake Kipawa (before may 6th 2013)

Lake Kipawa is a designated wildlife habitat (territoire à caractère faunique). Thus, the government expects the various resource and territory management practices to strive to maintain the wildlife pool and to provide a favorable frame for future uses. Taking this into account, please answer the following questions :

Name of the person or organisation (and it's representative) :

If you wish to be reached

Phone :

Email :

What are your concerns regarding Lake Kipawa ?

Should Kipawa lake be developed ?

Yes

No

If so, how do you envision the development of the Lake ?

If not, why ?

You can join this survey by mail, email or fax. See at the bottom of the page. Same survey is available directly at : <http://obvt.ca/kipawa>. If you have any question, just contact us.