Photo 24. Fens and white pine stands (M.-A. Bouchard, MDDEP)

4.5 Réserve de biodiversité projetée Wanaki

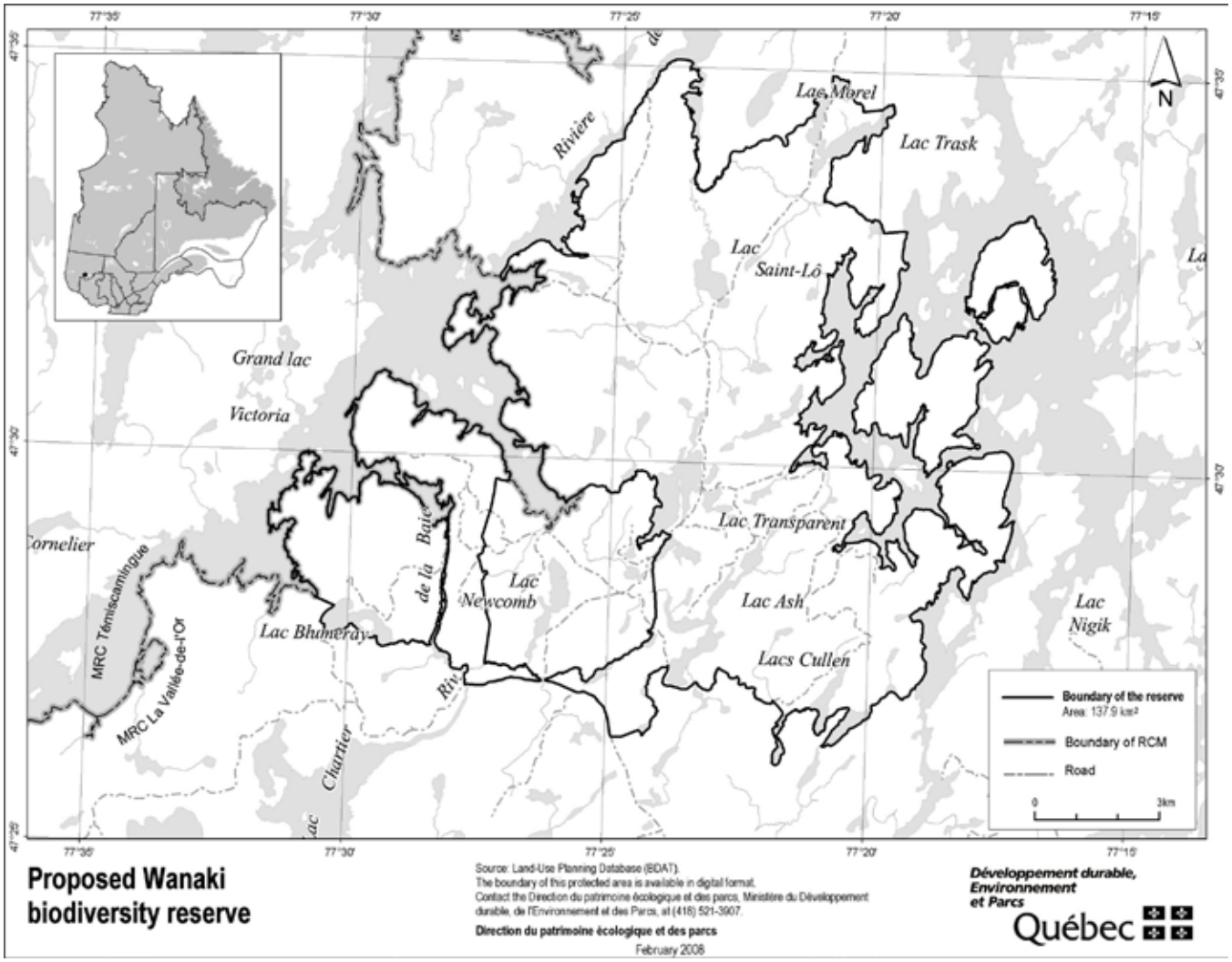
4.5.1 Location, boundaries and dimensions of the proposed reserve

The Réserve de biodiversité projetée Wanaki is located in the Abitibi-Témiscamingue administrative region, between 47° 26′ and 47° 35′ north latitude and 77° 16′ and 77° 31′ west longitude. It is roughly 65 km south of downtown Val-d'Or and near the Kitcisakik Algonquin community. It covers an area of 137.9 km^2 and is part of the Réservoir-Dozois unorganized territory, which in turn is part of the MRC de La Vallée-de-l'Or. The boundary of the reserve has been set to take into account the critical maximum elevation of hydropower generating structures for the Dozois Reservoir (346.26 m) and Grand Lac Victoria (326.14 m).

4.5.2 Legal framework

The territory described below has the status of a proposed biodiversity reserve, pursuant to the *Natural Heritage Conservation Act*. The same Act governs its regime of activities and its conservation plan.

Figure 105. Geographical location and boundaries of the Réserve de biodiversité projetée Wanaki, as presented in the summary conservation plan



4.5.3 Place name

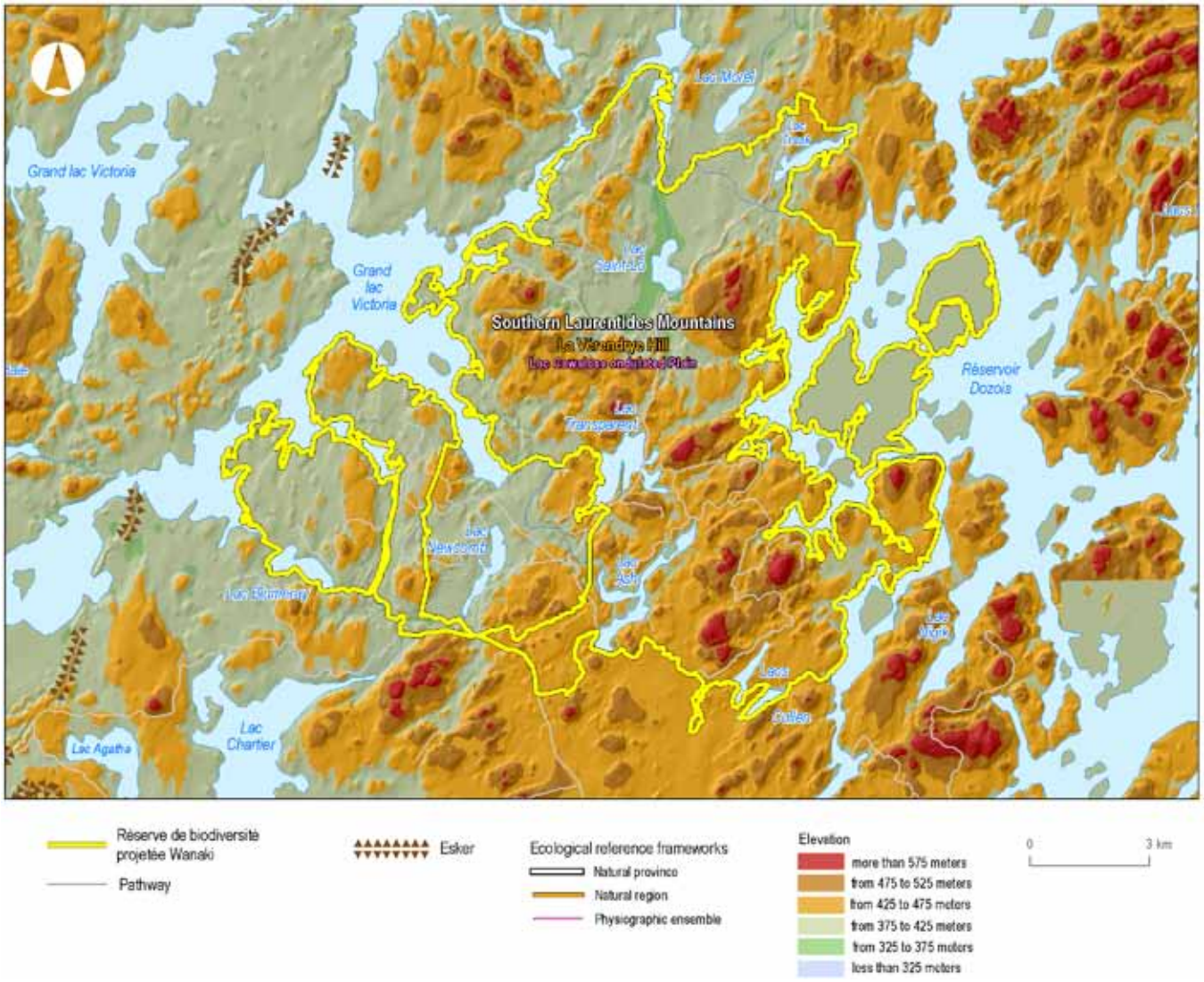
The provisional place name is the Réserve de biodiversité projetée Wanaki. The place name proposed for the granting of permanent protection status is the same since the term corresponds to the name that the community of Kitcisakik proposes to give the future village that it wishes to build. What is more, one of the sites under study for the new village is enclosed by the proposed biodiversity reserve. "Wanaki" means peace in the Anishnabeg language.

4.5.4 Ecology

Physical environment

As noted in the "Climate" section, the region of the proposed biodiversity reserve has a subpolar, subhumid climate with a medium growing season. The territory is located in the Grenville Geologic Province and its basement rock is entirely made up of granite gneiss and tonalitic gneiss.

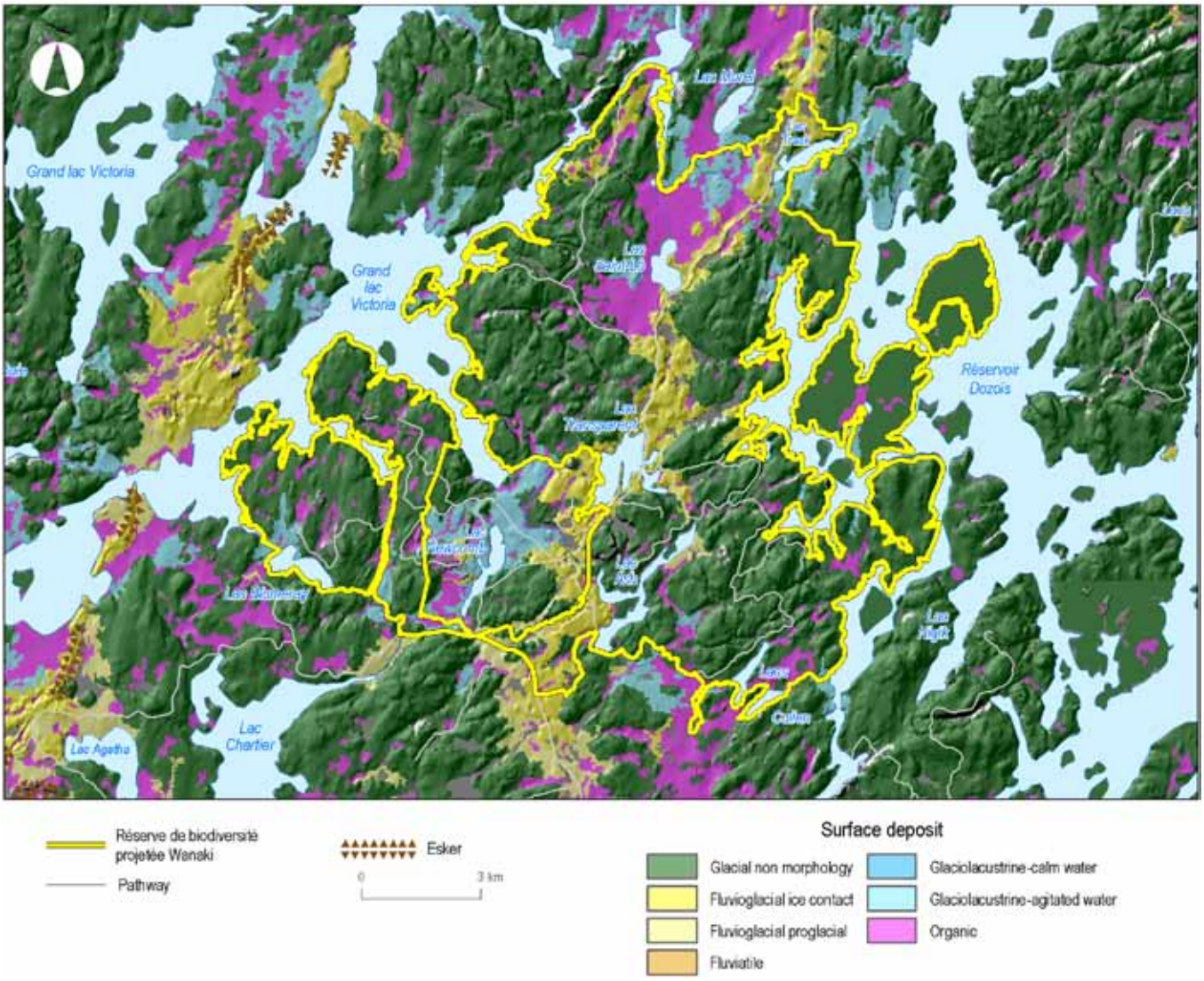
Figure 106. Topography of the Réserve de biodiversité projetée Wanaki



The hillocky landscape is fairly subdued and varies from 330 m to 440 m in altitude, with an average altitude of approximately 350 m (Figure 106). The Réserve de biodiversité projetée Wanaki is located in the La Vérendrye Hillocks natural region (Southern Laurentians natural province), more precisely in the Lac Cawatose rolling plain physiographic unit.

However, the reserve comprises a group of hillocks divided in its centre by a north-south glaciofluvial system. Several flat or depressed areas to the west of the glaciofluvial fluting contain sandy glaciolacustrine deposits and organic deposits (Figure 107), mainly minerotrophic peatlands.

Figure 107. Geomorphology of the Réserve de biodiversité projetée Wanaki



The Wanaki physiographic sere illustrates the forest characteristics associated with the features of physical environments (Figure 108).

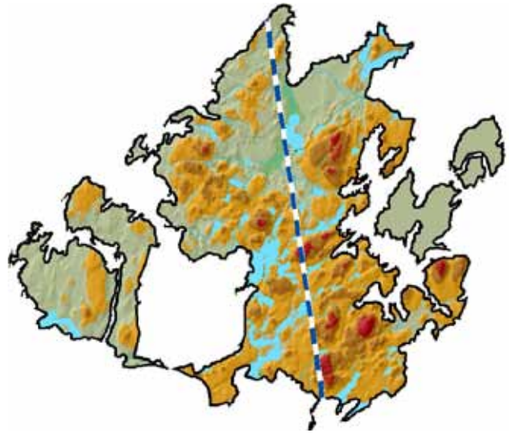
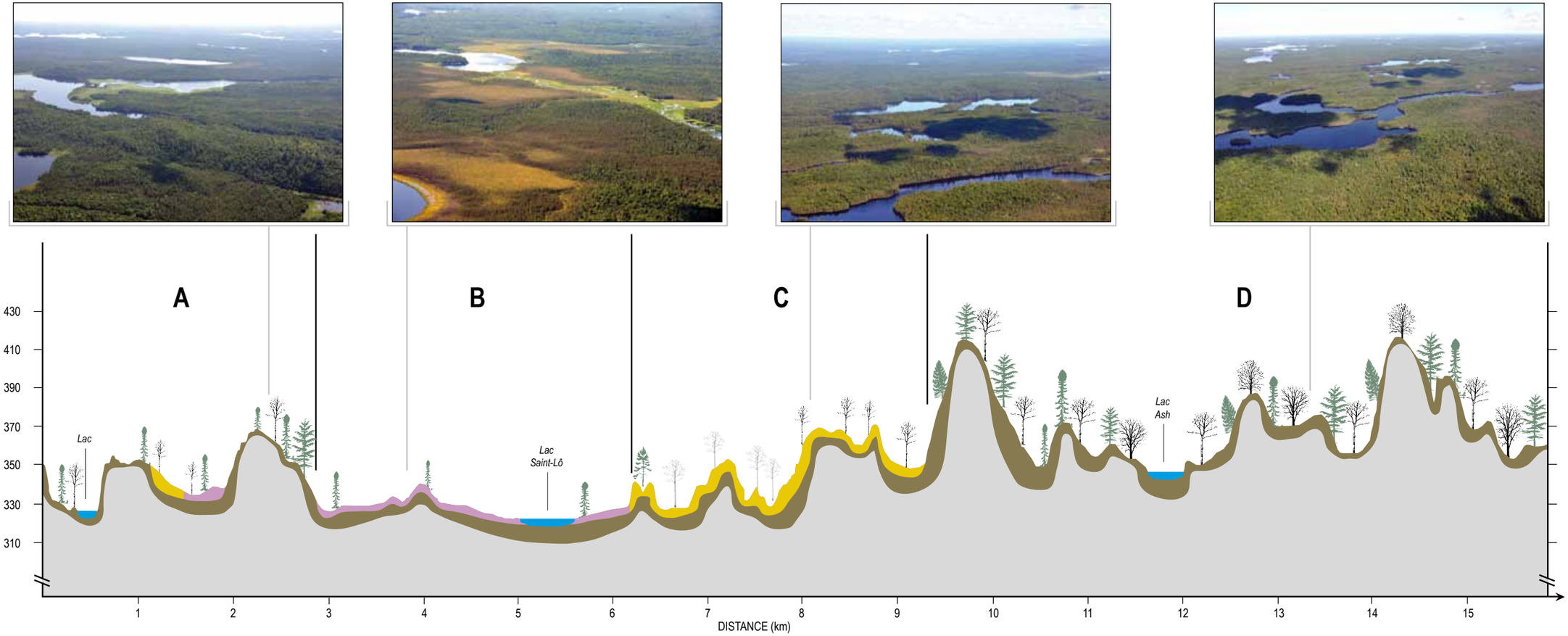


Figure 108.
Wanaki physiographic sere

Réserve de biodiversité projetée Wanaki

- Southern Laurentides Mountains natural province
- La Vérendrye Hills natural region
- Lac Cawatose ondulated Plain physiographic ensemble



A. Black spruce on till mounds
B. Fen
C. Intolerant leafy on fluvioglacial cordon
D. Mixed forest on thin till mounds

The proposed biodiversity reserve is part of the upper drainage basin of the Ottawa River. Located at the junction of the Dozois Reservoir and Grand Lac Victoria, the Algonquin community of Kitcisakik, meaning "at the big river mouth," has taken the area's name. Furthermore, the protected area is largely delimited by the Dozois Reservoir and Grand Lac Victoria. There are 56 named lakes in the territory of the protected area, including several big lakes, i.e. Lac Transparent and Lac et Ash, with an area of 1.6 km^2 and 1.3 km^2, respectively. The aquatic environments overall cover an area of 10 km^2, equivalent to just over 7% of the proposed biodiversity reserve.

The reserve has several wetlands, mainly in the north, near Lac Saint-Lô (Photo 25), with a total area of 18 km^2, equivalent to approximately 13% of the protected area.

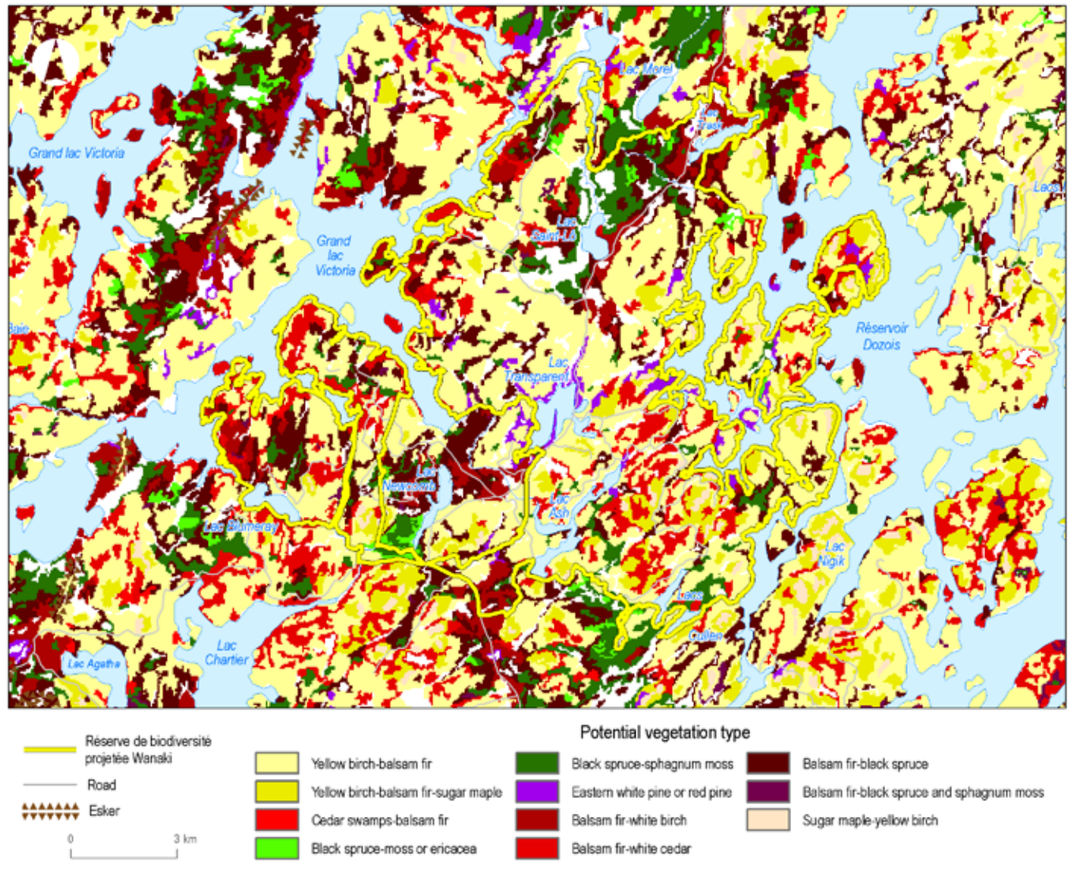
Photo 25. Minerotrophic peatlands in the Lac Saint-Lô area

Biological environment

Vegetation

The reserve is located in the balsam fir-yellow birch bioclimatic domain. It protects territories in which the main potential vegetation is the yellow birch-fir stand, especially on silt hillocks (Figure 109). Balsam fir-cedar stands and yellow birch-fir stands and yellow birch-sugar maple stands are also associated with silt hillocks but they are found, above all, on certain slopes and small valleys of the hillocks. Balsam fir-black spruce stands, balsam fir-white birch stands and black spruce-sphagnum moss stands and occasionally black spruce-moss or black spruce-heath stands are the types of potential vegetation found on lowlands made up of glaciolacustrine or glaciofluvial sand. White pine stands are likely to be found here and there in the territory, in particular around Lac Transparent.

Figure 109. Potential vegetation – Réserve de biodiversité projetée Wanaki



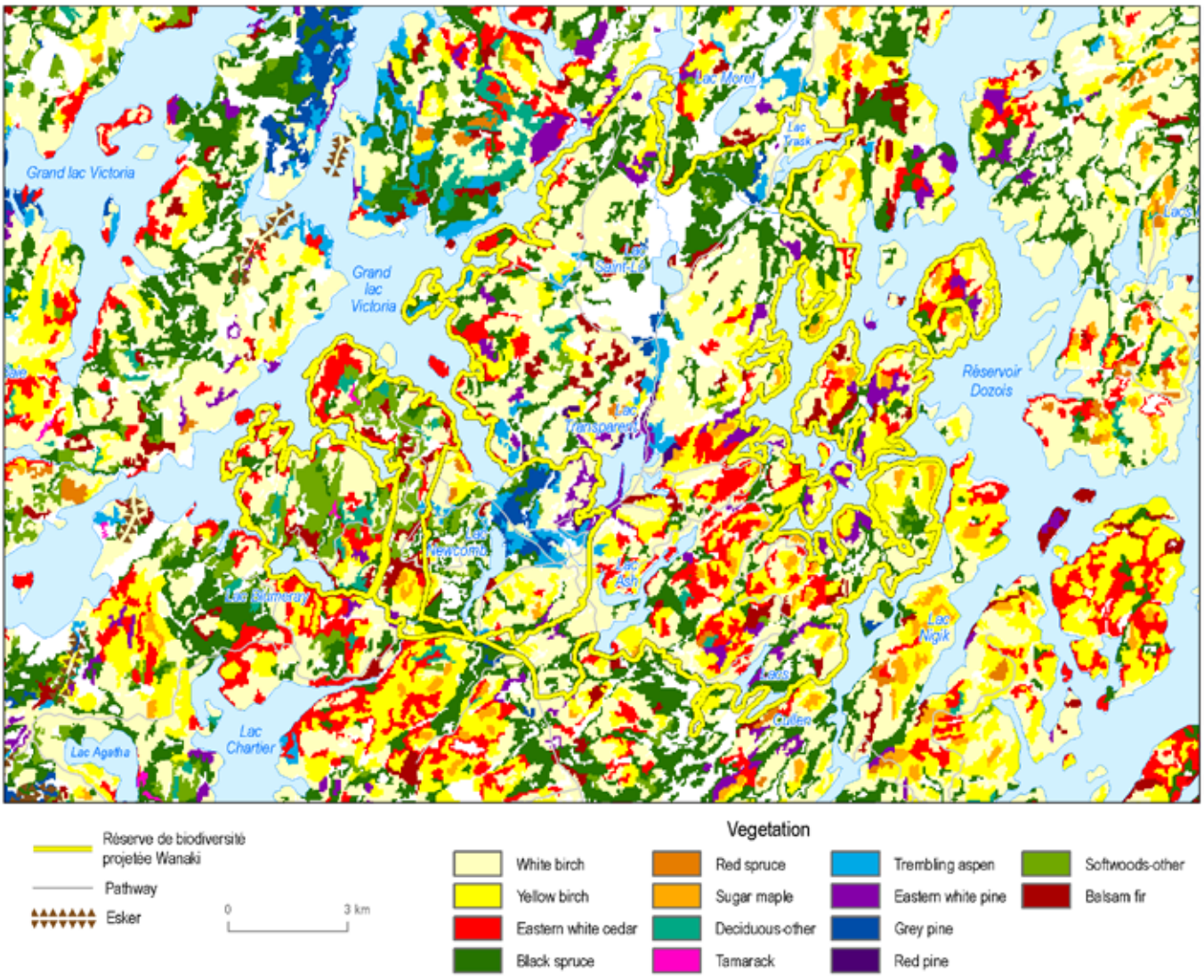
Unfold

In point of fact, on the silt hillocks, white birch stands accompanied by yellow birch stands and, on the bare steep slopes, cedar stands, predominate the actual vegetation (Figure 110). Black spruce-tamarack stands occupy the lowlands near the peat bogs as the mapping of the potential vegetation indicates (Photo 26). This is also true of the white pine stands that populate the periphery of Lac Transparent (Photo 27). Several forest stands of jack pine and trembling aspen are found on the glaciofluvial sand fluting. The predominance of white birch and the presence of trembling aspen and jack pine may stem from anthropogenic disturbances (logging) and natural disturbances (epidemics).

Photo 26. Vegetation adjacent to the peat bogs

Photo 27. Riparian vegetation at Lac Transparent

Figure 110. Vegetation – Réserve de biodiversité projetée Wanaki



Forest cover occupies nearly 83% of the territory of the reserve and mainly comprises young forest stands less than 40 years old (37%). Middle-aged forest stands (between 40 and 80 years old) occupy roughly 23% of the forest land in the reserve (Figure 111). However, a few areas have old-growth forests, which account for approximately 28% of the reserve's forest cover but are relatively scattered (see Figure 12). In the big old-growth forest blocks alone, the data from ecoforestry mapping indicate that selective cutting has been carried out there. Therefore, the stands are not genuinely old-growth forests.

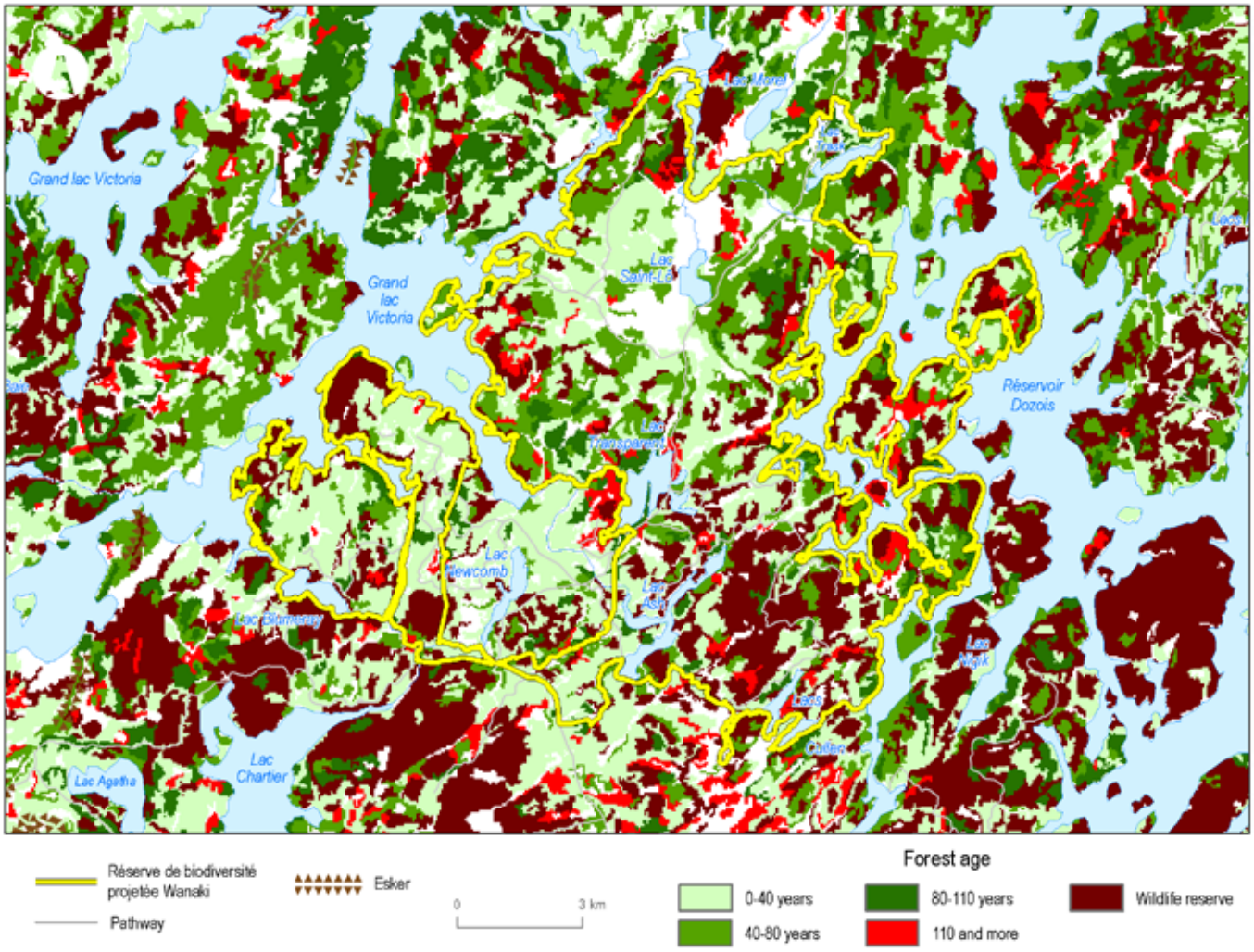
The proposed biodiversity reserve is located in an ecological subregion where the most frequent forest fires range in area from 0.03 km^2 (3 hectares) to 1 km^2 (see Figure 44). Accordingly, the proposed 137 km^2 biodiversity reserve can be deemed to have a sufficient geographic size to encompass all of the successional stages of the forest ecosystems since it largely exceeds the theoretical threshold proposed by certain researchers, i.e. three times the area of the biggest forest fires.

Wildlife

No occurrence has been mapped of rare, vulnerable or threatened species. Lac Transparent hosts lake trout, Northern pike, yellow walleye and yellow perch. Lac Saint-Lô hosts pike, yellow walleye and lake whitefish. No specific inventories have been conducted in the territory as regards aquatic and terrestrial species, but the ecosystems, depending on the human footprint and age of existing forests, are likely to host several species that are typical of the Abitibi-Témiscamingue region, as indicated in the section devoted to regional fauna. In particular, book trout, lake trout, Northern pike, yellow walleye, sturgeon and small-mouthed bass are likely to be found there.

Since the proposed biodiversity reserve is part of the Réserve faunique de La Vérendrye, several of the species inventoried in the wildlife sanctuary are likely to be found in the protected area. Ruffed grouse, spruce grouse and snowshoe hare are the most common small game. Moose, white-tailed deer and bear hunting

Figure 111. Age of forest stands – Réserve de biodiversité projetée Wanaki



also occur in the reserve (Photo 28). Beaver, wolf and fox are other common species.

Photo 28. A bear climbing an eastern white pine

Social environment

The territory, which lies entirely within the Réserve faunique La Vérendrye, has witnessed a marked Aboriginal presence over time. The Kitcisakik Algonquin community used the territory in the past since it is near the current village of Kitcisakik and the summer village of Kitcisakik (Photo 29), located on the shore of Grand lac Victoria.

Photo 29. Summer village of Kitcisakik

The protected area is bounded to the east the Dozois Reservoir, built in 1948 (Bourque dam), at a time when numerous dams were erected along the expansive Ottawa River.

The proposed biodiversity reserve is almost entirely located in the Grand-Lac-Victoria beaver reserve, where the Natives communities enjoy specific rights pertaining to the hunting and trapping of fur-bearing animals. It is part of FAMU 07 and hunting area 13.

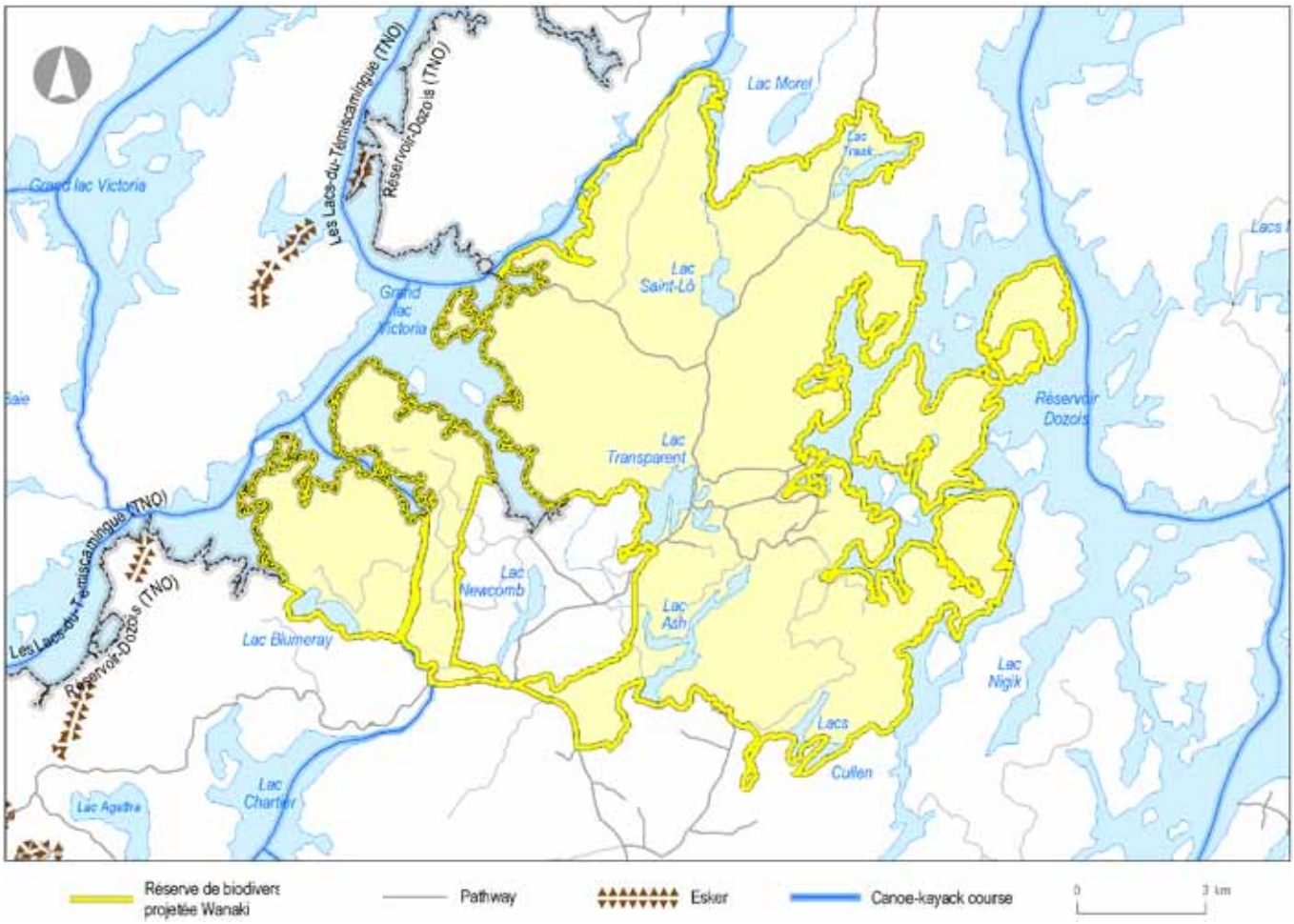
No archaeological sites has been officially inventoried. However, according to Archéo-08 (Marc Côté, personal communication), the territory and the surrounding area offer archaeological research potential since they have been visited and occupied for a long time. Prior to the erection of the Bourque dam, which created the Dozois Reservoir from Lac Dozois and affected the level of Grand lac Victoria, the area was part of the Ottawa River, an important traditional navigable waterway.

From the standpoint of accessibility, a main road affords access to the territory and facilitates travel there (Figure 112), i.e. Route 38 through the Réserve faunique de La Vérendrye that leaves Route 117 and leads of the village of Kitcisakik, then continues as a forestry road to the proposed biodiversity reserve and beyond (Photo 30). Furthermore, visitors to the Réserve faunique de La Vérendrye use the road. Other less important roads allow for travel in the territory of the proposed biodiversity reserve. They total 85 linear km. The territory is accessible by boat from the Dozois Reservoir and Grand lac Victoria. From Route 38, south of Lac Saint-Lô, Route 381 affords access to a bay on Grand lac Victoria, where members of the Kitcisakik community travel by boat to their summer village.

A snowmobile trail on Route 38. There are no hunting camps and cabins, which are prohibited in wildlife reserves.

Photo 30. Route 38, the main access road to the reserve

Figure 112. Occupancy and use of the Réserve de biodiversité projetée Wanaki



The wildlife reserve has built a primitive campground at Baie Barker in an area that is, however, excluded from the proposed biodiversity reserve. A canoe launch ramp is also found there. Moreover, the wildlife reserve has built a boat launch ramp at Lac Transparent.

Infrastructure may have been built in in the community of Kitcisakik but it has not been mapped.

Grand Lac Victoria is still a canoe and kayak route. It is possible to travel from Grand Lac Victoria to the Dozois Reservoir by means of a network of portages located in the proposed biodiversity reserve, starting at Baie Barker and running through Lac Transparent.

The proposed biodiversity reserve borders on trapping grounds where families from the community of Kitcisakik possess trapping rights.

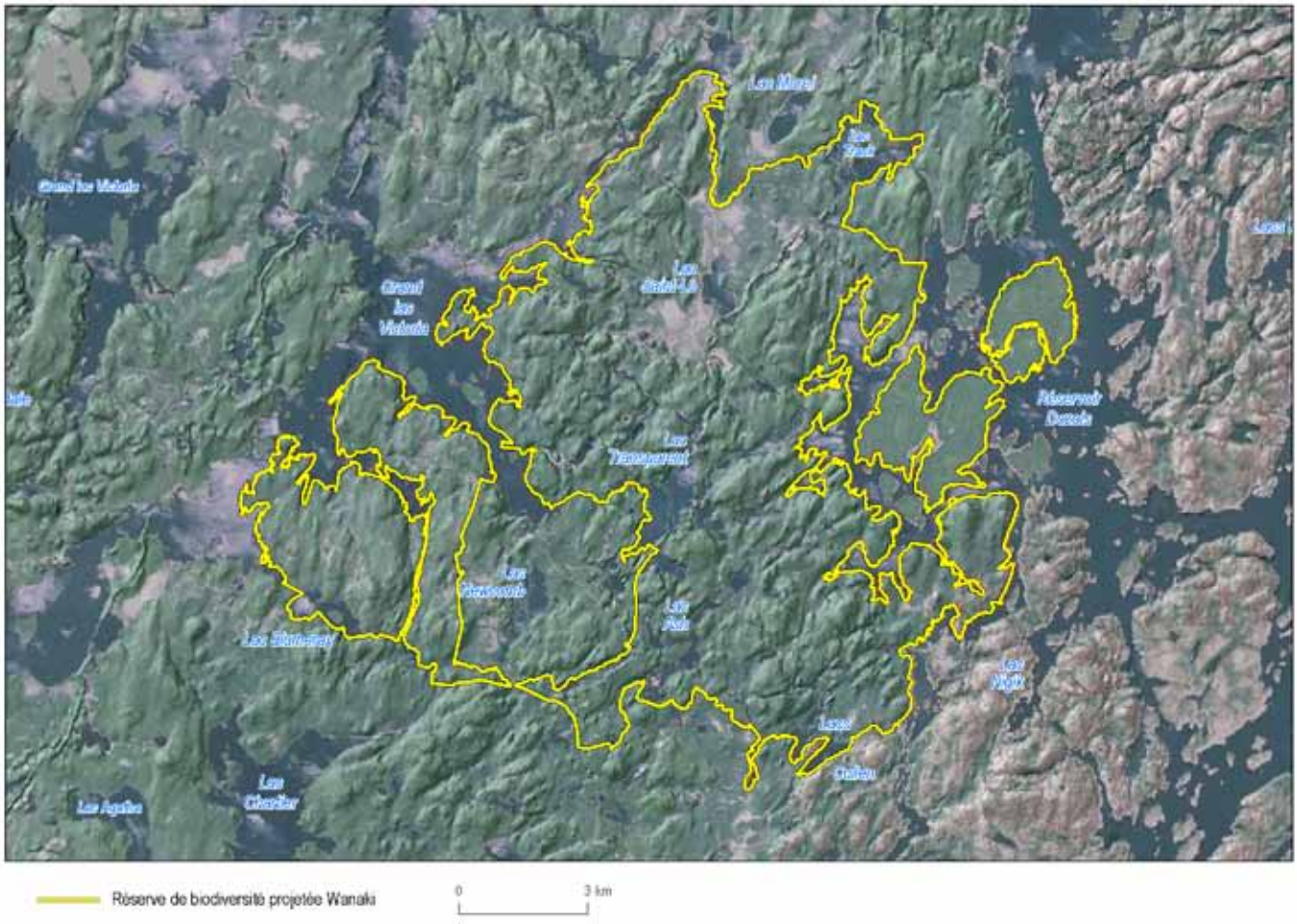
4.5.5 Contributions of the protected area

Representativeness

From the standpoint of the representativeness of the physical elements, the reserve is contributing almost alone to protecting physiographic types of the Lac Cawatose rolling plain physiographic unit (C0204) by protecting a high proportion of fairly flat lands containing glaciofluvial deposits and hillocks with glacial deposits (till) without precise morphology. It is also protecting, although to a lesser extent, the silt hummocks, which are not grouped together but are instead distributed in the physiographic unit, which makes it difficult to sufficiently protect them. Moreover, the reserve is helping to protect common types of surface deposits, e.g. glacial, glaciofluvial and organic deposits, but also rarer types of deposits in the La Vérendrye Hillocks natural region, i.e. sandy glaciolacustrine and aeolian deposits.

As for potential vegetation, the reserve is contributing greatly to the protection of yellow birch-fir stands, the most common type of potential vegetation in the La Vérendrye Hillocks natural region, and balsam fir-cedar stands. It is also contributing to the

Figure 113. Satellite image of the Réserve de biodiversité projetée Wanaki



representativeness of yellow birch-fir-sugar maple stands, balsam fir-black spruce stands, and balsam fir-white birch stands.

Efficacy

Human beings have left evidence of their passage through or presence in the territory, mainly stemming from forest harvests and logging roads. The general level of naturality of the protected area is relatively high since the traces of anthropogenic activities are generally inconspicuous. It does not have forest landscapes that display perfect ecological integrity. The satellite image in Figure 113 clearly illustrates the human footprint. It also reveals the condition of the territory surrounding the reserve.

Forestry operations have affected approximately 15 km^2, equivalent to 10% of the territory. Mild epidemics have affected over 30 km^2 of the reserve. The protected area has 85 linear km of roads, equivalent to a ratio of 0.62 km of road per km^2, a moderate density (0.43 to 1.06 km/km^2).[16]

From the standpoint of configuration, the protected area does not have a sufficient area (138 km^2) to encompass all of the successional stages of forest ecosystems. It now has a high perimeter-area ratio (1.74), i.e. more than five times the ratio of a perfect circle, because it must follow the shores of the Dozois and Grand Lac Victoria and excludes a portion of the lands corresponding to one of the sites under study for the establishment of the new village of Kitcisakik. Accordingly, the ratio might fall whether or not the site of the new village is adopted, since the boundaries will be adjusted, either by including the entire area, or by excluding the actual territory of the future village. What is more, when a 3-km strip is subtracted from the boundaries, no conservation core remains, which makes the reserve hardly effective as regards the objectives of maintaining ecological integrity and minimizing the edge effect stemming from peripheral activities.

The configuration of the protected area could be improved. The enhancements would target objectives pertaining to natural resources with a view to improving the quality of the elements protected and the protected area's contribution to the network.

[16] Quigley *et al.*, 2001.

Moreover, it is important to bear in mind the cultural elements associated with the territory since it is a sector of cultural and natural interest for the community of Kitcisakik.

4.5.6 Conservation issues

The territory offers development potential on account of its location in the Réserve faunique de La Vérendrye and the community of Kitcisakik's interest in it. Recreational, educational or cultural development is usually compatible with the vocation of a biodiversity reserve. However, we must ensure that the territory develops, as the case may be, in accordance with conservation objectives and that the territory's resources are not overused. The MDDEP is seeking, in particular, to restore the natural characteristics of forest landscapes. Furthermore, it is important to protect water quality in the reserve's lakes.

Since the territory is representative, the application of a fairly standard regime of activities should allow for the attainment of long-term protection objectives. However, special conditions might apply because of its cultural interest, development potential and the development projects contemplated by the village of Kitcisakik or the wildlife reserve. What is more, sites of cultural interest should be protected against any development and infrastructure that might affect them.

Since the community of Kitcisakik originally proposed the territory but the current proposed biodiversity reserve's boundaries do not correspond to the community's proposal, one of the key challenges would be to ensure that the territory is adjusted such that the protected area corresponds as much as possible to the territory of natural and cultural interest to the community of Kitcisakik, while enhancing the quality of the elements protected.

4.5.7 Theoretical expansions under study

Potential expansions have been studied (Figure 114) and take into consideration the original proposal, under which the territory to be protected extended southward. The expansions would add silt hummocks, which are underrepresented in the physiographic unit, and increase the proportions of mature forest stands, especially old-growth forests. Polygons Nos. 1, 2 and 4 and the eastern portion of polygon No. 3 in Figure 114 are, what is more, part of a sector of interest to the community of Kitcisakik that is used for subsistence purposes.

While logging occurred in 1988 and 1989 in a portion of the expansions, especially in polygons Nos. 1 and 4 in Figure 114, the expansions are at one and the same time of physical, biological and cultural interest. In particular, yellow birch stands, cedar stands and several sugar maple forests, virtually absent from the proposed biodiversity reserve, are found in polygons Nos. 1, 2 and 4. Polygons Nos. 3 and 5 have sustained very limited anthropogenic disturbances (logging) but have been affected by mild epidemics. They encompass numerous mature forest stands and old-growth forests. However, they display a higher level of constraint with respect to protection because of their forestry interest.

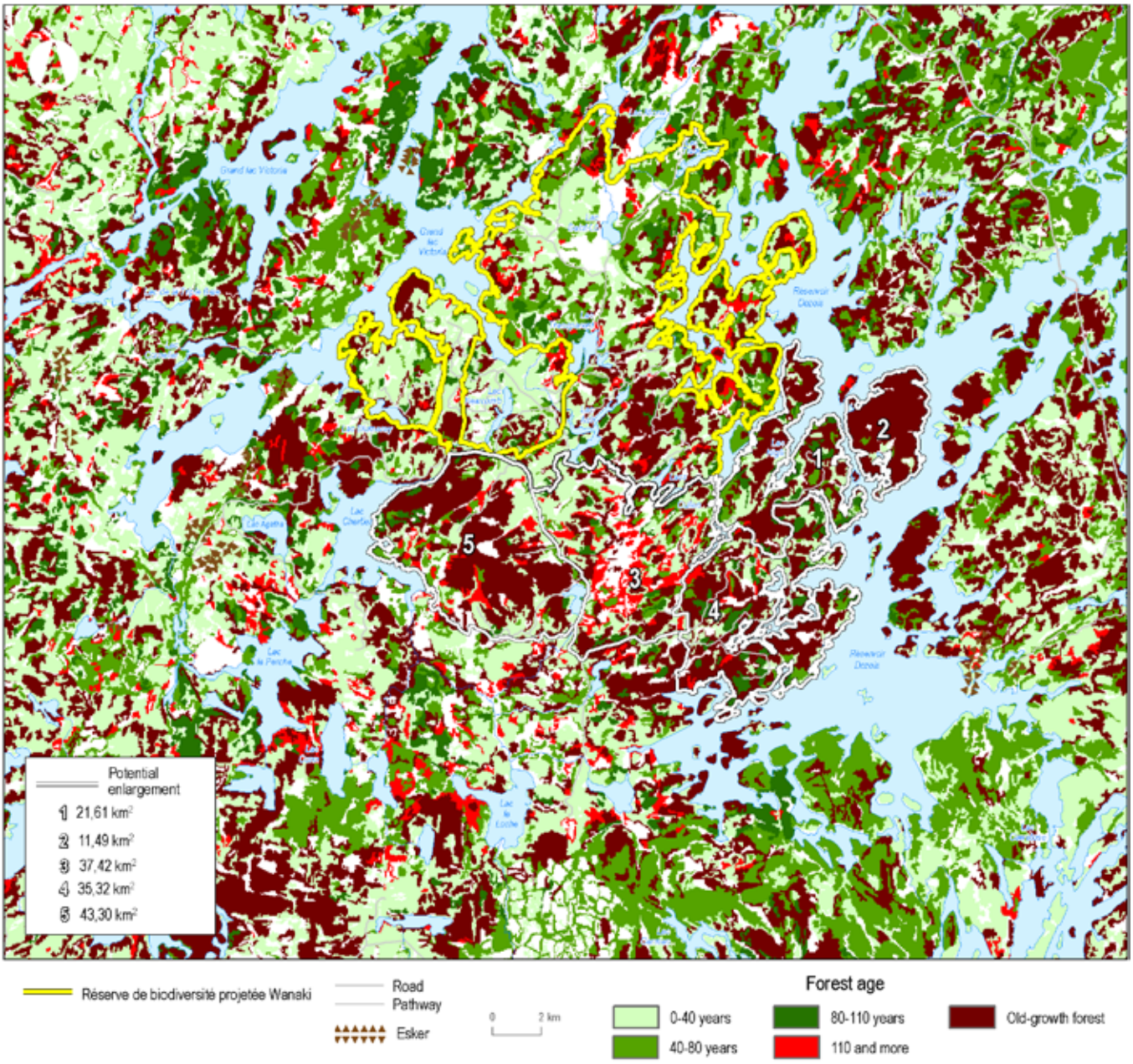
The expansions have a total area of 148 km^2. The biodiversity reserve's total area would double, to 285 km^2. However, since forestry work would already be planned in polygons Nos. 3 and 5 of Figure 114, the MDDEP would favour expansions by means of polygons Nos. 1, 2 and 4. The three polygons together cover 68 km^2, which would bring the area of the reserve to 205 km^2. The perimeter-area ratio would not be improved and would, to the contrary, decrease from 1.74 to 1.96, in particular because of the need to more extensively follow the shore of the Dozois Reservoir.

Polygons Nos. 1, 2 and 4 (Figure 114) afford an opportunity to enhance the natural physical and biological qualities, landscapes and cultural attributes of the current proposed reserve since they include physiographic types underrepresented in the network of protected areas in this natural region, types of potential vegetation of interest, but also a quality forest landscape and mature hardwood stands and old-growth forests.

The MDDEP presented these potential expansions of ecological interest to the members of the Table GIRT MRC-VO during the workshops that preceded the public consultations. The reactions to the potential expansions are presented in detail in the companion document entitled "Summary of the preparatory workshops for the public consultation and meetings: Granting of permanent biodiversity reserve or aquatic reserve status to eight territories in the Abitibi-Témiscamingue region" submitted to the BAPE Commission within the framework of this consultation. In short, the only items of discussion concerned forestry but the participants made few comments. No opposition was expressed. However, forestry work is planned in polygons Nos. 3 and 5 between now and 2013. For this reason, the polygons were deemed to be subject to a major constraint in respect of protection because of their accessibility for forestry work. As for polygons Nos. 1, 2 and 4, the MRNF believes that they display few constraints to protection since no forestry operations are planned there between now and 2013.

The community of Kitcisakik proposed expansions to the Réserve de biodiversité projetée Wanaki (Figure 115). It should be noted that polygons Nos. 6 and 7 in the figure are not drawn from accurate mapping. They are of considerable cultural interest to the community of Kitcisakik but the MDDEP does not possess information

Figure 114. Potential expansions of the Réserve de biodiversité projetée Wanaki

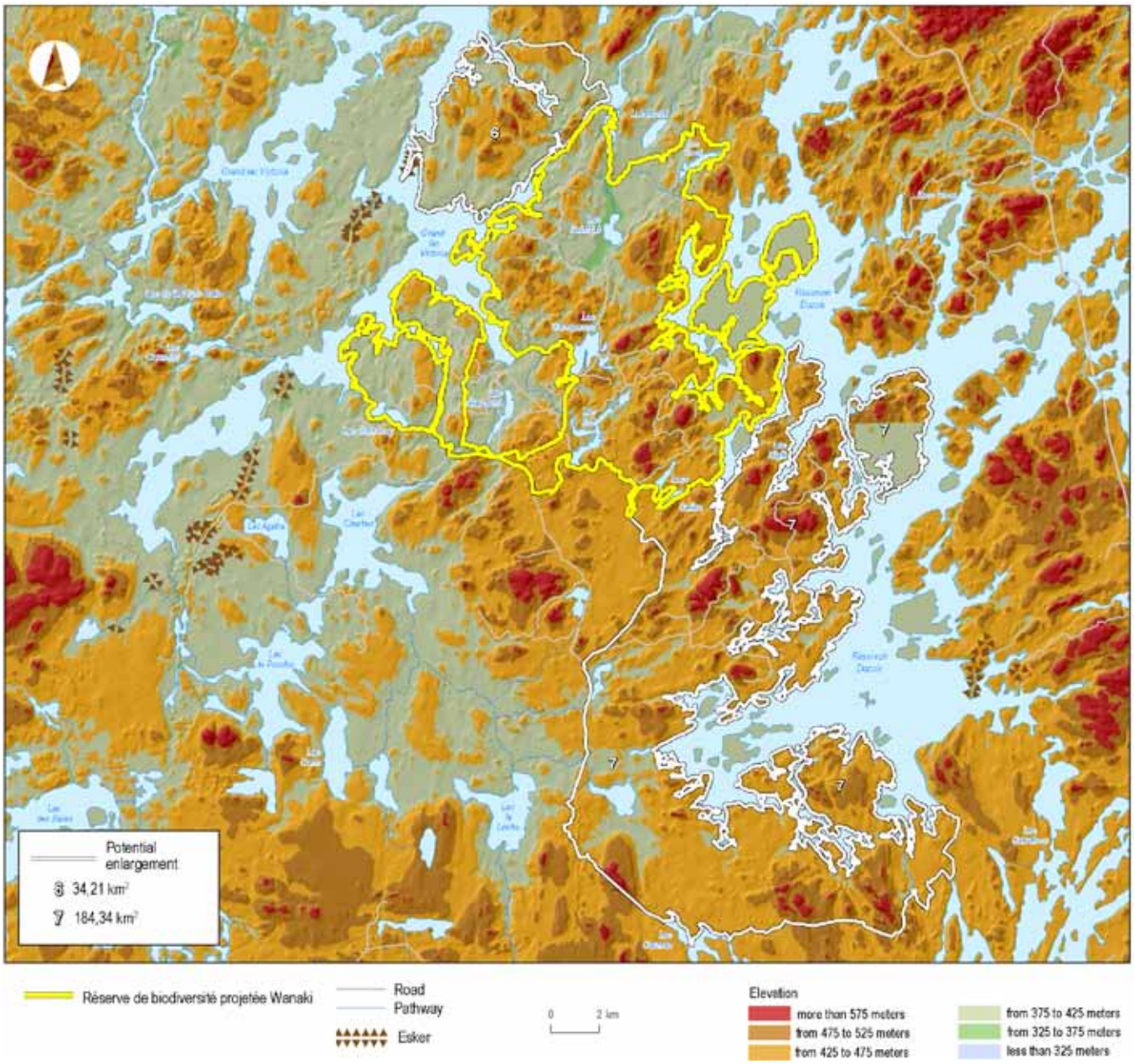


concerning the territories' cultural characteristics. A good portion of the southeastern polygon in Figure 115 was evaluated through the MDDEP's proposals (see Figure 114), since there is overlapping. The expansions comprise two sectors, one to the northwest of the proposed biodiversity reserve, and the other one to the southeast. They cover roughly 216 km², would increase the area of the reserve to 354 km² and have a perimeter-area ratio similar to the current one, i.e. 1.73.

4.5.8 Management of the permanent reserve

Once the biodiversity reserve obtains permanent status, it will be managed in such a way as to ensure the attainment of conservation objectives. Accordingly, the MDDEP's decisions pertaining to management will prioritize conservation. As for regulations, when the biodiversity reserve obtains permanent status, it will have a conservation plan in which a regime of activities will regulate all activities or initiatives in the protected area. The regime of activities will draw inspiration, by and large, from the regime of activities in the conservation plan of the proposed reserve. However, in the case of permanent status, the new conservation plan could make provision, as the case may be, for specific features to better structure activities

Figure 115. Expansions proposed by the Kitcisakik community – Wanaki sector



and initiatives in order to ensure better protection of the territory, ecosystems and biodiversity. The territory's special interest to the community of Kitcisakik and its location in a wildlife reserve mean that the method of management could be adapted, in particular by ensuring that the community of Kitcisakik and the Réserve faunique de La Vérendrye participate in its management, indeed that they be responsible, as the case may be, for the territory's management.

The conservation plan will stipulate that certain activities are allowed in the protected area, that others are strictly prohibited, and that a number of activities or initiatives whose compatibility with the protected area and its conservation objectives varies will be subject to authorization by the MDDEP. For more information, see the section entitled "The regime of activities explained" or the document entitled "Régime d'activités dans les réserves de biodiversité et les réserves aquatiques." When the manager of the territory evaluates requests for authorization, it will take into consideration the objectives concerning the resilience of the forest ecosystems and those pertaining to the preservation of water quality in the lakes. Special attention must be paid to the ecosystem assessment of any development to ensure that impact is maintained at an acceptable level.

As for the operational management that the MDDEP or any other partner carries out in the territory of the permanent reserve, it will lead to the installation of appropriate signage and surveillance of the protected area. However, a management committee comprising the key stakeholders concerned could be established to participate in the drafting of an action plan that defines the management priorities pertaining to the protected area, then collaborate on the action plan's implementation.