

**15.** Section 51 is amended

(1) by replacing the amounts in subparagraphs 1 to 5 of the first paragraph respectively by the following amounts:

- (1) “\$208”;
- (2) “\$228”;
- (3) “\$316”;
- (4) “\$419”;
- (5) “\$419”;

(2) by replacing “\$323” in the third paragraph by “\$326”.

**16.** Section 52 is amended by replacing “\$977” by “\$985”.

**17.** Section 74 is amended by replacing “\$254” and “\$126” in the second paragraph by “\$256” and “\$127”, respectively.

**18.** Section 82 is amended by replacing “\$3,042” and “\$2,278” in the third paragraph by “\$3,067” and “\$2,297”, respectively.

**19.** Section 86 is amended

(1) by replacing the amounts in subparagraphs 1 to 3 of the first paragraph respectively by the following amounts:

- (1) “\$2.27”;
- (2) “\$3.39”;
- (3) “\$120.54”;

(2) by replacing “\$11.26” in the second paragraph by “\$11.35”.

**20.** Section 87.1 is amended by replacing “\$385” by “\$388”.

**21.** Section 96 is amended by inserting “or an Aim for Employment benefit” in the second paragraph after “last resort financial assistance”.

**22.** This Regulation applies as of the 2018-2019 year of allocation.

**23.** This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

Gouvernement du Québec

**O.C. 112-2019, 13 February 2019**

Natural Heritage Conservation Act  
(chapter C-61.01)

Permanent status of the Réserve de biodiversité Opasatica, the Regulation respecting that reserve and its conservation plan

WHEREAS, under the first paragraph of section 43 of the Natural Heritage Conservation Act (chapter C-61.01), the Minister of Environment and the Fight Against Climate Change may recommend to the Government that all or part of land set aside under section 27 of the Act be assigned a permanent protection status as biodiversity reserve;

WHEREAS, under the second paragraph of section 43 of the Act, the Minister is to submit at the same time to the Government for its approval the conservation plans for the land;

WHEREAS, by Order in Council 484-2004 dated 19 May 2004, the Government authorized the Minister of the Environment to assign the status of proposed biodiversity reserve to the territory of Opasatica lake and approved the plan of that area and the proposed conservation plan for that area;

WHEREAS, by Minister’s Order dated 17 June 2004 (2004, *G.O.* 2, 2301), the Minister of the Environment assigned the status of proposed Opasatica lake biodiversity reserve to the territory of Opasatica lake for a period of 4 years beginning on 14 July 2004;

WHEREAS, by Order in Council 136-2008 dated 20 February 2008, the Government approved the amendments to the conservation plan of that reserve;

WHEREAS the setting aside of that territory was extended for 4 years under the Order of the Minister of Sustainable Development, Environment and Parks dated 19 June 2008 (2008, *G.O.* 2, 2561) and 8 years under the Order of the Minister of Sustainable Development, Environment and Parks dated 11 May 2012 (2012, *G.O.* 2, 709);

WHEREAS, in accordance with the first paragraph of section 39 of the Natural Heritage Conservation Act, the Minister of Sustainable Development, Environment and Parks entrusted the mandate to hold a public consultation on the proposed Opasatica lake biodiversity reserve to the Bureau d’audiences publiques sur l’environnement and its inquiry and public hearing report was made public on 17 July 2008;

WHEREAS the report deals with the feasibility of enlarging the territory of the proposed Opasatica lake biodiversity reserve and concludes, among other things, that permanent protection status should be assigned to it;

WHEREAS the limits of the proposed Opasatica lake biodiversity reserve were reassessed by the Minister and changed after the public consultation to ensure the protection of a cultural interest site for the Timiskaming First Nation and the addition of mature and less fragmented forest ecosystems of interest, and to rely on natural elements easily visible on the site to facilitate management;

WHEREAS the plan of the proposed Opasatica lake biodiversity reserve and its conservation plan were adjusted based on the changed limits and the technical description corresponding to the new limits has been prepared;

WHEREAS the land included in the territory forms part of the domain of the State and is not part of a reserved area or an agricultural zone established under the Act respecting the preservation of agricultural land and agricultural activities (chapter P-41.1);

WHEREAS, in accordance with the first paragraph of section 151 of the Act respecting land use planning and development (chapter A-19.1), the Minister of Sustainable Development, the Environment and the Fight Against Climate Change notified an opinion describing the planned intervention to the council of Ville de Rouyn-Noranda and to the council of Municipalité régionale de comté de Témiscamingue;

WHEREAS, in accordance with the first paragraph of section 152 of that Act, the council of Ville de Rouyn-Noranda, by resolution No. 2017-928 dated 27 November 2017, confirmed that the project for the establishment of the Réserve de biodiversité Opasatica complies with the objectives of the land use planning and development plan in force in their territory;

WHEREAS, in accordance with paragraph 2 of section 157 of that Act, the planned intervention is deemed to be in conformity with the land use and development plan of Municipalité régionale de comté de Témiscamingue in force in its territory, where its council did not give an opinion on that conformity within the time prescribed in the first paragraph of section 152 of that Act;

WHEREAS the Commission de toponymie sent to the Minister its approval of the name “Réserve de biodiversité Opasatica” to designate that permanent biodiversity reserve;

WHEREAS, under subparagraph *f* of paragraph 1 of section 46 of the Natural Heritage Conservation Act, in an aquatic reserve and a biodiversity reserve, any activity which the Government may prohibit by regulation is prohibited;

WHEREAS, under subparagraph *g* of paragraph 1 of section 46 of the Act, in an aquatic reserve and a biodiversity reserve, subject to measures in the conservation plan authorizing the activities and specifying the conditions on which they may be carried on, any allocation of a right to occupy land for vacation resort purposes, earthwork, backfilling or construction work and commercial activities are prohibited;

WHEREAS, under paragraph 2 of section 46 of the Act, all other activities, in addition to those prohibited by paragraph 1 of that section, are permitted, subject to the applicable conditions;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), the draft Regulation respecting the Réserve de biodiversité Opasatica was published in Part 2 of the *Gazette officielle du Québec* of 10 May 2017 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation respecting the Réserve de biodiversité Opasatica with amendments, in particular to include the technical description of the territory and to make technical adjustments;

WHEREAS, under paragraph 3 of section 44 of the Natural Heritage Conservation Act, the establishment of a biodiversity reserve and a change in its limits, or its abolishment, is effected by order of the Government, on a proposal by the Minister, subject to the publication of a notice of the decision of the Government to establish a biodiversity reserve in the *Gazette officielle du Québec* with the plan of the area and the conservation plan;

WHEREAS the publication in the *Gazette officielle du Québec* of this Order in Council, of the Regulation respecting the Réserve de biodiversité Opasatica and of its conservation plan constitutes the notice required by that paragraph, including the documents that must accompany it;

WHEREAS, under section 45 of the Natural Heritage Conservation Act, permanent protection status for land, conservation plans and applicable agreements, and amendments or revocations take effect on the date of publication of the order in the *Gazette officielle du Québec* or on any later date specified in the order;

IT IS ORDERED, therefore, on the recommendation of the Minister of Environment and the Fight Against Climate Change:

THAT permanent biodiversity reserve status be assigned to the territory described in the Regulation attached to Schedule I to this Order in Council, under the name “Réserve de biodiversité Opasatica”;

THAT the Regulation respecting the Réserve de biodiversité Opasatica, attached to Schedule I to this Order in Council, be made;

THAT the conservation plan applicable to the Réserve de biodiversité Opasatica, attached to Schedule II to this Order in Council, be approved;

THAT permanent status of the Réserve de biodiversité Opasatica and its conservation plan take effect on the fifteenth day following the date of their publication in the *Gazette officielle du Québec*.

YVES OUELLET,  
*Clerk of the Conseil exécutif*

## SCHEDULE I

### Regulation respecting the Réserve de biodiversité Opasatica

Natural Heritage Conservation Act  
(chapter C-61.01, s. 43 and s. 46, par. 1, subpars. e, f and g, and par. 2)

1. The Réserve de biodiversité Opasatica is constituted in the territory described in the Schedule.

2. For the purpose of this Regulation

(1) the words or terms “high-water mark”, “littoral zone”, “floodplain”, “lakeshore” and “riverbank” have the same meaning as the meaning given in the Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains (chapter Q-2, r. 35);

(2) the term “wetlands and bodies of water” has the same meaning as the meaning given in section 46.0.2 of the Environment Quality Act (chapter Q-2);

(3) the term “forest development activity” has the same meaning as the meaning given in the Sustainable Forest Development Act (chapter A-18.1).

## DIVISION I PROTECTION OF RESOURCES AND THE NATURAL ENVIRONMENT

3. Subject to the prohibition in the second paragraph, no person may introduce any individuals of a native or non-native species of fauna into the biodiversity reserve, including by stocking, unless the person has been authorized by the Minister.

No person may stock a lake or watercourse for aquaculture, commercial fishing or any other commercial purpose.

Except with the authorization of the Minister, no person may introduce non-native species of flora into the biodiversity reserve.

4. No person may use fertilizers in the biodiversity reserve. Compost for domestic purposes is however permitted if it is used at least 20 metres from a lake or watercourse, measured from the high-water mark.

5. No person may remove from the biodiversity reserve species of flora, small fruits or any other non-timber forest product by mechanical means.

6. No person may in the biodiversity reserve, unless the person has been authorized by the Minister,

(1) intervene in a wetland area, including a marsh, swamp or peat bog;

(2) modify the natural drainage or water regime, including by creating or developing lakes and watercourses;

(3) dig, fill, obstruct or divert a lake or watercourse;

(4) install or erect any construction, infrastructure or new works in in the littoral zone, on the banks or shores or the floodplains of a lake or watercourse; no authorization is however required for minor works — quay or platform, boat shelter — installed for private purposes and may be free of charge under section 2 of the Regulation respecting the water property in the domain of the State (chapter R-13, r. 1);

(5) carry on an activity other than those referred to in paragraphs 1 to 4 likely to directly and substantially affect the biochemical characteristics or quality of wetlands and bodies of water in the biodiversity reserve, including by discharging or dumping residual materials or contaminants into the wetlands or bodies of water;

(6) carry out soil development work or an activity likely to degrade the soil or a geological formation, or to damage the vegetation cover, in particular by stripping, the digging of trenches or excavation work, including any burial, earthwork, removal or displacement of surface materials or vegetation cover, for any purpose;

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

(8) reconstruct or demolish a structure, infrastructure or works;

(9) use a pesticide; no authorization is required for the use of personal insect repellent;

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

(11) hold a sports event, tournament, rally or any other similar event where

(a) fauna or flora species are taken or are likely to be taken; or

(b) motor vehicles or craft are used.

7. Despite paragraphs 6, 7 and 8 of section 6, if the requirements provided for in the second paragraph are met, no authorization is required to carry out the following work:

(1) the maintenance, repair or improvement of any construction, infrastructure or works, including a camp, a cabin, a road or a trail, including an ancillary facility such as a lookout or stairs;

(2) the construction or installation

(a) of a dependency or a facility ancillary to a trapping camp, a rough shelter, a shelter or a cabin, including a shed, a water withdrawal facility or a discharge and disposal of waste water, grey water and toilet effluents; or

(b) of a trapping camp, a rough shelter, a shelter or a cabin if, on the date of coming into force of this Regulation, such a building was allowed under the right of use or occupancy granted, but was not yet carried out; or

(3) the demolition or reconstruction of a trapping camp, a rough shelter, a shelter or a cabin, including a dependency or a facility ancillary to such a construction, including a shed, a water withdrawal facility or a discharge and disposal of waste water, grey water and toilet effluents.

The carrying out of the work referred to in the first paragraph must comply with the following:

(1) the work involves a construction, infrastructure or works whose presence is allowed in the biodiversity reserve;

(2) the work is carried out within the area of the land or right of way covered by the right of use or occupancy in the biodiversity reserve, whether the right results from a lease, a servitude or another form of title, permit or authorization;

(3) the nature of the work or elements erected by the work will not operate to increase the area of land that may remain deforested beyond the limits allowed by the provisions applicable to the sale, lease and granting of immovable rights under the Act respecting the lands in the domain of the State (chapter T-8.1) and, if applicable, the limits set under an authorization issued in connection with that construction, works or infrastructure;

(4) the work is carried out in accordance with the prescriptions of any permit or authorization issued for the work or in connection with the construction, infrastructure or works to which they are related, as well as in compliance with the applicable legislative and regulatory measures;

(5) in the case of forest roads, the work must not result in altering or exceeding the existing right of way, enlarging the driving roadway or converting the road into a higher class road.

For the purposes of this section, repair and improvement work includes work to replace or install structures or facilities with a view to complying with the requirements of environmental regulations.

8. No person may bury, incinerate, abandon or dispose of residual materials or snow, except if they are disposed of in waste disposal containers, facilities or sites determined by the Minister or, in other cases, with the authorization of the Minister.

Despite the first paragraph, an outfitter holding a lease for accommodation purposes in the reserve does not need an authorization to use a disposal facility or site, in compliance with the Environment Quality Act (chapter Q-2) and its regulations, if the outfitter was already using the facility or site on the date of coming into force of this Regulation.

## DIVISION II

### RULES OF CONDUCT FOR USERS

9. No person may enter, carry on an activity or operate a vehicle in a given sector of the biodiversity reserve if the signage erected by the Minister restricts access, traffic or certain activities in the sector in order to protect the public from a danger or to avoid placing the fauna, flora or other components of the natural environment at risk, unless the person has been authorized by the Minister.

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

## DIVISION III

### ACTIVITIES REQUIRING AN AUTHORIZATION

11. No person may, for a period of more than 90 days in the same year, occupy or use the same site of the biodiversity reserve, unless the person has been authorized by the Minister.

For the purposes of the first paragraph,

(1) the occupation or use of a site includes

(a) staying or settling on the biodiversity reserve, for instance for vacation purposes;

(b) setting up a camp or shelter; and

(c) installing, burying or abandoning any property in the reserve, including equipment, a device or a vehicle; and

(2) the expression “same site” includes any other site within a radius of 1 kilometre from the site.

Despite the first paragraph, an authorization is not required if a person,

(1) on the date of coming into force of this Regulation, was a party to a lease or had already obtained another form of right or another authorization allowing the person to legally occupy the land under the Act respecting the lands in the domain of the State (chapter T-8.1) or, if applicable, the Act respecting the conservation and development of wildlife (chapter C-61.1), and whose right to occupy the land is renewed or extended on the same conditions, subject to possible changes in fees; or

(2) in accordance with the law, has entitlement under a sublease, an assignment of a lease or a transfer of a right or authorization referred to in subparagraph 1, and whose right to occupy the land is renewed or extended on the same conditions, subject to possible changes in fees.

12. No person may carry on forest management activities to meet domestic needs or for the purpose of maintaining biodiversity, unless the person has been authorized by the Minister.

Despite the first paragraph, persons staying or residing in the biodiversity reserve and who collect wood required to make a campfire are not required to obtain the authorization of the Minister.

No such authorization is required if a person collects firewood to meet domestic needs to supply a trapping camp or a rough shelter permitted within the biodiversity reserve in the following cases and on the following conditions:

(1) the wood is collected by a person in compliance with the conditions set out in the permit for the harvest of firewood for domestic purposes issued under the Sustainable Forest Development Act (chapter A-18.1);

(2) the quantity of wood collected does not exceed 7 apparent cubic metres per year.

In addition, no authorization to carry on a forest management activity is required if a person authorized by lease to occupy land within the biodiversity reserve in accordance with this Regulation carries on the forest management activity for the purpose of

(1) clearing, maintaining or creating visual openings, and any other similar removal work permitted under the provisions governing the sale, lease and granting of immovable rights under the Act respecting the lands in the domain of the State (chapter T-8.1), including for access roads, stairs or other trails permitted under those provisions; or

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

If the work referred to in subparagraph 2 of the fourth paragraph is carried on for or under the responsibility of an enterprise providing any of those services, the work requires the prior authorization of the Minister, other than in the case of the exemptions provided for in sections 12 and 14.

13. No person may carry on commercial activities in the biodiversity reserve, except with the authorization of the Minister.



Despite the first paragraph, no authorization is required

(1) if the activity does not involve the taking of fauna or flora resources, or the use of a motor vehicle; or

(2) to carry on commercial activities if, on the date on which protection status as a biodiversity reserve takes effect, the activities were the subject of a right of use of the land for such purpose, whether or not the right results from a lease or another form of title, permit or authorization, within the limits of what the right allows.

#### **DIVISION IV** **AUTHORIZATION EXEMPTIONS**

**14.** Despite the preceding provisions, an authorization is not required for an activity or other form of intervention within the biodiversity reserve if urgent action is necessary to prevent harm to the health or safety of persons, or to repair or prevent damage caused by a real or apprehended catastrophe. The person concerned must, however, immediately inform the Minister of the activity or intervention that has taken place.

**15.** The members of a Native community who, for food, ritual or social purposes, carry on an intervention or an activity within the biodiversity reserve are exempted from obtaining an authorization.

**16.** Despite the preceding provisions, the following activities and interventions carried out by Hydro-Québec (hereinafter the “Société”) or by any other person for Hydro-Québec do not require the prior authorization of the Minister under this Regulation:

(1) any activity or intervention required within the biodiversity reserve to complete a project for which express authorization had previously been given by the Government and the Minister, or only by the latter, in accordance with the requirements of the Environment Quality Act (chapter Q-2), if the activity or intervention is carried out in compliance with the authorizations issued;

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

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

The Société informs the Minister of the various activities or interventions referred to in this section it proposes to carry out before the work is begun in the reserve.

For the purposes of this section, the activities and interventions of the Société include but are not restricted to pre-project studies, analysis work or field research, work required to study and monitor the impact of power transmission and distribution line corridors and rights of way, geological or geophysical surveys and survey lines, and the opening and maintenance of roads required for the purpose of access, construction or traffic incidental to the work.

#### **DIVISION V** **FINAL**

**17.** This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

#### **SCHEDULE**

##### **TECHNICAL DESCRIPTION**

##### **RÉSERVE DE BIODIVERSITÉ OPASATICA** (s. 1)

[Translation of the technical description filed in French only in the office of the Surveyor-General of Québec of the Ministère de l'Énergie et des Ressources naturelles.]

Description of a territory of irregular shape in the townships of Dasserat, Dufay, Monbeillard, Pontleroy, Desandrouins and Montreuil, in the territory of the municipalities of Ville de Rouyn-Noranda and Canton de Nédélec, in the administrative region of Abitibi-Témiscamingue, registration divisions of Rouyn-Noranda. The perimeter of the territory may be described as follows, namely:

Starting from a point situated on the border between Québec and Ontario with the intersection of the southern shore of lac Raventhat is, point 1 (5 324 609 m north, 303 486 m east);

Thence, in an average easterly direction, along the southeastern shore of lac Raven, the southern bank of an unnamed stream, the southwestern shore of an unnamed lake and the southwestern bank of an unnamed stream, which lakes and streams are excluded from the biodiversity reserve and along the northern shore of lac Buies, the eastern bank and shore of unnamed streams and lakes and the eastern bank of rivière Dufay, to the intersection of a line parallel to and at a distance of 150 metres from the northern shore of lac Dufaythat is, point 2 (5 323 419 m north, 307 026 m east);

Thence, in an average southeasterly direction, along a line parallel to and at a distance of 150 metres from the northern shore of lac Dufay, to the intersection of the western bank of an unnamed stream, that is, point 3 (5 322 778 m north, 308 996 m east);

Thence, in an average southeasterly direction, along the western, northern, southern and eastern banks of an unnamed stream to the intersection of a line parallel to and at a distance of 150 metres from the eastern shore of lac Dufay, that is, point 4 (5 322 765 m north, 309 021 m east);

Thence, in an average southerly direction, along a line parallel to and at a distance of 150 metres from the eastern shore of lac Dufay, to the intersection of the northeastern bank of an intermittent watercourse, that is, point 5 (5 320 568 m north, 308 472 m east);

Thence, in an average southeasterly direction, along the northeastern bank of an intermittent watercourse, to point 6 (5 320 426 m north, 308 822 m east);

Thence, easterly following straight line having a bearing of 85°33'43" over a distance of about 68 metres, to the intersection of a passable road, that is, point 7 (5 320 431 m north, 308 890 m east);

Thence, in an average northeasterly direction, along the southeastern right of way of a passable road, to the intersection of a non-passable road, that is, point 8 (5 320 608 m north, 308 990 m east);

Thence, easterly following a straight line having a bearing of 84°24'25" over a distance of about 728 metres to the intersection of the northwestern bank of an unnamed stream, that is, point 9 (5 320 679 m north, 309 715 m east);

Thence, in an average northeasterly direction, along the northwestern bank of an unnamed stream, to the intersection of an unnamed stream, that is, point 10 (5 320 897 m north, 310 032 m east);

Thence, in an average easterly direction, along the northern bank and shore of unnamed streams and lakes, to the intersection of a non-passable road, that is, point 11 (5 320 955 m north, 311 400 m east);

Thence, in an average northeasterly direction, along the southeastern right of way of a non-passable road, to the intersection of a non-passable road, that is, point 12 (5 321 332 m north, 311 858 m east);

Thence, in an average southeasterly direction, along the southwestern right of way of a non-passable road, to the intersection of the northwestern bank of an unnamed stream, that is, point 13 (5 320 842 m north, 312 096 m east);

Thence, in an average northeasterly direction, along the northwestern bank and shore of an unnamed stream, lac Montalais, an unnamed stream, lac Granville, an unnamed stream, an unnamed lake and rivière Granville to the intersection of the southern shore of baie Lamy of lac Opasatica, that is, point 14 (5 328 756 m north, 313 737 m east);

Thence, in an average northeastern direction, along the northwestern shore of baies Lamy and Klock of lac Opasatica and the western shore of baies McCormick and des Groseillers of lac Opasatica, to the intersection of the limit of the front of rang III of canton de Dasserat, that is, point 15 (5 336 926 m north, 317 583 m east);

Thence, easterly following the limit of the front of rang III of canton de Dasserat to the eastern shore of baie des Groseillers of lac Opasatica, that is, point 16 (5 336 926 m north, 317 685 m east);

Thence, in an average southerly direction, along the eastern shore of baies des Groseillers, McCormick, Ollier and Verte of lac Opasatica, to the intersection of the western limit of lot 4 381 461 of the cadastre of Québec, that is, point 17 (5 329 681 m north, 319 188 m east);

Thence, easterly following the southern limit of lots 4 381 461 and 4 382 310 of the cadastre of Québec to the southeastern apex of the said lot 4 382 310, that is, point 18 (5 329 681 m north, 319 306 m east);

Thence, in an average northeasterly direction, along the southeastern right of way of chemin des Amis, that is, the southeastern limit of lots 4 382 310, 4 382 311, 4 382 312 and part of lot 4 382 313 of the cadastre of Québec, which lots are excluded from the described territory, to point 19 (5 330 175 m north, 319 903 m east);

Thence, southeasterly following a straight line having a bearing of 139°41'03" over a distance of about 257 metres to the intersection of the western limit of lot 1 of rang VIII of canton Montbeillard, that is, point 20 (5 329 979 m north, 320 070 m east);

Thence, southeasterly following a straight line having a bearing of 156°48'12" over a distance of about 553 metres to the intersection with the southwest shore of an unnamed lake, that is, point 21 (5 329 471 m north, 320 287 m east);

Thence, in an average southerly direction, along the eastern bank of an unnamed stream and shore of an unnamed lake to the intersection with the eastern bank of an unnamed stream, that is, point 22 (5 329 026 m north, 320 197 m east);

Thence, easterly following a straight line having a bearing of  $107^{\circ}04'38''$  over a distance of about 305 metres to the intersection of a line parallel to and at a distance of 100 metres from the northern shore of lac Opasatica, point 23 (5 328 936 m north, 320 489 m east);

Thence, in an average easterly direction, along a line parallel to and at a distance of 100 metres from the northern shore of lac Opasatica to the intersection of the western limit of lot 4 644 453 of the cadastre of Québec, that is, point 24 (5 329 193 m north, 321 374 m east);

Thence, southerly following the western limit of lot 4 644 453 of the cadastre of Québec to the intersection of the northwestern shore of baie à l'Original of lac Opasatica, that is, point 25 (5 329 010 m north, 321 375 m east);

Thence, in an average easterly direction, along the northern shore of baie à l'Original of lac Opasatica, to the intersection of the northeastern bank of ruisseau à l'Original, that is, point 26 (5 328 779 m north, 322 799 m east);

Thence, southwesterly following a straight line having a bearing of  $211^{\circ}49'39''$  over a distance of about 34 metres, to the intersection of the southwestern bank of ruisseau à l'Original, that is, point 27 (5 328 750 m north, 322 781 m east);

Thence, in an average southerly direction, along the eastern shore of baies à l'Original, Île à Bergeron and the northern and northeastern shores of baie Solitaire of lac Opasatica, to the intersection of the eastern bank of rivière Solitaire, that is, point 28 (5 310 202 m north, 322 590 m east);

Thence, westerly following a straight line having a bearing of  $257^{\circ}44'06''$  over a distance of about 47 metres, to the intersection of the western bank of rivière Solitaire, that is, point 29 (5 310 192 m north, 322 544 m east);

Thence, in an average southwesterly direction, along the southeastern shore of lac Opasatica, to the intersection of the southern bank of ruisseau Bull Rock, that is, point 30 (5 304 192 m north, 316 465 m east);

Thence, in an average westerly direction, along the southern bank of ruisseau Bull Rock and shore of unnamed lakes, to point 31 (5 304 043 m north, 313 069 m east);

Thence, southerly following a straight line having a bearing of  $171^{\circ}58'13''$  over a distance of 319.34 metres, to point 32 (5 303 727 m north, 313 114 m east);

Thence, southwesterly, following a straight line having a bearing of  $210^{\circ}45'40''$  over a distance of about 308 metres to the intersection of the eastern bank of an unnamed stream with the northern shore of an unnamed lake, that is, point 33 (5 303 462 m north, 312 956 m east);

Thence, in an average southerly direction, along the eastern shore of unnamed lakes and bank of an unnamed stream, to the intersection of the southern bank of an unnamed stream, that is, point 34 (5 302 946 m north, 312 886 m east);

Thence, southwesterly, following a straight line having a bearing of  $232^{\circ}05'36''$  over a distance of about 475 metres, to the intersection of the northeastern shore of an unnamed lake, that is, point 35 (5 302 654 m north, 312 511 m east);

Thence, in an average southwesterly direction, along the southeastern shore and bank of unnamed lakes and streams, to point 36 (5 301 912 m north, 312 201 m east);

Thence, southwesterly, following a straight line having a bearing of  $228^{\circ}09'32''$  over a distance of about 440 metres, to the intersection of the southern bank of an intermittent watercourse, that is, point 37 (5 301 619 m north, 311 873 m east);

Thence, in an average southwesterly direction, along the southwestern bank of an intermittent watercourse, an unnamed stream, a lake and an unnamed stream, to the southwestern bank of an unnamed stream, that is, point 38 (5 301 235 m north, 311 462 m east);

Thence, in an average southwesterly direction, along the southeastern bank of an unnamed stream to the intersection to the southwestern bank of an unnamed stream, that is, point 39 (5 300 717 m north, 311 223 m east);

Thence, westerly, following a straight line having a bearing of  $271^{\circ}21'36''$  over a distance of about 674 metres, to the intersection of the southeastern bank of an unnamed stream and the eastern shore of lac à la Perchaude, that is, point 40 (5 300 733 m north, 310 549 m east);

Thence, in an average southwesterly direction, along the southeastern shore of lac à la Perchaude and bank of an intermittent watercourse to point 41 (5 300 431 m north, 309 990 m east);

Thence, southwesterly, following a straight line having a bearing of  $261^{\circ}11'48''$  over a distance of about 264 metres, to the intersection of the southern bank of an intermittent watercourse, that is, point 42 (5 300 391 m north, 309 729 m east);



Thence, in an average northwesterly direction, along the southwestern bank of an intermittent watercourse, ruisseau Touzin and shore of unnamed lakes, to the intersection of the eastern bank of crique de la Loutre, that is, point 43 (5 304 683 m north, 305 955 m east);

Thence, westerly, following a straight line having a bearing of  $286^{\circ}41'13''$  over a distance of about 23 metres, to the intersection of the western bank of crique de la Loutre, that is, point 44 (5 304 690 m north, 305 933 m east);

Thence, in an average northerly direction, along the western bank of crique de la Loutre, shore of lac à la Loutre and bank of unnamed streams, to the intersection of a passable road, that is, point 45 (5 315 365 m north, 306 913 m east);

Thence, in an average northwesterly direction, along the northeastern right of way of a passable road to the intersection of the southeastern bank of an unnamed stream, that is, point 46 (5 316 251 m north, 304 730 m east);

Thence, in an average southwesterly direction, along the southwestern bank of an unnamed stream, to the intersection of the eastern bank of an unnamed stream, that is, point 47 (5 316 211 m north, 304 652 m east);

Thence, in an average southwesterly direction, along the eastern bank of an unnamed stream, the northern shore of an unnamed lake, so as to exclude the said lake from the biodiversity reserve, the southern bank of an unnamed stream and shore of an unnamed lake and the southwestern bank of an unnamed stream, to the intersection of a passable road, that is, point 48 (5 315 937 m north, 304 314 m east);

Thence, in an average southwesterly direction, along the northwestern right of way of a passable road, to the border between Québec and Ontario, that is, point 49 (5 315 540 m north, 303 485 m east);

Thence, in a general northerly direction, following the border between Québec and Ontario to starting point 1.

Having a total area of 334.33 square kilometres for all of the biodiversity reserve.

A parcel of land having an area of 0.16 square kilometre including private lots 4 644 014, 4 644 666, 4 644 677, 4 644 688, 4 644 699, 4 644 710, 4 644 722, 4 644 733, 4 644 744, 4 644 755, 4 644 766, 4 644 777, 4 644 788, 4 644 799, 4 644 810, 4 644 821 and 4 644 833 and lots corresponding to part of chemin des Chutes

4 644 400, 4 644 334, 4 645 531, 4 645 532, 4 645 533 and 4 645 534 of the cadastre of Québec, registration division of Rouyn-Noranda, and that may be described as follows, are excluded from the biodiversity reserve:

Starting from the point situated at the southwestern apex of lot 4 644 400 of the cadastre of Québec, that is, point 50 (5 313 167 m north, 318 557 m east), being the starting point of the parcel to be described;

Thence, in an average northeastern direction, along the northwestern right of way of chemin des Chutes, that is, the northwestern limit of lots 4 644 400, 4 644 334, 4 645 531, 4 645 532 and 4 645 533 of the cadastre of Québec, to the northern apex of the said lot 4 645 533, that is, point 51 (5 314 027 m north, 319 025 m east);

Thence, in an average northeasterly direction, along the northwestern right of way of chemin des Chutes, that is, part of the northwestern limit of lot 4 645 533 of the cadastre of Québec, to the intersection of a non-passable road, that is, point 52 (5 314 055 m north, 319 085 m east);

Thence, in an average northerly direction, along the western right of way of a non-passable road, to the intersection of a non-passable road, that is, point 53 (5 314 302 m north, 319 014 m east);

Thence, in an average southeasterly direction, along the northeastern right of way of rue des Bouleaux, to the intersection of chemin des Chutes, corresponding to the northern limit of lot 4 645 534 of the cadastre of Québec, that is, point 54 (5 314 229 m north, 319 190 m east);

Thence, in an average easterly direction Est, along the northern right of way of chemin des Chutes, that is, the northern limit of lot 4 645 534 of the cadastre of Québec, to the northeastern apex of the said lot 4 645 534, that is, point 55 (5 314 225 m north, 319 208 m east);

Thence, in an average southerly direction, along the eastern and southern limit of lot 4 645 534 of the cadastre of Québec, to the intersection of the western shore of lac Opasatica, that is, point 56 (5 314 205 m north, 319 203 m east);

Thence, southwesterly, along the northwestern shore of lac Opasatica, to the southern limit of lot 4 644 666 of the cadastre of Québec, that is, point 57 (5 313 173 m north, 318 651 m east);

Thence, westerly, following the southern limit of lot 4 644 666 of the cadastre of Québec, to the southeastern apex of the said lot 4 644 666, that is, point 58 (5 313 161 m north, 318 576 m east);

Thence, westerly, following the southern limit of lot 4 644 400 of the cadastre of Québec, to the south-western apex of the said lot 4 644 400, that is, starting point 50.

The following two islands of lac Opasatica having a total area of 0.01 square kilometre and whose limit is described as follows are also excluded from the biodiversity reserve:

—An unnamed island situated in lac Opasatica whose limit with the shore of the said lake corresponds to the limit of lot 4 381 782 of the cadastre of Québec;

—An unnamed island situated in baie McCormick of lac Opasatica whose limit with the shore of the said lake corresponds to the limit of lots 5 209 469 and 5 209 470 of the cadastre of Québec.

Notes:

—The limit of the biodiversity reserve shown on the plan accompanying the technical description was determined from the digital files in the Québec topographic and administrative database (BDTA) at a scale of 1:20,000 of the Ministère de l'Énergie et des Ressources naturelles du Québec, an excerpt of the surveys officialized in the Registre du domaine de l'État effective on 26 April 2017, an excerpt of the Base de données cadastrale du Québec effective on 26 April 2017, digital compilation of surveys produced by the Ministère, the data bank of the forest information system (SIEF) of the said department and the mining right management system (Gestim) of the said department.

—The limit described in this description constitutes a limit only for the purposes of land management relating to the use of the mandate concerned and may not be invoked for border delineation purposes.

—Generally, all the beds of watercourses, rivers, lakes and islands are included in the biodiversity reserve. Only those excluded are mentioned in this technical description.

—The limits defined by the shore of a lake or the bank of a river or stream correspond to the high-water mark.

—The coordinates and areas used in this technical description are approximate. They were graphically determined from the said data used to determine the limit of the biodiversity reserve. They are given in metres in reference to the Québec plane coordinate system (SCOPQ), Modified Transverse Mercator projection (MTM), Time Zone 10 (central meridian 79°30'), North American Datum 1983 (NAD83).

—The measures comply with the International System of Units.

—The limit of the biodiversity reserve is based on the actual layout of the elements described in this document and must be legally interpreted in such a way. It was prepared by the Direction des aires protégées of the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques of Québec.

—The territory of the biodiversity reserve, as described in this technical description includes only the lands in the domain of the State. Any land that is not part of the domain of the State is excluded from the biodiversity reserve.

—The territory is represented on a plan at a scale of 1:40,000.

—In accordance with the instructions of the Direction des aires protégées of the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques of Québec, the information contained in the fundamental documents provided by the mandator, from which this technical description was prepared, is accepted as fact.

The whole as shown on the plan prepared by the undersigned on 24 November 2017 and filed with the office of the Surveyor-General of Québec of the Ministère de l'Énergie et des Ressources naturelles under document number 536698.

Prepared in Québec, on 24 November 2017, under number 11 401 of my minutes.

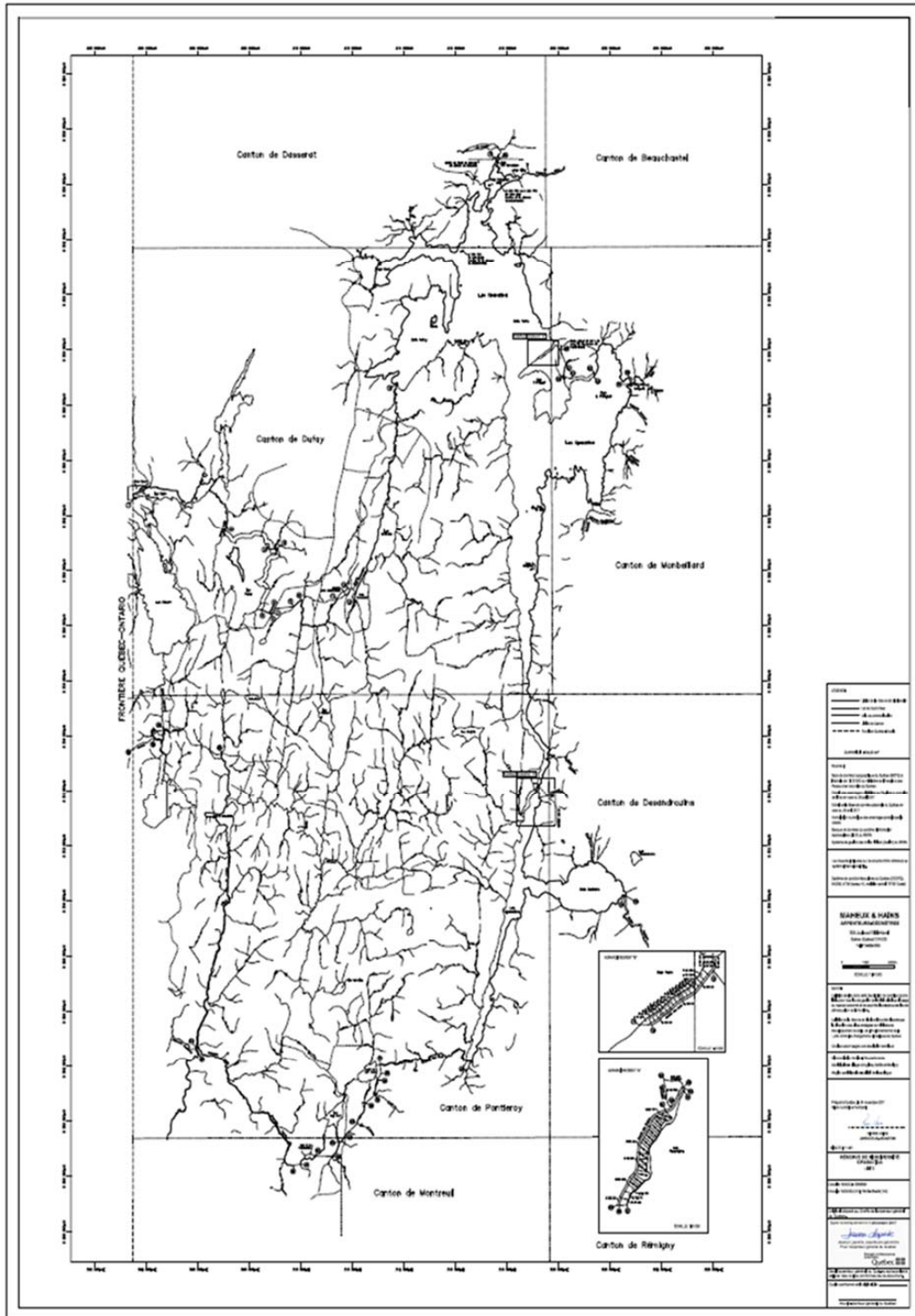
Digitally signed by:

PIERRE HAINS,  
*Land Surveyor*

Ministère du Développement durable,  
de l'Environnement et de la Lutte contre  
les changements climatiques

Direction des aires protégées

MDDELCC record: 5148-06-08(14)



**SCHEDULE II**

CONSERVATION PLAN OF THE RÉSERVE DE BIODIVERSITÉ OPASATICA



**Réserve de  
biodiversité  
Opasatica**



CONSERVATION PLAN

Cover page photos: Marc-André Bouchard

Reference to cite:

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## Introduction

In 2004, the Gouvernement du Québec moved to protect Lac Opasatica and a portion of the land located to the west of the lake.

The legal and provisional status of proposed biodiversity reserve was officially granted to this territory in July 2004 under section 27 of the *Natural Heritage Conservation Act* (chapter C-61.01). The proposed biodiversity reserve was given the temporary name of Réserve de biodiversité projetée du Lac Opasatica.

On February 22, 2007 the Minister of Sustainable Development, Environment and Parks (MDDEP) mandated the Bureau d'audiences publiques sur l'environnement (BAPE) to hold a public consultation on the proposed protected areas of Lac Opasatica, Lac des Quinze, Forêt Piché-Lemoine and Réservoir Decelles. This mandate was given to the BAPE in accordance with section 39 of the *Natural Heritage Conservation Act*, which provides for a public consultation process before permanent protection status is recommended to the Gouvernement du Québec for a territory reserved for the creation of a new protected area. The BAPE's mandate began on March 8, 2007 and concluded on August 8 of the same year. The consultation was held in April and May 2007 in Val-d'Or, Rouyn-Noranda, Angliers, Lac-Simon and Winneway. The BAPE's inquiry and public hearing report (No. 244) was submitted to the Minister of the MDDEP on August 8, 2007 (BAPE, 2007). In its report, the commission recommended giving permanent protection status to Réserve de biodiversité projetée du Lac Opasatica (Réserve de biodiversité Opasatica).

By giving permanent protected status to Réserve de biodiversité Opasatica, the Gouvernement du Québec ensures the definitive protection of representative samples of the biological diversity of the Abitibi lowlands natural province; more specifically, of representative ecosystems of the

Lac Témiscamingue lowlands natural region; and more precisely still, of the Lac Roger plain physiographic complex. The reserve joins a network of representative and exceptional protected areas that protect the various types of ecosystems across Québec.

This biodiversity reserve was selected in large part for Lac Opasatica, and for its extensive area of organic soil on rock. The territory is also noteworthy for its diversity of plant communities, including stands of black spruce, white birch and jack pine. The reserve contains four exceptional forest ecosystems, along with a wildlife habitat on Lac Opasatica's Île Ronde where there is a large heronry.

Lastly, sixteen sites of interest for Québec's archeological heritage have been found in the reserve. The concentration of archeological sites of interest has led to the designation of three archeological areas within the reserve. They are located around Lac Buies, near Baie à Beaupré, and on the shore of Lac Opasatica, more precisely the west shore south of Baie Lamy.

### 1. The territory of Réserve de biodiversité Opasatica

#### 1.1 Official toponym

Réserve de biodiversité Opasatica: the name reflects the presence of Lac Opasatica. As has been known since the early 20<sup>th</sup> century, "Opasatica" is of Algonquin origin, a fusion of "obié" or "opa", meaning "narrowed", and "satika", meaning "where there are aspens". The resulting compound means lake surrounded by poplars, poplar narrows, or lake enclosed by aspens (Commission de toponymie du Québec, 1996).

#### 1.2 Geographical location, boundaries and dimensions

The location and boundaries of Réserve de biodiversité Opasatica appear on the map in Appendix 1.

**Location:** Réserve de biodiversité Opasatica is located, in large part, on the territory of the city of Rouyn-Noranda, in the administrative region of Abitibi-Témiscamingue, and extends between 47°50'35" and 48°10'15" north latitude and between 79°15'28" and 79°31'46" west longitude. About 12% of the reserve is in the township municipality of Nédélec, in the MRC de Témiscamingue. The reserve lies about 25 km southwest of downtown Rouyn-Noranda and abuts the Québec-Ontario border. It can be accessed from highways 117 and 101, which pass respectively to the north and east of the reserve. It is served by a network of forest roads that enter the territory from the north via highway 117 and from the southwest via highway 101.

**Area and boundaries:** The initial area of the proposed reserve when it was set aside in 2004 was 245 km<sup>2</sup>. Following the public hearings, different expansion proposals were presented to the MELCC. In its analysis report No. 244, the BAPE recommended evaluating the possibility of expanding the proposed reserve to include the areas of interest presented, before granting permanent protection status (BAPE, 2007).

In its present form, the total area of the reserve is 334.4 km<sup>2</sup>. The final boundaries were defined on the basis of natural or anthropic elements that are easily identified on the ground, such as watercourses, lakes, forest roads and the edges of bogs. For sections along the shores of Lac Opasatica, watercourses and other bodies of water, the real boundary is the natural high-water mark. The legal boundaries of the reserve are defined in the technical description and the survey map prepared by land surveyor Pierre Hains with the following minutes 11401 (November 24, 2017) and filed in the surveying archives of the Surveyor General of Québec (Greffé de l'arpenteur général du Québec),

Ministère de l'Énergie et des Ressources naturelles under document number 536698.

### 1.3 Ecological portrait

Réserve de biodiversité Opasatica is part of the Abitibi lowlands natural province. It protects representative ecosystems in the Lac Témiscamingue lowlands natural region and belongs to the Lac Roger plain physiographic complex. Among the elements described below, those of the greatest ecological interest are mapped in Appendix 2.

#### 1.3.1 Representative elements

**Geology:** The biodiversity reserve is in Superior geological province, where the foundation rock is Archean (over 2.5 billion years old). The substratum is primarily intrusive igneous rock, i.e. granites. The western portion, near Lac Hébert, consists of sedimentary rocks in the form of conglomerate. The northern part consists of ultramafic volcanic rocks and metamorphosed metasedimentary rock in the form of paragneiss.

**Geomorphology:** When the Laurentide ice sheet melted, around 8500 years ago, it covered the bedrock with a thick layer of poorly drained glaciolacustrine sediments (silt and clay). Erosion by the waves of glacial lake Barlow-Ojibway stripped away the silt covering the tops of the highest mounds (Veillette, 2000).

Today the landscape is a plain punctuated with mounds and residual hillocks, gently sloping to the north.

Apart from outcrops here and there, the bedrock is covered by glaciolacustrine deposits or occasionally a thin layer of till. The relief is shallow, with an elevation ranging from 265 to 390 metres (average 300 metres).

A plant survey conducted in 2011 by FloraQuebeca noted two eskers on the territory of the reserve (FloraQuebeca, 2012). One is in the northwest portion and forms a small peninsula in Lac Dufay. The second esker lies along the eastern boundary of the reserve, near Passage à Paulson, and has a passable road running throughout its length (see map in Appendix 1 for the location of Passage à Paulson).

Réserve de biodiversité Opasatica is composed of four distinct ecological units, as defined by their landforms and surface deposits: Lac Opasatica, the northern terrestrial part of the reserve, the plateau south of it, and the western part of the reserve.

Due to its large size, Lac Opasatica constitutes a physical entity all on its own. As for the northern terrestrial part of the reserve, it is a glaciolacustrine plain composed of clay and silt, punctuated with hillocks of till. A few hollows are filled with organic deposits, forming shallow ombrotrophic bogs on till, and shallow wooded minerotrophic bogs on clay and silt. This unit is crossed by a ridge about 25 metres high running in an east-northeast/west-southwest direction. The ridge is a diabase dike created by differential erosion. Along its base are thin colluvial deposits on rock, colluvium being material that accumulates at the base of a steep slope.

South of the previous unit, a plateau rises 40 to 50 metres above the plain. The plateau has a large number of rocky outcrops with thin till. On its eastern side the plateau ends with an abrupt slope toward Lac Opasatica, where the soil consists of clay and silt. Hollows are filled with organic deposits, forming shallow ombrotrophic bogs on till and shallow wooded minerotrophic bogs on clay and silt.

According to the ecological reference framework of Québec (Li and Ducruc, 1999), the western part of the reserve is a complex of till hillocks of variable thickness, with rocky outcrops emerging from glaciolacustrine lowlands of clay and silt. A few hollows are filled with organic deposits forming bogs. To the south of Lac Hébert there are two areas of ice-contact fluvio-glacial deposits composed of sand and gravel. The island in Lac Dufay consists of ice-contact fluvio-glacial sand. Two areas of thin colluvium on rock are found to the west of Lac Hébert.

**Hydrography:** The biodiversity reserve is in the Rivière des Outaouais watershed. More precisely, the section to the west of Lac Opasatica is part of the Rivière Blanche sub-watershed. Lac Opasatica itself, together with the glaciolacustrine plain unit and the plateau unit, is in the Rivière Barrière sub-watershed.

Lac Opasatica is nearly 33 kilometres long, with a surface area of 48 km<sup>2</sup>. In its northern part it is 6 kilometres wide and has large bays, some of which are named, including Klock, Lamy, Verte and À l'Original. In its southern extremity the lake is very narrow, less than a kilometre wide at Baie Solitaire. At this location the lake empties into Rivière Solitaire, which in turn feeds Lac Rémigny. This long and narrow lake occupies a fault zone in the bedrock and has a maximum depth of over 60 metres.

There are nine other named lakes in the reserve, the largest ones being lakes Hébert, Dufay, Montalais and Granville, along with Lac Bull Rock and Petit Lac Bull Rock. Aquatic environments account for about 20% of the area of the reserve.

**Climate:** The territory of Réserve de biodiversité Opasatica is subject to a mild continental subarctic climate, subhumid with a long growing season. Average temperatures range from 1.9°C

to 4.5°C. The average annual precipitation ranges from 800 mm to 1359 mm, and the average growing season is from 180 to 209 days.

The reserve is in the balsam fir-yellow birch bioclimatic domain, which extends in a band from west to central Québec between 47° and 48° north latitude. Mesic sites are occupied by mixed stands of yellow birch and conifers, including balsam fir, white spruce and cedar. Sugar maples are at the northern limit of their range here. Forest fires and epidemics of spruce budworm are the two main factors of forest dynamics. The abundance of yellow birch and pines diminishes from west to east, resulting in two subdomains. The reserve is in the western one, where yellow birch-balsam fir stands are omnipresent on mesic sites.

**Forests:** As mentioned earlier, the reserve is noteworthy for its four exceptional forest ecosystems:

- The Baie-à-l'Original rare forest (a black ash-red ash stand);
- The Lac-Opasatica old forest (a balsam fir-white birch-cedar stand);
- The Baie-à-Beaupré old forest (a black spruce-white pine-cedar stand);
- The Rivière-Granville old forest (a balsam fir-white birch-cedar stand).

Forest covers about 70% of the territory. It is composed primarily of mixed forests (49%) and coniferous forests (44%), the remaining 7% being deciduous. The principal woodlands are black spruce stands and shade-intolerant hardwoods, especially white birch. Jack pine stands dominate the plateau in the southeast. There is a concentration of eastern white cedar stands in the northern portion around Lac Opasatica and around lakes Hébert and Dufay. While 43% of the forest cover consists of medium age stands (40-80 years), and 36% of young stands (0-40 years),

the remaining 21% consists of mature and old stands. Those of medium age are primarily concentrated on the plateau to the southeast, while the more scattered mature stands are mostly found in the northern portion, on the glaciolacustrine plain, or more precisely in the exceptional forest ecosystems (the Rivière-Granville and Lac-Opasatica old forests) and their peripheral areas, and in the western part of the reserve, some being near lakes Dufay and Hébert, the others being to the southwest, in the area surrounding two biological refuges.

In the glaciolacustrine plain ecological unit, in the northern part of the reserve, colonies of white birch and black spruce occupy the hillocks of till. In contrast, the silty-clay plain is populated by mixed forests and stands of regenerating hardwoods. The exceptional forest ecosystems of the Rivière-Granville and Lac-Opasatica old forests are in this ecological unit. Also present are cedar stands on the shores of Baie Lamy. Though most of the forests are young (10-15 years), this unit contains a good number of the reserve's old forests.

The southeast plateau is mostly populated by stands of jack pine, with stands of white birch and trembling aspen in steeper areas. These shade-intolerant hardwoods also grow on the eastern slope toward Lac Opasatica and in areas of lower elevation. Medium age stands (50-70 years) comprise 95% of the plant cover here. Stands of jack pine occupy areas of rocky outcrops, while stands of black spruce are chiefly found in areas of rocky outcrops, but also in the northern part of this unit.

The complex of till hillocks, rocky outcrops and slopes in the western ecological unit features colonies of white birch and black spruce. There is also a white pine-red pine stand with the characteristics of a rare forest. Cedar stands



occupy the area between lakes Hébert and Dufay. There are also isolated stands of yellow birch, white pine, balsam fir and tamarack. The forests are mostly young, and though the total area of old stands is relatively large, they are small and scattered, not in forest massifs.

**Flora:** In 2011 a survey targeting specific parts of the reserve was conducted by FloraQuebeca. The survey identified 335 vascular species, including 23 species of interest, as well as 1 species of lichen, 3 species of mushroom and 1 species of bryophyte (FloraQuebeca, 2012). No comprehensive plant inventory has been done for the entire territory of the reserve. However, Baldwin (1958) and Rousseau (1974) studied the vascular flora of the clay belt of northeastern Ontario and northwestern Québec, where the reserve is located. Chiefly characterized by boreal vegetation, the clay belt covers most of Abitibi and northern Témiscamingue. The few surveys done after Baldwin's study indicate that the region is home to around 1000 vascular species, while its non-vascular species include 125 lichens, 30 liverworts and 159 mosses. No survey has been done for the region's mushrooms and algae.

**Fauna:** No inventory has been done for wildlife in the reserve. However, species mentioned in the literature as being characteristic of the balsam fir-yellow birch and balsam fir-white birch forests of western Québec include the following: snowshoe hare, black bear, red squirrel, Canadian beaver, muskrat, American porcupine, red fox, patched fox, American marten, weasel, fisher, American mink, coyote, wolf, river otter, Canadian lynx, moose, white-tailed deer, and seven species of bat, three of which are endangered. According to the literature, some fifty species of mammals could inhabit western Abitibi-Témiscamingue, and thus the territory of Réserve de biodiversité Opasatica.

At the same time, bird surveys indicate that the species frequenting the reserve are characteristic of the balsam fir stands, mixed forests and continuous boreal forests of western Québec. The reserve provides a habitat for around 109 bird species, including one that is vulnerable and two that are likely to be designated threatened or vulnerable. The bird survey was done by the Société du loisir ornithologique de l'Abitibi (SLOA). As mentioned earlier, Île Ronde has been designated as a wildlife habitat (heronry) and is protected by the provisions of the *Act respecting the conservation and development of wildlife* (chapter C-61.1). There are about 40 active nests in the heronry (2002 census).

Of the 24 species of fish found by the Ministère des Forêts, de la Faune et des Parcs (MFFP) in Lac Opasatica, the most important are walleye, northern pike, yellow perch, whitefish and smallmouth bass. Other species noted include brown bullhead, white sucker, emerald shiner, spottail shiner, burbot, trout-perch, sauger and slimy sculpin. There are walleye spawning beds in lakes Hébert and Dufay. Some of the area's streams are home to brook trout.

Among the herpetofauna (which include snakes, turtles, amphibians and salamanders), 22 species have been observed in Abitibi-Témiscamingue. Some could inhabit the lakes and watercourses of Réserve de biodiversité de la Moraine-d'Harricana (MRNF, 2007).

### 1.3.2 Outstanding elements

According to the Centre de données sur le patrimoine naturel du Québec (2014), no plant species that is threatened or vulnerable or likely to be so designated has been observed in the reserve. They could however be present. It should be noted that one threatened species and seven plant species likely to be designated

threatened or vulnerable have been found on the territory of Rouyn-Noranda. However, the plant survey conducted in 2011 by FloraQuebeca for certain parts of the reserve led to the discovery of six new species (for the region or Abitibi), two species whose presence represents an extension of their range, ten species that are rare in Abitibi, a new occurrence in the reserve for one species, and five species worthy of mention (FloraQuebec, 2012).

The bald eagle, considered vulnerable in Québec, frequents the northern part of the reserve. Again according to the Centre de données sur le patrimoine naturel du Québec (CDPNQ), there were five observations of three species at risk: the anatum peregrine falcon (a vulnerable species), southern bog lemming and short-eared owl. The last two are species likely to be designated threatened or vulnerable that were observed in the vicinity of the biodiversity reserve and could well frequent it.

The Ministère des Forêts, de la Faune et des Parcs has accorded exceptional forest ecosystem (EFE) status to three old forests and one rare forest in the reserve. They are: two stands of balsam fir-white birch-cedar, one black spruce-white pine-cedar stand and one black ash-red ash stand. The first EFE, with an area of 117 hectares, is to the west of Lac Opasatica, while the second, of 113 hectares, is on the eastern slope of the Rivière Granville valley. As for the black spruce-white pine-cedar stand, which covers 39 hectares, it is on the eastern shore of Lac Opasatica, where a rocky point protrudes into the lake between Baie Verte and Baie à Beaupré. Lastly, the rare black ash-red ash stand occupies 26 hectares on the west side of Baie à Beaupré. (See map in Appendix 1 for the location of bays in Lac Opasatica.)

The black spruce-white pine-cedar stand contains multiple micro-habitats favourable to acidophilic plant communities that are uncommon in the region. The plants that have been found include cave-dwelling species, one uncommon species (marginal wood fern) and a very rare species located at the northern limit of its range (bulblet bladder-fern). The old forest of Lac Opasatica is home to several species of interest in the undergrowth and on the rocky sides of outcrops, including large specimens of bristly black currant.

The greatest diversity of plants in the reserve is on the five rocky points of the peninsula west of Baie à l'Original. There are two aquatic species at the northern limit of their range (Nuttall's waterweed and spinose-spore quillwort), three species of orchid including one in abundance (lesser purple fringed orchid), numerous chanterelles, a hawthorn uncommon in Abitibi, a few colonies of marsh arrow-grass, and a fine population of American reedgrass.

Also worth nothing is the presence of fluvio-glacial materials on the main island of Lac Dufay and along the lake's north shore. Clay deposits are far more abundant in the southern part of the reserve, with a rich variety of plant life and large meadows.

It should also be mentioned that in the area to the northeast, adjacent to the reserve, there is a white-tailed deer yard.

Finally, there are sixteen sites of interest for Québec's archeological heritage. Their strategic position on the water route between the St. Lawrence and Hudson's Bay gave them an important role in Amerindian history. All contain remains of prehistoric Amerindian occupations, and some, the remains of Euro-Québec occupations. One site is about 4300 years old,

while another is among the rare archeological sites in Québec where rock paintings have been found. All the sites are well preserved, but they are very fragile because of their low depth in the soil. Any disturbance of the surface could result in their partial or total destruction. It should be noted that the reserve's archeological potential may be much greater than is known at present. Corporation Archéo-08 has conducted a number of archeological digs in the reserve, especially on the shores of Lac Opasatica. Begun in 1987, their work is still underway and has been conducted in close collaboration with the Ministère de la Culture et des Communications.

#### 1.4 Land occupation and uses

The principal occupations and uses exercised in Réserve de biodiversité Opasatica are shown in Appendix 3.

One hundred and seven (107) land rights were granted within the boundaries of the reserve before it was set aside as a proposed biodiversity reserve. There are also 101 leases for temporary forest shelters (hunting camps), three resort leases (cottages) and three rights for activities complementary or accessory to a recreational trail for non-profit community use. These last are located along a network of multifunctional trails (cross-country skiing, snowshoeing, hiking) in the Passage à Paulson area.

Additionally, a snowmobile trail running north-south and marked by a snowmobile club crosses the western part of the reserve, along Lac Hébert.

Electrical transmission lines also cross the reserve. Their right of way is 12 metres wide.

The biodiversity reserve overlaps eleven trapping grounds in fur-bearing animal management units 04 and 02-B. The trappers responsible for them have not built any trapping camps in the reserve.

The following species have been harvested: weasel, beaver, coyote, squirrel, otter, Canadian lynx, American marten, fisher, muskrat, raccoon, patched fox (a cross between red fox and silver fox), red fox and mink.

Hunting is practised in the reserve; in fact, the harvest numbers for moose and black bear are twice the regional average (Ministère des Ressources naturelles et de la Faune, 2006). Due to the abundance of secondary trails to hunting camps, the natural environments surveyed in 2011 by FloraQuebeca were found to be quite fragmented. Many trails disturb the natural water flow in wetlands and encourage the propagation of invasive plant species.

With a depth of up to 60 metres, Lac Opasatica attracts a large number of boaters. The proximity of Rouyn-Noranda has led to cottage development along the east shore of Lac Opasatica. Forest roads leading in from highway 117 also provide access to lakes Pontleroy and Bull Rock. Every summer since 2008, monthly water quality monitoring has been carried out by local citizens, for Lac Opasatica and four of its headwater lakes (Évain, Fortune, King of the North and Mud). The results for conventional parameters suggest that the waters of Lac Opasatica are of good quality and not deteriorating. Monitoring for more toxic substances in the fish and surface waters of the Lac Opasatica watershed was done by a team from the Ministère de l'Environnement from the late 1970s to the early 1980s, and by the MDDEP on an occasional basis from 2009 to 2011. The results showed that toxic substances in the waters of the Lac Opasatica watershed, including metals, dioxins/furans and PCBs, are present but in negligible concentrations. Though slightly higher in the flesh of predatory fish caught from Lac Opasatica (walleye, sauger and northern

pike), concentrations of the same substances were below critical levels (MDDELCC, 2014, Guide de consommation du poisson de pêche sportive en eau douce).

## 2. Conservation and development of Réserve de biodiversité Opasatica

This section presents conservation and development guidelines, together with objectives specific to Réserve de biodiversité Opasatica.

### 2.1 Protection of biodiversity

To maintain the viability of ecological processes, management of the reserve should give priority to protecting the ecosystems present and the species that depend on them. This includes allowing the many ecosystems that have been disturbed to recover their dynamics and natural characteristics.

Existing occupations and uses that are compatible with the reserve's protection objectives will be maintained. Activities should be managed to ensure that they have as little impact as possible, and no long-term impact on biodiversity.

#### Specific objectives:

- ***Promote the resilience of disturbed forest ecosystems***

The total area of sections that were logged in the ten to fifteen years before the creation of the reserve is quite small. More in the past, a large proportion of the territory of the reserve was logged. That land is regenerating however, and is already populated with young and medium-age forests. The disturbed forest ecosystems should thus be able to recover their natural characteristics. The absence of any form of logging will facilitate that resilience. These environments have good productivity and will be

able to re-establish themselves in the coming decades, with no need for active management measures such as planting and restoration.

- ***Ensure the protection of intact forest ecosystems***

The forest ecosystems of the southern half of the reserve are relatively undisturbed. Most of the forests are of medium age. The jack pine stands on the plateau, where there are thin and very well drained deposits, are of particular interest. The soils supporting this ecosystem must also be well protected, especially those consisting of organic soil on rock. Any further fragmentation of the forest cover must be avoided. As for the mature and old forests, they should be given particular protection, avoiding impacts of any kind and thus any new fragmentation, intervention or development.

- ***Protect the lake ecosystems and riparian environments of Lac Opasatica***

There are over 500 cottages and residences around Lac Opasatica, most being on the east shore. Vacation activities can have impacts on aquatic and riparian environments, especially when sanitation facilities are ineffective, when banks are cleared too close to the water, or when boating activity is such that unstable or deforested banks are eroded by wave action.

The MELCC will ensure that lake and riparian ecosystems are well protected and that Lac Opasatica continues to have good quality water. Since most of the shoreline dwellings are outside of the boundaries of the reserve, the MELCC will pursue this objective by building awareness about good practices (with regard to logging, shoreline development, maintenance of sanitary facilities, and the use and maintenance of motor boats), and by ensuring the application of existing

and future standards for the protection of water bodies. The collaboration of shoreline residents outside the reserve in contributing to the protection of Lac Opasatica will be very important. To that end, cottagers and other users of the water bodies and riparian environments should be given the information needed to apply good practices, to equip them to participate in protection. The MELCC will develop communication tools to enable shoreline residents to be stakeholders in the protection of their living environment. The city of Rouyn-Noranda will be the principal partner in pursuing this objective.

On the subject of motor boat travel, there will be no new restrictions on navigation in Lac Opasatica. Regarding motorized water sports, the MELCC intends to encourage users to adopt better practices (speed reduction, appropriate motor choice, respect for fragile sites, proper maintenance of equipment, etc.). Appropriate documentation prepared by the MELCC will present good practices that users could adopt to minimize their impact on Lac Opasatica and its shoreline.

## **2.2 Knowledge acquisition and environmental monitoring**

Knowledge acquisition, besides being crucial to the achievement of objectives specific to natural heritage protection, will make it possible to monitor the natural environment. The knowledge acquired could also be used in developing activities for nature discovery, education and public awareness. It will facilitate the analysis of development projects, and ensure that management partners have a common understanding of the issues.

Ecological knowledge, especially about the support capacity of natural environments, and about the impact of recreational and tourist

activities on ecosystems, must also be developed. This will be done to properly assess the wealth of the reserve's resources, to obtain representative data, and to develop the tools needed for good management, to ensure that the biodiversity specific to the reserve is conserved.

### Specific objective:

- ***Perform targeted inventories and subsequent monitoring***

The MELCC will target certain needs related to knowledge building on biodiversity. For example, in summer 2011 a plant survey was done in parts of the reserve by FloraQuebeca. A list of terrestrial wildlife species that frequent the reserve could be created with the help of regional partners in the wildlife field. The same applies to fish species in Lac Opasatica. Other topics could be pursued, such as the resumption of regular water quality monitoring in Lac Opasatica. The subjects of surveys or research to prioritize will be determined later, and will be related to various existing or anticipated ecological problems.

## **2.3 Integrated and participative management**

The characteristics of the reserve and its adjacent areas, in particular the eastern shore of Lac Opasatica, make imperative the adoption of a management approach based on stakeholder participation. This will facilitate the harmonious management of recreational activities while protecting the natural heritage.

### Specific objective:

- ***Establish participative and collaborative management***

Inasmuch as part of what the reserve protects is a large lake, half of whose shoreline is privately owned and outside the protected area, the MELCC faces a challenge in integrated management. Another management challenge is the fact that the reserve adjoins an MRC, the city



of Rouyn-Noranda and two municipalities. To provide adequate protection to Lac Opasatica and the terrestrial ecosystems of the biodiversity reserve, the MELCC must engage the participation of the lake's users and residents, the holders of land rights, and the city of Rouyn-Noranda, the township municipality of Nédélec, and the MRC de Témiscamingue. The Algonquin community of Timiskaming will also be an important partner in managing the reserve.

The MELCC will encourage the creation of a conservation committee where issues related to protection of the reserve and the use of Lac Opasatica could be discussed by stakeholders, as well as measures to take in response. An action plan will be prepared by the MELCC in collaboration with management partners. Among other things, the plan will determine actions to be taken, the means advocated, actors chosen to perform those actions, performance horizons, and a mechanism for evaluating results.

### 3. Zoning

Réserve de biodiversité Opasatica occupies a territory adjacent to a vacation area that is excluded from the boundaries of the reserve. In the Passage à Paulson area, an enclave of private cottage lots is also excluded from the reserve. Furthermore, the biodiversity reserve is close to Rouyn-Noranda, so human pressure on the natural environment will need to be considered in the management of activities. Based on the ecosystems present, the occupation and use of the territory, the current state of the natural environment, and the reserve's protection and management objectives, the reserve has been divided into four zones. All four have a protection level and the same activity framework, but protection measures and development possibilities will reflect the specific features of each zone.

A map of the zones is provided in Appendix 4. This zoning, and the particular characteristics of

each zone, will be taken into account in the MELCC's management of the reserve and when evaluating authorization requests for activities and improvements.

The four zones are:

- Zone I: Lac Opasatica
- Zone II: Silty clay plain
- Zone III: Southern plateau
- Zone IV: Hillock complex

#### ***Zone I: Lac Opasatica***

This zone consists of Lac Opasatica, its shores and a few areas of lowland associated with the lake and topographically isolated from the other zones. Zone I covers around 56 km<sup>2</sup>, or about 17% of the territory of the reserve. Just outside the boundaries of the reserve, the significant human presence on the eastern shore of Lac Opasatica must be taken into consideration in the management of this zone.

Zone I can be considered a "humanized" zone, one in which the state of the natural environment is intimately linked to the presence and activities of humans. Maintenance of the zone's ecological integrity, and improvement of its natural character, will depend on interactions between the natural environment, neighbouring residents and cottagers, and users of the lake. A partnership between the MELCC, the city of Rouyn-Noranda and the people living around Lac Opasatica should make it possible to determine and implement appropriate conservation measures while respecting rights for occupation and use.

The conservation objective for Zone I is to maintain a balance between, on the one hand, the pressure exerted by human activities and impacts from the periphery, and on the other hand, the lake's capacity to maintain good water quality along with viable aquatic and riparian ecosystems.

Particular attention must also be paid to the conservation of the three protected areas in this zone: the heronry on Île Ronde and the two exceptional forest ecosystems.

### **Zone II: Silty clay plain**

This zone of 54 km<sup>2</sup>, covering about 16% of the territory of the reserve, corresponds to the great glaciolacustrine plain of clay and silt deposits, which is scattered with till hillocks and bog-filled hollows. A diabase dike left by differential erosion traverses the zone.

With the exception of its two exceptional forest ecosystems and their immediate surroundings, Zone II has undergone extensive logging in recent decades. The regenerating forest cover is slowly fighting back. Accordingly, the objective for this zone is to promote the resilience of its young forest cover. Any intervention that would cause further fragmentation and disturbance must be restricted. Luckily, the zone can only be accessed by a single forest road, or by water, reducing the risk of traffic and disturbances increasing.

Nonetheless, one of the main problems affecting this zone is that in winter, people cross Lac Opasatica by snowmobile and cut firewood for their homes and cottages. Yet no permits for firewood cutting have been granted by the MFFP in the territory of the reserve, so this activity is illegal, under both the *Natural Heritage Conservation Act* (chapter C-61.01) and the *Sustainable Forest Development Act* (chapter A-18.1).

Stumps of mature trees have been noted at the edge of one exceptional forest ecosystem. The measures to be taken to solve this problem must involve the collaboration of local actors and a common approach by the MELCC, the MFFP and the city of Rouyn-Noranda.

Due to logging done in the past, the human footprint is such that Zone II can be considered a “natural developed” zone. Management must

therefore be guided by a focus on the resilience of forest ecosystems and the need to keep further disturbance or fragmentation to a minimum. The goal pursued will be to increase the naturalness of the zone.

Zone II has about 97 linear km of roads and trails, for a fragmentation index of 1.8 km of road per km<sup>2</sup>, which is high according to Quigley *et al.* (2001). With 25 temporary shelters (hunting camps), the zone has a relatively low occupation rate of one occupation per 2 km<sup>2</sup>.

Particular protection from disturbance will be given to the two exceptional forest ecosystems along with the areas surrounding them.

### **Zone III: Southern plateau**

This zone of 81 km<sup>2</sup>, covering about 24% of the reserve, is the least disturbed part. Though mostly composed of medium age stands, the forest cover is relatively undisturbed, except for a few small sections that were logged just before the area was set aside as a proposed biodiversity reserve.

With 26 linear km of roads and trails, Zone III has a relatively low fragmentation index (Quigley *et al.* 2001), 0.3 linear km per km<sup>2</sup>. There are twenty leases for temporary shelters and three leases for activities complementary or accessory to a recreational trail for non-profit community use. The occupation rate is low at one occupation per 3.5 km<sup>2</sup>.

Covered with thin till, the southern plateau has numerous rocky outcrops with sparse vegetation. It includes the area of steep slopes leading down to the western shore of Lac Opasatica.

Due to its high level of naturalness, Zone III can be considered a “natural” zone, in which the natural character of ecosystems must be preserved. Zone III should be managed as the anchor of the reserve’s protection.

#### **Zone IV: Hillock complex**

This zone occupies the entire western portion of the reserve. It takes the form of a complex of hillocks rising above the clay lowlands. The zone covers 144 km<sup>2</sup>, or about 43% of the reserve.

Zone IV is characterized by numerous recent cutblocks (logged sites) dating from a few years before the creation of the reserve. The cutblocks are interspersed with areas that escaped harvesting, where there are mature and old forests and indeed three biological refuges.

As with Zone II, Zone IV can be considered a “natural developed” zone and will need to be managed with a focus on the resilience of disturbed forest ecosystems. The fragmentation rate of the forest cover is similar to that of Zone II.

It will be particularly important to consolidate the residual blocks of old forest, which are present here in greater proportion than in the rest of the reserve. Elements that fragment the territory (forest roads and their rights of way) will be renaturalized if no longer used as access routes.

There are about 184 linear km of roads and trails in this zone, giving it a fragmentation index of 1.3 km per km<sup>2</sup>, which is relatively high (Quigley *et al.* 2001). The road network reflects the presence of areas where logging was done before the creation of the reserve. There are 54 leases for temporary shelters and 2 resort leases, giving an occupation rate of one occupation per 2.6 km<sup>2</sup>, which is relatively low.

At Lac Dufay, the MFFP is conducting scientific research on the walleye population. Such research is compatible with the reserve’s conservation guidelines and can thus continue.

## **4. Activity framework applicable to Réserve de biodiversité Opasatica**

The purpose of the reserve is to protect natural environments and their components. For this reason, activities that could have a significant impact on ecosystems and biodiversity, especially of an industrial nature, are prohibited. Less harmful activities and occupations, such as those involving recreation, wildlife, ecotourism or education, are however permitted in this type of protected area.

In sum, the biodiversity reserve should be considered as a territory dedicated to protecting the natural environment, to nature discovery and to recreation.

### **4.1 Activity framework established by the Natural Heritage Conservation Act**

Activities carried out within the biodiversity reserve are primarily governed by the provisions of the *Natural Heritage Conservation Act* (chapter C-61.01).

Under the Act, the activities prohibited in an area with the status of biodiversity reserve are primarily the following:

- mining and gas or oil extraction;
- forest management within the meaning of section 4 of the *Sustainable Forest Development Act* (chapter A-18.1);
- the exploitation of hydraulic resources and any production of energy on a commercial or industrial basis.

Though fundamental to protecting the territory and its ecosystems, the above prohibitions do not cover all of the standards considered desirable to ensure the proper management of the reserve and the conservation of its natural environment. The *Natural Heritage Conservation Act* allows the Regulation to detail the legal framework applicable on the territory of a biodiversity reserve.

#### 4.2 Activity framework established by the Regulation respecting the Réserve de biodiversité Opasatica

The provisions contained in Regulation respecting the Réserve de biodiversité Opasatica set out additional prohibitions beyond those already stipulated in the *Natural Heritage Conservation Act* (chapter C-61.01). They also provide a framework for certain permitted activities, to ensure the protection of the natural environment in accordance with the principles of conservation and other management objectives of the reserve. Certain activities are therefore subject to prior authorization by the Minister.

The measures presented in Regulation concern new interventions in particular, and generally do not affect activities that are already being practised or facilities that are already present. Many existing uses are thus preserved.

In listing the activities requiring authorization, Regulation does not identify which ones would be considered incompatible with the vocation of the reserve and could therefore be refused authorization. Basic information about the compatibility or incompatibility of each type of activity is provided in the document *Activity Framework for Biodiversity Reserves and Aquatic Reserves*, which available on the website of the MELCC at

[http://www.mddelcc.gouv.qc.ca/biodiversite/aires\\_protegees/regime-activites/regime-activite-reserve-bio-aqua-en.pdf](http://www.mddelcc.gouv.qc.ca/biodiversite/aires_protegees/regime-activites/regime-activite-reserve-bio-aqua-en.pdf).

Note that certain activities are exempted from the requirement to obtain authorization. These exemptions are also presented in Regulation.

#### 5. Activities governed by other laws

Certain activities that could potentially be practised in the biodiversity reserve are also governed by other applicable legislative and regulatory provisions, and some require a permit or authorization or the payment of certain fees.

Certain activities could be prohibited or limited under other laws or regulations applicable on the territory of the reserve.

In the territory of Réserve de biodiversité Opasatica, a particular legal framework may govern permitted activities under the following categories:

- **Protection of the environment:** measures stipulated by the *Environment Quality Act* (chapter Q-2) and its regulations;
- **Archeological research and discoveries:** measures stipulated by the *Cultural Heritage Act* (chapter P-9.002);
- **Exploitation and conservation of wildlife resources:** measures stipulated by the *Act respecting the conservation and development of wildlife* (chapter C-61.1) and its regulations, including provisions related to threatened or vulnerable wildlife species, outfitters and beaver reserves, and measures in the applicable federal laws and regulations, including the legislation and regulations on fisheries;
- **Plant species designated as threatened or vulnerable:** measures prohibiting the harvesting of such species under the *Act respecting threatened or vulnerable species* (chapter E-12.01);
- **Access and property rights related to the domain of the State:** measures stipulated by the *Act respecting the lands in the domain of the State* (chapter T-8.1) and by the *Watercourses Act* (chapter R-13);
- **Issuance and oversight of forest development permits** (harvesting of firewood for domestic purposes, wildlife development, recreational development); and **delivery of authorizations** (forest roads): measures stipulated by the *Sustainable Forest Development Act* (chapter A-18.1);

- **Travel:** measures stipulated by the *Act respecting the lands in the domain of the State* and by the regulations on motor vehicle travel in fragile environments, under the *Environment Quality Act*;
- **Construction and development standards:** regulatory measures adopted by local and regional municipal authorities in accordance with the applicable laws.

## 6. Management

### 6.1 Responsibilities of the Minister of Environment and the Fight against Climate Change

The Minister of Environment and the Fight against Climate Change is responsible for the management of the reserve. Among other things, the Minister sees to the application of the *Natural Heritage Conservation Act* (chapter C-61.01) and the Regulation respecting the Réserve de biodiversité Opasatica. In managing the reserve, the MELCC enjoys the collaboration and participation of other government representatives that have specific responsibilities in or adjacent to the territory.

### 6.2 Monitoring

As mentioned in section 2, “Conservation and development of Réserve de biodiversité Opasatica”, measures will be taken toward monitoring the status of the natural environment, in collaboration with the following local and regional partners: municipal stakeholders, partners in the areas of environment, recreation and education, and the occupants and users of the territory (cottagers, hunters, fishers, trappers, etc.).

### 6.3 Participation of stakeholders

As mentioned in section 2, “Conservation and development of Réserve de biodiversité Opasatica”, the MELCC will seek the

collaboration and participation of stakeholders in managing the reserve. Its intention is to draw up an action plan to guide management in protecting and enhancing the territory and its resources. The MELCC will prepare the plan in collaboration with the regional actors concerned. A participation and consultation mechanism for local stakeholders will be worked out by the MELCC on the basis of local and regional territorial realities.

Management of the biodiversity reserve will respect the following conservation principles:

- maintain natural ecosystem dynamics;
- restore or facilitate the restoration, where necessary and in the medium term, of damaged ecosystems;
- respect the support capacity of ecosystems;
- maintain non-industrial harvesting activities, without encouraging their development;
- gather and disseminate knowledge about the natural and cultural heritage;
- participate in the management of adjacent areas to ensure harmonization with the conservation objectives pursued within the biodiversity reserve.



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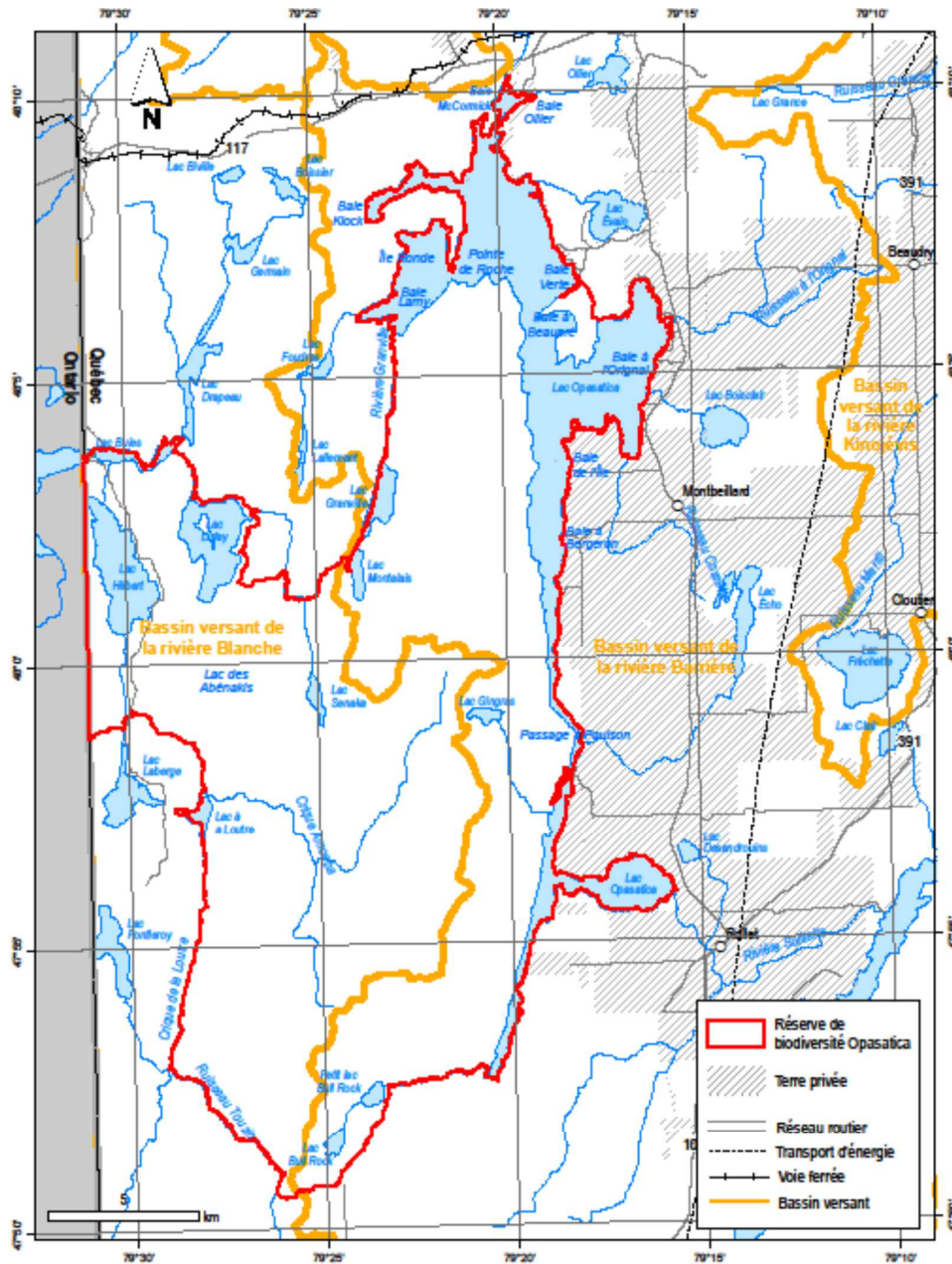
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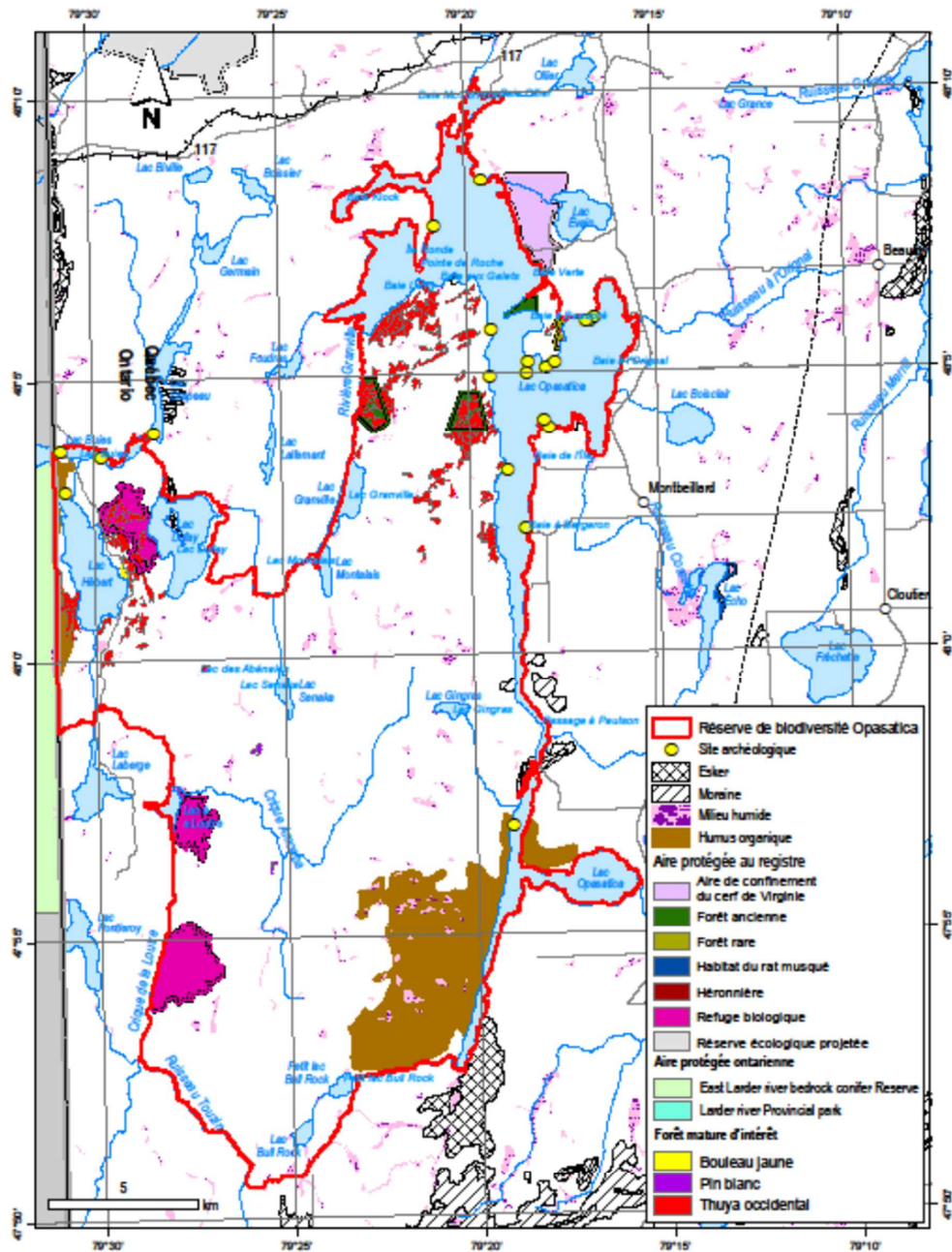
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## Appendix 1 — Réserve de biodiversité Opasatica: Boundaries and location

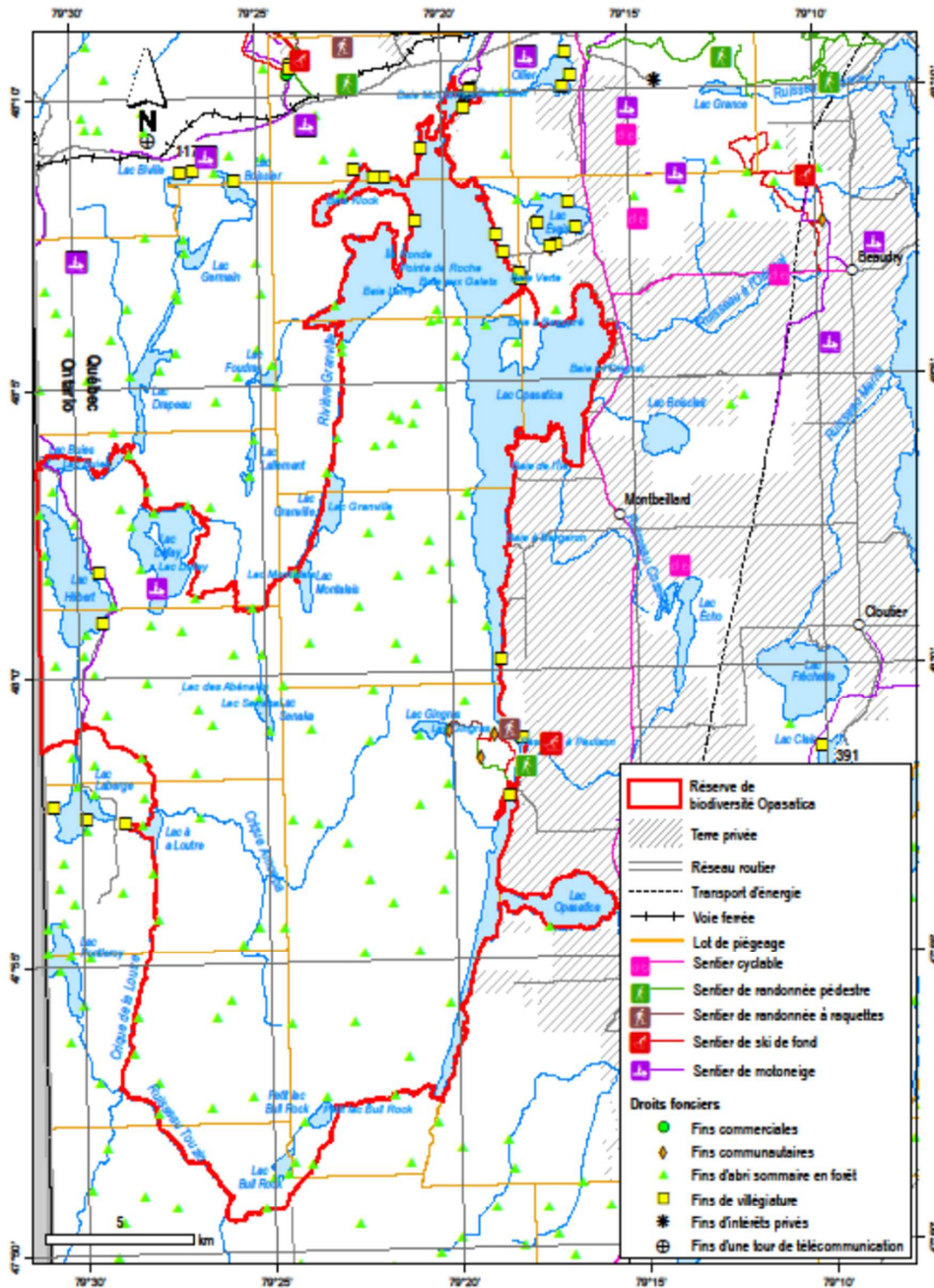


## Appendix 2 — Réserve de biodiversité Opasatica: Elements of ecological interest





## Appendix 3 — Réserve de biodiversité Opasatica: Land occupation and uses





Appendix 4 — Réserve de biodiversité Opasatica: Zoning

