

Gouvernement du Québec

**O.C. 113-2019, 13 February 2019**

Natural Heritage Conservation Act  
(chapter C-61.01)

Permanent status of the Réserve de biodiversité Kakinwawigak, 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 Des Quinze 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 biodiversity reserve to the territory of Des Quinze 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 Des Quinze 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 Des Quinze lake biodiversity reserve and concludes, among other things, that permanent protection status should be assigned to it;

WHEREAS the limits of the proposed Des Quinze lake biodiversity reserve were reassessed by the Minister and changed after the public consultation to ensure increased protection to mature deciduous stands, and to rely on natural elements easily visible on the site to facilitate management;

WHEREAS the plan of the proposed Des Quinze 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 Municipalité régionale de comté de Témiscamingue;

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 Kakinwawigak" 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 are permitted, in addition to those prohibited by paragraph 1 of that section, 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 Kakinwawigak 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 Kakinwawigak 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 Kakinwawigak 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 Kakinwawigak”;

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

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

THAT permanent status of the Réserve de biodiversité Kakinwawigak 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 Kakinwawigak

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 Kakinwawigak 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 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 territory of 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 in 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 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 14 and 16.

**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 KAKINWAWIGAK**  
(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 Rémigny, Beaumesnil, Villars, Bauneville and Latulipe, in the territory of Municipalité du Village d'Angliers, de Moffet et de Rémigny, in the administrative region of Abitibi-Témiscamingue, registration divisions of Témiscamingue and Rouyn-Noranda. The perimeter of the territory may be described as follows, namely:

**PARCEL A**

Starting from a point situated at the intersection of the northwestern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, and the northeastern shore of lac des Quinze, that is, point 1 (5 275 969 m north, 329 023 m east);

Thence, in an average northerly direction along the eastern shore of lac des Quinze and the northern shore of a lake, bank of a stream and shore of another unnamed lake to point 2 (5 284 702 m north, 330 862 m east);

Thence, northerly, following a straight line having a bearing of  $7^{\circ}45'00''$  over a distance of about 17 metres, to the intersection with the southern right of way of an unnamed road, that is, point, 3 (5 284 719 m north, 330 864 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road to the intersection of another unnamed road, that is, point 4 (5 284 693 m north, 332 114 m east);

Thence, in an average northeasterly direction, along the southeastern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 5 (5 285 040 m north, 332 399 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to the intersection with the western bank of an unnamed stream, that is, point 6 (5 285 031 m north, 333 642 m east);

Thence, in an average northerly direction, following the western bank of that unnamed stream to the intersection with the southern shore of an unnamed lake, that is, point 7 (5 285 037 m north, 333 641 m east);

Thence, in an average northeastern direction, along the western shore of an unnamed lake and the northwestern bank of an unnamed stream, to point 8 (5 285 546 m north, 334 028 m east);

Thence, northeasterly, following a straight line having a bearing of  $46^{\circ}21'11''$  over a distance of about 180 metres to the intersection with the northwestern bank of an unnamed stream that is, point 9 (5 285 670 m north, 334 158 m east);

Thence, in an average easterly direction, along the northern bank of an unnamed stream, to the intersection of the northern bank of the unnamed stream with the western shore of lac des Guêpes, point 10 (5 285 721 m north, 334 431 m east);

Thence, in an average northeasterly direction, along the northwestern shore of lac des Guêpes, to point 11 (5 286 028 m north, 334 691 m east);

Thence, easterly, following a straight line having a bearing of  $112^{\circ}26'40''$  over a distance of about 30 metres to the intersection with the southeastern shore of lac des Guêpes that is, point 12 (5 286 016 m north, 334 719 m east);

Thence, in an average southwesterly direction, along the southeastern shore of lac des Guêpes, to the intersection of the northern bank of an unnamed stream that is, point 13 (5 285 733 m north, 334 583 m east);

Thence, in an average easterly direction, along the northern bank of an unnamed stream and shore of unnamed lakes, to the intersection of an unnamed road that is, point 14 (5 285 971 m north, 338 145 m east);

Thence, in an average northerly direction, along the eastern right of way of an unnamed road, to the intersection of another unnamed road that is, point 15 (5 286 086 north, 338 099 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to point 16 (5 286 140 m north, 338 333 m east);

Thence, northeasterly, following a straight line having a bearing of  $63^{\circ}35'32''$  over a distance of about 30 metres to the intersection with the southeastern shore of an unnamed lake that is, point 17 (5 286 154 m north, 338 360 m east);

Thence, in an average easterly direction, along the southern shore of an unnamed lake, excluded from the biodiversity reserve, to point 18 (5 286 174 m north, 338 411 m east);

Thence, northeasterly, following a straight line having a bearing of 51°20'26" over a distance of about 6 metres to the intersection with the southern right of way of an unnamed road that is, point 19 (5 286 178 m north, 338 416 m east);

Thence, in an average northeasterly direction, along the southern and eastern right of way of an unnamed road, to the intersection of another unnamed road that is, point 20 (5 286 663 m north, 339 096 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 21 (5 286 599 m north, 339 466 m east);

Thence, in an average easterly direction, along the southern and eastern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 22 (5 286 812 m north, 340 861 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 23 (5 286 608 m north, 342 686 m east);

Thence, in an average southerly direction, along the western right of way of an unnamed road, to the intersection of an unnamed stream, that is, point 24 (5 286 458 m north, 342 630 m east);

Thence, in an average easterly direction, along the northeastern bank of an unnamed stream and shore of an unnamed lake and the northwestern bank of another unnamed stream, to the intersection of another unnamed stream, that is, point 25 (5 286 327 m north, 343 095 m east);

Thence, in an average easterly direction, along the northeastern bank of an unnamed stream, to point 26 (5 284 282 m north, 344 947 m east);

Thence, easterly, following a straight line having a bearing of 81°13'31" over a distance of about 93 metres to the intersection with the southwestern right of way of an unnamed road, that is, point 27 (5 284 296 m north, 345 038 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to point 28 (5 284 302 m north, 345 695 m east);

Thence, easterly, following a straight line having a bearing of 81°13'33" over a distance of about 28 metres to the intersection with the northwestern bank of an unnamed stream, that is, point 29 (5 284 306 m north, 345 723 m east);

Thence, in an average southeasterly direction, along the northern bank of an unnamed stream and the southwestern shore of lac Beaudry, excluded from the biodiversity reserve, to the intersection of the northern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, that is, point 30 (5 283 026 m north, 347 564 m east);

Thence, in an average westerly direction, along the northern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to the intersection of an unnamed road, that is, point 31 (5 281 937 m north, 341 466 m east);

Thence, in an average northwesterly direction, along the northeastern right of way of an unnamed road, to the intersection of an unnamed stream, that is, point 32 (5 282 123 m north, 341 135 m east);

Thence, in an average westerly direction, along the southeasterly bank of an unnamed stream, excluded from the biodiversity reserve, the southeastern shore of an unnamed lake, excluded from the biodiversity reserve and the northern bank of another unnamed stream, excluded from the biodiversity reserve, to point 33 (5 282 571 m north, 339 880 m east);

Thence, northerly following a straight line having a bearing of 342°05'47" over a distance of about 989 metres to the intersection with the southeastern bank of an unnamed stream, that is, point 34 (5 283 512 m north, 339 576 m east);

Thence, in an average southerly direction, along the southeastern banks and shores of unnamed streams and lakes, the southwestern shore of an unnamed lake, excluded from the biodiversity reserve, and the southwestern bank of an unnamed stream, excluded from the biodiversity reserve, to the intersection of the northern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, that is, point 35 (5 281 539 m north, 339 978 m east);

Thence, in an average westerly direction, along the northern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to point 36 (5 278 835 m north, 330 684 m east);

Thence, in an average southwesterly direction, along the northwestern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to starting point 1.

Having an area of 76.36 square kilometres.

**PARCEL B**

Starting from point 30 (5 283 026 m north, 347 564 m east) of parcel A described above, easterly, following a straight line having a bearing of  $83^{\circ}56'41''$  over a distance of about 71 metres, to the intersection of the southeastern shore of lac Beaudry, that is, point 37 (5 283 033 m north, 347 634 m east), being the starting point of the parcel to be described;

Thence, in an average northeasterly direction, along the southeastern shore of lac Beaudry, to the intersection of an unnamed stream, that is, point 38 (5 285 891 m north, 348 854 m east);

Thence, in an average southerly direction along the southwestern banks and shores of unnamed streams and lakes, the western banks and shores of unnamed streams and lakes and the northwestern banks and shores of unnamed streams and lakes, which streams and lakes are excluded from the biodiversity reserve, to point 39 (5 284 117 m north, 349 238 m east);

Thence, southwesterly, following a straight line having a bearing of  $208^{\circ}22'38''$  over a distance of about 608 metres, to the intersection of an unnamed stream, that is, point 40 (5 283 582 m north, 348 949 m east);

Thence, southerly, following a straight line having a bearing of  $167^{\circ}45'59''$  over a distance of about 409 metres, to the intersection with the northern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, that is, point 41 (5 283 182 m north, 349 036 m east);

Thence, in an average westerly direction, along the northern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to starting point 37.

Having an area of 3.52 square kilometres.

**PARCEL C**

Starting from point 1 (5 275 969 m north, 329 023 m east) of parcel A described above, easterly, following a straight line having a bearing of  $103^{\circ}42'20''$  over a distance of about 38 metres, to the intersection of the southeastern right of way of the Hydro-Québec power transmission line, that is, point 42 (5 275 960 m north, 329 060 m east), being the starting point of the parcel to be described;

Thence, in an average northeasterly direction, along the southeastern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to point 43 (5 278 804 m north, 330 708 m east);

Thence, in an average easterly direction, along the southern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to point 44 (5 280 973 m north, 338 185 m east);

Thence, southwesterly, following a straight line having a bearing of  $204^{\circ}28'57''$  over a distance of about 33 metres, to the intersection with the southeastern bank of an unnamed stream, that is, point 45 (5 280 943 m north, 338 171 m east);

Thence, in an average southwesterly direction, along the southeastern banks of streams, shore of an unnamed lake, to the intersection of an unnamed road, that is, point 46 (5 279 775 m north, 336 050 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 47 (5 279 792 m north, 336 158 m east);

Thence, in an average southwesterly direction, along the northwestern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 48 (5 279 286 m north, 335 899 m east);

Thence, in an average southerly direction, along the western right of way of the same unnamed road, to the intersection of another unnamed road, that is, point 49 (5 278 407 m north, 335 889 m east);

Thence, in an average southerly direction, along the western right of way of the same unnamed road, to the intersection of another unnamed road, that is, point 50 (5 278 037 m north, 335 800 m east);

Thence, in an average southerly direction, along the western right of way of the same unnamed road, to the intersection of another unnamed road, that is, point 51 (5 277 643 m north, 335 775 m east);

Thence, in an average southeasterly direction, along the southwestern right of way of the same unnamed road, to the intersection of another unnamed road, that is, point 52 (5 277 169 m north, 336 488 m east);

Thence, in an average southerly direction, along the western right of way of the same unnamed road, to the intersection of another unnamed road, that is, point 53 (5 276 813 m north, 336 556 m east);

Thence, in an average southeasterly direction, along the southwestern right of way of the same unnamed road, to the intersection of another unnamed road, that is, point 54 (5 276 660 m north, 336 684 m east);



Thence, in an average easterly direction, along the southwestern right of way of the same unnamed road, to the intersection of an unnamed stream, that is, point 55 (5 276 528 m north, 337 176 m east);

Thence, in an average southerly direction along the southwestern bank of an unnamed stream, the southern banks and shores of unnamed streams and lakes and the western banks and shores of unnamed streams and lakes, which streams and lakes are excluded from the biodiversity reserve, to the intersection of the northern shore of an unnamed lake, that is, point 56 (5 274 460 m north, 337 907 m east);

Thence, in an average southeasterly direction, along the southwestern shore of a lake and bank of an unnamed stream excluded from the biodiversity reserve, to point 57 (5 274 117 m north, 338 200 m east);

Thence, easterly, following a straight line having a bearing of 109°18'00" over a distance of about 272 metres, to the intersection with the southwestern right of way of an unnamed road, that is, point 58 (5 274 027 m north, 338 457 m east);

Thence, in an average southerly direction along the western right of way of an unnamed road, to the intersection of an unnamed stream, that is, point 59 (5 273 033 m north, 338 882 m east);

Thence, in an average easterly direction, along the southeastern bank of an unnamed stream and the southwestern bank and shore of unnamed streams and lakes, which streams and lakes are excluded from the biodiversity reserve, to the intersection of another unnamed stream, that is, point 60 (5 272 898 m north, 339 299 m east);

Thence, in an average northeasterly direction, along the southeastern bank and shore of unnamed streams and lakes, which streams and lakes are excluded from the biodiversity reserve, to point 61 (5 273 955 m north, 341 414 m east);

Thence, easterly, following a straight line having a bearing of 110°17'46" over a distance of about 516 metres, to the intersection with the southern bank of an unnamed stream, that is, point 62 (5 273 776 m north, 341 898 m east);

Thence, in an average easterly direction, along the southern bank of an unnamed stream excluded from the biodiversity reserve, to the intersection of the western shore of lac Gaboury, that is, point 63 (5 273 722 m north, 342 767 m east);

Thence, in an average southwesterly direction, along the western shore of lac Gaboury, lac Langelier and bank of petite rivière Roger and the northern, eastern and south-western shore of lac des Quinze, which lakes and river and lot 5 593 530 are excluded from the biodiversity reserve, to the intersection of an unnamed river, that is, point 64 (5 270 989 m north, 336 473 m east);

Thence, in an average northeasterly direction, along the southeastern bank of an unnamed river, excluded from the biodiversity reserve, to the intersection of an unnamed stream, that is, point 65 (5 272 673 m north, 337 360 m east);

Thence, in an average southwesterly direction, along the northwestern bank of an unnamed river, to the intersection of the shore of lac des Quinze, that is, point 66 (5 271 024 m north, 336 383 m east);

Thence, in an average westerly direction, along the northern shore of the lac des Quinze, to the intersection of the southeastern bank of an unnamed river, that is, point 67 (5 271 621 m north, 333 955 m east);

Thence, in an average northeasterly direction, along the southeastern bank of an unnamed river to the intersection of ruisseau Misery, that is, point 68 (5 272 003 m north, 334 311 m east);

Thence, in an average southwestern direction, along the northwestern bank of an unnamed river to the intersection on the northern shore of lac des Quinze, that is, point 69 (5 271 674 m north, 333 864 m east);

Thence, in an average northwestern direction, along the shore of the lac des Quinze, so as to exclude lots 5 593 486 and 5 593 531 of the cadastre of Québec of the biodiversity reserve, to starting point 42.

Having an area of 126.32 square kilometres.

#### **PARCEL D**

Starting from point 31 (5 281 937 m north, 341 466 m east) of parcel A described above, easterly, following a straight line having a bearing of 110°32'28" over a distance of about 72 metres, to the intersection of the southern right of way of the Hydro-Québec power transmission line, that is, point 70 (5 281 911 m north, 341 534 m east), being the starting point of the parcel to be described;

Thence, in an average easterly direction, along the southern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to the intersection of the western shore of Lac Beaudry, excluded from the biodiversity reserve, that is, point 71 (5 282 991 m north, 347 580 m east);

Thence, in an average easterly direction, along the southern shore of lac Beaudry, to the intersection of the southeastern right of way of the Hydro-Québec power transmission line, that is, point 72 (5 282 997 m north, 347 638 m east);

Thence, in an average easterly direction, along the southern right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width, to point 73 (5 283 146 m north, 349 044 m east);

Thence, southerly, following a straight line having a bearing of  $167^{\circ}45'58''$  over a distance of about 417 metres, to the intersection with the northeastern bank of an unnamed stream, that is, point 74 (5 282 738 m north, 349 132 m east);

Thence, in an average southerly direction along the eastern bank of an unnamed stream, to point 75 (5 282 473 m north, 349 212 m east);

Thence, southerly, following a straight line having a bearing of  $184^{\circ}17'50''$  over a distance of about 1081 metres, to the intersection with the northeastern shore of an unnamed lake, that is, point 76 (5 281 395 m north, 349 131 m east);

Thence, in an average southeasterly direction, along the northeastern shore of a laked and bank of an unnamed stream, to the intersection of another unnamed lake, that is, point 77 (5 281 261 m north, 349 367 m east);

Thence, in an average southerly direction, along the southwestern shore of an unnamed lake and the northwestern bank of an unnamed stream excluded from the biodiversity reserve, to point 78 (5 280 988 m north, 349 369 m east);

Thence, southerly following a straight line having a bearing of  $195^{\circ}15'37''$  over a distance of about 25 metres to the intersection with the southeastern bank of an unnamed stream, that is, point 79 (5 280 964 m north, 349 362 m east);

Thence, in an average southwestern direction, along the southeastern of an unnamed stream and shore of an unnamed lake, to the intersection of the shore of the said unnamed lake and bank of another unnamed stream, that is, point 80 (5 280 749 m north, 349 155 m east);

Thence, in an average southwesterly direction, along the southeastern bank of an unnamed stream to point 81 (5 280 360 m north, 348 797 m east);

Thence, southerly following a straight line having a bearing of  $190^{\circ}23'39''$  over a distance of about 172 metres to the intersection with the northwestern bank of an unnamed stream, that is, point 82 (5 280 191 m north, 348 766 m east);

Thence, in an average southerly direction along the western bank and shore of unnamed streams and lakes excluded for the biodiversity reserve, to the intersection with the northern right of way of an unnamed road, that is, point 83 (5 278 890 m north, 348 472 m east);

Thence, in an average westerly direction, along the northern right of way 20 metres wide from the centre of an unnamed road, to the intersection of another unnamed road, that is, point 84 (5 279 569 m north, 344 872 m east);

Thence, northwesterly, following a straight line having a bearing of  $334^{\circ}58'52''$  over a distance of about 17 metres to the intersection with the northwestern bank of rivière Roger, that is, point 85 (5 279 584 m north, 344 865 m east);

Thence, in an average southwesterly direction, along the northwestern bank of rivière Roger excluded from the biodiversity reserve to the intersection of an unnamed stream, that is, point 86 (5 279 460 m north, 344 705 m east);

Thence, in an average northwesterly direction, along the northern and northeastern banks and shores of unnamed streams and lakes excluded from the biodiversity reserve to the intersection of an unnamed road, that is, point 87 (5 281 243 m north, 342 955 m east);

Thence, in an average northwesterly direction, along the northeastern right of way of an unnamed road, to the intersection of another unnamed road, that is, point 88 (5 281 648 m north, 342 650 m east);

De là in an average westerly direction, along the northeastern right of way of an unnamed road, to starting point 70.

Having an area of 23.99 square kilometres.

#### **PARCEL E**

Starting from point 63 (5 273 722 m north, 342 767 m east) of parcel C described above, southeasterly, following a straight line having a bearing of  $120^{\circ}53'34''$  over a distance of about 1936 metres, to the intersection of the eastern shore of lac Gaboury, that is, point 89 (5 272 727 m north, 344 430 m east) being the starting point of the parcel to be described;

Thence, in an average easterly direction, along the northern bank and shore of unnamed streams and lakes, to the intersection of the southwestern shore of an unnamed lake, that is, point 90 (5 272 608 m north, 345 029 m east);

Thence, in an average easterly direction, along the southern shore and bank of unnamed lakes and streams, which streams and lakes are excluded from the biodiversity reserve, to the intersection of the southwestern shore of an unnamed lake, that is, point 91 (5 272 688 m north, 345 731 m east);

Thence, southerly following a straight line having a bearing of 191°58'28" over a distance of about 34 metres, to the intersection with the southern right of way of an unnamed road, that is, point 92 (5 272 655 m north, 345 724 m east);

Thence, in an average easterly direction, along the southern right of way of an unnamed road, to the intersection of an unnamed stream, that is, point 93 (5 273 097 m north, 347 899 m east);

Thence, in an average easterly direction, along the southern bank and shore of unnamed streams and lakes, which streams and lakes are excluded from the biodiversity reserve, to the intersection of the shore of lac des Quinze, that is, point 94 (5 273 155 m north, 348 837 m east);

Thence, in an average westerly direction, along the shore of lac des Quinze, baie des Quenouilles, petite rivière Roger, lac Langelier and lac Gaboury, excluded from the biodiversity reserve, to starting point 89.

Having an area of 11.96 square kilometres.

The following 6 islands of lac des Quinze whose limit with the said lake must be established at the geodesic elevation of 263.94 m are also included in the biodiversity reserve:

— Île Morris

Except and withdrawn from the right of way of the Hydro-Québec power transmission line 36.576 metres (120 feet) in width  
Coordinate: 5 275 076 m north, 328 464 m east  
Area: 0.65 square kilometres

— Unnamed island "A"

Coordinate: 5 270 109 m north, 331 219 m east  
Area: 0.04 square kilometres

— Unnamed island "B"

Coordinate: 5 263 959 m north, 336 726 m east  
Area: 0.09 square kilometres

— Île du Foyer

Coordinate: 5 262 824 m north, 337 022 m east  
Area: 0.07 square kilometres

— Unnamed island "C"

Coordinate: 5 262 441 m north, 336 846 m east  
Area: 0.02 square kilometre

— Unnamed island "D"

Coordinate: 5 262 379 m north, 337 129 m east  
Area: 0.01 square kilometre

Having a total area of 243.04 square kilometres for all of the biodiversity reserve.

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 2 May 2017 and an excerpt of the Base de données cadastrale du Québec effective on 2 May 2017.

— The right of way of 36.576 metres (120 feet) in width, of the power transmission line, Rapide-des-îles/Rapides VII corresponding to availability No. 29-T (Right #583770) in favour of Hydro-Québec.

— Generally, all the beds of watercourses, rivers and lakes 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, except the limits along the shore of lac des Quinze that must be established at the geodesic elevation of 263.94 m.

— 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, 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 8 February 2018 and filed with the office of the Surveyor-General of Québec of the Ministère de l'Énergie et des Ressources naturelles under document number 536697.

Prepared in Québec, on 23 October 2017, under number 11 327 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(13)





**SCHEDULE II**  
CONSERVATION PLAN OF THE RÉSERVE DE BIODIVERSITÉ KAKINWAWIGAK



**Réserve de  
biodiversité  
Kakinwawigak**



CONSERVATION PLAN

Cover page photos: Marc-André Bouchard

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## Introduction

In 2004, the Gouvernement du Québec moved to protect an area of land located to the east of Lac des Quinze.

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

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 entrusted to the BAPE pursuant to section 39 of the *Natural Heritage Conservation Act*, which provides for a public consultation process before a proposal is made to the Government on permanent protection status for land set aside as a proposed protected area. The BAPE's mandate started 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 des Quinze, which is now Réserve de biodiversité Kakinwawigak.

By giving permanent protected status to Réserve de biodiversité Kakinwawigak, the Gouvernement du Québec ensures the definitive protection of the following: representative samples of the biological diversity of the Abitibi lowlands natural province; more specifically, of representative ecosystems in the Lac Témiscamingue lowlands natural region; and more precisely still, of the Lac Roger plain physiographic complex (MDDELCC, 2014a). The new reserve joins a network of representative and exceptional protected areas by which the various types of ecosystems across Québec are protected.

This reserve was chosen particularly for its complex of mounds covered with stands of yellow birch and mature maple. The area is also of note for the diversity of its plant communities, including yellow birch, white birch, eastern white cedar, sugar maple, balsam fir, trembling aspen, jack pine, tamarack, black spruce and white pine.

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

#### 1.1 Official toponym

Réserve de biodiversité Kakinwawigak: the name refers to the former presence of the Long Point First Nation, which inhabited the southern point of what is now the biodiversity reserve, and whose name corresponds to the point of land that extends into Lac des Quinze. The term "*kakinwawigak*" means "*long point*" in Algonquin.

#### 1.2 Geographical location, boundaries and dimensions

The location and boundaries of Réserve de biodiversité Kakinwawigak are illustrated in Appendix 1.

**Location:** Réserve de biodiversité Kakinwawigak is located in Abitibi-Témiscamingue region, in the MRC de Témiscamingue, between 47°30'25" and 47°43'15" north latitude and between 78°54'9" and 79°11'00" west longitude. It extends over three municipalities: Angliers, Rémigny and Moffet. The reserve is about 35 km northwest of Ville-Marie and about 25 km from the village of Winneway, where the Long Point First Nation has settled. It is accessible by highways 101 and 391, and by following Chemin de la Baie-du-Tigre to Rémigny. The reserve is also served by a network of forest roads that can be accessed through its northern portion.

**Area and boundaries:** The initial area of the proposed reserve, when it was set aside as such in 2004, was 159 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).

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 banks of watercourses and water bodies, the real boundary is the natural high-water mark. For the section along the shores of Lac des Quinze, which is a hydroelectric reservoir, the boundary corresponds to the level of 263.94 metres. Six islands in Lac des Quinze that are mostly above that level are also part of the biodiversity reserve.

The northern part of the reserve is crossed in an east-west direction by a 120 kV electrical transmission line, circuit 1339 Rapides des îles / Rapides-7. This transmission line and its right of way, which averages about 37 metres across, are excluded from the biodiversity reserve. The excluded land corresponds to an easement granted to société Hydro-Québec, as recorded in the Registre du domaine de l'État.

After the above modifications, Réserve de biodiversité Kakinwawigak now covers an area of 243.1 km<sup>2</sup>. 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 11327 (October 23, 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 536697.

### 1.3 Ecological portrait

Réserve de biodiversité Kakinwawigak is part of the Abitibi lowlands natural province. It protects representative ecosystems in the Lac Témiscamingue lowlands natural region (MDDELCC, 2014a) and belongs to the Lac Roger plain physiographic complex, which is characterized by 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. granitoids, with granite in the northern part. At the eastern end, near lakes Beaudry and Gérin-Lajoie, the bedrock is 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 the silt from 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 of 218 to 373 metres (average 284 metres).

Two eskers cross the reserve along a northeast-southwest heading. One is on the point of land where Lac à Donat is located. The other passes to the east and south of Lac du Vieux-Leblanc, continuing to the southern tip of the reserve.

Réserve de biodiversité Kakinwawigak is composed of three distinct ecological units, in terms of landforms and surface deposits.

With an area of 110 km<sup>2</sup>, the largest ecological unit occupies the entire western part of the reserve, and consists of glaciolacustrine silty clay lowlands scattered with hillocks and knolls of thin till, with rocky outcrops. One of the eskers is

found here, its sand and gravel deposits adding diversity. Hollows are filled with organic deposits in the form of peat bogs.

The second ecological unit, located in the southern part of the reserve, is more heterogeneous and covers 55 km<sup>2</sup>. Its two parts are on either side of Petite Rivière Roger. The relief and topography are varied, with mounds of thin till and rocky outcrops, an esker with deposits of sand and gravel, and glaciolacustrine lowlands composed of sand and gravel in some places, clay and silt in others. A few hollows are filled with organic deposits in the form of bogs.

The last ecological unit, of 77 km<sup>2</sup>, occupies the northern part of the reserve and consists of a complex of till mounds, with rocky outcrops and bogs in the valley bottoms. Though more homogeneous, its forest cover makes it the main element of interest in the reserve.

**Hydrography:** The biodiversity reserve is in the watershed of Rivière des Outaouais, which skirts the reserve where it becomes Lac des Quinze. The several sub-watersheds in the reserve empty directly into Lac des Quinze (Rivière des Outaouais).

There are five named lakes in Réserve de biodiversité Kakinwawigak. By order of decreasing size, they are: Lac Gérin-Lajoie (1.54 km<sup>2</sup>), Lac des Guêpes (1.34 km<sup>2</sup>), Lac du Vieux-Leblanc (0.31 km<sup>2</sup>), Lac Roger (0.17 km<sup>2</sup>) and Lac à Donat (0.09 km<sup>2</sup>). The total area of these lakes and the 350 or so other water bodies and watercourses in the reserve comes to about 4.9 km<sup>2</sup>, or 2% of the reserve's territory.

**Climate:** The territory of the reserve 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 eastern white cedar. Sugar maples are at the northern limit of their range. Forest fires and epidemics of spruce budworm are the two main factors of forest dynamics here. The abundance of yellow birch and pines diminishes from west to east, resulting in two subdomains. The reserve is in the western one, where stands of yellow birch-balsam fir are omnipresent on mesic sites.

**Forests:** Forest occupies about 215 km<sup>2</sup> of the reserve, representing some 88% of the territory. The forest cover consists of 70% mixed forests. Coniferous stands account for 25% of the forest cover, while deciduous stands are only 5%. The principal elements are stands of black spruce and balsam fir. These primarily occupy the ecological unit of silty clay lowlands, sharing the territory (depending on the degree of disturbance) with stands of white birch and poplar. Yellow birch stands are also abundant, particularly on the complex of till mounds in the northern part, and on the mounds and hillocks of the southern part. The yellow birch stands in both areas share the territory with stands of sugar maple.

The topographic and geomorphological diversity of Réserve de biodiversité Kakinwawigak has given rise to forest diversity. Thus, besides the forest stands common to the ecosystems mentioned above, there are other stands such as white or red pine on steep slopes and sandy habitats, cedar on rock walls and rocky outcrops where the soil is thin or absent, jack pine on sandy soils, and tamarack in very poorly drained places and around bogs.

The forest cover is characterized by a balanced distribution of age classes among forest stands. Young regenerating stands, mostly due to logging, account for 36% of the forest cover, while those of medium age (40-80 years) represent about 20%. Mature and old forests are in the majority, accounting for nearly 40% of the forest cover. The ecological unit covering the centre and west of the reserve, the silty clay lowlands, primarily contains young and medium-age stands. The ecological unit in the south, and the complex of till mounds to the north, are mostly covered by mature and old forest.

At this latitude and in terms of climate and the physical components of the ecosystem (topography, surface deposits), the territory is particularly well suited to the development of yellow birch-balsam fir stands. However, some parts of the silty clay lowlands are favourable to balsam fir-black spruce stands and balsam fir-black spruce-sphagnum moss stands. The characteristics of other sectors are ideal for the development of black spruce-moss or black spruce-heath stands, or to black spruce-sphagnum moss stands. Some of the riparian environments offer conditions suited to the

presence of balsam fir-eastern white cedar, while the tops of certain mounds are more suited to birch-fir-sugar maple stands and maple-yellow birch stands.

**Flora:** No comprehensive plant inventory has been done on the territory of Réserve de biodiversité Kakinawigak. 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. Primarily characterized by boreal vegetation, the clay belt covers most of Abitibi and northern Témiscamingue. The few inventories conducted after Baldwin's study, indicate that the region is home to about 1000 vascular species, 125 species of lichen, 30 species of liverwort, and 159 species of moss. However, no inventory has been done of 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 balsam fir-yellow birch forests 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 Kakinawigak.

The few lakes, rivers and brooks in the reserve are generally small, and have not been surveyed for fish species.

With regard to birds, the Ministère des Forêts, de la Faune et des Parcs has identified over 150 species in the area, most of which are likely to be found in the biodiversity reserve.

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 Kakinawigak (MRNF, 2007).

### 1.3.2 Outstanding elements

According to the Centre de données sur le patrimoine naturel du Québec (2014a), 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. On the other hand, numerous plant species that are threatened, vulnerable or likely to be so designated have been found near Lac Témiscamingue. Some of them could therefore be present in the biodiversity reserve.

Again according to the CDPNQ (2014a), a number of wildlife species that are threatened, vulnerable or likely to be so designated, such as the chimney swift, sedge wren, bald eagle, silver-haired bat, eastern red bat, hoary bat and rock vole, have been observed just outside the reserve. Most of them could frequent the reserve to feed or reproduce.

The presence of sugar maple stands is of particular interest, since they are among the most northern in Québec. Additionally, woodland areas with old forests and mature deciduous forests are the major feature of this reserve. A more comprehensive inventory could enrich our limited knowledge of the vegetation, while potentially revealing other outstanding elements.

Also found in Réserve de biodiversité Kakinawigak are two areas that have all the characteristics of biological refuges. One surrounds Lac Roger, while the other is to the northwest of Lac Gérin-Lajoie. Also, according to the CDPNQ (2014b), several areas near the biodiversity reserve enjoy a degree of protection. These include the aquatic bird staging areas of Lac des Quinze, Baie Barrière, Baie du Tigre and Ruisseau Mc Farland; the heronry of Lac des Quinze, with 42 active nests across from Pointe du Fish Creek; the muskrat habitats of Rivière des Quinze (Baie Sèche area) and of Lac des Quinze (Baie du Tigre area); and lastly, a biological refuge on the shores of Lac Beaumesnil, north of the reserve.

Also found in the southeastern part of the reserve is the old village of the Long Point First Nation. It was once the site of a Hudson's Bay Company trading post and an Oblate mission founded in 1884. There is still an Algonquin cemetery there, with the remains of a small chapel built in 1891 (MRC de Témiscamingue, 2006).

It is also interesting to note that there is an area of archeological potential at the southern tip of the reserve, on the shores of Lac des Quinze. The presence of archeological sites in the reserve has

yet to be confirmed. The archeological potential of the area could be significant, since the biodiversity reserve includes the site of the old village of Long Point First Nation.

#### **1.4 Land occupation and uses**

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

There are 72 registered land rights on the territory of the reserve, including six resort leases, one lease for accommodation purposes held by an outfitter with non-exclusive rights, and 65 leases for temporary shelters (hunting shelters).

The biodiversity reserve straddles eleven traplines in fur-bearing animal management unit 08. A single trapping camp has been built on the southern point of the reserve, opposite Squelette and Du Foyer islands. According to the MRNF (2006), catches recorded in 2002-2005 included weasel, American beaver, coyote, red squirrel, river otter, Canadian lynx, American marten, fisher, muskrat, raccoon, patched fox, red fox and American mink. The same source states that trapping pressure on these species was average at the time.

The entire territory of the reserve is in hunting zone 13, where sports hunting is practised. The annual harvest data for large game only concerns moose and black bear. The MFFP has examined hunting pressure on the territory of the reserve from 2011 to 2014. Over this period, the harvest was 83 moose (1.27 moose per 10 km<sup>2</sup>) and 12 black bears. This indicates an annual average of 21 moose and 3 black bears, and a density of 0.86 moose and 0.12 black bear per 10 km<sup>2</sup>.

Compared to the average for hunting zone 13 (0.5 moose and 0.19 black bear per 10 km<sup>2</sup>), the hunting pressure on moose in the reserve is considered well above average, while the pressure on black bear is lower than average (MFFP, 2015).

In 2006 the Ministère des Ressources naturelles et de la Faune had little data about sport fishing pressure on the territory of the reserve, but considered it to be low (MRNF, 2006).

The MRNF had no data in 2006 about the species and quantities taken by the Algonquin communities of Timiskaming and Long Point, nor on their activities and places for wildlife harvesting (MRNF, 2006).

It should also be mentioned that a canoe route on Lac des Quinze follows the southern and southwestern boundaries of the reserve. The route allows for temporary wilderness camping along the shore in this part of the reserve.

The area is noteworthy for having few buildings and very few trails or forest roads. Parts of the reserve cannot even be accessed by land. There are plans to upgrade the roads shown in Appendix 3.

## **2. Conservation and development of Réserve de biodiversité Kakinwawigak**

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

### **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 ecosystems that have been disturbed by logging, especially on silty clay lowlands, to recover their dynamics and natural characteristics.

Since the existing occupations and uses are few in number, and compatible with the reserve's protection objectives, they 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 areas that were logged over the ten to fifteen years prior to the creation of the reserve are concentrated in the silty clay lowlands and at the foot of till mounds in the northern part. Other areas have also been logged, but more in the past. However, regeneration is underway in those areas, where there are already young to medium-age stands, especially black spruce and shade-intolerant hardwoods.

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 over the next few decades, with no



need for active management measures such as planting and restoration.

- ***Ensure the protection of mature and old forests***

The forest ecosystems on till mounds and hillocks, whether in the north, south or west, have been little disturbed and are mostly composed of mature to old forests. Stands of so-called noble hardwoods, such as yellow birch-sugar maple and maple-yellow birch, are of particular interest. It is rare to find such forest ecosystems preserved at this latitude. Any further fragmentation of the forest cover must therefore be avoided, except for unobtrusive development (such as hiking trails) to facilitate enjoyment of these natural environments.

## **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, a plant inventory must be done. A list of fish species in the lakes, and of the reserve's terrestrial wildlife, could be created with the help of regional partners in the wildlife field. More knowledge is needed about the various species (flora and fauna) associated with the ecosystems of old noble hardwood forests, such as the stands of sugar maple at the northern limit of their range. Other inventories or scientific research, whether on existing or anticipated ecological problems, could be conducted later.

## **2.3 Integrated and participative management**

The characteristics of the reserve and its adjacent areas, in particular the presence of Lac des Quinze, a well used waterway giving access to the reserve, 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***

Although Réserve de biodiversité Kakinwawigak is little used and almost unoccupied, the MELCC should engage the participation of users and the holders of land rights (outfitter with non-exclusive

rights, cottagers, hunters and trappers), the municipalities of Rémigny, Angliers and Moffet, and the regional county municipality of Témiscamingue, in managing the reserve. The Long Point First Nation will be an important partner in managing the reserve, since the latter contains the remnants of their past occupation and its members continue to practise activities there.

The MELCC will encourage the creation of a conservation committee where stakeholders can discuss protection issues and the 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 Kakinawwigak is partly bordered by a hydroelectric reservoir, Lac des Quinze. Management of the territory will need to reflect the reserve's accessibility from that waterway. Based on the ecosystems present, the current state of the natural environment, the reserve's protection and management objectives, and to a lesser extent considerations of land use and occupation, the reserve has been divided into three zones, even though it is relatively homogeneous. All three have a protection level and the same activity framework. However, protection measures and development possibilities will reflect the specific features of each zone. All three have specific elements of ecological interest, or that must be preserved, such as old hardwood forests, remnants of Aboriginal occupation, or a variety of wetlands.

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 three zones are:

- Zone I: Silty clay lowlands
- Zone II: Southern point
- Zone III: Massif of noble hardwoods

#### ***Zone I: Silty clay lowlands***

This zone is a plain of glaciolacustrine origin whose fine deposits of clay and silt accumulated at the bottom of Lac Barlow-Ojibway during the last deglaciation. Zone I covers around 110 km<sup>2</sup>, or about 45% of the territory of the reserve.

Zone I can be considered a "natural" zone, despite the fact that its disturbance level and human footprint are somewhat greater than in the other two zones. With its flat topography and fine deposits, the area is productive from a forestry point of view, and easy to log. Such environments are favourable to stands of conifers like balsam fir and black spruce. Naturally present in the reserve, these species were logged in the last decade of the 20<sup>th</sup> century, and traces of that activity remain. The zone also features a mosaic of wetlands, some quite large, limiting the amount of timber that could be harvested. In sum, the zone is relatively undisturbed and rich in wetlands and forest diversity (in terms of both age and species).

Human presence has been scattered and periodic. While there is limited overland access, the zone is easily entered via Lac des Quinze.

There are 41 buildings, mostly hunting camps, but the occupation rate is relatively low, at one building per 2.7 km<sup>2</sup>. Additionally, there are about 136 linear km of forest roads and trails. The zone's fragmentation index is 1.24 linear km per km<sup>2</sup>, which is high according to Quigley *et al.* (2001).

The conservation objective for Zone I is to maintain its ecological integrity and improve or restore the natural character of its ecosystems, especially where logging has been done. Active management measures such as planting or restoration will not be needed. As for the trails and forest roads, they will have to be studied to identify which ones are essential for access to buildings and which ones could be renaturalized.

#### **Zone II: Southern point**

Covering 55 km<sup>2</sup>, this zone represents about 23% of the biodiversity reserve. The landscape is different from that of Zone I, with a tiered elevation presenting knolls, then hillocks, then mounds of till. The maximum vertical drop (i.e. of the tallest mounds) is about 100 metres. The low relief consists of glaciolacustrine deposits of clay and silt, occasionally sands and gravels. An esker rises above the lowlands here. The mounds and hillocks of thin till, with rocky outcrops here and there, are the dominating feature. The higher portion is largely covered by old forests, including stands of yellow birch, maple, white pine and cedar. The zone's diverse environments have produced a diversity of forest ecosystems, so there are also stands of balsam fir, black spruce and jack pine.

Unlike the others, Zone II is nearly devoid of trails and forest roads. In this respect it can be considered a "natural" zone. There are just

13 linear km of trails and forest roads. The fragmentation index is 0.24 linear km per km<sup>2</sup>, which is low (Quigley *et al.*, 2001). Land occupation consists of 13 hunting camps and 2 cottages, or one building per 3.7 km<sup>2</sup>.

The objective for this zone is to conserve its natural and relatively unfragmented character, and to allow its woodland landscapes to continue evolving naturally.

Zone II contains the Longue-Pointe site, a former Algonquin village that is of historical and cultural interest. It is important to note that the village site is at Baie Paulson, not the place identified as "Longue-Pointe" on the topographic maps (see map in Appendix 1). According to the literature, in 1884 the village had a Hudson's Bay Company trading post and an Oblate mission (MRC de Témiscamingue, 2006). The site now contains an Amerindian cemetery and the remains of a small chapel built in 1891. The Algonquins of Longue-Pointe were moved to Lac Simard in 1950.

In view of the site's cultural and historical interest, it must be preserved, and if appropriate, developed in collaboration with the Long Point First Nation and in harmony with their values.

#### **Zone III: Massif of noble hardwood forests**

This zone of 77 km<sup>2</sup> represents about 32% of the biodiversity reserve. It is characterized by a relief of till mounds (deposits of glacial origin), wetlands in the valley bottoms, and rocky outcrops. This zone is the domain of the yellow birch. The summits and slopes are relatively undisturbed, covered with mature stands and old hardwood forests, primarily yellow birch-balsam fir, as well as yellow birch-sugar maple and maple-yellow birch. Disturbance from logging in the past is

found more on the plateaus and low areas, where there are now stands of white birch and conifers (black spruce and balsam fir stands). There is a fairly well developed network of forest roads.

Being the main access to the reserve and an area where there has been logging activity, Zone III has a high fragmentation index (Quigley *et al.* 2001). It has about 117 linear km of forest roads and trails, giving a fragmentation index of 1.5 linear km per km<sup>2</sup>. There are 15 hunting camps and one cottage, for a total of 16 buildings. The occupation rate is just one building per 4.8 km<sup>2</sup>, which is very low.

The main conservation objective for Zone III is to maintain the characteristics of its mature and old forests and to promote the resilience of stands that were logged in the years prior to the reserve's creation. No new development will be allowed, except of the kind that would enhance the reserve's educational and ecotourism dimensions (e.g. hiking trails, shelters, interpretive panels). However, upgrading will be done on certain forest roads, as shown in Appendix 4.

As with the other two zones, Zone III corresponds to a "natural" zone. As such, it will be managed in a similar fashion with respect to development, fragmentation and promoting the resilience of ecosystems.

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

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 Kakinawigak

The provisions contained in Regulation respecting the Réserve de biodiversité Kakinawigak 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 Kakinawigak, 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 Kakinwawigak. 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 Kakinwawigak”, 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 residents, cottagers, hunters, fishers, trappers, etc.

### 6.3 Participation of stakeholders

As mentioned in section 2, “Conservation and development of Réserve de biodiversité Kakinwawigak”, 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 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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## Appendix 2 — Réserve de biodiversité Kakinawigak: Elements of ecological interest







