

CANADA 36: LAC SAINT-PIERRE, QUEBEC

Information Sheet on Ramsar Wetlands

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Reference: 36th Ramsar site designated in Canada

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Date of Ramsar Designation:

Geographical Coordinates: 46°02'N 72°39'W (upstream) to 46°5'N 72°39'W (downstream)

General Location: Region corresponding to a section of the St. Lawrence River between Sorel and Trois-Rivières, located 65 km east of Montréal in the province of Quebec. The region is situated right in the middle of the inhabited part of Quebec, a short distance from the province's main urban agglomerations.

Area: 11,952 ha

Wetland Types (Ramsar Classification System): *Interior wetlands:* L - permanent inland delta; Xf - riverine floodplain and seasonally flooded freshwater swamp forest; O - permanent freshwater lake; Ts - permanent freshwater ponds and marshes; W - permanent freshwater swamp forest; M - Permanent river. *Artificial Wetlands:* 6 - agriculture\arable land subject to seasonal flooding

Altitude: 6 m above m.s.l.

Overview: Three important environments are found there: an archipelago of approximately one hundred islands, a group of extremely large bays and a very large area of open water.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): Lac Saint-Pierre is an extension of the St. Lawrence River and it originates from an immense rock cavity that had been partially filled with argillaceous sediment from the Champlain Sea. This argillaceous sediment is found underneath a silt deposit on the bottom lands surrounding the lake.

The region at issue includes two vast environments, namely an archipelago, located upstream, which includes approximately one hundred islands, and a shallow lake, with an area of 480 km². The downstream portion of the lake is generally less than 3 m deep, except at the seaway, where the average depth is approximately 11 m. Its riverbed, which is primarily composed of clay, is dotted with areas of fine sediment, sand, gravel and rock outcroppings.

The hydrological behaviour of this vast body of water is typical of a river extension. The characteristics of the lake and delta are quite lentic, with the exception of the deep area

corresponding to the navigation channel, where a significant portion of the flow is concentrated, particularly during the low-water period.

Together, the lake's 14 tributaries provide relatively significant flow (nearly 800 m³/s) to Lac Saint-Pierre, which is primarily formed from inflows of water originating from the Great Lakes and from the upstream river corridor (nearly 11,000 m³/s). Water management with respect to the Great Lakes directly influences the water level of Lac Saint-Pierre. The lake's water bodies do not form a homogeneous mix, due to the fact that water from the tributaries flows near the shores, whereas the seaway contains water from the Great Lakes.

Lac Saint-Pierre is one of the areas of the river that has a higher sedimentation rate, as a result of the inflow of water from the following rivers: Richelieu, Saint-François, Yamaska and Nicolet.

Tidal water, considered to be negligible at Sorel, has already had a visible effect on Trois-Rivières and it is definitely a factor that affects the dynamics of Lac Saint-Pierre, as manifested by a slower current and an increased water level.

The slightly uneven topography of the area and the weakness of the slopes promote the creation of very large wetlands (in terms of area). The vast expanse of its overflow plain, which can reach more than 25,000 ha (18,000 of which recur every 0-2 years), makes it the largest freshwater flood plain in Quebec.

Ecological Features (Habitats, Vegetation): Lac Saint-Pierre is an integral part of ecological region 2b (Lac Saint-Pierre) in southern Quebec; a deciduous area, domain of Linden maple stands and sugar maple-yellow birch stands, sub-domain of Linden maple stands. Silver maple, increasingly rare in Quebec, is omnipresent in the region and forms the dominant arborescent plant community. In the region of Lac Saint-Pierre, vegetation that is characteristic of substrata wetlands is predominant. Lac Saint-Pierre is bordered by a vast flood plain, which is, in fact, the largest freshwater flood plain in Quebec. In spring, the water overflows the riverbed and submerges 7,000 ha of natural grassland, scrubland, riparian forest and cultivated land. This vast flood plain includes 4,000 ha of farmland, which is primarily used as a staging area in spring by 350,000 birds (ducks and geese). Approximately 20% of the marshes in the St. Lawrence are located in the region of Lac Saint-Pierre. Marshes cover more than 8,000 ha and they are of great importance to the river corridor, since 70% of them have disappeared along the St. Lawrence over the past 50 years. Due to the vast deep and shallow marshes, situated to the east of the archipelago, and due to the insular nature of those marshes, unique and very important wildlife are found there. Finally, it is important to emphasize the presence of Slender Bulrush, a rare plant community.

Aquatic-grass beds, actual gardens of floating and submerged plants, extend over more than 6,200 ha and are frequently used by wildlife. They support a myriad of invertebrates and they are used for the propagation and feeding of fish. In addition, waterfowl use this biomass in order to raise ducklings, and the biomass is used as a staging area in spring and fall.

Land Tenure:

(a) Site: Government land tenure is 83%; the remaining land tenure belongs to agencies devoted to the conservation and enhancement of wildlife.

(b) Surrounding Area: Land tenure is private. However, this strong private tenure has ensured the conservation of natural habitats, due to the fact that almost none of this land has ever been altered, or it has been altered very little. Vacationers contribute greatly by the sense of ownership that they have developed concerning these natural habitats.

Conservation Measures Taken: The wildlife habitats of Lac Saint-Pierre are protected by the MEF and CWS in several regions, as a result of the dynamic involvement of their national and regional partners. The protection measures fall into three levels:

(a) Legal Protection of Wildlife Habitats

An Act respecting the conservation and development of wildlife (Quebec), the *Environment Quality Act* (Quebec) and the *Fisheries Act* (Canada) prescribe, as applicable, prohibition or intervention standards with respect to wildlife habitats, and specifically with respect to those existing at Lac Saint-Pierre:

Fish habitat (48,000 ha);

Muskrat habitat (643 ha);

(b) Legal Protection on included sites:

Provincial and federal laws, among others, ensure, respectively, the designation of "wildlife sanctuaries" and "migratory bird sanctuaries" for the specific protection of certain habitats. The following are found at Lac Saint-Pierre:

Grande Île: Property of the MEF and a wildlife sanctuary since 1992; it contains one of the most important heron colonies in North America, boasting more than 1,300 nests and a population that is continually growing. Protected area: 146.18 ha.

Îles de la Girodeau: Acquired by CWS in 1985 for the protection of wildlife habitats. It is the third most important site in the archipelago for the propagation of waterfowl. Protected area: 435.05 ha, including a magnificent aquatic-grass bed, measuring over 308.43 ha. Study in progress in order to create a national wildlife area there.

Nicolet National Defence site: Contains a Migratory Bird Sanctuary that is managed by Canadian Wildlife Service. Ducks Unlimited Canada (DU) developed part of the site (128 ha) for waterfowl. Protected area: 4,330.51 ha, including the public tenure marsh in front.

Baie Lavallière: The largest protected marsh in all of eastern Canada, acquired in the 1970s by the MEF and developed by DU, it is expected that this site will receive the status of wildlife sanctuary. Protected area: 1,416.69 ha. Restoration of spawning grounds and waterfowl habitats (Fish Habitat Restoration Program, MEF, NAWMP, SABL, DU).

(c) Protection Through Acquisition and Through Agreements with Partners:

Certain areas are reserved strictly for the purposes of conservation, while others are enhanced through wildlife management, wildlife-agricultural management, interpretation facilities.

Baie-du-Febvre/Nicolet-South: Acquired by SARCEL for the protection of a staging area, recreational and educational development for the purposes of waterfowl observation and interpretation. Stakeholders: SARCEL, Centre d'interprétation de Baie-du-Febvre. Area: 407.53 ha.

Commune de Baie-du-Febvre: In partnership with NAWMP, the Société de mise en valeur de la Commune financed the protection of wetlands through an agreement. Developed by DU in 1992, its role with respect to wildlife is protected for the next twenty-five years. Improvement of habitats and protection: 330 ha. Restoration of spawning grounds (Fish Habitat Restoration Program, MEF, Fondation Héritage Faune, NAWMP).

Île à la Cavale: Acquired in part by NCC in 1993 for the protection of wildlife habitats. Protected area: 10.43 ha.

Île à la Perche: Acquired in 1992 by NCC for the conservation of wildlife habitats and used mainly for nesting. Protected area: 24.84 ha.

Île aux Citrons: Acquired by NCC in 1992. Protected area: 2.42 ha.

Île aux Raisins: Acquired by CWS for the conservation of wildlife habitats. Protected area: 15.42 ha.

Île de Grâce, aux Corbeaux, and others: Restoration of wildlife habitats (Fish Habitat Restoration Program, NAWMP, SLV 2000): 232.19 ha.

Île de la Traverse: Acquired in 1988 by NCC for the protection of an important staging area at the entrance of Lac Saint-Pierre. Protected area: 30.68 ha.

Île des Barques: Property of the Canadian Coast Guard and managed by Canadian Wildlife Service. Protected area including an important grass bed to the south and a marsh, developed by DU within the framework of NAWMP. Protected area: 154.67 ha.

Île du Moine: Acquired by Nature Conservancy of Canada (NCC) and developed by DU within the framework of NAWMP. During the migration period, not less than 173 species of birds can be found there, including among others, the least bittern and the sedge wren, two vulnerable species. Protected area: 498.77 ha.

Île aux Liards: Property of the Government of Quebec. Protected area: 13.47 ha.

Île aux Foins: Property of Environment Canada for the purpose of safeguarding wildlife habitats. Protected area: 18.47 ha.

Île Lapierre: Properties acquired by NCC for the protection of habitats within the framework of EHJV, Fish Habitat Restoration Program and SLV-2000. Protected area: 50.19 ha.

Île à Cochon: Property of NCC acquired within the framework of PASL. Area: 17.34 ha.

Île Dupas: Communal tenure. DU developed 810 ha there for the reproduction of waterfowl. Area protected through a 25-year agreement between DU and the owner. Restoration of spawning grounds (Fish Habitat Restoration Program, NAWMP, MEF).

Île Lacroix: Property of MEF since the beginning of the 1970s. Protected area: 15.38 ha.

Île Ronde: Property of Transport Canada, managed by CWS. Protected area: over 58.48 ha.

Îles du Mitan and du Milieu: Lands acquired within the framework of NAWMP, they form an area of private and communal property, which is managed by SCIRBI. Area: 389.23 ha.

Îlets Percés: Property of CWS since 1991 for the purpose of safeguarding wildlife habitats. Protected area, including marshes and grass beds: 61.52 ha.

Îles Millette and Straham: Property of FFQ, acquired within the framework of NAWMP for the purpose of safeguarding fish habitat. Protected area: 21.46 ha.

Saint-Eugène Marsh: Restoration of spawning grounds (Fish Habitat Restoration Program, MEF). Area: 34 ha.

Saint-Barthélemy: Properties acquired by FFQ, for the protection of wildlife habitats, and managed by the Société conservation de St-Barthélemy/St-Joseph de Maskinongé (Fish Habitat Restoration Program, NAWMP). Protected area: 373.66 ha.

Marsh (public tenure): Situated on the north and south shores of Lac Saint-Pierre and bordering the islands. Protected area: 5,357 ha.

Louiseville / Porte de la Mauricie: On each side of the Rivière du Loup, 22 ponds and 37 islands developed by DU for the propagation of waterfowl. Area protected by agreement (25 years): 288 ha. Fish habitat restoration (Fish Habitat Restoration Program, MEF, Fondation Héritage Faune).

Conservation Measures Proposed: In 1988, the MEF introduced a plan for the conservation and enhancement of habitats and wildlife in the region of Lac Saint-Pierre. This exercise represented an initial step toward recognition and toward study of the future of this exceptional ecosystem. It was implemented upon consultation and discussion with all stakeholders in the environment, their involvement being the main success factor. Thus, the plan is a tool in order to achieve desired conservation objectives. Proposed projects include:

Baie-du-Febvre / Nicolet-South: Proposed status of wildlife sanctuary. Involves nearly all of the wildlife protection agencies in Quebec, in order to protect the foraging territories of migratory

birds. In summer, nearly half of the greater snow goose population, more than 500,000 birds, are found there. Agricultural and wildlife developments: 407.53 ha.

Baie de Lavallière: Wildlife sanctuary project: 1,416.69 ha.

Île aux Sables and other islands in the archipelago: Acquisition project for the purpose of conservation. Area: 200 ha.

Saint-Barthélemy et Saint-Joseph-de-Maskinongé: Agricultural and wildlife management project, proposed status of wildlife sanctuary. Partners: North American Waterfowl Management Plan and the Société de conservation de St-Barthélemy / St-Joseph de Maskinongé: 373.66 ha.

Current Land Use/Activities in:

(a) Site: Refers to Lac Saint-Pierre and its flood plain, the majority of which is covered in water.

(b) Surrounding Area: Most of the private land in the territory, or 61% of the area, is used for farming. Private land is among the most fertile land in Quebec, benefitting each year from the organic contributions that result from spring flooding. For nearly twenty years, abandoning hay production in favour of cereal crops has led to a movement to recover land covered with water that has overflowed during periods of flooding. The development of shipyards and related industries and the creation of a port in the Sorel region has led to the partial denaturation of the banks in this area and to a change in downstream water quality. The cities of Trois-Rivières and Sorel are urban agglomerations that extend their influence to Pointe-du-Lac and Nicolet and to Sainte-Anne-de-Sorel respectively.

Threats to Integrity of:

(a) Site:

Navigation

The effects of commercial navigation are many: wave action from passing boats, chemical pollution, bacterial contamination and stress caused by infrastructures and the introduction of exotic species. Some of the islands are eroding as a result of the wave action, particularly those located less than 0.6 km from the navigation channel. On an annual basis, more than 10,000 merchant ships use the shipping channel that is part of the affected region and more than 700 stop at the harbour facilities at Sorel and at the head of Lac Saint-Pierre. The tonnage handled there is close to 11,000,000 tonnes annually, which is directly related to the Sorel-Tracy region industrial complex.

Erosion of the island shores by the numerous pleasure craft that criss-cross the channels in this archipelago should not be under-estimated.

The dredging and dumping operations are themselves harmful to aquatic wildlife. However, with the exception of dumping, these operations can be handled in such a way as to offer interesting management for wildlife.

Exploitation of natural resources

The environmental degradation and intense commercial exploitation that has been noted in recent years are most likely responsible for the decrease in certain animal species, specifically fish and the disappearance of a few others.

The forests that still exist on the shores of Lac Saint-Pierre, are still threatened by uncontrolled logging (e.g. firewood). Uncontrolled grazing, especially along the shore, leads to the loss of vegetation cover and causes accelerated erosion.

Agricultural Activities

Banking and subsequent drainage of the land in the flood plain represents a net loss in wildlife habitat. The affected area covers 388 ha of waterfront land, 312 ha of which were aquatic grassbeds, 63 ha that was in large part composed of forest cover and wet scrubland. It should be noted, however, that overall, only 5% of the Lac St-Pierre wetlands have disappeared during the past 40 years, compared to 70% along the whole of the St. Lawrence River.

Agricultural activities are also a source of environmental stress. Soil erosion, the addition of nutrients, pollutants and bacteria, as well as the physical modifications related to diking also disturb the environment.

Urban Development

Shoreline urbanization is generally a source of disruption for habitats, as a result of the development that permanently modifies the natural banks. Overall, 19% of the banks in the Lac Saint-Pierre area are occupied by residential and commercial facilities.

Ballistic testing

Along the border of the southeastern part of the lake, the Department of National Defence occupies a large area, 23 km long by 7 km wide, designated as a "firing range". This land is used for ballistic testing. In addition to restricting public access to a large area of the lake and banks, this ballistic testing has been identified as having a potential effect on the animal populations.

(b) Surrounding Area:

A large number of municipalities dump their waste water into the tributaries; a very low percentage of the population in these municipalities is served by a water purification plant. Despite the importance of livestock production around Lac Saint-Pierre it is in these drainage basins that we find the highest concentration of livestock.

Hydrological/Physical Values: In the area of the Lac St-Pierre archipelago, five channels (Chenal aux Castors, Petit Chenal de l'île Dupas, Chenal des Ours, grand Chenal and Chenal de l'île aux Barques) have been closed by stone sills. These projects, erected several decades ago, make it

possible to maintain the water levels upstream to the Montréal harbour during the low-water period, and to concentrate the flow toward the navigation channel.

Management of water levels at the exit of the Great Lakes influences general ecosystem productivity by the annual and seasonal variations that it imposes in a water system in place since 1960.

Social/Cultural Values:

Tenure

The most original feature of the land tenure lies in the existence of five communal pastures, approximately 3 centuries old, and covering approximately 21 km² of land.

Commercial wildlife exploitation

A dozen fish species are fished commercially by 42 fishers who land 600 tonnes of fish each year, 50% of which is yellow perch, panfish, and brown bullhead. Lac Saint-Pierre supports the most significant commercial lake sturgeon in North America. Frogs are also subject to a trade levy. Muskrat trapping is an activity practised by many people.

Archaeological sites

Prehistoric Amerindian site on Île Dupas (CaFg-2)

Noteworthy Fauna:

Birds

Of the 288 bird species counted, 116 are considered breeders. Because of its large flood plain, Lac Saint-Pierre is the most important spring staging area in Eastern Canada. More than 350,000 birds, ducks, geese and Canada geese stay there from the beginning of April until mid-May. For the past several years, the Baie-du-Febvre area has received thousands of snow geese, and thus is the first important spring staging area along the St. Lawrence for this species.

The Lac Saint-Pierre region also receives more than 70,000 Canada geese, which is more than half the Canada geese present along the St. Lawrence River in the spring. The flood plain of the south bank between Nicolet and Baie-du-Febvre is the first important spring staging area along the St. Lawrence for this species. Each spring, more than 17,000 tip-up ducks use the rest and feeding areas on the flood plain and more than half of these are found in the Saint-Barthélemy and the Commune and Milieu islands areas. Most of these ducks come from the Atlantic coast and stay approximately 40 days in the area. In the fall, more than 50,000 ducks and geese use Lac Saint-Pierre.

The Grande Île heron colony is one of the most, if not the most significant ones in North America, with 1,300 nests occupied for the most part by the great blue heron and the black-crowned night-heron (approximately 150 nests) and more than 5,000 individuals. The site is protected under the

wildlife sanctuary act instituted by the ministère de l'Environnement et de la Faune du Québec in 1992.

On Île du Moine alone, located on the south shore of Lac Saint-Pierre, at certain times of the year more than 173 different species of birds can be observed. This island, acquired by DU and the Nature Conservancy Canada, is considered the best bird observation site in southern Quebec.

Twelve bird species in this region appear on the Quebec list of species that could be listed as being threatened or vulnerable. Of these twelve, ten species are considered vulnerable, threatened, or in danger throughout Canada⁽¹⁾:

Vulnerable birds:

The horned grebe, least bittern, Cooper's hawk, golden eagle, yellow rail, great grey owl, red-headed woodpecker, sedge wren. Species that are threatened or in danger: caspian tern, peregrine falcon.

Nine amphibian species inhabit this area, six of which are frog species. Among these, the pickerel frog is on the Quebec list of species that could be listed as being threatened or vulnerable. The red-bellied, garter, and smooth green snakes, as well as the snapping, painted, and spiny softshell turtles also inhabit this area. The spiny softshell turtle is the only one in this category identified on the Quebec list of vertebrate species that could be listed as being threatened or vulnerable.

Mammals

Mammals are represented by 23 species, including the muskrat, an omnipresent species, as well as the white tailed deer, the moose, the beaver, the red fox, and the coyote.

Fish

Seventy-nine different species have been counted here, or 68% of all freshwater species found in Quebec. The copper and river redhorse found in this archipelago appear on the list of the Committee of the Status of Endangered Wildlife in Canada. The lake sturgeon, whose status is vulnerable in the St. Lawrence, is strongly represented in Lac Saint-Pierre.

Noteworthy Flora:

Twenty-seven species of rare plants that could be listed as threatened or vulnerable inhabit the Saint-Pierre wetlands: *Armoracia lacustris*, *Arisaema dracontium*, *Bidens discoidea*, *Carex alopecoidea*, *Cinna arundinacea*, *Cyperus lupulinus* ssp, *Lupulinus*, *Celtis occidentalis*, *Echinochloa walteri*, *Eragrostis hypnoides*, *Gratiola aurea*, *Juncus greenei*, *Lysimachia hybrida*, *Peltandra virginica* spp. *virginica*. *Palanthera flava*, *Polygonum hydropiperoides* var. *hydropiperoides*, *Potamogeton gemmipare*, *Potamogeton pusillus* var. *gemmaiparus*, *Potamogeton illinoensis*, *Ranunculus flabellaris*, *Ranunculus longirostris*, *Scirpus torreyi*, *Scirpus heterochaetus*, *Selaginella apoda*, *Spiranthes lucida*, *Strophostyles helwula*, *Sparganium androcladum*, *Veronica catenata*.

According to COSEWIC classification there are numerous listed amphibian and reptile species at risk in this area.

Current Scientific Research and Facilities: Studies and research on the integration of wildlife and agriculture, enabling the development of environmentally-sensitive agricultural practices on the Ronde, du Moine, and possibly aux Barques islands, with a demonstration project on the first two islands. This project includes wildlife and plant inventories. Additional projects include:

- There is a large farm woodlands conservation program on the islands in the Lac Saint-Pierre archipelago (du Moine, Ronde, à la Cavale, à l'Ours, des Plantes, Saint-Ignace, Dupas etc.) as well as on the mainland in this area. This program also includes wildlife and plant inventories.
- In 1980, there was a program of research and knowledge acquisition on the Lac Saint-Pierre flood plain that produced approximately thirty scientific studies.
- Assessment of developments on the flood plain and waterfowl use of the agricultural plateau.
- Research program on species other than waterfowl that use the developed marshes (du Moine, du Milieu, Dupas and Baie Lavallière islands). Waterfowl inventories were conducted on the aux Raisins islands, on the îlets Percés, on Pointe des îlets and on the Girodeau islands. These are the control islands in the waterfowl inventory network of the North American Waterfowl Management Plan.
- Knowledge acquisition on the Lac Saint-Pierre reptiles and amphibians that could be listed as being threatened or vulnerable, in order to determine their status.
- Knowledge acquisition on Lac Saint-Pierre fish that could be listed as threatened or vulnerable.
- Lac Saint-Pierre wildlife sanctuary creation program.
- Pilot project on biological control of purple loosestrife recently undertaken on the National Defence lands at Nicolet.

Current Conservation Education: Private organizations such as SARCEL, ZIP, and the Baie-du-Fèvre interpretation centre are involved in this area. For example, the Baie-du-Fèvre interpretation centre organizes wildlife observation and interpretation sessions for educational clients as well as several environment-related activities. Some organizations offer mini-cruises and tours to discover the lake's islands and wildlife. At Berthier, the Société d'aménagement, de conservation, d'interprétation et de recherche de Berthier et ses îles [the Berthier islands development, conservation, interpretation and research association] (SCIRBI) is responsible for developing interpretation trails in the Berthier islands. The Société d'aménagement d'Autray [Autray development association] offers mini-cruises of the islands.

Construction of an interpretation centre at Baie-du-Febvre, the result of co-operation between the municipality and the many stakeholders in this area, offers interpretation activities for the flood plain and its habitats and wildlife.

The Centre d'interprétation du patrimoine de Sorel [Sorel heritage interpretation centre] also offers educational and interpretation activities. The municipality of Sorel manages this centre.

Current Recreation and Tourism: Despite certain physical limitations, such as variability in the water system and the rock dikes, Lac Saint-Pierre, especially its archipelago, is used a great deal for pleasure boating. In 1987, the number of craft on Lac Saint-Pierre was estimated at 7,161. Several businesses offer hunting, fishing and lodging services.

Wildlife exploitation is of particular economic importance. Sport fishing draws more than 24,000 fishers annually, for more than 300,000 user-days. In terms of the economy, these activities would generate \$5 million in direct spending, for an overall economic impact of \$70 million per year. Recreational winter fishing, which is more and more popular, represents more than 20% of the total fishing effort: almost 65,000 person-days, a figure that has increased substantially by 14.5% since the last statistics calculated between 1979 and 1987.

Waterfowl hunting is a typical traditional activity in the area and generates more than 15,000 recreation days per year. Four hundred waterfowl hunters come each fall.

Bird watching is becoming more and more popular in the region; for example, 70,000 people participated in this activity at Baie-du-Fèvre in the spring of 1996. The economic impacts of wildlife observation have been evaluated at close to a million dollars in this region alone.

Management Authority: Various federal, provincial, private and non-government agencies.

Jurisdiction : Federal, provincial, municipal, institutional and private. Stakeholders in the Lac Saint-Pierre Region include:

- Fondation de la faune du Québec (FFQ)
- Fédération québécoise de la faune (FQF)
- Ministère de l'Environnement et de la Faune du Québec (MEF)
- Office de Tourisme et Congrès Les Vallées de l'Archipel du Lac Saint-Pierre
- Fondation Héritage Faune (FHF)
- Regional county municipalities (MRC)
- Fish Habitat Restoration Fund (FHFRF)
- North American Waterfowl Management Plan (NAWMP)
- Eastern Habitat Joint Venture (EHJV)
- Canadian Wildlife Service. Environment Canada (CWS)
- Wildlife Habitat Canada (WHC)
- St. Lawrence Vision 2000 (SLV 2000)
- Lac St-Pierre ZIP Committee
- Société d'ornithologie de Lanaudière
- Université du Québec à Trois-Rivières
- Société d'initiative du Bas Richelieu
- Société de conservation de St-Barthélemy, St-Joseph de Maskinongé
- Ducks Unlimited Canada (DU)
- Municipalities

Association de chasse et de pêche du comté de Maskinongé (ACPCM)
 Corporation pour la mise en valeur du lac Saint-Pierre (COLASP)
 Nature Conservancy of Canada (NCS)
 Société d'aménagement Berthier D'Autray (SABA)
 Société d'aménagement récréatif pour la conservation de l'environnement du lac Saint-Pierre (SARCEL)
 Société de conservation, d'interprétation et de recherche de Berthier et ses îles (SCIRBI)
 Société de mise en valeur de la Commune de Baie-du-Febvre (SOMICO) Société d'ornithologie du Centre du Québec (SOCQ)
 Unité des producteurs agricoles (UPA) de Nicolet
 Société d'aménagement de la Baie Lavallière (SABL)
 Association des chasseurs et pêcheurs de Ste-Anne-de-Sorel

Selected Bibliography:

- Auclair, M.-J., D. Gingras, J. Harris and A. Jourdain. 1991 (December). Synthèse et analyse des connaissances sur les aspects socio-économiques du lac Saint-Pierre. Technical Report. Priority intervention zone 11. Groupe de travail sur les zones d'intérêt prioritaire. Centre Saint-Laurent. Conservation et Protection. Montréal, Quebec.
- Barabé, A., J.-C. Bourgeois and R. Trudel, 1995. Dans la vallée du fleuve Saint-Laurent : l'écotourisme au lac Saint-Pierre. *Écodécision*, Winter 1995, pp. 91-94.
- Barabé, A., J.-C. Bourgeois and R. Trudel. 1994. *Sustainable tourism in the wetlands of national importance of the St. Lawrence River. The case of Baie-du-Febvre on Lake St. Pierre*. Quebec, Canada, IIPT – Second Global Conference: Building a Sustainable World through Tourism, Montréal, Sept. 12-16, 1994, 27 pp.
- Benoit, J., J.-C. Bourgeois, S. Desjardins et J. Picard. 1988. Plan de conservation et de mise en valeur des habitats et de la faune du lac Saint-Pierre. Ministère du Loisir, de la Chasse et de la Pêche, Directions régionales de Montréal et de Trois-Rivières.
- Benoit, J., R. Bergeron, J.-C. Bourgeois, S. Desjardins and J. Picard. 1987. Les habitats et la faune de la région du Lac Saint-Pierre : synthèse des connaissances. Ministère du Loisir, de la Chasse et de la Pêche, Directions régionales de Montréal et de Trois-Rivières.
- Bourgeois, J.-C. 1994. La halte migratoire du lac Saint-Pierre: un habitat d'importance internationale pour la sauvagine. *Québec Oiseaux*, 5(3): 18-22.
- Burton, J. 1991 (December). Le lac Saint-Pierre. Priority intervention zone 11. Guiding Interpretation, Centre Saint-Laurent, Conservation and Protection. Environment Canada. Montréal, Quebec.
- Canadian Wildlife Service (CWS). 1990. Espèces rares et menacées. Data transfer conducted by Nature Conservation Canada (NCC) and the Centre de données sur le patrimoine naturel (CDPNQ).
- De Repentigny, L.-G. 1994. Fichier insulaire du Saint-Laurent (FISL). Fact sheet on the islands in the St. Lawrence. General information on the islands in the St. Lawrence and on its main tributaries (computerized data; continually updated). Canadian Wildlife Service. Conservation and Protection, Environment Canada, Quebec Region. Sainte-Foy.

- Gariépy, Normand, 1993 (November). Caractéristiques de la région du lac Saint-Pierre. Candidature of the region for UNESCO Biosphere Reserve. Report prepared for l'Office de Tourisme et des Congrès Les Vallées de l'Archipel du lac Saint-Pierre, Tracy, Quebec.
- Gratton, L. and C. Dubreuil. 1990. Portrait de la végétation et de la flore du Saint-Laurent. Direction de la conservation et du patrimoine écologique, ministère de l'Environnement du Québec.
- Langlois, C., L. Lapierre, M. Léveillé, P. Turgeon et C. Ménard. 1992 (January). Synthèse sur les communautés biologiques du lac Saint-Pierre. Technical report. Priority intervention zone 11. Groupe de travail sur les zones d'intérêt prioritaire. Centre Saint-Laurent, Conservation and Protection, Environment Canada. Montréal, Quebec.
- Laporte, P., Y. Lavergne, M. Breton, F. Duchesneau and C. Dubreuil. 1990. Plan d'action Saint-Laurent : Rapport du groupe de travail sur les espèces de faune et de flore prioritaires du couloir Saint-Laurent .
- Lavoie, G. 1991. Plantes vasculaires susceptibles d'être désignées menacées ou vulnérables du Québec. Direction de la conservation et du patrimoine écologique. Ministère de l'Environnement du Québec.
- Ministère du Loisir, de la Chasse et de la Pêche, 1988 (June). Plan de conservation et de mise en valeur des habitats et de la faune de la région du lac Saint-Pierre. Ministère du loisir, de la Chasse et de la Pêche. Government of Quebec.
- Robert, M. 1989. Les oiseaux menacés du Québec. Association québécoise des groupes d'ornithologues and Canadian Wildlife Service. Environment Canada.
- Sylvestre, A., L. Champoux and D. Leclair. 1992 (January). Synthèse des connaissances sur les aspects physiques et chimiques de l'eau et des sédiments du lac Saint-Pierre. Technical report. Priority intervention zone 11. Groupe de travail sur les zones prioritaires. Centre Saint-Laurent, Conservation and Protection. Environment Canada, Montréal, Quebec.
- Thibault, M. and D. Hotte. 1987. Les régions écologiques du Québec méridional : deuxième approximation. Mapping service. Centre d'information géographique et foncière. Quebec Ministry of Energy and Resources. Ste-Foy, Quebec.

Reasons for Ramsar Designation:

The site meets the following Ramsar criteria:

Criteria applicable to representative or unique wetlands

1. (c) A good and particularly representative wetland that plays a significant hydrological, biological or ecological role in the river ecosystem.

General plant- and animal-based criteria

2. (a) Shelters an appreciable group of plant or animal species or sub-species that are rare, vulnerable or at risk of extinction or an appreciable number of individuals of one or several of these species.

2. (b) Has special value because of the preservation of genetic and ecological diversity in an area due to the quality and characteristics of its plants and wildlife.

2. (c) Has special value as plant or animal habitat at a crucial stage in their biological cycle.

Specific waterfowl-based criteria

3. (a) Regularly shelters 20,000 aquatic birds.
3. (b) Regularly shelters considerable numbers of individuals belonging to particular waterfowl groups that testify to the value, productivity or diversity of wetlands.
3. (c) According to accessible data on population, it regularly shelters one percent of the individuals in a population belonging to a waterfowl species or sub-species.

Status of Management Plan: A plan is under development with all stakeholders.