

Lake Saint-François National Wildlife Area Management Plan

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About Environment Canada's Protected Areas and Management Plans

What are Environment Canada Protected Areas?

Environment Canada establishes marine and terrestrial National Wildlife Areas for the purposes of conservation, research and interpretation. National Wildlife Areas are established to protect migratory birds, species at risk, and other wildlife and their habitats. National Wildlife Areas are established under the authority of the *Canada Wildlife Act* and are, first and foremost, places for wildlife. Migratory Bird Sanctuaries are established under the authority of the *Migratory Birds Convention Act, 1994* and provide a refuge for migratory birds in marine and terrestrial environments.

What is the Size of the Environment Canada Protected Areas Network?

The current Protected Areas Network consists of 54 National Wildlife Areas and 92 Migratory Bird Sanctuaries comprising more than 12 million hectares across Canada.

What is a Management Plan?

A management plan provides the framework in which management decisions are made. It is intended to be used by Environment Canada staff to guide decision making, notably with respect to permitting. Management is undertaken in order to maintain the ecological integrity of the protected area and to maintain the attributes for which the protected area was established. Environment Canada prepares a management plan for each protected area in consultation with First Nations, public and other stakeholders.

A management plan specifies activities that are allowed and identifies other activities that may be undertaken under the authority of a permit. It may also describe the necessary improvements needed in the habitat, and specify where and when these improvements should be made. A management plan identifies Aboriginal rights and allowable practices specified under land claims agreements. Further, measures carried out for the conservation of wildlife must not be inconsistent with any law respecting wildlife in the province in which the protected area is situated.

What is Protected Area Management?

Management includes monitoring wildlife, maintaining and improving wildlife habitat, periodic inspections, enforcement of regulations, as well as the maintenance of facilities and infrastructure. Research is also an important activity in protected areas; hence, Environment Canada staff carries out or coordinates research in some sites.

The Series

All of the National Wildlife Areas are to have a management plan. All of these management plans will be initially reviewed five years after the approval of the first plan, and every ten years thereafter.

To Learn More

To learn more about Environment Canada's protected areas, please visit our website at www.ec.gc.ca/ap-pa or contact the Canadian Wildlife Service.

Lake Saint-François National Wildlife Area

Lake Saint-François National Wildlife Area (NWA) was created in 1978 to protect a series of marshes and swamps unique to Quebec that support diverse plant and animal species, including rare species. It is a Wetland of International Importance under the Ramsar Convention and an Important Bird Area. Today, the NWA protects exceptional wetlands and other habitats for the conservation of species at risk and priority bird species.

The NWA covers 1 316 hectares on the south shore of Lake Saint-François, a natural widening of the St. Lawrence River in southwestern Quebec, near the border with Ontario and the United States. It is made up of a mosaic of wetland and upland habitats, including sedge and cattail marshes, wooded swamps populated by Red Maple stands, and well-drained dry woods featuring communities dominated by hawthorn, hickory and Sugar Maple. The biodiversity of the NWA is among the most remarkable in Quebec, since it is home to more than 293 animal species and 547 plant species, including at least 15 species at risk under the *Species at Risk Act* and 46 designated threatened or vulnerable species or species likely to be so designated under provincial legislation.

Thirteen species of waterfowl, including the Canada Goose, the Mallard, the American Black Duck, the Wood Duck and the Lesser Scaup, nest in the NWA. The marshes and adjacent openwater areas are used by more than 5 000 ducks in the spring and by more than 8 000 ducks during the fall migration. Of the 237 listed bird species, many landbirds and waterbirds nest in the NWA, including the Northern Waterthrush, the Veery and the Sandhill Crane. The NWA is also home to one of the largest Sedge Wren populations in Canada. The Four-toed Salamander, the Blanding's Turtle and the Snapping Turtle are among the amphibians and reptiles observed here. The Muskrat, the Meadow Jumping Mouse, the Big Brown Bat, the Beaver, the White-tailed Deer and the Coyote are some of the mammal species present. The site is also an important habitat for species at risk in the region, such as the Yellow Rail, the Map Turtle and the Butternut.

The NWA is facing major threats and management challenges relating to its proximity to many human activities. The main threats and challenges are the impact of human activities on the NWA, the fragmented nature of the NWA, invasion by plant species, habitat and infrastructure degradation, and the development of the surrounding land.

Access to the NWA is restricted to designated areas and at certain times of year, from April to December. Some activities are permitted as long as they are consistent with the conservation goals and objectives of the management plan.

The goals of the management plan are to: 1) protect and enhance significant habitats for species at risk, priority bird species and other wildlife species; 2) consolidate the NWA and promote natural habitat conservation on adjacent land in order to foster connectivity and improve ecological conditions; 3) reduce the impact of human activities on the NWA; 4) raise awareness among the public and local communities of the conservation of the NWA, wildlife species and their habitats; and 5) ensure ecological monitoring of the NWA and improve knowledge on wildlife species and their habitats.

The management plan will be implemented over a 10-year horizon in accordance with priorities and available resources.

For greater certainty, nothing in this management plan shall be construed so as to abrogate or derogate from the protection provided for existing Aboriginal or treaty rights of the Aboriginal peoples of Canada by the recognition and affirmation of those rights in section 35 of the *Constitution Act, 1982*.

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1 DESCRIPTION OF THE PROTECTED AREA

Lake Saint-François National Wildlife Area (NWA) lies on the south shore of the St. Lawrence River, 50 kilometres upstream of Salaberry-de-Valleyfield, in the extreme southwest of Quebec. More specifically, it is located in the township municipality of Dundee in the western portion of the Haut-Saint-Laurent regional county municipality (RCM) (Table 1 and Figure 1).

The NWA was created in 1978 to protect exceptional wetland habitats, plant and animal diversity, as well as rare and at-risk species. Its territory bordered by Lake Saint-François to the north and farmlands to the south is noted for the presence of a mosaic of wetland and upland habitats with diverse plant communities.

Table 1: Information on Lake Saint-François National Wildlife Area

Protected Area Designation	National Wildlife Area
Province or Territory	Quebec – township municipality of Dundee, RCM of Haut-Saint-Laurent
Latitude and Longitude	45°02' N and 74°29' W
Size	1 316 ha (adjacent to an additional 150 ha of federal land not classified as an NWA)
Protected Area Designation Criteria (Protected Areas Manual)¹	Historic: Created primarily to protect exceptional wetlands because of their southern location on the shore of Lake Saint-François and their great diversity of animals (waterbirds and landbirds) and plants, including certain rare or at-risk species. Current: Criterion 2a – The area supports an appreciable assemblage of rare, vulnerable, threatened or endangered species or subspecies of plants or animals, or an appreciable number of individuals of any one or more of these species or subspecies. <u>For this NWA:</u> The area supports an extraordinary number of plant and animal species at risk. Criterion 2b – The area has special value for maintaining the genetic and ecological diversity of a region because of the quality and uniqueness of its flora and fauna. <u>For this NWA:</u> The area supports an exceptional diversity of plant and animal species as well as wildlife habitats.
Protected Area Classification System (Protected Areas Manual)¹	Category A – Species or critical habitat conservation
International Union for Conservation of Nature (IUCN) Classification²	Category III – Natural Monument
Order-in-Council Number	PC 1978-1439, PC 1985-694, PC 1985-693, PC 1995-473, PC 1995-1445

Table 1: Information on Lake Saint-François National Wildlife Area (continued)

Directory of Federal Real Property (DFRP) Number	67461
Gazetted	April 27, 1978
Additional Designations	Wetland of International Importance (Ramsar site “Lake Saint-François”) and Important Bird Area (IBA “Lake Saint-François National Wildlife Area and bordering waters”)
Faunistic and Floristic Importance	Remarkable biodiversity. The wetlands and adjoining drier land serve as important breeding ground for birds and are sought-after staging areas for migratory birds; presence of plant and animal species at risk.
Invasive Species	Presence of the Common Reed (exotic), European Frogbit, Flowering Rush, Reed Canarygrass and Purple Loosestrife. Zebra and Quagga Mussels live in the nearby waters.
Species at Risk	The NWA has at least 15 species under the federal <i>Species at Risk Act</i> , including the Yellow Rail, the Map Turtle and the Butternut, as well as 46 species designated threatened or vulnerable or likely to be so designated in Quebec under the provincial <i>Act respecting threatened or vulnerable species</i> , including the Eastern Sand Darter.
Management Agency	Environment Canada – Canadian Wildlife Service
Public Access and Use	Access restricted to designated areas from April to December unless specified otherwise. Activities permitted: hiking; nature observation and photography on the trails; and canoeing and kayaking with a person authorized by Environment Canada to act as a guide/interpreter. Migratory bird hunting is permitted in the designated area west of the welcome area (prohibited in the area of the aménagements pointe Fraser I and II [enhancement works] and on either side of Ruisseau Fraser).

1. Environment Canada, 2005

2. IUCN, 2008

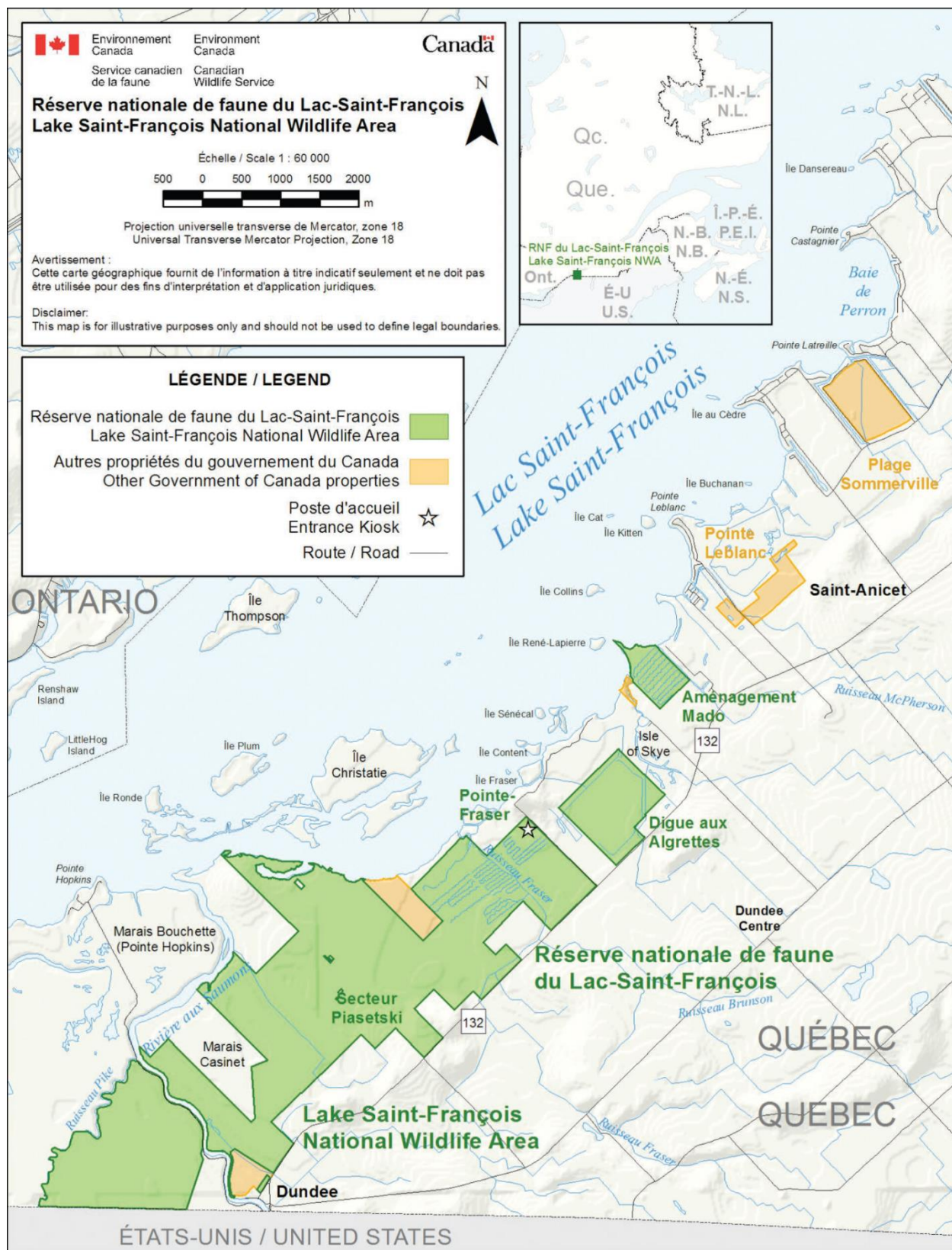


Figure 1: Lake Saint-François National Wildlife Area

1.1 REGIONAL CONTEXT

Lake Saint-François NWA is an area bounded to the north by Lake Saint-François (a natural widening of the St. Lawrence River) and to the south by farmland and Route 132 (Figure 2). It is also bounded to the north by private lands, including Fraser-Point, a resort area with a number of cottages. Some marshes and swamps located to the west of the NWA and some islands to the north are part of the Akwesasne Native Reserve, which is situated approximately one kilometre west of the NWA.

Lake Saint-François NWA is located in the RCM of Haut-Saint-Laurent, which has a population of over 22 000 and is located in the extreme southwest of Quebec, on the border with Ontario and New York State, approximately 100 kilometres from Montréal. The NWA has an area of 1 316 hectares. An additional 152 hectares of federal lands not classified as an NWA are adjacent to the NWA (Figure 1).

The local landscape is an undulating plain of low hills, all oriented from southwest to northeast (Mailloux and Godbout, 1954). The slow flow of the streams is due to the gentle slope of the area, which is scattered with isolated knolls and low ridges rising no more than eight metres above the surrounding ground. The dam and dikes built in the Salaberry-de-Valleyfield archipelago since 1932 have considerably disrupted and altered the hydrological cycle of Lake Saint-François while enabling the expansion of marshes on its shore. In the spring, the water in the lake is maintained at its lowest level and then gradually raised until September. Lake Saint-François is thus relatively stable from May to November, with the average monthly water level varying by only 10 centimetres (Comité Zip du Haut-Saint-Laurent, 1997). This practice sets Lake Saint-François apart from the other non-regulated fluvial lakes of the St. Lawrence, such as Lake Saint-Pierre or Lac des Deux Montagnes. Most of Lake Saint-François is less than six metres deep. The land adjacent to the NWA is privately owned and is used mainly as farmland. In addition, the NWA is not far from the Droulers archaeological site, a tourist attraction that adds to the NWA's attendance, estimated at 4 000 visitors annually.

Several government and non-governmental organizations (see 10 Collaborators) collaborate on the mission and activities of the NWA, especially the Association des membres et amis pour la protection de la réserve nationale de faune du lac Saint-François (AMAPRE) since 1993.



Figure 2: Aerial view of the Aménagement Mado (enhancement work) in the eastern portion of Lake Saint-François National Wildlife Area

Photo: Christine Lepage © Environment Canada, Canadian Wildlife Service

1.2 HISTORICAL BACKGROUND

Nomadic human groups are thought to have frequented the Lake Saint-François area as soon as 8 000 years before present (B.P.). These populations harvested various natural resources, particularly big game such as caribou. Later, human groups of the Archaic period (7 000 to 3 000 years B.P.) established themselves throughout the territory, as it became inhabitable (after the last glaciation). The populations of the time generally comprised hunter-gatherer-fisher groups (BAPE, 2004).

The first distinctive signs of Iroquoian culture appeared during the Late Woodland period (1 000 to 500 years B.P.) (Mercier et al.,1986). Around 650 years B.P., the St. Lawrence Iroquoian populations turned to agriculture (corn, squash, bean, tobacco and sunflower), hunting and fishing being complementary. They also developed a distinctive pottery and established themselves in semi-permanent villages usually close to fishing camps and near a river or a confluence. These villages of longhouses were sometimes palisaded. Ancient Iroquoian sites are found particularly in Montréal, in the Saint-Anicet area (several sites; Woods, 2012) and at Pointe-du-Buisson (BAPE, 2004).

In the early 1600s, on his quest for the Northwest Passage and his voyages in the St. Lawrence Valley, Champlain camped near Saint-Anicet. Many travellers also used the St. Lawrence to reach the Great Lakes region and beyond (Mercier et al.,1986).

As had occurred on the north shore of Lake Saint-François, loyalists settled in 1782–1784 in what would become Huntingdon county (today part of Haut-Saint-Laurent RCM). At that time, the Aboriginal tribes of the area granted concessions to a number of American families in the Dundee region (Mercier et al.,1986).

From the early 1800s to about 1840, some major pine stands and oak forests were harvested. Only a minor tree clearing on high grounds disturbed the original forests in the area that would later become the NWA. Subsistence agriculture was subsequently established and was replaced some time later by forage crop and dairy production (Mercier et al.,1986).

In 1931, land drainage to create new farmland resulted in the loss of more than 11 000 hectares of marshes. However, the construction of a dam at Salaberry-de-Valleyfield in 1933 created at least 2 000 hectares of wetlands along Lake Saint-François. The area of natural grassland and marshland continued to decline afterwards, which resulted in a 63% decrease of the area estimated in 1921 (16 340 ha) and amounted to a total loss of 19 907 hectares (Mercier et al.,1986).

Studies conducted from 1968 to 1976 demonstrated the importance of the current site of Lake Saint-François NWA for waterfowl and for the richness of its habitat. Today, many human communities are established close to this protected area, notably in Dundee and Saint-Anicet. Vibrant Mohawk communities still exist in the area and utilize the lands for traditional pursuits.

1.2.1 National Wildlife Area

From 1971, the federal government began to acquire the land that would officially be designated Lake Saint-François NWA on April 27, 1978, through an Order in Council made under the *Wildlife Area Regulations*.

The first management plan of Lake Saint-François NWA was published in 1986 (Mercier et al., 1986). In addition, a conservation plan of this protected area was published in 2003 (Canadian Wildlife Service, 2003).

1.3 LAND OWNERSHIP

Lake Saint-François NWA is owned by the Government of Canada, having been acquired on a willing-buyer/willing-seller basis from the 1970s to 1990s. The NWA covers approximately 1 316 hectares of land legally classified as an NWA. Approximately 152 hectares of federal lands adjacent to the NWA or intersecting it but not classified as an NWA are managed by Environment Canada.

1.4 FACILITIES AND INFRASTRUCTURE

Lake Saint-François NWA contains a number of facilities and infrastructure, some of which are owned by the Association des membres et amis pour la protection de la réserve nationale de faune du Lac-Saint-François (AMAPRE) (Table 2 and Figure 3).

The NWA includes a welcome area (Figure 4) located at the end of Chemin de la Pointe-Fraser in the municipality of Dundee. The welcome area consists of seven structures: the Entrance Kiosk (Information Centre), a multipurpose outdoor animation room, a storage shed, a warehouse (maintenance equipment), a boathouse (canoe and kayak), a shelter to protect the drinking water well, and composting toilets.

There is an observation tower near the Entrance Kiosk (Figure 5) and a shelter near the start of the Sentier du Trille-Penché (trail). Wildlife observation blinds or hides have also been constructed for visitors along the Sentier de la Digue-aux-Aigrettes. There are also three parking lots (a 15-space lot at the Entrance Kiosk and two 5-space lots near the Sentier de l'Érablière-à-Caryers and the Sentier de la Digue-aux-Aigrettes) and picnic tables.

Three docks—two in Baie aux Grenouilles and one on Ruisseau Fraser—provide access to Lake Saint-François and to the Sentier de l'Île-aux-Orchidées. There are also eight hiking trails with a total length of 10.5 kilometres. Some of the trails include boardwalks. Signs are posted indicating the location of the NWA, its legal boundaries and regulations in effect. In addition, interpretive panels are installed at various sites in the NWA.

Table 2: Facilities and infrastructure of Lake Saint-François National Wildlife Area

Type of facilities or infrastructure	Approximate area or length	Owner
Entrance Kiosk (Information Centre)	95 m ²	AMAPRE
Multipurpose outdoor animation room	98 m ²	To be confirmed
Storage shed	6.25 m ²	To be confirmed
Warehouse	45 m ²	To be confirmed
Boathouse	39 m ²	To be confirmed
Well shelter	13.5 m ²	To be confirmed
Composting toilets	3 m ²	To be confirmed
Shelter (Sentier du Trille-Penché)	12 m ²	AMAPRE
Observation tower	70 m ²	Environment Canada (Canadian Wildlife Service)
Observation blinds/hides (3)	17 m ²	AMAPRE
Parking lots (3)	1515 m ²	Environment Canada (CWS)
Docks (3)	-	To be confirmed
Trails (<i>sentiers</i>)		
Sentier de la Digue-aux-Aigrettes	4 km	Environment Canada (CWS)
Sentier du Poste-d'Accueil	0.3 km	Environment Canada (CWS)
Sentier de la Mise-à-l'Eau	0.2 km	Environment Canada (CWS)
Sentier de la Tour	0.6 km	Environment Canada (CWS)
Sentier du Marais	0.7 km	Environment Canada (CWS)
Sentier du Trille-Penché	0.7km	Environment Canada (CWS)
Sentier de l'Érablière-à-Caryers (Piassetki)	3.5 km	Environment Canada (CWS)
Sentier de l'Île-aux-Orchidées	0.5 km	Environment Canada (CWS)

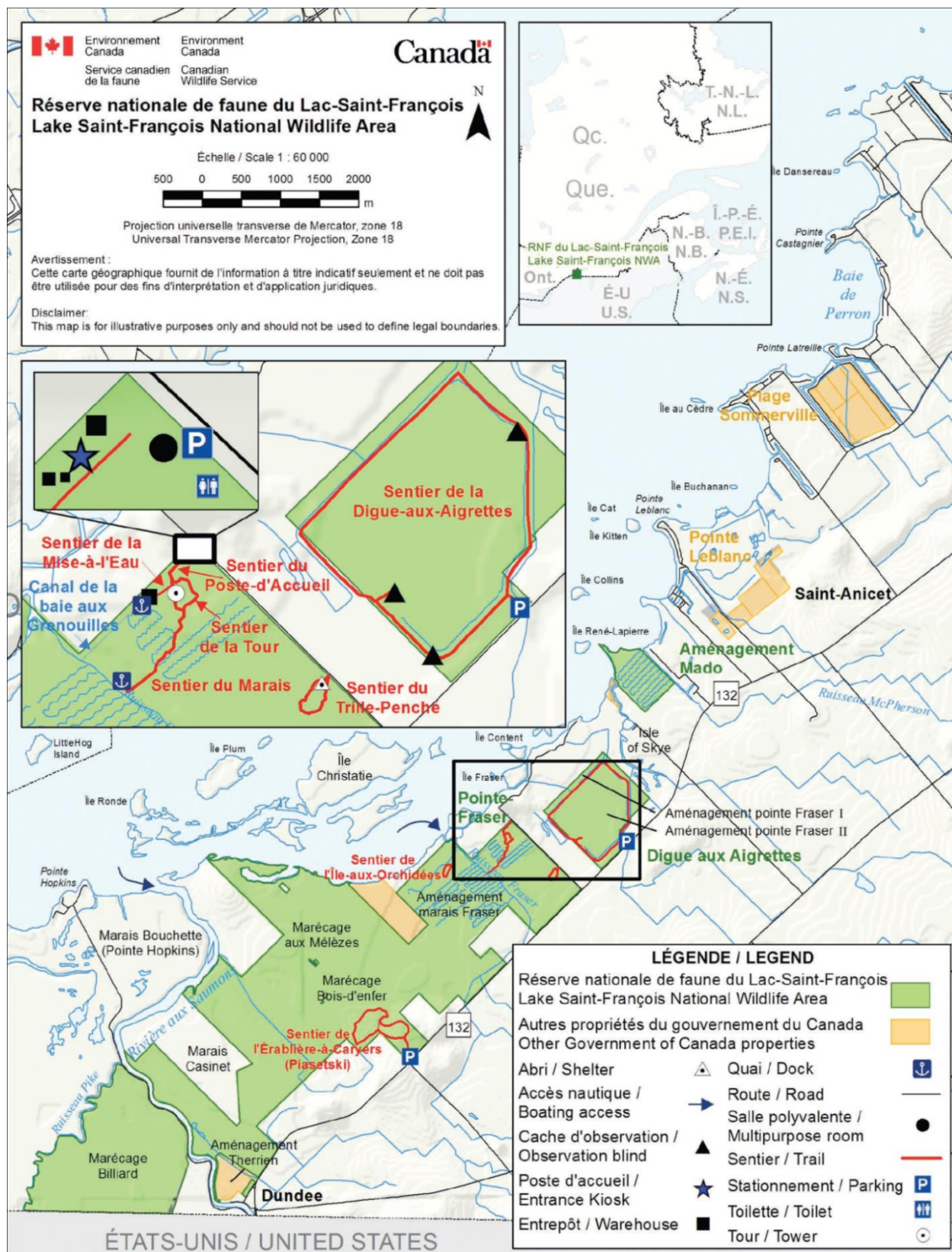


Figure 3: Facilities, infrastructure and wildlife enhancement works of Lake Saint-François National Wildlife Area



Figures 4 and 5: Entrance Kiosk (Information Center) and observation tower of Lake Saint-François National Wildlife Area

Photos: Benoit Roberge © Environment Canada, Canadian Wildlife Service

A number of waterfowl enhancement works (aménagements) have been created through agreements between Ducks Unlimited and Environment Canada. From west to east, there is a pond at Therrien farm, between Rivière aux Saumons and Ruisseau Therrien (created in 1982), zigzag channels in the Ruisseau Therrien sector (area of approximately 9.5 ha; dug in 1981) and similar zigzag channels located in Marais Fraser and lying on each side of Ruisseau Fraser (approximately 16 km long; dug in the fall of 1983).

The Aménagement pointe Fraser I, created in 1977 by Ducks Unlimited, is located in the Marais de la Digue-aux-Aigrettes. The Aménagement pointe Fraser II, south of the first one, consists of a dike (whose contour corresponds to the Sentier de la Digue-aux-Aigrettes) that keeps the water at a certain level. It was created in the fall of 1983.

The marsh of the Aménagement Mado is bounded by Ruisseau Mado to the west, Lake Saint-François to the north and a large ditch to the east. This enhancement work, made of zigzag channels similar to those of the Aménagement Marais Fraser and Aménagement Therrien, covers approximately 29.7 hectares.

2 ECOLOGICAL RESOURCES

2.1 TERRESTRIAL AND AQUATIC HABITATS

Lake Saint-François NWA is located in the mixedwood plains ecozone, more specifically in the St. Lawrence Lowlands ecoregion. The landscape is a mosaic of wet and dry habitats. Wetlands such as forested and shrub swamps (Red Maple, alder and willow) and marshes (sedge and cattail communities and wet meadows) cover more than 80% of the NWA (Figure 6). The dry areas are located on moraine ridges. There are 15 plant communities in the marshes, 15 in very wet to flooded woodlands, 17 in dry to wet woodlands, and 5 in dry to wet open areas (de Repentigny and Fragnier, 1986). The NWA also contains 10 types of plant associations in aquatic environments (Melançon and Lethiecq, 1981). Because of its richness of habitats and high plant diversity, with over 547 species (de Repentigny and Fragnier, 1986), the NWA is one of the richest areas in terms of flora in southern Quebec. In addition, six exceptional forest ecosystems have been identified in the NWA, namely one basswood stand, three bitternut hickory stands (17 ha), one maple stand with basswood and beech (7 ha), and one maple stand on peatland (40 ha) (Canadian Wildlife Service, 2003).

Plant communities such as Lake Sedge (*Carex lacustris*), Water Sedge (*Carex aquatilis*), cattail (*Typha spp.*) and Bluejoint Grass (*Calamagrostis canadensis*) meadows occupy over 80% of the marsh habitat. This habitat contains more than 100 vascular plant species, the most common being the Bluejoint Grass, Common Cattail (*Typha latifolia*), Narrow-leaved Cattail (*Typha angustifolia*), Lake Sedge, Water Sedge, Purple Loosestrife (*Lythrum salicaria*) and Jewelweed (*Impatiens capensis*) (Melançon and Lethiecq, 1981; de Repentigny and Fragnier, 1986).

The habitat in very wet to flooded woodlands mainly consists of Red Maple (*Acer rubrum*) stands. Although much less abundant, Silver Maple (*Acer saccharinum*) stands are the second most common woodland type in the NWA (de Repentigny, 1976; Desrochers and Fragnier, 1983). The Red Maple stands contain the three most abundant tree species in the NWA, namely the Red Maple, Black Ash (*Fraxinus nigra*) and American Elm (*Ulmus americana*). Another common species is the Poison Sumac (*Toxicodendron vernix*), a poisonous species likely to be designated threatened or vulnerable in Quebec. The very wet to flooded areas are also home to fairly extensive Speckled Alder (*Alnus rugosa*) and willow stands (de Repentigny and Fragnier, 1986). The welldrained woodlands contain plant associations dominated by hawthorn, hickory and Sugar Maple (*Acer saccharum*). Eastern White Cedar (*Thuja occidentalis*)

stands are one of the only conifer dominated associations in the NWA (de Repentigny and Fragnier, 1986).

Grass beds have taken over large portions of the aquatic environments owing to favourable local conditions (weak currents near shorelines, and clear, shallow water). The main species found are Sessilefruit Arrowhead (*Sagittaria rigida*) and Common Bulrush (*Scirpus lacustris*).



Figure 6: Swamp and aquatic grass beds in the Aménagement marais Fraser (zigzag channel enhancement work)

Photo: Chantal Lepire © Environment Canada, Canadian Wildlife Service

2.2 WILDLIFE SPECIES

Surveys conducted at Lake Saint-François NWA between 2004 and 2009 by the Canadian Wildlife Service (CWS) and the Quebec Ministère des Ressources naturelles et de la Faune (MRNF) (Department of Natural Resources and Wildlife) completed and updated the data previously acquired on the wildlife and species at risk resources of the NWA (Pouliot et al., in prep.). The data collected show that the fauna in the NWA is highly diversified, since the relatively small area is home to more than 237 bird species (including 110 nesting species), 17 amphibian and reptile species, and 33 mammal species.

2.2.1 Invertebrates

There has never been a survey of the insects and other terrestrial invertebrates in the NWA. A mussel survey was done in 2004, particularly in the Rivière aux Saumons sector. Two native mussel species were collected and identified in the NWA: the Eastern Elliptio (*Elliptio complanata*) and the Eastern Lampmussel (*Lampsilis radiata*).

2.2.2 Fish

Surveys conducted in the wildlife area by the MRNF and the CWS from 2004 to 2007 (Pouliot et al., in prep.) found 23 fish species, including the Eastern Sand Darter (*Ammocrypta pellucida*), a threatened species according to the Canada *Species at Risk Act* and the Quebec *Act respecting threatened or vulnerable species*. The high diversity of fish may be due to the presence of streams crossing the NWA, which contain habitats that differ from those found in the green waters of the St. Lawrence River.

Virtually no surveys have been conducted during the spawning season. Only one species, the Largemouth Bass (*Micropterus salmoides*), has been confirmed to spawn in the NWA (Pageau and Tanguay, 1977). The data collected by Shooner (1989), however, suggest the presence of a potential Pumpkinseed (*Lepomis gibbosus*) spawning site (Canadian Wildlife Service, 2003). The Common Carp (*Cyprinus carpio*) also spawns in Ruisseau Fraser and Ruisseau Mado (Denis Gervais, 2010, pers. comm.).

2.2.3 Amphibians and Reptiles

Surveys conducted from 2004 to 2006 by MRNF and CWS (Pouliot et al., in prep.) documented the presence of reptiles and amphibians in the NWA. A total of seven anuran species were heard and/or seen in the NWA, including the Northern Spring Peeper (*Pseudacris crucifer*), Northern Leopard Frog (*Lithobates pipiens*) and Green Frog (*Lithobates clamitans*).

These surveys confirmed the presence of five salamander species: the Mudpuppy (*Necturus maculosus*), the Red-spotted Newt (*Notophthalmus viridescens*), the Yellow-spotted Salamander (*Ambystoma maculatum*), the Blue-spotted Salamander (*Ambystoma laterale*) and the Four-toed Salamander (*Hemidactylium scutatum*).

The Snapping Turtle (*Chelydra serpentina*), the Map Turtle (*Graptemys geographica*), the Painted Turtle (*Chrysemys picta*) and the Common Garter Snake (*Thamnophis sirtalis*) were observed during the 2004 and 2005 surveys. Investigations conducted in 2011 confirmed the presence of the Blanding's Turtle (*Emydoidea blandingii*) (Rouleau and Giguère, 2012). A report by CWS (de Repentigny, 1990) indicates that the Redbelly Snake (*Storeria occipitomaculata*) has been observed near the NWA and is likely to be present in the NWA.

2.2.4 Birds

The annotated list of birds in and around the NWA names more than 270 species (Mercier et al., 1986), or more than one third of all the bird species found in Canada. Within the NWA, 237 bird species have been surveyed, including 110 species considered nesting species (AMAPRE, 2000).

Migration

During migrations, the ponds and streams in the NWA are visited by many geese as well as dabbling and diving ducks. In 1974 and 1981, close to 70 000 individuals were counted, 80–95% of which were diving ducks, such as scaups and goldeneyes, in both spring and fall (Lehoux et al., 1985). Counts in 1988 and 1990 found just over 8 800 individuals in spring and 4 000 in fall (Canadian Wildlife Service, 2003), a decrease largely attributable to the low number of diving ducks present, particularly scaups. The data obtained in 1997 by the Quebec Wildlife and Parks Corporation (Faune et Parcs Québec, FAPAQ) from an aerial survey of parcels covering the NWA found 1 600 individuals in spring—50% of which were Lesser Scaups (*Aythya affinis*)—but no individuals in fall. It is difficult to determine why use of the NWA by ducks has declined over the past few decades. The trend may be due to a combination of such factors as human activities and local development, changes in the Lake Saint-François ecosystem, and changes in waterfowl populations in other areas and at other stages of their life cycle.

In the spring, Northern Pintails (*Anas acuta*), Mallards (*Anas platyrhynchos*), American Black Ducks (*Anas rubripes*) and Canada Geese (*Branta canadensis*) gather by the thousands in flooded fields and sheltered areas (Canadian Wildlife Service, 2003). During migration periods, raptors such as the Turkey Vulture (*Cathartes aura*), the Osprey (*Pandion haliaetus*) and the Sharp-shinned Hawk (*Accipiter striatus*) are often seen flying over the NWA.

During migration periods, more than 24 warbler species frequent the woodlands in the NWA. The most common of these are the Yellow Warbler (*Setophaga petechia*) and the Common Yellowthroat (*Geothlypis trichas*), which may also nest in the NWA. The rarest warblers observed include the Palm Warbler (*Setophaga palmarum*) and the Golden-winged Warbler (*Vermivora chrysoptera*). More than 11 sparrow species also frequent the woodlands and marshes in the NWA during migration. The most common sparrows are the Song Sparrow (*Melospiza melodia*) and the Swamp Sparrow (*Melospiza georgiana*), which also nest in the NWA. The rarest sparrows are the Vesper Sparrow (*Pooecetes gramineus*) and the Field Sparrow (*Spizella pusilla*).

Breeding

Of the 100 or so bird species that nest in the NWA, 13 are waterfowl species that breed in the area, including the Canada Goose (*Branta canadensis*), the Wood Duck (*Aix sponsa*), the Green-winged Teal (*Anas crecca*), the American Black Duck, the Mallard, the Northern Pintail and the Redhead (*Aythya americana*).

A number of other bird species use the marshes in the NWA during the breeding season, such as the Sora (*Porzana carolina*), the Virginia Rail (*Rallus limicola*), the Common Gallinule (*Gallinula galeata*), the American Coot (*Fulica americana*), the Green Heron (*Butorides virescens*), the Marsh Wren (*Cistothorus palustris*) and the Swamp Sparrow.

Surveys of these wetlands made in 2004 (Pouliot et al., in prep.) also identified other more secretive marsh bird species, such as the Pied-billed Grebe (*Podilymbus podiceps*), the American Bittern (*Botaurus lentiginosus*) and the Least Bittern (*Ixobrychus exilis*). However, the Common Gallinule was not observed that year, though the species had previously seemed to be a well-established breeding species in the NWA (de Repentigny and Labonté, 1980).

Desrochers and Fragnier (1983) identified the Swamp Sparrow as the most abundant breeding species in the NWA, followed in descending order by the Common Yellowthroat, the Yellow Warbler, the Veery (*Catharus fuscescens*) and the Red-winged Blackbird (*Agelaius phoeniceus*). The 2004 surveys confirmed that the Swamp Sparrow, the Common Yellowthroat and the Yellow Warbler are still the three most abundant breeding species.

The presence of the Black Tern (*Chlidonias niger*) was noted in the sectors of the Aménagement Mado (enhancement work), the Digue aux Aigrettes and the Pointe Fraser, as well as at the mouth of the Rivière aux Saumons. A few pairs may have nested in the marshes in or around the NWA in 2004. A 2006 survey by CWS identified five colonies near the NWA: two near Île Dickerson, one near Île Plum, and two near Île Christatie (Pouliot et al., in prep.). In the NWA, nesting individuals were observed at the Digue aux Aigrettes in 1983 and in 1984 during survey work in the field (Gervais et al., 1983; Gervais and Shaffer, 1984a and b).

A nest found in the NWA on June 20, 2007, confirmed the first breeding record of the Sandhill Crane (*Grus canadensis*) in southernmost Quebec. The nest was located in the Digue aux Aigrettes sector, where a juvenile individual has been observed on a number of occasions (P. Tarasoff, pers. obs.). Breeding has been confirmed every year since then (SOFA, 2008, 2009, 2010). In the fall of 2009, nine individuals were observed along the Sentier de la Digue-aux-Aigrettes (SOFA, 2009).

2.2.5 Mammals

According to studies conducted in 1983 and 1984 (Gervais et al., 1984) and from 2004 to 2009 (Pouliot et al., in prep.), 33 mammal species are found in the NWA. The Southern Redbacked Vole (*Myodes gapperi*) was by far the most common small mammal species in 1984, while the Meadow Jumping Mouse (*Zapus hudsonius*) was the most common species in 2004. The Muskrat (*Ondatra zibethicus*) is present throughout the NWA, and the Beaver (*Castor canadensis*) is similarly common. The White-tailed Deer (*Odocoileus virginianus*) frequent the NWA in winter as well as in summer. The NWA contains a number of other mammal species, such as the Red Fox (*Vulpes vulpes*), the Coyote (*Canis latrans*) and the American Mink (*Neovison vison*). In June 2003, a Bobcat (*Lynx rufus*) was spotted on the Sentier de l'Érablière-à-Caryers in the Piasetski sector (AMAPRE, 2003).

The 2004 surveys confirmed the presence of at least four bat species in the NWA, namely the Hoary Bat (*Lasiurus cinereus*), the Red Bat (*Lasiurus borealis*) and the Big Brown Bat (*Eptesicus fuscus*) as well as individuals of the genus *Myotis* (Pouliot et al. in prep.) (see 2.3 Species at Risk).

2.3 SPECIES AT RISK

Lake Saint-François NWA contains at least 15 animal and plant species designated at risk under the Species at Risk Act (SARA) (Table 3). Some of these species are protected under both federal and provincial legislation. It also contains 46 designated threatened or vulnerable species or likely to be so designated in Quebec under the Act respecting threatened or vulnerable species (ARTVS).

In particular, the NWA provides a refuge for the Sedge Wren (*Cistothorus platensis*), a species likely to be designated threatened or vulnerable in Quebec. More than 28 territorial males were found in 1983, making this the largest Sedge Wren population in Quebec and one of the most important in Canada. With recent work suggesting that the Sedge Wren population in the NWA may exceed 121 males, this is clearly a significant area for this species in eastern North America (Robert et al., 2009). A number of threatened bird species (SARA), such as the Least Bittern, are also found in the NWA. Other species with a precarious status, such as the Bobolink (*Dolichonyx oryzivorus*), the Caspian Tern (*Hydroprogne caspia*) and the Rusty Blackbird (*Euphagus carolinus*), are occasionally seen in the NWA. Moreover, the Red-headed Woodpecker (*Melanerpes erythrocephalus*) and the Loggerhead Shrike (*Lanius ludovicianus*) have already been observed in the NWA, but the last mentions of the species date back to 1985 and 1974 respectively.

At least three bat species at risk were observed in the NWA during acoustic surveys conducted in 2004, namely the Hoary Bat and the Red Bat as well as individuals of the genus *Myotis*. In the latter case, it could be the Little Brown Bat (*Myotis lucifugus*) or the Northern Myotis (*Myotis septentrionalis*), two species that are endangered in Canada, but due to strong similarities between the sounds of both species, it is often impossible to distinguish them with certainty. Based on their ecological preferences, it was most probably the Little Brown Bat (Pouliot et al. in prep.).

According to data from the Centre de données sur le patrimoine naturel du Québec (CDPNQ, 2009a, 2009b), the Map Turtle and the Blanding's Turtle have been observed in the NWA. The first one is considered as a species of special concern in Canada (SARA and COSEWIC) and as threatened in Quebec (ARTVS). The Snapping Turtle is designated a species of special concern across Canada (SARA and COSEWIC). The CDPNQ database contains one observation of a Northern Watersnake (*Nerodia sipedon*), a species likely to be designated threatened or vulnerable in Quebec, within a one-kilometre zone around the NWA (mouth of the Rivière aux Saumons). In addition, the Four-toed Salamander has been observed in the NWA.

One fish species, the Eastern Sand Darter, is present in the Rivière aux Saumons, which flows through the NWA. The Eastern Sand Darter has been designated threatened under the SARA and the ARTVS. Two endangered plant species (SARA), among which the Butternut, are also found in the NWA as well as many plant species likely to be designated threatened or vulnerable in Quebec.

Table 3: Species at risk in Lake Saint-François National Wildlife Area

Common and scientific names of species	Status in Canada SARA ¹	Status in Canada COSEWIC ²	Status in Quebec ARTVS ³
Birds			
Common Nighthawk <i>Chordeiles minor</i>	Threatened	Threatened	SLDTV ⁴
Peregrine Falcon <i>Falco peregrinus anatum/tundrius</i>	Special concern*	Special concern*	Vulnerable** or SLDTV ^{4***}
Short-eared Owl <i>Asio flammeus</i>	Special concern	Special concern	SLDTV ⁴
Barn Swallow <i>Hirundo rustica</i>	No status	Threatened	No status
Chimney Swift <i>Chaetura pelagica</i>	Threatened	Threatened	SLDTV ⁴

Table 3: Species at risk in Lake Saint-François National Wildlife Area (continued)

Common and scientific names of species	Status in Canada SARA ¹	Status in Canada COSEWIC ²	Status in Quebec ARTVS ³
Birds (continued)			
Golden-winged Warbler <i>Vermivora chrysoptera</i>	Threatened	Threatened	SLDTV ⁴
Canada Warbler <i>Cardellina canadensis</i>	Threatened	Threatened	SLDTV ⁴
Least Bittern <i>Ixobrychus exilis</i>	Threatened	Threatened	Vulnerable
Bald Eagle <i>Haliaeetus leucocephalus</i>	No status	Not at risk	Vulnerable
Yellow Rail <i>Coturnicops noveboracensis</i>	Special concern	Special concern	Threatened
Sedge Wren <i>Cistothorus platensis</i>	No status	Not at risk	SLDTV ⁴
Mammals			
Hoary Bat <i>Lasiurus cinereus</i>	No status	No status	SLDTV ⁴
Red Bat <i>Lasiurus borealis</i>	No status	No status	SLDTV ⁴
<i>Myotis</i> sp (Little Brown Bat, <i>M. lucifugus</i> , and/or Northern Myotis, <i>M. septentrionalis</i>)	Endangered	Endangered	No status
Reptiles			
Northern Watersnake <i>Nerodia sipedon sipedon</i>	No status	Not at risk	SLDTV ⁴
Snapping Turtle <i>Chelydra serpentina</i>	Special concern	Special concern	No status
Map Turtle <i>Graptemys geographica</i>	Special concern	Special concern	Vulnerable
Blanding's Turtle <i>Emydoidea blandingii</i> Great Lakes / St. Lawrence population	Threatened	Threatened	Threatened
Four-toed Salamander <i>Hemidactylium scutatum</i>	No status	Not at risk	SLDTV ⁴
Fish			
Eastern Sand Darter <i>Ammocrypta pellucida</i> Quebec populations	Threatened	Threatened	Threatened

Table 3: Species at risk in Lake Saint-François National Wildlife Area (continued)

Common and scientific names of species	Status in Canada SARA ¹	Status in Canada COSEWIC ²	Status in Quebec ARTVS ³
Vascular plants			
Wild Leek <i>Allium tricoccum</i>	No status	No status	Vulnerable
Brainerd's Hawthorn <i>Crataegus brainerdii</i>	No status	No status	SLDTV ⁴
Caughuawaga Hawthorn <i>Crataegus suborbiculata</i>	No status	No status	SLDTV ⁴
Eastern Blue-eyed Grass <i>Sisyrinchium angustifolium</i>	No status	No status	SLDTV ⁴
Hairy Woodland Brome <i>Bromus pubescens</i>	No status	No status	SLDTV ⁴
Cutleaf Toothwort <i>Cardamine concatenata</i>	No status	No status	SLDTV ⁴
Sartwell's Sedge <i>Carex sartwellii</i>	No status	No status	SLDTV ⁴
Burreed Sedge <i>Carex sparganioides</i>	No status	No status	SLDTV ⁴
Velvet Sedge <i>Carex trichocarpa</i>	No status	No status	SLDTV ⁴
Swamp White Oak <i>Quercus bicolor</i>	No status	No status	SLDTV ⁴
Flat-stem Spikerush <i>Eleocharis compressa</i>	No status	No status	SLDTV ⁴
Licorice Bedstraw <i>Galium circaezans</i>	No status	No status	SLDTV ⁴
Showy Orchis <i>Galearis spectabilis</i>	No status	No status	SLDTV ⁴
Yellow Vetchling <i>Lathyrus ochroleucus</i>	No status	No status	SLDTV ⁴
Poke Milkweed <i>Asclepias exaltata</i>	No status	No status	SLDTV ⁴
Variable-leaved Watermilfoil <i>Myriophyllum heterophyllum</i>	No status	No status	SLDTV ⁴
Butternut <i>Juglans cinerea</i>	Endangered	Endangered	SLDTV ⁴
Rock Elm <i>Ulmus thomasii</i>	No status	No status	Threatened
Small Pondweed <i>Potamogeton pusillus</i>	No status	No status	SLDTV ⁴

Table 3: Species at risk in Lake Saint-François National Wildlife Area (continued)

Common and scientific names of species	Status in Canada SARA ¹	Status in Canada COSEWIC ²	Status in Quebec ARTVS ³
Vascular plants (continued)			
Yellow Watercrowfoot <i>Ranunculus flabellaris</i>	No status	No status	SLDTV ⁴
Southern Wild Rice <i>Zizania aquatica</i> var. <i>aquatica</i>	No status	No status	SLDTV ⁴
Canada Sanicle <i>Sanicula canadensis</i>	No status	No status	SLDTV ⁴
Hidden Spikemoss <i>Selaginella eclipes</i>	No status	No status	SLDTV ⁴
American Bladdernut <i>Staphylea trifolia</i>	No status	No status	SLDTV ⁴
Poison Sumac <i>Toxicodendron vernix</i>	No status	No status	SLDTV ⁴
Yellow Pimpernel <i>Taenidia integerrima</i>	No status	No status	SLDTV ⁴
Longspur Violet <i>Viola rostrata</i>	No status	No status	SLDTV ⁴
Dotted Watermeal <i>Wolffia borealis</i>	No status	No status	SLDTV ⁴
Plant at risk (name withheld)	Endangered	Endangered	Threatened

1 Canada *Species at Risk Act* (Species at Risk Public Registry, 2014)

2 Committee on the Status of Endangered Wildlife in Canada (COSEWIC, 2014)

3 Quebec *Act Respecting Threatened or Vulnerable Species* (MDDELCC, 2014 and MFFP, 2014)

4 Species likely to be designated threatened or vulnerable in Quebec (MDDELCC, 2014 and MFFP, 2014)

* Status assigned to the two subspecies *anatum/tundrius* taken together

** Status assigned to the *anatum* subspecies

*** Subspecies *tundrius*.

2.4 INVASIVE SPECIES

The aquatic grass beds in Lake Saint-François NWA contain the European Frogbit (*Hydrocharis morsus-ranae*), an introduced floating plant that has become invasive, particularly in certain constructed channels. The NWA also contains the exotic Common Reed (*Phragmites australis*) and the indigenous Common Reed (same species but different genotypes) populations in Quebec (PHRAGMITES Group, 2011). The exotic Common Reed is a cause for concern because it poses a high risk of invading the NWA and altering ecosystems. Other invasive exotic species such as the Purple Loosestrife (*Lythrum salicaria*), the Flowering Rush (*Butomus umbellatus*) and the Reed Canarygrass (*Phalaris arundinacea*) are present in the NWA but are

less abundant. However, the Reed Canarygrass spreads rapidly and could impede the establishment of indigenous wetland plants.

Lake Saint-François contains two exotic mussel species: the Zebra Mussel (*Dreissena polymorpha*), which was introduced to Canada in the mid-1980s, and the Quagga Mussel (*Dreissena bugensis*), which appeared in the Great Lakes in 1991 and Lake Saint-François in 1992 (Armellin et al., 1994). Because of their adaptability, these organisms are able to compete with indigenous freshwater mussels (Unionidae family).

A survey conducted as part of the 2009 monitoring program suggests that the Round Goby (*Neogobius melanostomus*) is spreading in Lake Saint-François (Pierre Dumont, pers. comm., 2010). This exotic fish species can be a major predator of the eggs of the indigenous fish species in the lake.

3 MANAGEMENT CHALLENGES AND THREATS

Lake Saint-François NWA is facing major management threats and challenges largely related to its proximity to many human activities, particularly agricultural and ecotourism activities. The main threats on the ecological integrity of the NWA are the impact of human activities on the NWA, the fragmentation of the NWA, the invasion by plant species, the habitat and infrastructure degradation by the Beaver, and the development of the surrounding area. They are described below in descending order of importance, as determined by current knowledge.

3.1 IMPACT OF HUMAN ACTIVITIES ON THE NWA

The presence of visitors in the most ecologically fragile sectors of the NWA is a potential threat to habitat conservation for the migratory birds and species at risk. Wildlife habitats are sometimes located near the sectors visited by the public, exposing plants to trampling and animals to disturbance such as motor vehicle traffic (boats, snowmobiles, off-road vehicles). However, little is known about the impact of visitors on wildlife species and their habitats, including those identified as critical habitat for species at risk.

The popularity of ecotourism activities among the general public may have a medium- and long-term impact on the preservation of the integrity of the NWA. Ecotourism may indeed degrade the environment and increase disturbance of wildlife if carried out without adequate knowledge of visitor use of the NWA and without infrastructure and tools for better managing visitor entry and activities. Current data on NWA attendance are limited to the number of visitors to the Entrance Kiosk, which is not the only point of entry to the NWA.

3.2 FRAGMENTATION OF THE NWA

The NWA is a series of discontinuous parcels of land of varying sizes along the shore of Lake Saint-François. Its layout interferes with the ecological connectivity of habitats and species because it limits the movement and dispersal of plant and animal species. The discontinuity also limits the legal protection that can be afforded to populations of certain species that are also found on nearby private lots and on adjacent federal lands that are not classified as an NWA. The fragmented nature of the NWA complicates boundary marking and makes monitoring and enforcement more difficult.

3.3 INVASION BY PLANT SPECIES

The presence of invasive plant species may be an increasingly serious threat to the ecological integrity of the NWA because such species disturb the composition of wildlife habitats, particularly the habitat of certain priority bird species. Over the past few years, an increase has been observed in the number of invasive exotic plant species in the NWA, such as the European Common Reed, the European Frogbit, the Purple Loosestrife and the Flowering Rush (Canadian Wildlife Service, 2003).

The exotic Common Reed is an introduced species capable of spreading quickly, destroying natural habitats and affecting the indigenous Common Reed and other indigenous plant species that occupy the same ecological niche; it is therefore a cause for particular concern. A model of the risk of invasion of the NWA by the exotic Common Reed for 2030 shows that the area occupied by the introduced variety would grow from 8 hectares to 70 hectares (PHRAGMITES Group, 2011). In addition, the proliferation of the European Frogbit clogs certain channels constructed in the marshes, changes the composition of the aquatic flora and fauna, and impedes boating.

Certain non-exotic species can also alter the composition of habitats. For example, the Speckled Alder, an indigenous wetland shrub, is very abundant and could invade sedge marshes, which are the preferred habitat of the Yellow Rail and the Sedge Wren (Robert, 1995; Gratton, 1996). The substantial reduction in fire frequency is thought to be the likely cause of this invasion (Jean and Bouchard, 1991 in Brisson et al., 2006). Speckled Alder control experiments have already been conducted in the NWA (Brisson et al., 2006).

3.4 HABITAT AND INFRASTRUCTURE DEGRADATION

Upon its creation in 1978, the NWA had a well-established Beaver population. The Beaver has caused adverse effects in the past, including flooding land in the NWA, blocking drains and other water-draining structures, damaging wildlife enhancement works (such as digging tunnels in the Digue aux Aigrettes, which may make it difficult to maintain the water level), as well as cutting down trees in areas where species at risk are found. Over the years, control measures have had to be taken to reduce these adverse effects.

In recent years, the presence of Beavers in the NWA has also become a cause for concern among farmers owing to the flooding of farmlands adjacent to the NWA. However, this flooding may be attributable to other factors, such as the low elevation of the farmlands, the regulation of water levels in Lake Saint-François, the presence of Beaver dams outside the NWA, and changes to stream flow.

In 2011, a Beaver management plan was implemented in the NWA to limit the impact of the Beaver (as well as of the Muskrat) on the NWA and on adjacent land.

3.5 DEVELOPMENT OF SURROUNDING LAND

More than 85% of the land along the shore of Lake Saint-François is privately owned, and farmland and Route 132 bound the NWA to the south, forming a ring of human activity and infrastructure around the NWA and obstructing the free exchange of species with other natural environments in the vicinity. This situation fails to promote the genetic exchanges necessary for the plant and animal populations in the NWA and surrounding area.

Over the past 30 years, there has been an intensification in agriculture, with perennial crops being converted to annual crops (Maheu-Giroux et al., 2006), which are generally less favourable for wildlife. Agricultural land has expanded to the detriment of the residual natural environments (e.g. wildlands, wooded riparian buffers) that often act as corridors for animal species travelling to or from the NWA, including species that require a large home range.

3.6 SCIENTIFIC KNOWLEDGE GAPS

The current data on the ecosystems in the NWA are occasionally insufficient or obsolete with respect to vegetation and habitats in general, certain bird and mammal species (particularly with regard to species at risk ecology), and the impact of certain threats on plants and animals (e.g. non-point source pollution, hunting and poaching, visitors). Moreover, they do not always allow for proper measurement of the ecological integrity of the NWA or fully support decision making with regard to the management of some of the habitat and species populations. Incorporating other existing data sources, conducting research and implementing an ecological monitoring program would help to improve the scientific knowledge in this area.

3.7 POACHING

Wildlife poaching, primarily of the White-tailed Deer, the Snowshoe Hare (*Lepus americanus*), the Eastern Cottontail (*Sylvilagus floridanus*) and the Ruffed Grouse (*Bonasa umbellus*), has been reported in the NWA, as has waterfowl hunting outside the permitted areas and periods. Although sport fishing is not authorized in the NWA, illegal fishing has also been reported on Ruisseau aux Gouins, Ruisseau Fraser and Étang aux Oies. The extent of this threat and its impact on the populations present in the NWA are not well documented.

3.8 NON-POINT SOURCE POLLUTION

The use of fertilizers and pesticides on adjacent fields may pose a threat to the preservation of the ecological integrity of the NWA. Fertilizers can degrade water quality, make an environment unfavourable to aquatic species, affect the aesthetic quality of a water body, and cause accelerated eutrophication in an aquatic environment. Pesticides can accumulate in the food chain and pose a risk of chronic toxicity for wildlife. The effects of non-point source pollution on the ecosystems in the NWA have not been assessed.

3.9 ACCIDENTAL SPILLS

Accidental spills of hydrocarbons or other chemicals from ships in the waters of Lake Saint-François adjacent to the NWA could cause aquatic bird mortalities and have serious effects on the shoreline and the entire ecosystem of the NWA. Environment Canada and its collaborators have an Emergency Response Plan in place to ensure the appropriate measures are taken to protect birds in the event of an accidental spill of that nature.

4 GOALS AND OBJECTIVES

4.1 VISION

Lake Saint-François NWA protects wetlands and other significant habitats for species at risk, priority bird species and other wildlife species. The priority bird species are the species identified in the *Bird Conservation Strategy for Bird Conservation Region 13 in the Quebec Region: Lower Great Lakes/St. Lawrence Plain* (Environment Canada, 2013).

4.2 GOALS AND OBJECTIVES

The goals and objectives listed below are used to clarify the management plan vision, taking into account the threats and management challenges. These goals and objectives will be achieved by carrying out the actions identified in Table 4 (Management Approaches for Lake Saint-François National Wildlife Area), which will be implemented in accordance with available resources.

Goal 1: Protect and enhance significant habitats for species at risk, priority bird species and other wildlife species.

Objectives:

- 1.1 Conserve species at risk, such as the Yellow Rail and the Least Bittern, and their critical habitat;
- 1.2 Implement management, restoration and enhancement measures for disturbed habitats of species at risk, priority bird species and other wildlife species;
- 1.3 Limit the impact of the Beaver population on habitats and infrastructure;
- 1.4 Prevent the spread of invasive species, such as the exotic Common Reed, the Speckled Alder and the European Frogbit.

Goal 2: Consolidate the NWA and promote natural habitat conservation on adjacent land in order to foster connectivity and improve ecological conditions.

Objectives:

- 2.1 Complete the review of the boundaries of the NWA and post them on-site in order to protect plants and animals from the impact of human activities;
- 2.2 Assess the conservation potential of adjacent federal land that do not have legal protection status;

- 2.3 Facilitate the identification of parcels of land outside the NWA that are important for conservation.

Goal 3: Reduce the impact of human activities on the NWA.

Objectives:

- 3.1 Produce a map of sensitive components and habitats, such as conservation sectors, as well as infrastructure, land use and visitor access;
- 3.2 Ensure better promotion of the regulations in order to reduce the number of incidents related to non-compliance with the regulations;
- 3.3 Limit disturbances on habitats in the NWA through the development of minimal access infrastructure that are safe for visitors.

Goal 4: Raise awareness among the public and local communities of the conservation of the NWA, wildlife species and their habitats.

Objectives:

- 4.1 Promote public outreach and communication activities about the importance of conservation, the role of the NWA and the mission of the CWS;
- 4.2 Educate the regional population about the mission of the NWA, the applicable regulations and public safety;
- 4.3 Foster understanding and collaboration of local and Aboriginal communities in the conservation of the NWA and adjacent land and in the reduction of external threats.

Goal 5: Ensure ecological monitoring of the NWA and improve knowledge on wildlife species and their habitats.

Objectives:

- 5.1 Develop an ecological monitoring program;
- 5.2 Fill priority gaps in scientific knowledge.

4.3 EVALUATION

An annual monitoring of the actions implemented and the results obtained will be performed based on financial and human resources availability. This monitoring will be used to establish priorities for action and resources. The management plan will be reviewed five years after its initial approval and every ten years following that.

Table 4: Management approaches for Lake Saint-François National Wildlife Area

Goals	Objectives	Actions (Priority Level) ¹
Goal 1: Protect and enhance significant habitats for species at risk, priority bird species and other wildlife species. Challenge and threats: • Impact of human activities on the NWA • Accidental spills • Habitat and infrastructure degradation • Invasion by plant species	Objective 1.1: Conserve species at risk, such as the Yellow Rail and the Least Bittern, and their critical habitat.	• Implement the measures proposed in the species at risk recovery strategies. (2, 3) • Locate and protect the critical habitat of species at risk. (2) • Work with the province to protect species at risk in Quebec. (2, 3)
	Objective 1.2: Implement management, restoration and enhancement measures for disturbed habitats of species at risk, priority bird species and other wildlife species.	• Review the migratory bird hunting practices and areas in the NWA. (1) • Clarify the roles of stakeholders and collaborators, map sensitive habitats in the NWA, and work with the stakeholders and collaborators to implement the Environment Canada Emergency Response Plan in order to protect species in vulnerable areas. (1) • Develop a restoration plan and restore disturbed habitats or enhancement works (aménagements de la Digue aux Aigrettes, Mado and Therrien) for waterfowl species or plant or animal species at risk. (3) • Monitor and maintain artificial nesting boxes for the Wood Duck, the American Kestrel, the Tree Swallow, the Purple Martin, the House Wren and the Eastern Bluebird. (1, 2, 3) • Install nesting platforms for the reintroduction of the Black Tern to the Marais Fraser, and evaluate the efficiency of that technique. (2) • Survey White-tailed Deer yards in cooperation with collaborators, Aboriginal peoples and/or local communities. (2)
	Objective 1.3: Limit the impact of the Beaver population on habitats and infrastructure.	• Implement a Beaver population management plan in the NWA in cooperation with collaborators, Aboriginals and/or local communities. (1)
	Objective 1.4: Prevent the spread of invasive species, such as the exotic Common Reed, the Speckled Alder and the European Frogbit.	• Assess the impact of the Speckled Alder on the Yellow Rail and Sedge Wren habitats that the shrub seems to have invaded, and take action if necessary and feasible. (1, 2) • Carry out targeted actions to control invasive species, such as the exotic Common Reed and the European Frogbit. (1, 2)

Table 4: Management approaches for Lake Saint-François National Wildlife Area (continued)

Goals	Objectives	Actions (Priority Level)¹
Goal 2: Consolidate the NWA and promote natural habitat conservation on adjacent land in order to foster ecological connectivity and improve ecological conditions. Challenges and threats: • Fragmentation of the NWA • Development of surrounding land • Impact of human activities on the NWA • Poaching	Objective 2.1: Complete the review of the boundaries of the NWA and post them on-site in order to protect plants and animals from the impact of human activities.	• Complete the review of the NWA property boundaries. (1) • If necessary, review the legal boundaries of the NWA. (1) • Post the boundaries of the NWA. (1)
	Objective 2.2: Assess the conservation potential of adjacent federal land that do not have legal protection status.	• Take the necessary steps to incorporate the adjacent federal lands into the NWA. (2) • Review the legal description of the NWA. (1)
	Objective 2.3: Facilitate the identification of parcels of land outside the NWA that are important for conservation.	• Develop an NWA consolidation plan to analyze the ecological value and the potential for habitat and species at risk conservation of any adjacent parcels of land that are significant for conservation. (2, 3) • Communicate the available information on habitats outside of the reserve that are significant for connectivity so as to facilitate their conservation. (2, 3) • Foster working relationships with the Mohawks of Akwesasne towards conservation stewardship of adjacent lands. (3)
Goal 3: Reduce the impact of human activities on the NWA. Challenges and threats: • Impact of human activities on the NWA • Poaching	Objective 3.1: Produce a map of sensitive components and habitats, such as conservation sectors, as well as infrastructure, land use and visitor access.	• Update the map of sensitive components. (1) • Incorporate knowledge on species at risk and sensitive areas, document visitor use, and establish NWA land conservation priorities. (1) • Analyze the carrying capacity (visitor use of the areas according to the fragility of the environment) based on the NWA conservation priorities and sensitive areas. (2)
	Objective 3.2: Ensure better promotion of the regulations in order to reduce the number of incidents related to non-compliance with the regulations.	• Identify the priority needs for enforcement of the existing regulations to protect birds and other wildlife species. (1) • Work with the Wildlife Enforcement Directorate to facilitate land surveillance and law enforcement with respect to entry, circulation and the prohibition of hunting during critical periods. (1, 2, 3)

Table 4: Management approaches for Lake Saint-François National Wildlife Area (continued)

Goals	Objectives	Actions (Priority Level) ¹
	Objective 3.3: Limit disturbances on habitats in the NWA through the development of minimal access infrastructure that are safe for visitors.	- Schedule an infrastructure inspection and establish an action plan. (1) - Restore low-maintenance infrastructure, taking into account the conservation areas in order to minimize the impact on the ecological integrity of the NWA. (2) - Implement a trail and infrastructure signage system to facilitate visitor entry and improve the visitor experience. (2)
Goal 4: Raise awareness among the public and local communities of the conservation of the NWA, wildlife species and their habitats. Challenges and threats: - Development of surrounding land - Non-point source pollution - Poaching - Impact of human activities on the NWA - Habitat and infrastructure degradation - Invasion by plant species	Objective 4.1: Promote public outreach and communication activities about the importance of conservation, the role of the NWA and the mission of the CWS.	Identify the major themes of an outreach program (e.g. mandates, roles, messages, target audiences, tools, means, collaborators) and facilitate its implementation. (1, 2)
	Objective 4.2: Educate the regional population about the mission of the NWA, the applicable regulations and public safety.	- Update the installed signage and posted regulations. (1) - Prepare and disseminate a public safety plan. (1)
	Objective 4.3: Foster understanding and collaboration of local and Aboriginal communities in the conservation of the NWA and adjacent land and in the reduction of external threats.	- Raise awareness of communities and facilitate the preservation of connectivity areas for species with large home ranges, species at risk or species of interest, and the preservation of significant biodiversity areas outside the NWA. (3) - Raise awareness among managers of adjacent properties on the importance of best practices and their benefits for the NWA. (2) - Foster understanding that traditional ecological knowledge is another tool to assist in reserve conservation. (3)

Table 4: Management approaches for Lake Saint-François National Wildlife Area (continued)

Goals	Objectives	Actions (Priority Level) ¹
Goal 5: Ensure ecological monitoring of the NWA and improve knowledge on wildlife species and their habitats. Challenges and threats: Scientific knowledge gaps	Objective 5.1: Develop an ecological monitoring program.	- Determine the indicators and monitoring methodology of the ecological monitoring program. (2) - Include Mohawk expertise, local conservation organizations and ministries for the implementation and analysis of ecological monitoring works. (2) - Implement the ecological monitoring program. (1, 2, 3)
	Objective 5.2: Fill priority gaps in scientific knowledge.	- Identify knowledge gaps and promote the acquisition of knowledge based on the 2003 NWA conservation plan. (1) - Include traditional ecological knowledge in the ecosystems management of the reserve. (2) - Use the various existing data sources (ÉPOQ, SOS-POP, ornithological clubs) and research work results to improve scientific knowledge. (2) - Foster collaborations to acquire knowledge on the use of the Ducks Unlimited wildlife enhancement works (aménagement pointe Fraser I and II) by waterfowl and aquatic birds in order to increase that use. (2) - Encourage or support surveys and monitoring (internal, by Aboriginal peoples or collaborators) of priority bird species, species at risk, stressors, sensitive habitats and threats following the development of the knowledge acquisition plan. (2, 3)

1 Level of Priority: 1 (from 0 to 3 years); 2 (from 4 to 6 years); 3 (from 7 to 10 years)

Note: The levels of priority assigned to the actions relate to the implementation schedule and not the significance for resource conservation. They can change depending on the context and the available resources

5 MANAGEMENT APPROACHES

Table 4 contains a description of all the possible actions that could be used in the management of Lake Saint-François NWA. However, specific management actions will be determined during the annual work planning process and will be implemented as human and financial resources allow, and according to the approaches defined below.

5.1 HABITAT MANAGEMENT

Habitat management will be oriented towards the conservation and recovery of species at risk and the protection of critical habitat. To this end, conservation areas and sensitive species in the NWA will have to be identified.

The assessment of the condition of the invasive species in the NWA and the preparation of response plans will take into account their biological effectiveness and the costs and efforts necessary to implement the potential actions.

5.2 WILDLIFE MANAGEMENT

Wildlife management will be based on the knowledge acquired from the surveys conducted to date, thus making it possible to obtain updates on a number of biodiversity components of the NWA. In addition, priority will be given to collaboration with various government and university specialists on research or monitoring projects in order to ensure the best possible protection of species at risk. The recommendations set out in the species at risk recovery strategies will also guide the designation and protection of the designated critical habitat in and around the NWA.

5.3 MONITORING

An ecological monitoring program is planned for the next years in order to obtain an overview of the health of the NWA and a data bank to support actions. The NWA ecological monitoring program will be based on the existing biological monitoring projects being carried out internally and in collaboration with regional and provincial collaborators. The monitoring efforts will focus on species designated at risk under federal and provincial legislation, species that are representative of the NWA, specific ecosystems, and ecological and anthropogenic stressors on the NWA.

5.4 RESEARCH

Needs regarding knowledge acquisition and research have been identified for a number of species groups and management issues associated with Lake Saint-François NWA. The priorities primarily focus on acquiring knowledge on the biological diversity of the NWA (e.g. waterfowl, insects, amphibians, reptiles, the Beaver, the White-tailed Deer, predators). They also involve documenting the presence of species designated at risk in Canada and designated of concern in Quebec, as well as ecological stressors and the impact of human activity (e.g. pollution, hunting, poaching, climate change).

To obtain authorization to conduct monitoring or research in Lake Saint-François NWA and to receive instructions regarding the guidelines for research proposals, please contact:

National Wildlife Area – Request for Research permits

Environment Canada – Canadian Wildlife Service

Quebec Region

801-1550 D'Estimauville Avenue

Québec QC G1J 0C3

Email: permisSCFQuebec@ec.gc.ca

5.5 PUBLIC INFORMATION AND OUTREACH

The NWA is open to the public from April to December. Environment Canada could authorize public awareness activities about the conservation of natural environments. Such activities could be carried out by local and regional conservation groups and municipalities.



Figure 7: Guide nature observation tour provided by AMAPRE
Photo: © AMAPRE

Under the auspices of the National Conservation Plan, Environment Canada has identified Lake Saint-François NWA as one of the NWAs that will benefit from funding through the Connecting Canadians to Nature initiative. This initiative is meant to aid in fostering an appreciation for nature in all Canadians with the goal of building a “community of stewards”. One of the goals of the National Conservation Plan and the Connecting Canadians to Nature initiative is to increase public access to some National Wildlife Areas. Visits must be managed in a way that does not impact on the conservation of wildlife.

Funding will be used for basic infrastructure to make sites more accessible, to create new or expanded trails and viewing platforms, to support a variety of low-impact public uses and to provide on-site programs delivered through collaborative partnerships.

In Lake Saint-François NWA, this money will be used to fund various projects such as the installation of signage and information kiosks, the construction of a boardwalk at Baie aux Grenouilles and the development of initiatives allowing the public to discover this exceptional natural environment.

6 AUTHORIZATIONS AND PROHIBITIONS

In the interest of the wildlife species and their habitats, human activities are minimized and controlled in NWAs through the implementation of the *Wildlife Area Regulations*. These regulations set out activities that are prohibited [subsection 3(1)] in the NWA and provide mechanisms for the Minister of the Environment to authorize certain activities that are otherwise prohibited. The Regulations also provide the authority to the Minister to prohibit entry into NWAs.

Activities within an NWA and activities within it are authorized only if notices issued by the Minister have been posted at the entrance or limits of the reserve or published in local newspapers. However, a permit may be obtained from the Minister of the Environment authorizing certain activities to take place.

6.1 PROHIBITION OF ENTRY

Under the *Wildlife Area Regulations*, the Minister may issue a notice that will be published in a local newspaper or posted at the entrance of any wildlife area or on the boundary of any part thereof prohibiting entry to any wildlife area or part thereof. Such a notice can be issued when the Minister is of the opinion that entry is a public health and safety concern or may disturb wildlife and their habitats.

In Lake Saint-François NWA, such a notice would be posted in the Entrance Kiosk and the three parking lots. Authorized activities and those activities requiring a permit or an authorization are described below.

Access to Lake Saint-François NWA is permitted from April to December, unless otherwise stated in the public notices published in local newspapers or posted at the entrance of the NWA. In addition, holders of a migratory bird hunting licence are authorized to access migratory bird hunting areas in the NWA from mid-September to the end of December. However, access is restricted to certain areas as indicated at the site, and visitors must comply with all other restrictions unless they have a permit issued by the Minister.

Note: If there is a discrepancy between the information presented in this document and the notice, the notice prevails, as it is the legal instrument prohibiting entry.

6.2 AUTHORIZED ACTIVITIES

The following activities are permitted because they are consistent with the conservation goals and objectives set out in the management plan for this NWA: hiking; nature observation and photography on the trails; picnicking in the designated sites, canoeing and kayaking with a person authorized by Environment Canada to act as a guide/interpreter; and migratory bird hunting only in the authorized areas.

Hiking, Nature Observation, Photography and Picnicking

These activities are authorized only on the NWA trails and facilities and infrastructure designated for those purposes, such as the observation tower and observation blinds/hides (Figure 3), during the authorized periods, from April to December. Picnicking is allowed only on a bench, at a table and in an observation blind/hide.

Canoeing and Kayaking

Canoeing and kayaking are permitted only in the company of a person authorized by Environment Canada to act as a guide/interpreter and only in locations designated for those purposes, such as Ruisseau Fraser, Ruisseau Therrien and Ruisseau aux Gouins.

Migratory Bird Hunting

Migratory bird hunting in the NWA is authorized only in the designated area and only in compliance with the authorized periods, conditions, locations and hunting equipment. For public safety reasons, it is prohibited in the aménagements pointe Fraser I and II (enhancement works) and on either side of Ruisseau Fraser for public safety purposes (Figure 8). Holders of a migratory bird hunting licence are allowed to hunt in the areas where this activity is authorized in the NWA in compliance with the conditions and the periods specified in the *Migratory Birds Regulations*, usually from mid-September to mid-December.

Other Activities

All other activities are prohibited in the NWA, particularly hunting of any animal species other than migratory bird species, trapping, fishing, logging, the use of motor vehicles (e.g. speedboats, personal watercrafts, all-terrain vehicles, snowmobiles), cross-country skiing and snowshoeing.

A notice listing activities that are permitted in the NWA is posted at the Entrance Kiosk on Chemin de la Pointe-Fraser as well as in the three parking lots and was also published in local newspapers in 2011 (Appendix I).

Permits or authorizations could be issued for research activities that are consistent with the priorities set out in the management plan. Permits could also be issued for scientific activities, such as surveys, enhancement works or habitat restoration.

6.3 AUTHORIZATIONS

Under the *Wildlife Area Regulations*, the Minister of the Environment may authorize an activity that is prohibited by issuing a permit, or a notice that will be published in a local newspaper or posted at the entrance of any wildlife area or on the boundary of any part thereof.

Permits and notices authorizing an activity may be issued only if the Minister is of the opinion that the activity is scientific research relating to wildlife or habitat conservation, or the activity benefits wildlife and their habitats or will contribute to wildlife conservation, or the activity is not inconsistent with the purpose for which the NWA was established and is consistent with the most recent management plan. These conditions must be met before the Minister will consider authorizing a prohibited activity.

The Minister may also add terms and conditions to permits in order to minimize the impact of an activity on wildlife and wildlife habitat.

All requests for permits or authorizations must be made in writing to the following address:

National Wildlife Area – Permit Request
Environment Canada
Canadian Wildlife Service
Quebec Region
801-1550 D'Estimauville Avenue
Québec QC G1J 0C3
Email: permisSCFQuebec@ec.gc.ca

6.4 EXCEPTIONS

The following activities will be exempt from the requirements for permitting and authorizations:

- Activities related to public safety, health or national security that are authorized by or under another Act of Parliament, or activities that are authorized under the *Health of Animals Act* and the *Plant Protection Act* to protect the health of animals and plants;
- Activities related to routine maintenance of NWAs, to the implementation of management plans, and enforcement activities conducted by an officer or employee of Environment Canada.

6.5 OTHER FEDERAL AND PROVINCIAL AUTHORIZATIONS

Depending on the type of activity, other federal or provincial authorizations or permits may be required to undertake an activity in the NWA.

For more information, please contact your regional federal or provincial permitting office.

7 HEALTH AND SAFETY

All reasonable efforts will be made to protect the health and safety of the public, including adequately informing visitors of any known or anticipated hazards or risks. Further, Environment Canada staff will take all reasonable and necessary precautions to protect their own health and ensure safety as well as that of their co-workers. However, visitors (including researchers and contractors) must make all reasonable efforts to inform themselves of risks and hazards and must be prepared and self-sufficient. Natural areas involve some dangers, and proper precautions must be taken by visitors to ensure their own security, recognizing that Environment Canada staff neither regularly patrol nor offer services for visitor safety in NWAs.

In the case of environmental emergencies, please contact the National Environmental Emergencies Centre at the following telephone numbers:

514-283-2333 or 1-866-283-2333

Incidents or emergency situations can be reported to:

- Environment Canada: 1-800-668-6767 or enviroinfo@ec.gc.ca
- Marine salvage (Canadian Coast Guard): 1-800-463-4393/cellular: *16
- Sûreté du Québec (Police): 310-4141/cellular: *4141
- Sécurité civile (Civil Security): 1-866-776-8345/cellular: 911
- SOS-Braconnage (Poaching): 1-800-463-2191
- Environmental emergencies: Environment Canada : 1-866-283-2333 or Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques: 1-866-694-5454
- Forest fire (SOPFEU): 1-800-463-FEUX (3389)
- Local authorities (Police or Fire Department): 911

8 ENFORCEMENT

The management of NWAs is based on three acts and the regulations thereunder:

- the *Migratory Birds Convention Act, 1994* and the *Migratory Birds Regulations*;
- the *Canada Wildlife Act* and the *Wildlife Area Regulations*;
- the *Species at Risk Act*.

Environment Canada's wildlife enforcement officers are responsible for ongoing surveillance of compliance with the acts and regulations and for conducting investigations, as required.

Examples of activities that, if carried out on NWAs without authorization, may constitute an offence include:

- Accessing the site;
- Destroying or disturbing migratory birds, their nests or eggs;
- Possessing a weapon or other instrument that could be used for hunting;
- Picnicking, camping or engaging in any other recreational activity;
- Lighting a fire;
- Removing or damaging any natural artefact, building, fence, poster, sign or other structure;
- Dumping or depositing waste or substances likely to reduce the quality of the natural environment;
- Letting a pet run free.

9 PLAN IMPLEMENTATION

The management plan will be implemented over a 10-year period. Annual work plans will be based on priorities and budgetary framework. Depending on available resources and opportunities, some actions could be brought forward, postponed or cancelled. Environment Canada will promote an adaptive management approach for the implementation of the management plan.

The implementation of the plan will be evaluated five years after its publication, on the basis of the actions identified in Table 4 above.

10 COLLABORATORS

Collaboration with local agencies and organizations to contribute to the protection and conservation of wildlife species and their habitats in the NWA will be favoured. For instance, collaborations could be developed or pursued with universities and research centres to fill scientific knowledge gaps, with the province to implement the species at risk recovery measures (particularly for species under provincial jurisdiction), and with non-governmental organizations and municipal authorities to increase public awareness of the conservation objectives of the NWA.

The following are the main organizations likely to collaborate on the mission and activities of Lake Saint-François NWA.

Agents de protection de la faune (Wildlife Protection Officers) (MFFP)

Salaberry-de-Valleyfield Local Office

640 Cardinal Street

Salaberry-de-Valleyfield QC J6S 0A8

Telephone: 450-370-3024

Fax: 450-370-3026

Association des membres et amis pour la protection de la
réserve nationale de faune du Lac-Saint-François (AMAPRE)

7600 Pointe Fraser Road

Dundee QC J0S 1L0

Telephone: 450-264-5908

Website: www.amisrnf-lacstfrancois.com/

Email: amisrnf@hotmail.com

Comité ZIP du Haut-Saint-Laurent (ZIP Committee of Haut-Saint-Laurent)

28 St. Paul Street, Suite 203

Salaberry-de-Valleyfield QC J6S 4A8

Telephone: 450-371-2492

Fax: 450-371-7599

Email : dq.ziphsl@rocler.com

Conférence régionale des élus Vallée-du-Haut-Saint-Laurent
88 Saint-Laurent Street
Salaberry-de-Valleyfield QC J6S 6J9
Telephone: 450-370-1881
Fax: 450-370-0110
Email: info@crevhsl.org

Ducks Unlimited Canada
710 Bouvier Street, Suite 260
Québec QC G2J 1C2
Telephone: 418-623-1650
Toll free number: 1-800-565-1650
Fax: 418-623-0420
Email: du_quebec@ducks.ca

Haut-Saint-Laurent Regional County Municipality
10 King Street, Suite 400
Huntingdon QC J0S 1H0
Telephone: 450-264-5411
Fax: 450-264-6885
Email : mrchsl@mrcchsl.com

Ministère des Forêts, de la Faune et des Parcs (MFFP)
(Quebec Ministry of Forests, Fauna and Parks)
Estrie–Montréal–Monterégie Directorate
545 Crémazie Boulevard East, 8th Floor
Montréal QC H2M 2V1
Telephone: 514-873-2140
Fax: 514-873-8983
Email: monteregie@mffp.gouv.qc.ca

Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC) (Quebec Ministry of Sustainable Development, Environment and Fight against Climate Change)

Montréal Regional Office

5199 Sherbrooke Street East, Suite 3860

Montréal QC H1T 3X9

Telephone: 514-873-3636

Fax: 514-873-5662

Email: montreal@mddelcc.gouv.qc.ca

Mohawk Council of Akwesasne

P.O. Box 579

Akwesasne via Cornwall ON K6H 5T3

Telephone: 613-575-2348

Fax: 613-575-2181

Email: karla.ransom@akwesasne.ca

Mohawk Council of Kahnawake

P.O. Box 720

Kahnawake QC J0L 1B0

Telephone: 450-632-7500

Fax: 450-638-5958

Email: communications@mck.ca

Municipality of the Parish of Saint-Anicet

335 Jules Léger Avenue

Saint-Anicet QC J0S 1M0

Telephone: 450-264-2555

Fax: 450-264-2395

Email : info@stanicet.com

Municipality of the Township of Dundee
3296 Montée Smallman
Dundee QC J0S 1L0
Telephone: 450-264-4674
Fax: 450-264-8044
Email: mun.dundee@sftl.ca

Société de conservation et d'aménagement du bassin de la rivière Châteauguay
624 Notre-Dame Street, Suite 40
Saint-Chrysostome QC J0S 1R0
Telephone: 450-699-1771
Fax: 450-699-1781
Email: f.blackburn@scabric.ca

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APPENDIX I: NOTICE FROM ENVIRONMENT CANADA PUBLISHED IN 2011

Environment Canada wishes to inform the public that the Lac Saint-François National Wildlife Area (NWA), located in the municipality of Dundee, is a protected area. Since its creation in 1978, the NWA has aimed to protect migratory birds, wildlife and wetland habitats, as well as several species at risk that are found within its boundaries.

To protect this area, the Department also advises all persons using the NWA of their obligation to comply with a number of rules stemming from the *Canada Wildlife Act* and ensuing regulations. Persons failing to comply with these rules or with applicable legislation are subject to fines and prosecution.

The following activities are authorized in designated areas: hiking; nature watching; photography; picnicking; and canoeing and kayaking on Fraser, Therrien and aux Gouins creeks.

Unless specifically authorized by a permit issued by the Minister, the following activities are prohibited within the NWA:

- hunting, with the exception of migratory birds if in accordance with authorized periods, conditions and locations, and using an authorized hunting instrument (see subsection 3(1) of the *Regulations Respecting the Management of Wildlife Areas and the Control Thereof*);
- fishing;
- destroying or removing a plant;
- allowing any domestic animal to run at large;
- swimming, camping or lighting a fire;
- operating a conveyance;
- dumping or depositing any waste.

For complete information on applicable regulations, please refer to the *Canada Wildlife Act*, the *Wildlife Area Regulations*, the *Migratory Birds Convention Act, 1994*, and the *Species at Risk Act* at www.ec.gc.ca.

To file a complaint or to report illegal activity, please contact Environment Canada by telephone at 1-800-668-6767 or by email at enviroinfo@ec.gc.ca.

Nothing in this notice shall be construed so as to abrogate or derogate from any existing Aboriginal rights or treaty rights.