



POINTE DE L'EST NATIONAL WILDLIFE AREA



Management plan
2020

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About Environment and Climate Change Canada's Protected Areas and Management Plans

What are Environment and Climate Change Canada Protected Areas?

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

How has the federal government's investment from Budget 2018 helped manage and expand Environment and Climate Change Canada's National Wildlife Areas and Migratory Bird Sanctuaries?

The Nature Legacy represents a historic investment over five years of 1.3 billion dollars that will help Environment and Climate Change Canada expand its national wildlife areas and migratory bird sanctuaries, pursue its biodiversity conservation objectives and increase its capacity to manage its protected areas.

According to the budget 2018, Environment and Climate Change Canada will be conserving more protected areas, and have more resources to effectively manage and monitor the habitats and species found inside these areas until 2023.

What is the size of the Environment and Climate Change Canada Protected Areas Network?

The current Protected Areas Network consists of 55 National Wildlife Areas and 92 Migratory Bird Sanctuaries, comprising more than 14 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 and Climate Change 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 and Climate Change Canada prepares a management plan for each protected area in consultation with First Nations, the 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 and Climate Change Canada staff carries out or coordinates research in some sites.

The series

All of the National Wildlife Areas are to have a management plan. The management plans should be initially reviewed 5 years after the approval of the first plan, and every 10 years thereafter.

To learn more

To learn more about Environment and Climate Change Canada's protected areas, please visit our website at <https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas.html> or contact the Canadian Wildlife Service.

Pointe de l'Est National Wildlife Area

Pointe de l'Est National Wildlife Area was established in 1978 by Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) in order to protect habitats serving as staging areas for migratory birds, especially waterfowl and shorebirds, and as breeding grounds for species at risk or with a precarious status such as the horned grebe and the piping plover. The latter nests on the beaches adjoining the NWA, but this protected area constitutes an important protection zone adjacent to its nesting habitat. The value of the NWA also resides in its dune ecosystems, rare environments in Quebec that require protection.

This protected area covering 724 hectares is established in a maritime environment and is located in the Municipality of Grosse-Île in the Magdalen Islands, an archipelago in the Gulf of St. Lawrence. The Pointe de l'Est (also called Île de l'Est) is a sandy expanse characterized by a great diversity of habitats. In addition to a complex network of ponds and lagoons, it includes fixed and mobile sand dunes dotted with fragile patches of beachgrass and crowberry barrens. The inland area is occupied by salt meadows and coniferous forests.

The National Wildlife Area and adjacent areas of the Pointe de l'Est are home to more than 150 bird species, about 100 of which are breeders, including the American black duck, northern pintail, green-winged teal, spotted sandpiper and horned grebe, a species at risk that nests in the emergent vegetation of the ponds. During the fall migration period, some 20 species of shorebirds use the area, including the black-bellied plover, sanderling and whimbrel. The frequently observed landbirds include the fox sparrow, savannah sparrow and blackpoll warbler. The area is also home to numerous waterbirds, including the great blue heron, great black-backed gull and common tern. In addition, among the dozen species of mammals found in the Magdalen Islands archipelago, several are likely to be observed at the Pointe de l'Est, including the deer mouse, meadow vole, red fox, red squirrel, coyote and at least one species of bat. Finally, the NWA is home to at least seven species of animals and plants at risk or with a precarious status, namely the horned grebe, already mentioned, the Nelson's sparrow, rusty blackbird, a bat species of the genus *Myotis* (probably the little brown myotis), the Connecticut beggarticks, broom crowberry and northern adder's-tongue.

Access to the NWA is permitted year-round, but is restricted to designated areas. Visitors can engage in hiking and snowshoeing, nature observation and photography along a network of hiking trails approximately five kilometres long, as well as in the minimal all-terrain vehicle (ATV) trail network, annual and seasonal. The local organization La Salicorne offers guided tours of the NWA and public awareness-raising activities with the authorization of Environment and Climate

Change Canada. In addition, under the current management plan, berry picking is now authorized in certain sectors of the NWA subject to specific rules and conditions. Migratory bird hunting is permitted in the fall according to the applicable regulations, with the exception of the Camarine and Échouerie areas for public safety reasons. In 2017 and 2018, use of ATVs was authorized only on the ATV trail identified by public notice. Since 2019, use of ATVs in the NWA is authorized only in the new “minimal ATV¹ trail network” laid out and marked for this purpose, with the goal of preventing the ecological impacts of unregulated use of motorized vehicles and protecting fragile habitats and the wildlife species that depend on them. In addition, under a pilot project conducted between 2019 and 2022 at the request of local residents, use of trucks and jeeps is authorized only during the migratory bird hunting season in designated sectors of the network, and only for permit holders issued by ECCC for the use of these vehicles (truck or jeep) during this strict period. The ecological impacts of this pilot project will be monitored.

Pointe de l'Est National Wildlife Area is exposed to significant threats and presents several management challenges, particularly human presence and disturbance (e.g. use of motorized vehicles), residential and commercial development² (illegal presence of cottages), biological resource use, pollution, climate change and extreme weather events, the collaboration of governments, local stakeholders and residents in conservation efforts, invasive or otherwise problematic species, diseases and genes, as well as scientific knowledge gaps. This protected area is one of the last large wildlife areas on the Magdalen Islands. In the next few years, the collaboration of governments as well as the mobilization of local organizations and residents, who are familiar with this area and strongly attached to it, will be essential to prevent irreversible impacts on this very fragile natural environment.

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

¹ i.e. quads, including side-by-side type vehicles.

² The nomenclature of threats and challenges is based on the International Union for Conservation of Nature Threats Classification Scheme (IUCN, 2015; see also Salafsky et al., 2008). There is no residential or commercial development at the Pointe de l'Est, but cottages fall into this category.

This management plan will be implemented over a 10-year period in line 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

Pointe de l'Est National Wildlife Area (NWA) is located on the Pointe de l'Est (also called Île de l'Est), in the Municipality of Grosse-Île, at the northeastern tip of the Magdalen Islands (Figure 1). This archipelago with an area of 202 km² extends over approximately 65 kilometres in the southern part of the Gulf of St. Lawrence. The NWA was established in 1978 by the Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS), at the time Environment Canada) in order to protect a group of important habitats for migratory birds, particularly waterfowl and shorebirds, as well as to protect the habitats of species at risk or with a precarious status, particularly the horned grebe (*Podiceps auritus*) and the piping plover (*Charadrius melodus*) (Lemieux and De Repentigny, 1986). The horned grebe nests in the NWA and the piping plover nests on nearby beaches, but the NWA offers a protection zone adjacent to its nesting habitat. In addition, the NWA contains dune ecosystems, rare environments in Quebec that require protection.

This protected area covering 724 hectares is located in a maritime environment on a sandy peninsula covered with sparse vegetation and bordered by beaches (which are outside the NWA and fall under provincial jurisdiction). It is interspersed with parcels of federal lands without legal protection status with an area of 258 hectares and by enclaves of private lands. In addition, the NWA is surrounded by the Refuge faunique de la Pointe-de-l'Est (Pointe de l'Est Wildlife Preserve) (provincial), which includes almost the entire coastline of the Point. The NWA and the Pointe de l'Est are characterized by a great diversity of environments (Figure 2) consisting mainly of shore dunes, wetlands, crowberry barrens, salt meadows and coniferous forests, which are home to varied wildlife, particularly some 150 bird species (Létourneau et al., 2016) and some 10 species of mammals. Table 1 summarizes the general information concerning this National Wildlife Area.

Toponymic Note

In French, the term “Îles-de-la-Madeleine” designates the administrative entity (e.g. agglomeration, municipality, committee, club) and the term “îles de la Madeleine” (often translated by Magdalen Islands) designates the geographical entity, i.e. the archipelago itself.

Table 1 Information on Pointe de l'Est National Wildlife Area

Protected Area Designation	National Wildlife Area
Province or Territory	Quebec – Municipality of Grosse-Île, Communauté maritime des Îles-de-la-Madeleine
Latitude and Longitude	47°38'N and 61°27'W
Size	724.07 ha (adjacent to 258.17 ha of federal lands without legal protection status)
Protected Area Selection Criteria (Protected Areas Manual¹)	Criterion 1a – The area supports a population of a species or subspecies or a group of species that is concentrated for any portion of the year. Criterion 3a – The area is rare or unusual wildlife habitat, of a specific type in a biogeographic region.
Protected Area Classification System	Category A – Species or critical habitat conservation Category B: Site connectivity (link the sites)
International Union for Conservation of Nature (IUCN) Classification²	Category III – Natural Monument or Feature
Order in Council Number	PC 1978-1439
Directory of Federal Real Property (DFRP) Number	Property 67464. Only one contaminated site is still active in the NWA (site 00002671; February 4, 2015).
Gazetted	1978
Other Designations	The National Wildlife Area is part of the Ile de l'Est Important Bird Area (IBA) , which also includes the Refuge faunique de la Pointe-de-l'Est (Pointe de l'Est Wildlife Preserve).
Faunistic³ and Floristic⁴ Importance	The value of the NWA resides mainly in its dune ecosystems, which are rare environments in Quebec. The NWA and the Pointe de l'Est represent a staging area for migratory birds and an important breeding area for various bird species, including waterfowl. The NWA harbours species at risk.
Invasive Species	Two invasive plant species are present in the NWA: the reed canarygrass and the purple loosestrife. Six invasive plant species are found within a 25-km radius from the NWA. A microlepidoptera (small moth) (<i>Paraswammerdamia conspersella</i>) could damage the crowberry barrens.
Species at Risk	The NWA is home to at least seven animal and plant species that are considered at risk under the federal <i>Species at Risk Act</i> (SARA) or under the Quebec <i>Act Respecting Threatened or Vulnerable Species</i> (LEMV) or that are likely to be so designated, i.e. the horned grebe, Nelson's sparrow and rusty blackbird, at least one bat species of the genus <i>Myotis</i> (probably the little brown myotis) and four plant species, i.e. the Connecticut beggarticks, broom crowberry and northern adder's tongue. The piping plover, which is considered endangered according to SARA and threatened according to the ATVS, nests on the beaches adjacent to the NWA (outside the NWA).
Management Agency	Environment and Climate Change Canada – Canadian Wildlife Service

Table 1 Information on Pointe de l'Est National Wildlife Area

<p>Public Access and Use</p>	<p>The NWA is open to the public at all times year-round, but access is restricted to designated areas.</p> <p>Permitted activities: hiking, snowshoeing, nature observation and photography on the designated trails. Guided tours and public awareness activities are offered by a local organization authorized by Environment and Climate Change Canada.</p> <p>Migratory bird hunting is permitted in the fall, except for the Camarine and Échouerie areas for public safety reasons.</p> <p>Berry picking is now authorized in certain areas of the NWA subject to specific rules and conditions.</p> <p>Since 2019, use of motorized vehicles outside the official access roads and parking areas in the NWA is only authorized, subject to certain rules and conditions, in the new minimal ATV trail network laid out and marked in order to reduce the impact of this activity on fragile habitats and the wildlife species that depend on them. In addition, under a pilot project conducted between 2019 and 2022 at the request of local residents, use of trucks and jeeps is authorized only during the migratory bird hunting season in designated sectors of the network, and only for permit holders issued by ECCC for the use of these vehicles (truck or jeep) during this strict period.</p>
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¹.Environment Canada, 2005

².IUCN, 2008

³.Names of vertebrate wildlife species used by MFFP, 2020a

⁴.Names of plant species used by Brouillet et al. 2010+ (VASCAN, accepted names)

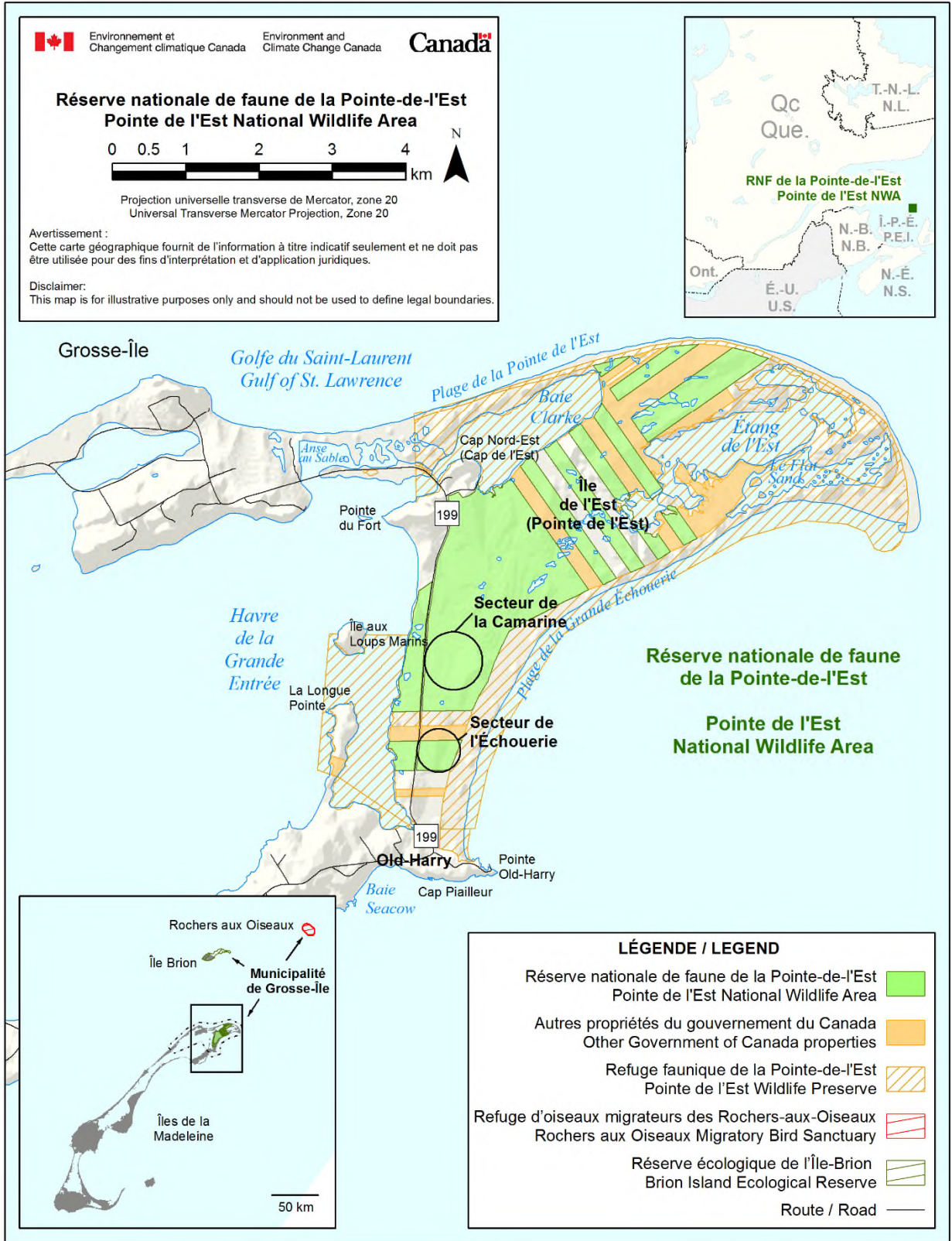


Figure 1 Pointe de l'Est National Wildlife Area

Note: The boundaries of the wildlife preserve obtained do not line up exactly with the base map.

1.1 REGIONAL CONTEXT

Pointe de l'Est National Wildlife Area is located in the Municipality of Grosse-Île, which forms, with the Municipality of Îles-de-la-Madeleine, the Communauté maritime des Îles-de-la-Madeleine. This community, which has a population of approximately 12,475 (2016 figures) and includes the entire Magdalen Islands archipelago, has the same responsibilities as a regional county municipality (RCM) (Municipalité des Îles-de-la-Madeleine, 2019a). The archipelago consists of some 15 islands and islets, including seven main islands which are connected by narrow strips of sand called tombolos (Attention Fragîles, 2010).

The economic structure of the archipelago is largely based on small and medium-sized businesses. The backbone of the local economy remains the fishing industry, which depends mainly on the American lobster (*Homarus americanus*) and the snow crab (*Chionoecetes opilio*). Several fish species are also harvested. This industry provides some 2,000 jobs and generates economic benefits of several tens of millions of dollars annually (Portail IDM, 2019). In addition to fishing, there are aquaculture operations producing [blue] mussels [*Mytilus edulis*], [sea] scallops [*Placopecten magellanicus*], [American] oysters [*Crassostrea virginica*] and algae (in 2017: MAPAQ, 2019). During the past few decades, local residents and entrepreneurs have worked to relaunch the seal industry and created small businesses processing seal products: clothing, meat, ecotourism, fur and oil. Gradually, jobs have been created and local entrepreneurs are working to find new uses and markets for this resource (ACPIQ, 2019). Tourism, which has experienced significant growth for more than a decade, has become the second-ranked industry in the economy of the archipelago. Every year, tens of thousands of visitors come to the islands (Portail IDM, 2019), attracted by nature, the beaches, the sea and the wind which provide ideal conditions for many outdoor activities, such as hiking, cycling, kitesurfing, windsurfing, diving, kayaking and fishing. The islands also offer many other tourist attractions such as museums, interpretation centres, festivals, historic sites, theatres, shows, art galleries and local food products (the agri-food sector occupies an increasing place in the local economy) (Portail IDM, 2019 and Tourisme IDM, 2019).

Since the early 1980s, Mines Seleine has been mining the salt domes that form part of the archipelago's subsurface geologic structure. The mine, which is located in the Municipality of Grosse-Île, provides nearly 200 jobs and generates economic spin-offs of approximately \$15 million annually, while producing some 1.5 million tonnes of salt, which is exported to eastern North America for road de-icing (Portail IDM, 2019). In addition, the Communauté maritime des Îles-de-la-Madeleine has the largest diesel-fueled generating station in Quebec,

which produces the islanders' electricity. The generating station is supplied by a 3-kilometre-long pipeline from the port of Cap-aux-Meules.

The Municipality of Grosse-Île has a population of 490 (Statistics Canada, 2012). It encompasses some of the best preserved natural environments of the archipelago. In addition to Pointe de l'Est National Wildlife Area, this municipality is home to three other important natural sites: the Rochers aux Oiseaux Migratory Bird Sanctuary (federal), the Réserve écologique de l'Île-Brion (Brion Island Ecological Reserve) (provincial) and the Refuge faunique de la Pointe-de-l'Est (Pointe de l'Est Wildlife Preserve) (provincial). The latter includes the entire coastline around the NWA on the Pointe de l'Est, particularly the Pointe de l'Est and Grande Échouerie beaches (Figure 1). The Grande Échouerie beach is very popular owing to its size and quality. The access point is the Échouerie beach of the Municipality of Grosse-Île.

The Mi'gmaq people, who historically frequented the Magdalen Islands, also have a connection with the archipelago. The Mi'gmaq of Gaspésie, who are represented by the Mi'gmawei Mawiomi Secretariat, include the communities of Gesgapegiag, Gespeg et Listuguj and comprise more than 15,000 people. These communities are involved in a variety of activities, including land use planning, land protection and development, fishing, hunting and medicinal plant gathering. The Mi'gmaq are also interested in collaborating with ECCC to contribute their traditional knowledge and expertise in the conservation and protection of Pointe de l'Est National Wildlife Area and of various areas of Gaspésie.

The NWA is open to the public at all times and receives approximately 2,500 visitors annually. Access is restricted to certain sectors. The local population, which is very attached to the site, uses the area for a variety of purposes, including berry picking, hiking and migratory bird hunting in the fall. A local non-governmental organization, La Salicorne, has collaborated in the mission and activities of this protected area for nearly 30 years by offering guided hikes as well as bird-watching activities and interpretation of terrestrial ecosystems, mainly to tourists.



**Figure 2 Dunes and forests of Pointe de l'Est National Wildlife Area
(in the background Cape Nord-Est or Cap de l'Est**

Photo Marielou Verge © Environment and Climate Change Canada,
Canadian Wildlife Service

1.2 HISTORICAL BACKGROUND

1.2.1 Prehistoric Period

The most ancient archeological artifacts excavated on the Magdalen Islands probably date back 8,500 to 2,500 years before the present (Late Paleolithic and Maritime Archaic periods). Several remains date from 2,500 to 500 years before the present (Woodland period). This material was discovered at various locations on most of the islands. Do the widely dispersed sites at which the material was found indicate a significant occupation of the archipelago by Amerindians? Were these islands a trading centre? These questions currently remain unanswered, but it is known that the Magdalen Islands archipelago was long used by Amerindians on a seasonal basis, for reasons and in ways that are not well documented (Fortin and Larocque, 2003). However, it appears that well before the arrival of Europeans, the Gulf of St. Lawrence and the Magdalen Islands were used by Indigenous peoples as a vast fishing ground and hunting grounds for marine mammals, including walruses and seals (Lemieux and De Repentigny, 1986; see also De Repentigny, 1994).

1.2.2 Historic Period

Amerindians and European Contact

In the 1500s, European hunters and fishermen (French, Portuguese, Basque) joined the Indigenous peoples who used the Gulf of St. Lawrence and the Magdalen Islands archipelago. In addition to fish, the fishermen were looking for shoreline areas suitable for drying cod. The islands also attracted the attention of producers of oil, ivory and skins (walrus and seal). The reputation of the Magdalen Islands was growing and their existence was more officially recognized with the arrival of Jacques Cartier, who was the first to describe them. On June 25, 1534, Cartier reached the Rochers aux Oiseaux (Bird Rocks), which he called “Isle de Margaulx” (northern gannets). He then landed on Brion Island (named in honour of a French admiral), which was wooded, appeared fertile and was surrounded by walruses. He called the main cape of Grosse Île “Cap Dauphin” in honour of the King of France and gave the name “Allezay” to the Rocher du Corps Mort. During his second trip in 1536, Cartier was able to clearly distinguish the islands of Havre aux Maisons, Cap aux Meules and Havre Aubert, which are linked by sand bars. He called the archipelago “Les Araynes” (from the Latin *arena* meaning “sand”) (Fortin and Larocque, 2003).

During these trips, the French encountered Indigenous peoples, including Mi'gmaq from Chaleur Bay. At that time, this group of the Algonquin family occupied the coast of what is now Gaspé Peninsula, New Brunswick, Prince Edward Island, Nova Scotia and Maine. Experienced navigators, the Mi'gmaq built canoes of various sizes, the longest of which (eight metres) allowed them to travel on the open sea. Before and after the arrival of Cartier, the Mi'gmaq used the Magdalen Islands during the summer period, probably attracted by the walruses, a source of fat and meat, the large bird colonies and the red ochre, easily accessible along the cliffs. It is believed that the absence of large terrestrial mammals deterred any attempt at overwintering. The Mi'gmaq designated the archipelago by the toponym “Memquit” or “Mewquit” (island floating on the water) and, later, “Menagoesenog” (islands beaten by the surf) (Fortin and Larocque, 2003). The toponym “Isle Ramée” (Isle of Ramea) appears on Champlain's map (1613) and the name “Ramées” was also used by Nicolas Denys (1672), the first owner of the archipelago. On his 1632 map, Champlain used the term “La Magdalene” to designate the island that is currently called Île du Havre Aubert. In 1663, François Doublet, the second owner of the archipelago, received permission from the king to change the names “Araynes,” “Ramea” and “Brion” to the “Îles de la Madeleine,” in honour of his wife Madeleine Fontaine (Commission de toponymie du Québec, 2019).

Colonization and Development

After several attempts to establish a colony, it was only in 1761 that Acadians from Prince Edward Island, Cape Breton Island and Chaleur Bay settled in the Magdalen Islands archipelago, where they worked as fishers and hunters. In 1867, the Magdalen Islands were definitely affiliated with the jurisdiction of Quebec. From a socio-economic standpoint, the 19th century was an extremely difficult period for the islanders. The shortage of lumber and the high price of imported materials had an impact on heating methods and boat building (Fortin and Larocque, 2003).

In the early 1900s, some 6,000 persons lived in the archipelago. By 1968, the population had risen to 13,000. Fishing was the main activity during this period. It was developed and organized very efficiently. Fish processing plants were established as well as lobster fishermen's cooperatives. Since the hunting of marine mammals had decreased or stopped altogether during the 19th and 20th centuries, hunters continued to hunt wild geese [*sp.*] and the American black duck (*Anas rubripes*) (Fortin and Larocque, 2003).

Seal Hunt

The seal hunt is one of the oldest traditions of the Magdalen islanders. In the 1970s, a large-scale international anti-seal hunting campaign caused the closure of most of the markets for seal products. In the last few decades, the islanders have endeavoured to relaunch this industry (ACPIQ, 2019; see also 1.1 Regional Context).

Forest Use

Before colonization, the Magdalen Islands were most probably almost entirely covered by forests (various authors in Roy-Bolduc, 2010; Attention Fragîles, 2010). Today, trees cover approximately a quarter of the area of the archipelago. The causes of this deforestation include the intensive cutting of trees for domestic purposes until the mid-20th century and, more recently, the expansion of homes, the creation of recreational paths and trails, as well as the imbalance between the harvesting and renewal of forest resources. Indeed, the forest renews itself slowly owing to the harsh environmental conditions (wind, insects, rodents, diseases, ice storms) and the destruction of the stunted trees that form a protective belt around the forest (Attention Fragîles, 2010).

National Wildlife Area

In 1968, the Canadian Wildlife Service proposed the creation of a National Wildlife Area at the Pointe de l'Est in the Magdalen Islands in order to protect and enhance migratory bird habitats (Lemieux and De Repentigny, 1986). Between 1975 and 1977, the Government of

Canada acquired 23 lots located on the Pointe de l'Est which received the official status of National Wildlife Area on April 27, 1978 under the *Wildlife Area Regulations*. In 1992, as part of the St. Lawrence Action Plan, a 62.2-hectare new lot (lot 24) was acquired, allowing a substantial proportion of the NWA to be consolidated by combining more than 429 hectares in one block (De Repentigny, 1994; Langevin, et al., 1994; R. Langevin, CWS, pers. comm., 2015).

This document constitutes the second management plan approved for Pointe de l'Est National Wildlife Area. The first plan was published in 1986 (Lemieux and De Repentigny, 1986). A conservation plan for this protected area was also published in 2005 (CWS, 2005).

1.3 LAND OWNERSHIP

Pointe de l'Est National Wildlife Area is the property of the Government of Canada and is managed by Environment and Climate Change Canada. The total area of the NWA is 724 hectares. The federal government also owns 258 hectares of lands adjacent to the NWA, but this land does not have legal protection status (R. Langevin, CWS, pers. comm., 2015).

1.4 FACILITIES AND INFRASTRUCTURE

Pointe de l'Est National Wildlife Area includes a few facilities and infrastructures (Table 2, Figure 3, Figure 4, Figure 5). The Camarine Area (formerly called the Marais-Salés Area) includes a wooden information kiosk (formerly called interpretation kiosk) located along Route 199 (Figure 6) and a boardwalk leading to two hiking trails (Figure 7) with a total length of approximately 2.1 km. These trails provide access to the Mitan Trail, a trail approximately 1.1 km long that links the Camarine Area to the Échouerie Area. The Échouerie Area includes two hiking trails with a total length of 1.4 km. The Échouerie Trail includes interpretation panels and boardwalks as well as a staircase (Figure 8), which provides access to the Grande Échouerie beach. Each area also has a parking lot including a trash can.

In addition, renovations are planned in the NWA in order to improve the visitor experience, particularly refurbishing of the visitor reception areas in the Camarine and Échouerie areas, improving the laying out and marking of hiking trails, and adding infrastructure in the trails, such as scenic lookouts and boardwalks (Figure 4, Figure 5 and Table 3).

Table 2 Current facilities and infrastructure in Pointe de l'Est National Wildlife Area

Type of facility or infrastructure	Dimensions	Area	Owner
Information kiosk (formerly called interpretation kiosk)	10 m	La Camarine	Environment and Climate Change Canada (CWS)
Boardwalk (leading to the trails)	21 m	La Camarine	Environment and Climate Change Canada (CWS)
Trails in the Camarine Area* • La Camarine (formerly Les Marais-Salés) • Le Bol-à-Soupe	1288 m 855 m	La Camarine	Environment and Climate Change Canada (CWS)
Parking lot	6 spaces	La Camarine	Environment and Climate Change Canada (CWS)
Trash can (in the parking lot)		La Camarine	Environment and Climate Change Canada (CWS)
Trail between the Camarine and Échouerie areas* • Le Mitan	1127 m	Between La Camarine and L'Échouerie areas	Environment and Climate Change Canada (CWS)
Trails in the Échouerie Area* • L'Échouerie • La Lande • Le Rabougri	616 m 259 m 499 m	L'Échouerie	Environment and Climate Change Canada (CWS)
Boardwalk (Échouerie Trail)	46 m	L'Échouerie	Environment and Climate Change Canada (CWS)
Boardwalk (Échouerie Trail)	18 m	L'Échouerie	Environment and Climate Change Canada (CWS)
Boardwalk (Échouerie Trail, outside the NWA)	25 m	L'Échouerie	Ministère des Forêts, de la Faune et des Parcs du Québec (MFFP)
Dune staircase (Échouerie Trail)	64 m	L'Échouerie	Environment and Climate Change Canada (CWS)
Parking lot	6 spaces	L'Échouerie	Environment and Climate Change Canada (CWS)
Trash can (in the parking lot)		L'Échouerie	Environment and Climate Change Canada (CWS)

* Source: PWGSC, 2016

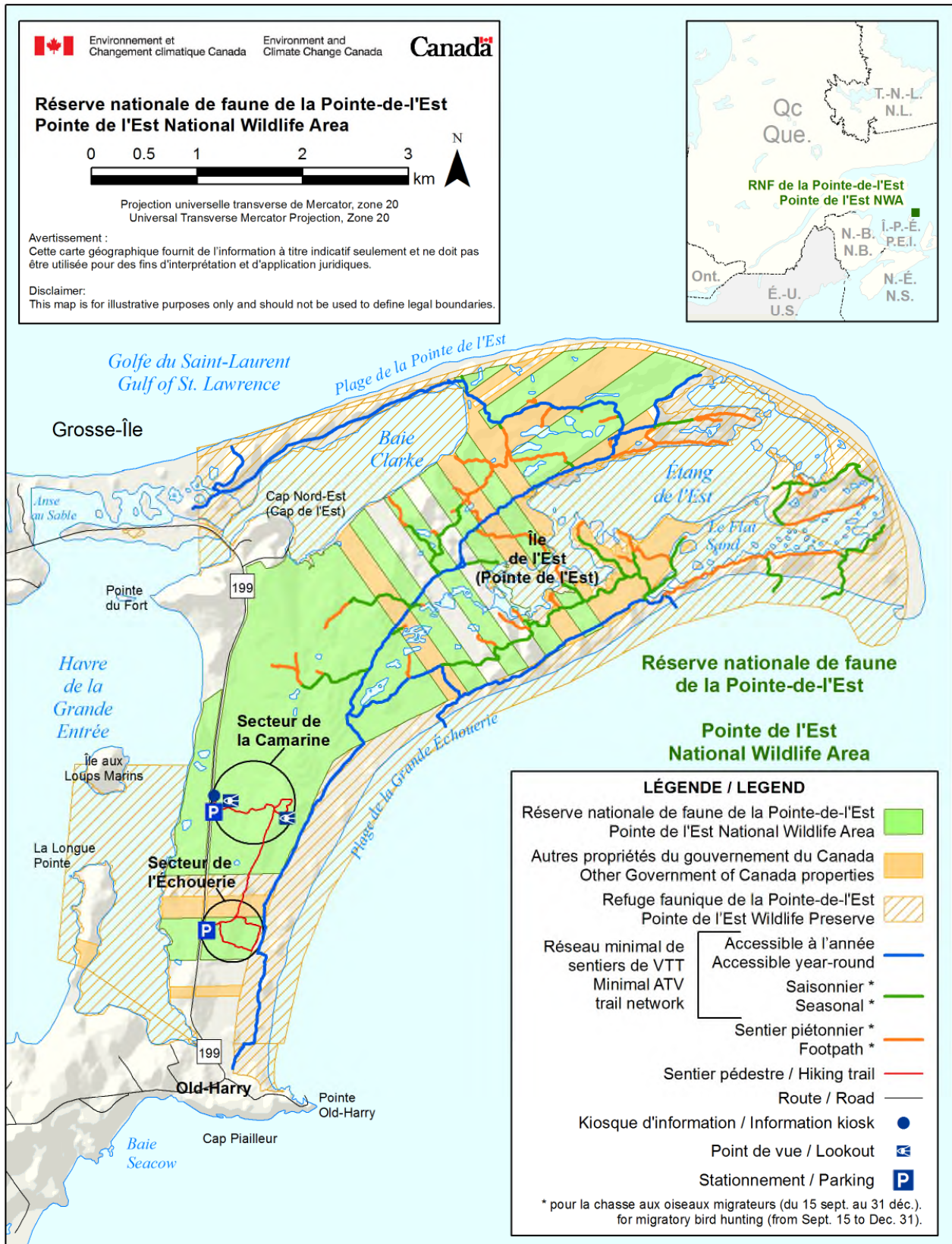


Figure 3 Facilities and infrastructure in Pointe de l'Est National Wildlife Area

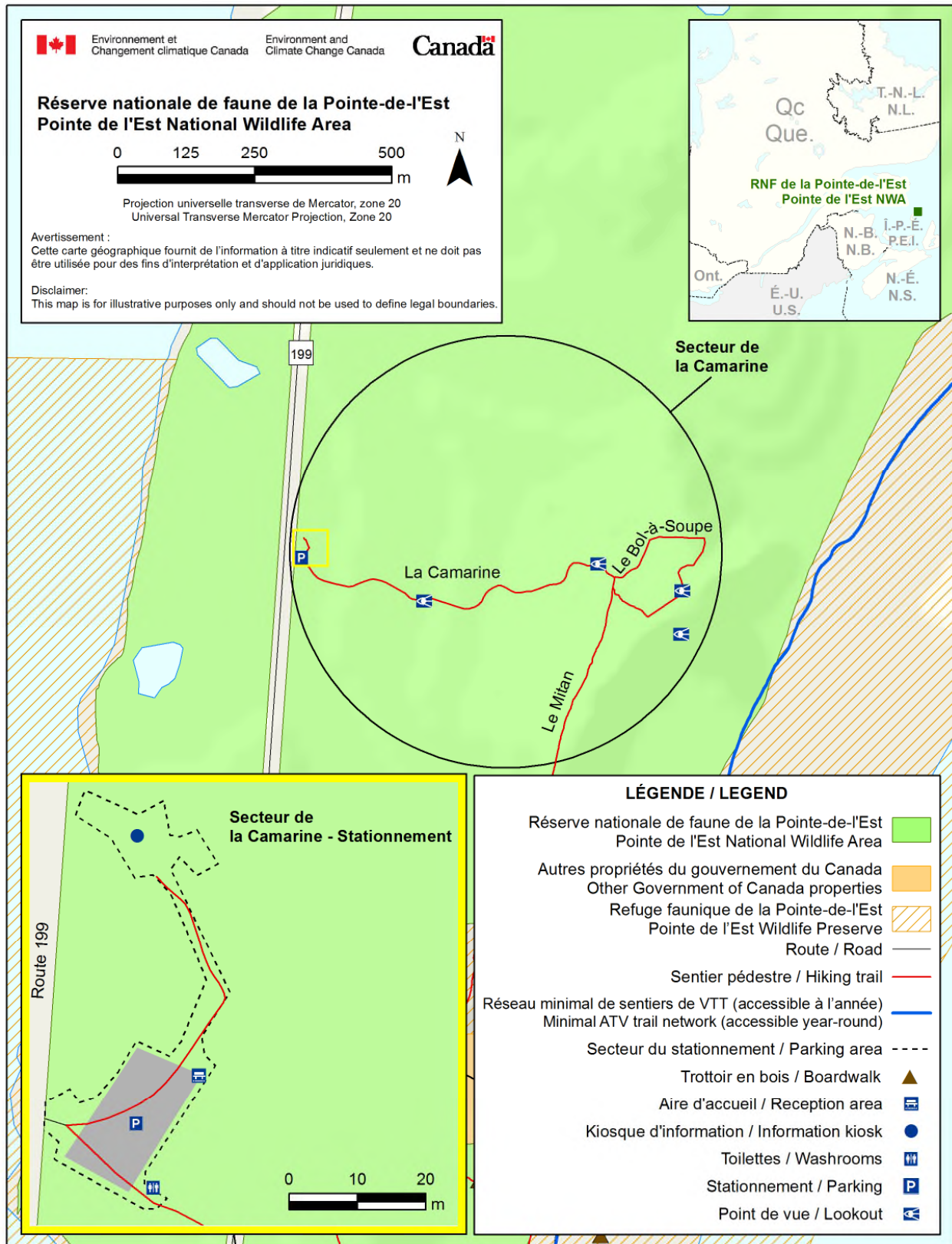


Figure 4 Current and planned facilities and infrastructure in the Camarine Area in Pointe de l'Est National Wildlife Area

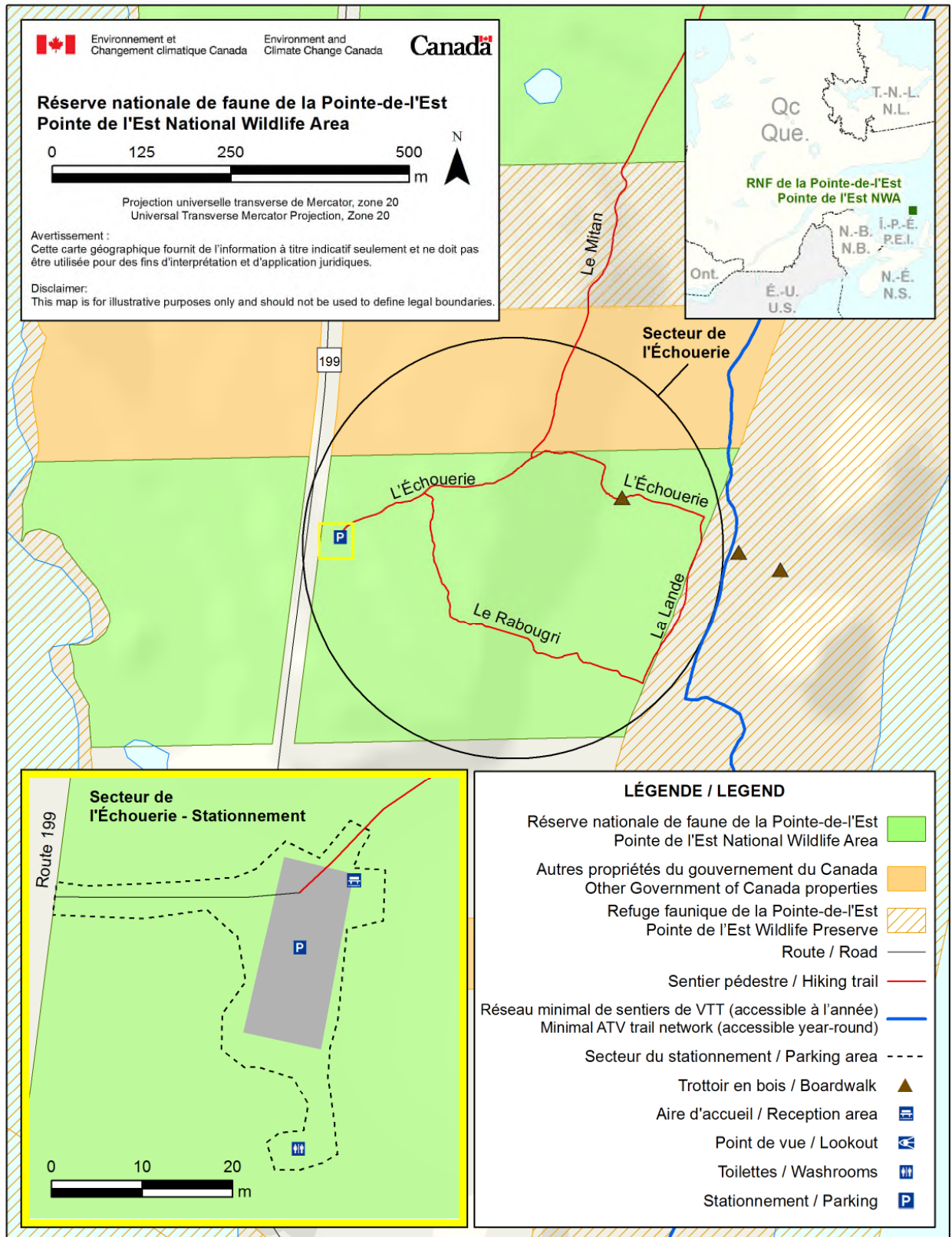


Figure 5 Current and planned facilities and infrastructure in the Échouerie Area in Pointe de l'Est National Wildlife Area



Figure 6 Information kiosk in the Camarine Area

Photo Stéphane Turgeon © Environment and Climate Change Canada, Canadian Wildlife Service



Figure 7 Boardwalk in the Camarine Area

Photo Stéphane Turgeon © Environment and Climate Change Canada, Canadian Wildlife Service



Figure 8 Staircase in the Échouerie Trail

Photo Marielou Verge © Environment and Climate Change Canada, Canadian Wildlife Service

Table 3 Planned facilities and infrastructure in Pointe de l'Est National Wildlife Area

Type of facility or infrastructure	Dimensions	Area	Owner
Wooden visitor reception deck •Information shelter •Bicycle stand •Benches	30 m ²	La Camarine	Environment and Climate Change Canada (CWS)
Trash can enclosure		La Camarine	Environment and Climate Change Canada (CWS)
Picnic table		La Camarine	Environment and Climate Change Canada (CWS)
Refurbishment of the parking lot •Parking bumpers •Patching of gravel surfaces and drainage		La Camarine	Environment and Climate Change Canada (CWS)
Composting toilet		La Camarine	Environment and Climate Change Canada (CWS)
Wooden visitor reception deck •Information shelter •Bicycle stand	30 m ²	L'Échouerie	Environment and Climate Change Canada (CWS)
Trash can enclosure			
Picnic table		L'Échouerie	Environment and Climate Change Canada (CWS)
Boardwalk	10 m	L'Échouerie	Environment and Climate Change Canada (CWS)
Boardwalks	21 m	L'Échouerie	Environment and Climate Change Canada (CWS)
Lounger-type bench at the top of the staircase		L'Échouerie	Environment and Climate Change Canada (CWS)
Composting toilet		L'Échouerie	Environment and Climate Change Canada (CWS)
Refurbishment of the parking lot •Parking bumpers •Patching of gravel surfaces and drainage		L'Échouerie	Environment and Climate Change Canada (CWS)

2 ECOLOGICAL RESOURCES

2.1 TERRESTRIAL AND AQUATIC HABITATS

2.1.1 *Topography and Physical Geography*

The Magdalen Islands archipelago is part of the Maritimes Plain, a region of the Appalachians that includes north-central Nova Scotia, half of New Brunswick as well as all of Prince Edward Island, continues under the waters of the Gulf of St. Lawrence and encompasses the Magdalen Shelf (Rastoul and Rousseau, 1979 in Lemieux and De Repentigny, 1986). The rocky islets that comprise the archipelago are composed of metasedimentary (metamorphosed sediments) and volcanic rocks that were raised by thick salt deposits. The erosion of these rocks released the sand and gravel that form the insular shelf (Ouranos, 2008). The highest peaks of the archipelago are buttes composed of volcanic rocks, which reach a maximum elevation of 170 metres (MRNF, 2006).

The National Wildlife Area is located on the Île de l'Est, or Pointe de l'Est, which is in fact a large sand spit³ located between Grosse Île and Île de la Grande Entrée, two low-lying islands composed mainly of schist and sandstone with a maximum elevation of 90 metres and 31 metres, respectively (Owens and McCann, 1980). Most of the point is composed of littoral and dune sand. The soil is composed of grey quartzose sand eroded from the sandstone shelf surrounding the islands by the action of the sea. This erosion process constantly delivers unconsolidated material which, under the influence of the wind, forms new dunes and beach ridges. The Pointe de l'Est area includes dunes, barrens, two large lagoons, salt meadows, marshes and extensive beaches (Lemieux and De Repentigny, 1986). The north lagoon, called Clarke Bay, is exposed to the daily influence of the tides, through the Havre de la Grande Entrée. The south lagoon has closed up and today forms the Étang de l'Est, a brackish pond that is invaded by the sea only during the large equinoctial tides in the spring and fall (Létourneau et al., 2016). However, dune breaches have recently formed along the coastline following the major storms that occurred in 2010 in Clarke Bay. Such breaches can result in the penetration of saltwater and thus modify the aquatic ecosystems and lead to the loss of habitats in the Étang de l'Est.

³ In geomorphology, a spit is a long narrow accumulation of sand, gravel or cobble in water that is parallel, oblique or perpendicular to the shore, with one end attached to the land and the other end free (except the tombolo, which connects an island to the mainland (www.geobase.ca)).

2.1.2 Climate and Tides

Thanks largely to the maritime environment, the archipelago is the most temperate location in Quebec. The temperature variations are small and the winter is much milder than in Montreal. Compared to central Quebec, the seasons are delayed by approximately one month (Rastoul and Rousseau, 1979 in Lemieux and De Repentigny, 1986). The mean annual temperature is 4.4°C and the average monthly temperatures vary from -6.3°C in January to 16.6°C in July. Total annual precipitation is 89.8 cm. The frost-free season is more than 160 days (AAFC, 2012).

The Magdalen Islands archipelago is part of the Atlantic Maritime Ecozone and the Îles-de-la-Madeleine Ecoregion (ESWG, 1995). According to the Braun-Blanquet phytosociological classification system, it belongs to the boreal vegetation zone and to the balsam fir-white birch bioclimatic domain (Roy-Bolduc, 2010). Grandtner (1967 in Roy-Bolduc, 2010), however, places the archipelago in the balsam fir-white spruce bioclimatic domain. The mean tidal range in the Magdalen Islands is lower than in the other regions of the St. Lawrence, i.e. 0.60 metre, since the islands are located near the tidal node (amphidromic point) in the Gulf. For the same reason, the north coast of the islands is exposed to diurnal tides (one high tide and one low tide per day), while its other coasts are exposed to diurnal and semi-diurnal tides (two high tides and two low tides per day) unlike the other regions of the St. Lawrence, where the tides are semi-diurnal only (Comité ZIP des Îles-de-la-Madeleine, 2002; Attention Fragîles, 2010).

2.1.3 Vegetation

There is little data on the flora and the forest environments of the National Wildlife Area or of the Pointe de l'Est as a whole. Furthermore, most of the studies on the subject date back several decades (CWS, 2005). However, an invasive plant inventory carried out in the NWA in 2019 identified 191 plant species, among which 31 introduced species, 2 invading species and 4 species with a precarious status (see 2.3 Species at risk). The following description of the vegetal communities of the Pointe de l'Est is taken from the work of Grandtner (1967 in CWS, 2005).

The Pointe de l'Est is composed of very large sandy beaches 10 to 50 metres wide and coastal dunes interspersed with wetlands. According to Grandtner (1967 in CWS, 2005), almost the entire vegetation cover of the Pointe de l'Est belongs to the group of maritime plants and salt soils. Pioneer species colonize the backshore and beachgrasses dominate the mobile dune, followed by crowberry barrens and then stands of stunted spruces with lichens and salt meadows. The rest of the area is covered with low marsh (fresh or brackish water marshes) in which hydrophytes dominate.

The dune environment includes an “active” zone which is composed of the backshore, the foredune and the mobile dune. This zone is colonized by pioneer plants which are tolerant of salt spray and of being buried in sand, permitting the formation of dunes. On the backshore (beyond the intertidal zone), the American sea rocket (*Cakile edentula*) and the seabeach sandwort (*Honckenya peploides*) are the first two colonizing species. On the slope of the foredune facing the sea and on the ridge of the mobile dune, the American beachgrass (*Ammophila brevifoliosa*) dominates. On the top and on the inner slope of the mobile dune, species such as the beach pea (*Lathyrus japonicus*), beach wormwood (*Artemisia stelleriana*), northern bayberry (*Morella pensylvanica*) and Baltic rush (*Juncus balticus*) are also found. The mobile dune does not exhibit either a soil horizon or a humus layer. Its surface is dry, the sand shifts constantly under the action of the wind, and the soil is acidic and generally nutrient-poor, sometimes with a high salt content from the spray (Grandtner, 1967 in CWS, 2005).

The dune environment also includes a “stable” zone, which is composed of the fixed dune and is characterized by the presence of plants of the family Ericaceae. The black crowberry (*Empetrum nigrum*), purple crowberry (*Empetrum atropurpureum*) and common bearberry (*Arctostaphylos uva-ursi*) dominate. Other species such as the common juniper (*Juniperus communis*), creeping juniper (*Juniperus horizontalis*), mountain cranberry (*Vaccinium vitis-idaea*), early lowbush blueberry (*Vaccinium angustifolium*), velvet-leaved blueberry (*Vaccinium myrtilloides*), broom crowberry (*Corema conradii*; see section 2.3 Species at Risk) and woolly beach-heather (*Hudsonia tomentosa*) are also present. Finally, dense forests of stunted white spruces (*Picea glauca*) and balsam firs (*Abies balsamea*) populate the ridges of the most stable dunes (Figure 9), representing the last stage of this vegetation series (Grandtner, 1967 in CWS, 2005; Giles and King, 2001 in CWS, 2005). The white spruce and a few hardwoods, such as the white birch (*Betula papyrifera*), trembling aspen (*Populus tremuloides*) and pin cherry (*Prunus pensylvanica*) are also present. The stunted trees, which colonize the edges of mature stands, constitute a natural barrier against the effects of the wind and salt spray (Attention Fragîles, 2010). The fixed dune presents visible podzolic horizons and a humus layer at the surface. The soil is wetter and moderately acidic (Grandtner, 1967 in CWS, 2005).



Figure 9 Dunes and forests of Pointe de l'Est National Wildlife Area

Photo Benoît Roberge © Environment and Climate Change Canada, Canadian Wildlife Service

Other geological forms of interest are present in the dune environment. The parabolic dune, which is dome- or parabola-shaped, is dominated by beachgrasses. The development of this kind of dune depends on the quantity of sand available and involves active periods and stable periods. A very large parabolic dune is present to the south of Clarke Bay and is believed to be one of the largest in North America (Serge Jolicoeur, University of Moncton, pers. comm., 2015).

A blowout is a deflation basin formed by the action of the wind on the dunes. Of variable size, it is sometimes deep enough to reach the water table. Woolly beach-heather often colonizes its slopes, while Baltic rush and large cranberry (*Vaccinium macrocarpon*) often grow at its base (CWS, 2005).

Finally, a substantial part of the Pointe de l'Est is covered with wetlands, particularly intertidal marshes, salt meadows, low marshes, freshwater (Figure 10) or brackish ponds, swamps and peat bogs. The intertidal salt marsh, which covers most of Clarke Bay and is regularly flooded by the tides, is populated by halophyte plants. The littoral sand with its high salt

content is colonized by pioneer species such as the Virginia glasswort (*Salicornia depressa*), sea milkwort (*Lysimachia maritima*) and smooth cordgrass (*Spartina alterniflora*). Further from the sea, the salt meadow, flooded only by large tides, is dominated by the Baltic rush. The saltmeadow cordgrass (*Spartina patens*) and the prairie cordgrass (*Spartina pectinata*) are common here (Grandtner, 1967 in CWS, 2005; Beaumont and Chamberland, 1976 in CWS, 2005).



Figure 10 Wetland of Pointe de l'Est National Wildlife Area

Photo Marielou Verge © Environment and Climate Change Canada, Canadian Wildlife Service

Low marshes are located in the depressions of the coastal plain and in areas where there is fresh or brackish water at the surface. At the Pointe de l'Est, they are oriented northeast–southwest and extend from behind the Cap de l'Est [or Cape Nord-Est] as far as the southwestern boundary of the NWA. There are other small marshes between Clarke Bay and the Étang de l'Est. Hydrophilic plants dominate in these marshes, particularly the variegated pond-lily (*Nuphar variegata*), which grows in the deepest parts of the ponds, as well as bulrushes (*Scirpus* spp.), broad-leaved cattail (*Typha latifolia*), harlequin blueflag (*Iris versicolor*), bog buckbean (*Menyanthes trifoliata*) and bluejoint reedgrass (*Calamagrostis canadensis*),

present in the less flooded parts. The speckled alder (*Alnus incana*) is considered the final stage in the vegetation series (Grandtner, 1967 and Beaumont and Chamberland, 1976 in CWS, 2005). The peat bogs dominated by peat moss (*Sphagnum spp.*) are home to the tuberous grass-pink (*Calopogon tuberosus*) as well as the northern pitcher plant (*Sarracenia purpurea*) and the round-leaved sundew (*Drosera rotundifolia*), two carnivorous plants (CWS, 2005).

2.2 WILDLIFE

2.2.1 Invertebrates

The Canadian Wildlife Service has not conducted any surveys of invertebrates in Pointe de l'Est National Wildlife Area.

2.2.2 Fish

The Canadian Wildlife Service has not conducted any surveys of fish in this protected area.

2.2.3 Amphibians and Reptiles

There is little data on the diversity and distribution of herpetofauna in the Magdalen Islands. Recent research and interviews with observers support the hypothesis that only the green frog (*Lithobates clamitans*) is present in the archipelago. It appears that the species is well established on the three islands in the southern part of the archipelago, i.e. the Havre Aubert, Cap aux Meules and Havre aux Maisons islands, and that it is absent from the northern part of the archipelago, i.e. north of Havre aux Maisons island (Pouliot et al., 2009 in Létourneau et al., 2016).

In addition, a red-eared slider turtle (*Trachemys scripta [elegans]*) and an eastern painted turtle (*Chrysemys picta picta*) have previously been observed in the archipelago, but these were pets released into the wild (Bider and Matte, 1991 in Létourneau et al., 2016). Despite these anecdotal reports, no reptile species appear to be established in the archipelago (Létourneau et al., 2016).

Owing to the low potential presence of amphibians and reptiles in the NWA (isolated maritime environment not well suited to these species), the Canadian Wildlife Service has not conducted any targeted surveys of herpetofauna in this protected area. However, it did pay particular attention to the detection of herpetofauna during its survey work aimed at other species carried out in 2007 (Létourneau et al., 2016). In spite of these efforts, no amphibians or reptiles have been observed in the NWA.

2.2.4 Birds

The data and descriptions below concern the Pointe de l'Est in general, since the bird surveys carried out and the bird sightings made to date in this area have essentially considered the Pointe de l'Est area as a whole, without examining the National Wildlife Area separately. Further details are provided on the NWA when possible.

Although the protection of important habitats for migratory birds, particularly waterfowl and shorebirds, was one of the reasons for the creation of the National Wildlife Area and although the NWA offers many suitable habitats for avifauna, the surveys conducted on the Pointe de l'Est since the 1970s show that the NWA contains only a small proportion of the sites important for birds. In fact, a number of bird species use the habitats adjacent to the NWA, particularly the piping plover (see 2.3 Species at Risk), a shorebird that was a source of concern when this protected area was established (Lemieux and De Repentigny, 1986).

Approximately 215 bird species were observed at the Pointe de l'Est by birders between 1993 and 2012 (Larivée, 2012: ÉPOQ data; compilations of checklists completed by birders). During surveys carried out by the CWS in 2007 (Létourneau et al., 2016) in the National Wildlife Area and areas adjacent to the Pointe de l'Est, 144 bird species were surveyed, including numerous landbird, waterfowl, shorebird, waterbird and colonial bird species. Of these, some 100 are considered breeders (Létourneau et al., 2016).

During these surveys, the fox sparrow (*Passerella iliaca*), blackpoll warbler (*Setophaga striata*), savannah sparrow (*Passerculus sandwichensis*) and white-throated sparrow (*Zonotrichia albicollis*) were observed at more than 50% of the stations, followed by the American robin (*Turdus migratorius*), swamp sparrow (*Melospiza georgiana*), American crow (*Corvus brachyrhynchos*), Wilson's snipe (*Gallinago delicata*), sora (*Porzana carolina*), great black-backed gull (*Larus marinus*), common yellowthroat (*Geothlypis trichas*), yellow-rumped warbler (*Setophaga coronata*) and winter wren (*Troglodytes hiemalis*) (observed in 30% to 50% of the stations). The abundant species included generally colonial species, such as the northern gannet (*Morus bassanus*) and the double-crested cormorant (*Phalacrocorax auritus*), and certain species of Laridae (e.g. gulls, kittiwake and terns). The other abundant species included the cedar waxwing (*Bombycilla cedrorum*) and the white-winged crossbill (*Loxia leucoptera*). Seven species were reported on all the daily checklists, namely the great blue heron (*Ardea herodias*), great black-backed gull, common tern (*Sterna hirundo*), American crow, common raven (*Corvus corax*), American robin and savannah sparrow (Létourneau et al., 2016).

Waterfowl

The Étang de l'Est and the many other ponds of the Pointe de l'Est serve as rearing or feeding areas for many waterfowl species. Sixteen waterfowl species were observed at the Pointe de l'Est during surveys conducted by the CWS in 2007 (Létourneau et al., 2016), including some 14 breeding species and two species considered non-breeding summer visitors (the common goldeneye, *Bucephala clangula*, and the bufflehead, *Bucephala albeola*). Among all the Anatidae likely to breed in the study area, only the common merganser (*Mergus merganser*) was not detected in 2007. Five species have been confirmed as breeders based on the observation of clutches, namely the American black duck, northern pintail (*Anas acuta*), green-winged teal (*Anas crecca*), American wigeon (*Anas americana*) and ring-necked duck (*Aythya collaris*). The first three species accounted for nearly 61% of the breeding waterfowl of the Pointe de l'Est. Among the species that are probable breeders are the wood duck (*Aix sponsa*), gadwall (*Anas strepera*), mallard (*Anas platyrhynchos*) and blue-winged teal (*Anas discors*), while three species are possible breeders, namely the Canada goose (*Branta canadensis*), northern shoveler (*Anas clypeata*) and greater scaup (*Aythya marila*) (Létourneau et al., 2016). The authors of the study mention the common eider (*Somateria mollissima*) among the probable breeders, but there is no breeding habitat for this duck at the Pointe de l'Est (F. Shaffer, pers. comm., 2020) and the species was not seen there during the fieldwork of the *Second Atlas of the Breeding Birds of Southern Québec* (Robert et al., 2019).

Shorebirds

In total, 23 species of shorebirds were surveyed at the Pointe de l'Est in 2007 (Létourneau et al., 2016), including 20 of the regular species of the Magdalen Islands archipelago mentioned by David (1996, in Létourneau et al., 2016). During the fall migrations, the black-bellied plover (*Pluvialis squatarola*) and the sanderling (*Calidris alba*) were the most abundant species, while the semipalmated plover (*Charadrius semipalmatus*), whimbrel (*Numenius phaeopus*), semipalmated sandpiper (*Calidris pusilla*), least sandpiper (*Calidris minutilla*), ruddy turnstone (*Arenaria interpres*) and greater yellow legs (*Tringa melanoleuca*) were regularly observed. Only the spotted sandpiper (*Actitis macularius*) was confirmed as a breeder, but other species observed can be considered breeders at the Pointe de l'Est, namely the Wilson's snipe, killdeer (*Charadrius vociferus*), piping plover (see 2.3 Species at Risk) and least sandpiper. The willet (*Tringa semipalmata*) was until recently considered a visiting migrant and an unusual summer visitor in the archipelago (Létourneau et al., 2016), but a nest of the species was found a few kilometres from the Pointe de l'Est (on the north dune, between

Pointe-aux-Loups and Grosse-Île) in 2011 as well as in the southern part of the archipelago in 2013, during fieldwork for the *Second Atlas of the Breeding Birds of Southern Québec* (Robert et al., 2019). The other species of shorebirds observed at the Pointe de l'Est include the red knot (*Calidris canutus*), a migrant that is regularly observed in this area during the migration period, but does not breed in the archipelago (see 2.3 Species at Risk), as well as the Baird's sandpiper (*Calidris bairdii*) and the buff-breasted sandpiper (*Calidris subruficollis*), which are considered rare migrants in the islands (Létourneau et al., 2016). The latter has a special concern status in Canada.

Waterbirds and Colonial Birds

Laridae

During surveys carried out between 1995 and 2003 at the Pointe de l'Est for the purpose of monitoring the presence of the roseate tern (*Sterna dougallii*; see 2.3 Species at Risk), the Arctic tern (*Sterna paradisaea*) and the common tern were observed (CWS, 2005). During surveys conducted in this area in 2007 (Létourneau et al., 2016), nine species of Laridae were observed, including five breeding colonial species. A mixed colony of common terns and Arctic terns dominated by common terns was identified on an islet in the main pond [Flat Sand]; 351 nests were counted. A roseate tern was also seen during these surveys (Rail, 2009). Subsequently, again at the Pointe de l'Est, but outside the NWA, the number of breeding common terns sometimes accompanied by Arctic terns varied from 39 to 130 (J.F. Rail, CWS, pers. comm., 2019): 50 in 2008-2009 (F. Shaffer, CWS, pers. comm. 2011), 130 in 2011 (A. Richard, pers. comm., 2017), none in 2012 (J.F. Rail, CWS, pers. comm., 2019) and 39 in 2017 (A. Richard, pers. comm., 2017). Terns are among the iconic species of the Magdalen Islands owing to the many nesting and foraging habitats that the islands offer (Létourneau et al., 2016).

A small colony of black-headed gulls (*Chroicocephalus ridibundus*), a species of European origin, has been nesting in the archipelago since 1981. Its nesting at the Pointe de l'Est was noted for the first time in 2000, when six pairs nested on two islets located in a pond bordering the National Wildlife Area. Between 2001 and 2006, the small colony of 14 to 25 individuals was located in the NWA (Rail, 2009; CDQS, 2015). In 2007, the colony was on an islet located outside the NWA, but nearby, and it contained 17 nests, a record number for the Pointe de l'Est (Rail, 2009). In 2014, the colony was located outside the NWA and contained 9 nests (J. F. Rail, CWS, pers. comm., 2016). In 2017, a few individuals were observed in flight

above the NWA, but it could not be confirmed if they were nesting in the NWA (A. Richard, pers. comm., 2017).

The surveys conducted at the Pointe de l'Est also identified two breeding pairs of great black-backed gulls (*Larus marinus*) in 2007 (Rail, 2009), one pair of this species at the Étang de l'Est in 2014 (CDQS, 2015) and another on an islet of the main pond in 2017 (A. Richard, pers. comm., 2017). The black-legged kittiwake (*Rissa tridactyla*) is also found at the Pointe de l'Est (up to 400 individuals observed in June 2007, Létourneau et al., 2016) along with the herring gull (*Larus argentatus*) (last breeding report: one pair in 1990; CDQS 2015), ring-billed gull (*Larus delawarensis*) and Iceland gull (*Larus glaucoides*) (Létourneau et al., 2016).

Northern Gannet

The northern gannet was observed in very large numbers along the shores of the Pointe de l'Est during the surveys in 2007 (Létourneau et al., 2016). This abundance is explained by the presence of a colony at Rochers aux Oiseaux which contained some 26,758 pairs in 2018 (J.F. Rail, CWS, pers. comm., 2019). Since these rocks are located only 32 kilometres from the Point, many northern gannets can be observed from the Point (Létourneau et al., 2016).

Great Blue Heron

The great blue heron can be found near the water bodies and lagoons of the archipelago, particularly at the Pointe de l'Est (CWS, 2005). It is one of the species that was reported on all the daily checklists during the bird surveys conducted at the Pointe de l'Est in 2007 (Létourneau et al., 2016). In 2002, there was a heronry in the Mont Moore area adjacent to the NWA (Fisheries and Oceans Canada, FHAMIS, 2002 in CWS, 2005). It was no longer there in 2006 and the site was not visited during the surveys in 2007 (Létourneau et al., 2016). In addition, no herons were seen there during overflights of the site carried out in June 2012 and 2017 (J.-F. Rail, CWS, pers. comm., 2019). However, a colony of the species was present less than five kilometres west of the NWA, i.e. at Rockhill Point, in 2012 (12 nests) and in 2017 (26 nests) (J.F. Rail, CWS, pers. comm., 2019).

2.2.5 Mammals

The archipelago is home to more than 10 species of mammals, including the deer mouse (*Peromyscus maniculatus*), meadow vole (*Microtus pennsylvanicus*), snowshoe hare (*Lepus americanus*), red squirrel (*Tamiasciurus hudsonicus*), red fox (*Vulpes vulpes rubricosa*), and two species associated with humans, namely the house mouse (*Mus musculus*) and the Norway rat (*Rattus norvegicus*). The hare of the *struthopus* subspecies, present elsewhere in the Atlantic provinces, was reportedly introduced more than a century ago (Burton, 1976 in Lemieux and

De Repentigny, 1986). It appears to have been decimated since. In 1994, 91 hares from the Lower St. Lawrence were re-introduced on the Île du Havre Aubert (Pelletier, 2013). The red squirrel was introduced in the fall of 1975 and has reproduced since. The red fox, which also belongs to a subspecies known in the Atlantic provinces (*rubricosa*), has been present in the islands for a very long time, since it is included in Cartier's accounts in 1534 (Burton, 1976 in Lemieux and De Repentigny, 1986).

Targeted surveys of small mammals carried out by the CWS at the Pointe de l'Est in 2007 (Létourneau et al., 2016) recorded the presence of two of the above-mentioned species, namely the deer mouse and the meadow vole, which are omnipresent in the NWA. In addition, recordings of bats carried out in the NWA during these surveys identified only individuals of the genus *Myotis*. This could be the little brown myotis (*Myotis lucifugus*) or the northern myotis (*Myotis septentrionalis*), two endangered species (see 2.3 Species at Risk), but given the close overlap between the characteristics of the sounds emitted by these two species, it was not possible to distinguish them with certainty based on the equipment used (Létourneau et al., 2016). Elsewhere in the archipelago, the presence of bats was documented during acoustic surveys carried out in 2015 at the Sillons site (Île du Havre aux Maisons) and at the Pointe aux Canots site (Île du Havre Aubert) by Attention Fragîles (Atlantic Coastal Action Program Cape Breton, 2015-2016). The main bat species detected was the little brown myotis, which is present year-round. Three other migratory species were detected, namely the eastern red bat (*Lasiurus borealis*), northern myotis and hoary bat (*Lasiurus cinereus*) (M. Bourgeois and A. Richard, Attention Fragîles, pers. comm., 2019).

Since the 2000s, the presence of the coyote (*Canis latrans*) has also been reported in the archipelago. A few individuals have been seen mainly in the forest, but also in the dune environment, where they feed on carrion, birds, rodents and even foxes (Attention Fragîles, 2010). The species has also been observed at least three times at the Pointe de l'Est over the past few years (two sightings by A. Richard, Attention Fragîles, pers. comm., 2019 and sightings by R. Scott reported by M. Bourgeois, Attention Fragîles, pers. comm., 2019). The predation of adult terns and tern nests by the red fox and the coyote has been observed in the archipelago (Rail, 2009).

2.3 SPECIES AT RISK

Pointe de l'Est National Wildlife Area is home to at least seven animal and plant species at risk or species likely to be designated as such according to the federal *Species at Risk Act* (SARA) or the Quebec *Act Respecting Threatened or Vulnerable Species* (LEMV), namely the

Nelson's sparrow (*Ammospiza nelsoni*), horned grebe and rusty blackbird (*Euphagus carolinus*), at least one species of bat (probably the little brown myotis, *Myotis lucifugus*) as well as the Connecticut beggarticks (*Bidens heterodoxa*), broom crowberry and northern adder's-tongue (*Ophioglossum pusillum*).

2.3.1 Birds

The NWA is home to at least three bird species at risk or likely to be designated as such, two of which are confirmed breeders, namely the Nelson's sparrow and the horned grebe, and one species that is a very likely breeder, namely the rusty blackbird (Table 4).

In addition, wildlife surveys conducted at the Pointe de l'Est (without distinction with the NWA) in 2007 recorded the presence of 11 bird species at risk or species likely to be designated as such, including the three species previously mentioned and the piping plover (*melodus* subspecies), which nests on the beaches adjacent to the NWA, as well as the roseate tern, for which there are potential nesting sites in the area (Létourneau et al., 2016). Six other bird species at risk have been observed at the Pointe de l'Est during these surveys: the olive-sided flycatcher (*Contopus cooperi*) and the eastern wood peewee, which are unusual summer visitors in the archipelago; the bobolink (*Dolichonyx oryzivorus*), a recognized breeder in the archipelago whose presence is unusual at the Pointe de l'Est; the bank swallow, a potential breeder at the Pointe de l'Est, as well as the red knot (*rufa* subspecies) and the peregrine falcon (*Falco peregrinus*), observed during the migration period (Létourneau et al., 2016). Since the 2007 surveys, the bank swallow was observed on several occasions in the NWA between 2014 and 2020 (up to 30 individuals in June 2015; eBird Québec, 2020) and the red knot has been seen fairly regularly in the area during the migration period (eBird Québec, 2019). In addition, based on historical records of the Bicknell's thrush (*Catharus bicknelli*) and the short-eared owl (*Asio flammeus*) in the area (CDPNQ, 2016; SOS-POP, 2016), substantial efforts were made to detect these species during the surveys in 2007, but no individuals were sighted (Létourneau et al., 2016). However, the short-eared owl has been observed in 2016 and 2018 in the NWA (eBird Québec, 2019).

Nelson's Sparrow

Although the Nelson's sparrow, a species likely to be designated threatened or vulnerable in Quebec, is considered a regular breeder in the Magdalen Islands (Fradette, 1990 and David, 1996 in Létourneau et al., 2016), it appears to be uncommon. Surveys carried out in the archipelago in June 2005 recorded the presence of 14 singing males at the Barachois de Fatima and north of the Havre aux Basques (Rivard et al., 2006). Other surveys conducted at

the Pointe de l'Est in 2007 counted eight singing males, some in the National Wildlife Area. These findings indicate the existence of a small population that probably breeds in this protected area (Létourneau et al., 2016). The presence of one individual was also reported at Cape Nord-Est (or Cap de l'Est) in the NWA in 2013 (SOS-POP, 2016) and in 2015 (eBird Québec, 2019).

Horned Grebe

A small population of horned grebes has been breeding in the Magdalen Islands for some 100 years (Environment Canada, 2013a). This population was designated endangered in Canada in 2011 under the *Species at Risk Act*, and threatened in Quebec in 2000 under the *Act Respecting Threatened or Vulnerable Species*. The species was present in several areas of the archipelago until the 1990s, but since 2005, it has been present essentially on Brion Island and at the Pointe de l'Est. From 1993 to 2007, at most 25 adults were observed during a single breeding season; on average, 15 adults were present every year. The data indicate that the population has fallen by approximately 22% in the last three generations (COSEWIC, 2009 in Environment Canada, 2013a). During the 2010-2014 fieldwork for the *Second Atlas of the Breeding Birds of Southern Québec* (Robert et al., 2019), evidence of the presence of the species was obtained at only a few ponds: one located in Fatima and the other at the Pointe de l'Est and on Brion Island. The data from a survey conducted in 2014 (CWS, unpublished data) report only seven nests distributed in five ponds (Robert et al., 2019).

At the Pointe de l'Est, the species can be found, among other locations, at the Étang de l'Est and adjacent small ponds, which are located partly in the National Wildlife Area and partly in the provincial wildlife preserve, both during and after the breeding period (1988-2015 data: CDPNQ, 2016 and SOS-POP, 2016). Nests have been observed in the NWA, but not necessarily every year (F. Shaffer, CWS, pers. comm., 2016). During surveys carried out by the CWS in the archipelago in 2007, eight nests were observed, including seven at the Étang de l'Est and one on a nearby pond (all outside the NWA, but close to it) (Létourneau et al., 2016). The Étang de l'Est is used as a nesting area, but is also a very important gathering site of the horned grebe in the post-nuptial period (resting, feeding and moulting) (Richard, 2018; Shaffer and Laporte, 2003). The last survey carried out at this location in 2018 reported a maximum number of four birds. This is half the maximum number observed in 2017. In addition, the number of grebes observed at the Étang de l'Est in 2018 was less than the average of the years 2004-2007 and 2012-2017 (12.6 grebes) (Richard, 2018).

Rusty Blackbird

The nesting of the rusty blackbird is confirmed at the Pointe de l'Est (Létourneau et al., 2016; Robert et al., 2019). During surveys conducted there in June 2007, this species was fairly common and was detected at 12% of the listening stations, many of which were located in the NWA (Létourneau et al., 2016). In 2009, two adults were seen feeding a young near a pond located partly in the NWA (F. Shaffer, CWS, pers. comm., 2020). In addition, two adults exhibiting breeding behaviour (agitated, carrying food) were observed in a radius of 30 to 50 m from the NWA in 2010. Two adults were also observed near the NWA in June 2013 during the survey work for the *Second Atlas of Breeding Birds of Southern Québec* (SOS-POP, 2016). Besides, several observations of the species were reported in the NWA between 2011 and 2019 (eBird Québec, 2020).

Short-eared Owl

The nesting of the short-eared owl has previously been reported in the Pointe de l'Est area (historical record of a nest with eggs in 1907). In addition, one adult was observed in or at the edge of the NWA in 1989 (SOS-POP, 2016). The precision of the data (radius of 1.5 km) did not make it possible to confirm the exact position of the individual observed. Surveys carried out at the Pointe de l'Est in 2007 did not detect any short-eared owls despite substantial efforts (Létourneau et al., 2016). However, the species has been observed three times in the NWA over the past few years, namely in July and August 2016 and in September 2018 (A. Richard, pers. comm., 2019; see SOS-POP, 2016 and eBird Québec, 2019). The bird observed in July 2016 performed a very high circular flight and made cries that the observer associated with an aerial display. The short-eared owl has a special concern status in Canada and is likely to be designated threatened or vulnerable in Quebec.

Piping Plover

The piping plover *melodus* subspecies is considered endangered in Canada and threatened in Quebec. The last breeding population in Quebec is located in the Magdalen Islands, where a few tens of pairs breed every year. Every long beach of the archipelago contains nests, but their distribution is not uniform (Robert et al., 2019). Annual monitoring of this population has been carried out by the CWS and the organization Attention Fragîles since 1987. The counts indicate that the population reached a maximum of 53 pairs in 1995 and a minimum of 23 pairs in 2017 (CWS, unpublished data in Robert et al., 2019). At the Pointe de l'Est, the piping plover nests outside the National Wildlife Area on beaches located in the Pointe de l'Est

Wildlife Preserve (under provincial jurisdiction). However, several of these nesting sites are located near the NWA (CDPNQ, 2016 and SOS-POP, 2016).

Roseate Tern

The roseate tern was reported for the first time in the Magdalen Islands in 1972 (David, 1996 in Létourneau et al., 2016). In Quebec, the species nests exclusively in the archipelago, on small grassy islands located in the lagoons (Robert et al., 2019). While it was a confirmed breeder in two survey squares during the fieldwork for the first *Atlas of the Breeding Birds of Southern Québec* (1984-1989), it was detected in only one square in the *Second Atlas of the Breeding Birds of Southern Québec* (2010-2014) and no confirmation of its breeding was obtained. In addition, it is no longer observed every year, as was the case between 1987 and 2010. It was also absent from the archipelago in 2011, 2014, 2015 and 2016 (Robert et al., 2019). One of the potential nesting sites of the species is located within the colony of common terns and Arctic terns of the Pointe de l'Est (at Flat Sand Pond, outside the NWA). One individual was seen there in 2006 (SOS-POP, 2016) and another in 2007 during the breeding season, but no nests of the species were found (Létourneau et al., 2016). The site was visited five times between 2008 and 2015, but the species was not observed (SOS-POP, 2016). The roseate tern is considered endangered in Canada and threatened in Quebec.

Bicknell's Thrush

The Bicknell's thrush, which is designated threatened in Canada and vulnerable in Quebec, has previously been observed at the Pointe de l'Est, near the NWA or perhaps even in the NWA (historical records in 1901, 1972 and 1989; CDPNQ, 2016). The precision of the data (radius of 1.5 km) does not make it possible to confirm the exact position of the birds observed. No Bicknell's thrushes were detected during targeted surveys conducted at the Pointe de l'Est by the CWS in 2007 (Létourneau et al., 2016). The species has not been seen again in the archipelago since 1989 (CDPNQ, 2016), including during the fieldwork conducted between 2010 and 2014 for the *Second Atlas of the Breeding Bird of Southern Québec* (Robert et al., 2019).

2.3.2 Mammals

The National Wildlife Area and the Pointe de l'Est are home to at least one mammal species at risk. Recordings of bats carried out in the NWA in 2007 identified individuals of the genus *Myotis*. This could be the little brown myotis or the northern myotis, but more probably the first. These two species are considered endangered in Canada (see 2.2.5 Mammals) (Létourneau et al., 2016).

2.3.3 Plants

The NWA and the Pointe de l'Est are also home to three species of vascular plants at risk or likely to be so designated according to the Quebec *Act Respecting Threatened or Vulnerable Species*, namely the Connecticut beggarticks, broom crowberry (Gagnon et al., 1995 in CWS, 2005; CDPNQ, 2016) and northern adder's-tongue (BEA, 2019). Another plant species at risk is present in the Pointe de l'Est, but outside the NWA, namely the Gulf of St. Lawrence aster (*Symphotrichum laurentianum*), which is designated threatened under the Canada SARA and the Quebec LEMV. In the province, the species is found only on the Magdalen Islands, mainly around the Lagune (or Baie) du Havre Aux Basques. In the Pointe de l'Est, it is found in the Étang de l'Est and in Clarke Bay, in the Pointe de l'Est Wildlife Preserve, on provincially owned lands (Couillard and Jolicoeur, 2008).

Table 4 Species at risk in Pointe de l'Est National Wildlife Area

Species common and scientific names	Status			Presence
	Canada		Quebec	
	SARA ¹	COSEWIC ²	LEMV ³	
Birds				
Nelson's sparrow <i>Ammodramus nelsoni</i>	None	Not at risk	SLDTV ⁴	Singing males surveyed in the NWA and in the Pointe de l'Est area in 2007. Small probably breeding population. Most recent observations in the NWA in 2013 (SOS-POP, 2016) and 2015 (eBird, 2019).
Horned grebe <i>Podiceps auritus</i> , Magdalen Islands population	Endangered (Schedule 1)	Endangered	Threatened	Uses the ponds in the NWA and in the Pointe de l'Est area as nesting and post-breeding gathering areas (F. Shaffer, CWS, pers. comm., 2016; SOS-POP, 2016).

Table 4 Species at risk in Pointe de l'Est National Wildlife Area

Species common and scientific names	Status			Presence
	Canada		Quebec	
	SARA ¹	COSEWIC ²	LEMV ³	
Rusty blackbird <i>Euphagus carolinus</i>	Special Concern (Schedule 1)	Special Concern	SLDTV ⁴	A breeding species at the Pointe de l'Est (Robert et al., 2019). A common species during a survey conducted in the NWA in June 2007 (Létourneau et al., 2016). Two adults seen feeding a young near the NWA in 2009 (F. Shaffer, CWS, pers. comm., 2020), two breeding adults seen very near the NWA in 2010 and two adults seen near the NWA in June 2013 (SOS-POP, 2016). Several sightings reported in the NWA between 2011 and 2019 (eBird, 2020).
Mammals				
<i>Myotis sp.</i> (Little brown myotis, <i>M. lucifugus</i> and/or northern myotis, <i>M. septentrionalis</i>)	Endangered (Schedule 1)	Endangered	No status	Individuals recorded in the NWA in 2007 (Létourneau et al., 2016). Identification not confirmed: more probably little brown myotis.
Vascular plants				
Connecticut beggarticks <i>Bidens heterodoxa</i>	None	None	SLDTV ⁵	Present in the NWA (CDPNQ, 2016; BEA, 2020).
Broom crowberry <i>Corema conradii</i>	None	None	Threatened	Present in the NWA (CDPNQ, 2016; BEA, 2020).
Northern adder's-tongue <i>Ophioglossum pusillum</i>	None	None	SLDTV ⁵	Present in the NWA (BEA, 2020)

1 Federal Species at Risk Act (Species at Risk Public Registry, 2020)

2 Committee on the Status of Endangered Wildlife in Canada (Species at Risk Public Registry, 2020)

3 Quebec Act Respecting Threatened or Vulnerable Species (MFFP, 2020b)

4 Wildlife species likely to be designated threatened or vulnerable in Quebec (MFFP, 2020b)

5 Plant species likely to be designated threatened or vulnerable in Quebec (MELCC, 2020)

2.4 INVASIVE SPECIES

A survey of invasive plants has been carried out in Pointe de l'Est NWA and within a 25-km radius from it in September 2019 (BEA, 2020). The reed canarygrass (*Phalaris arundinacea*) — occurring in the wild both as native and exotic forms that can only be distinguished based on a molecular analysis (Lavoie et al., 2019) — and the purple loosestrife (*Lythrum salicaria*), an alien species, have been observed at various locations in the NWA, namely in most marshes, along the ATV trails and along road 199. These plants form low density groups (covering of about 15 %) on small areas ($\leq 30 \text{ m}^2$) (BEA, 2020).

As part of this survey, six invasive plant species were noted within a 25-km radius from the NWA (BEA, 2020): the reed canarygrass and five alien species with a high invasive potential, including the purple jewelweed (*Impatiens glandulifera*), smooth bedstraw (*Galium mollugo*), Siberian elm (*Ulmus pumila*), Japanese knotweed (*Reynoutria japonica*) and giant knotweed (*Reynoutria sachalinensis*). Some of these species are found at a few tens of meters from the NWA (cape Nord-Est or Cap de l'Est) and others within a 1 to 8-km radius from it. Two small Japanese knotweed colonies covering a 5 m^2 area were seen at cape Nord-Est less than 100 meters from the NWA. The smooth bedstraw and the Siberian elm are also present at Cape Nord-Est. The giant knotweed was observed in Grosse-Île and a purple jewelweed colony was seen in Old-Harry (BEA, 2020). In addition, the larvae of a small moth, *Paraswammerdamia conspersella*, have damaged the crowberry barrens at several locations in the archipelago, including on Île de la Grande Entrée and Île aux Loups. This infestation was reported for the first time in 1999 by members of the public who mentioned having observed barrens with a “burned” appearance. This micromoth is believed to originate in Scandinavia and was probably introduced by migratory birds or by humans (unintentionally on shoes). This alien species was probably dormant until the arrival of climatic conditions conducive to its spread (CWS, 2005). In addition, “burned” crowberries were observed in Pointe de l'Est NWA during surveys of the horned grebe in 2010, but the species appears to have become re-established, since the damage caused by the moth was no longer apparent in 2015 (F. Shaffer, CWS, pers. comm., 2015).

3 THREATS AND MANAGEMENT CHALLENGES

Pointe de l'Est National Wildlife Area is one of the last large, wild, natural spaces on the Magdalen Islands. However, the expansion of local activities and the development of tourism may pose a threat to this area increasingly sought-after. This National Wildlife Area is exposed to several threats and presents a number of management challenges, particularly human presence and disturbance (including use of motorized vehicles), residential and commercial development (illegal presence of cottages), biological resource use, pollution, climate change and extreme weather events, the collaboration of governments, local stakeholders and residents in conservation efforts as well as invasive or otherwise problematic species, genes and diseases, and scientific knowledge gaps. In the next few years, the collaboration of governments as well as the mobilization of local organizations and residents, who are familiar with this area and very attached to it, will be essential to prevent irreversible impacts on this very fragile natural environment. The threats and management challenges related to this NWA are described below in order of relative importance based on current knowledge and on an analysis tool developed by the CWS (Baril, 2014). The threats nomenclature and classification and the assessment of their significance are based on the International Union for Conservation of Nature Threats Classification Scheme (IUCN 2015; Salafsky et al. 2008).

3.1 HUMAN PRESENCE AND DISTURBANCE

3.1.1 Recreational Activities

Motorized Vehicles

Human disturbance is a significant source of environmental stress in the NWA. Use of motorized vehicles outside the official access roads and parking areas is a major problem in this protected area. Indeed, for the past three decades, all-terrain vehicles (ATVs) and four-wheel drive vehicles (trucks and jeeps) have posed a threat to the integrity of the coastal dunes system of the Pointe de l'Est. Since the 1980s, use of motorized vehicles has been tolerated on trails reserved for this purpose (ATV trails) partly because some owners of properties enclaved in the NWA must use these trails to reach their property. Although the recreational use of any means of transport in the NWA is officially prohibited under the *Wildlife Area Regulations* and has never been encouraged, it has increased over the years. In addition, the number of unofficial recreational ATV trails has continued to increase, which has caused significant environmental impacts. In 2016, ECCC commissioned two studies on the impacts of ATVs in Pointe de l'Est National Wildlife Area (O'Carroll and Jolicoeur, 2017). The first one is a summary of the biophysical and social data compiled by Géo Littoral Consultants and the University of Moncton

which revealed that there are more than 111 kilometres of active trails and tracks in the NWA and more than 302 kilometres of active trails and tracks in the Pointe de l'Est area. The second is an environmental characterization carried out by Attention Fragîles which shows that the natural environments of the Pointe de l'Est are particularly degraded, owing mainly to the heavy motorized vehicle use, and that a number of fragile environments and species at risk are located on the edges of the existing ATV trails (Attention Fragîles, 2017). Use of motorized vehicles in the NWA leaves permanent scars in the dune environments, modifies the landscape and vegetation communities, and can result in the destruction of vegetation and plants at risk. In addition, repeated passages of motorized vehicles in the dunes contribute to soil erosion (CWS, 2005). This erosion process, which is increased by the action of the wind, results in deep ruts and wide depressions in the dunes. In the wetlands, motorized vehicles cause soil compaction and physical alteration of the vegetation and also create ruts and quagmires that can modify the drainage and cause the drying out of certain areas (CWS, 2005). The dunes are essential to the ecological balance of the Magdalen Islands archipelago, since they protect the water table, which is a source of drinking water, mitigate coastal erosion, link the islands to each other and provide invaluable habitat for many animal and plant species (Attention Fragîles, 2010).

In 2007, in order to minimize the effects of motorized vehicles on the environment, the Quebec Department of Natural Resources and Wildlife (MRNF) (now the Department of Forests, Wildlife and Parks [MFFP]) laid out and marked a main ATV trail in the Pointe de l'Est Wildlife Preserve and Pointe de l'Est National Wildlife Area. At that time, ECCC was not consulted concerning this project. Despite this initiative, the lack of collaboration among local stakeholders as well as the lack of monitoring, maintenance and signage of these trails has resulted in the creation of new ATV trails and the alteration of these natural environments. In 2009, the Municipality of Îles-de-la-Madeleine adopted a by-law governing the use of motorized vehicles on the beaches, dunes, shorelines and wetlands. This by-law prohibits motorized vehicles in the dunes where vegetation is present in order to protect the dune environment, although it authorizes vehicles in the access corridors to the beach identified and marked for this purpose (Attention Fragîles, 2010; Municipalité des Îles-de-la-Madeleine, 2019b). However, there is still no by-law of this kind in the Municipality of Grosse-Île. It seems that the latter and various local stakeholders are not in favour of extending the Municipality of Îles-de-la-Madeleine's ATV trail network in the Pointe de l'Est area. A network of ATV trails covering the entire archipelago could attract the attention of some ATV enthusiasts and ATV clubs in Quebec and encourage them to come carry out this activity on the islands and in the NWA, which could increase human impacts on the environment.

In 2015, the Comité de travail de la Pointe-de-l'Est (Pointe de l'Est Working Committee) was established at the initiative of Attention Fragîles in collaboration with Environment and Climate Change Canada. The goal of the committee was to establish by 2018 an official network of marked and monitored ATV trails in order to regulate use of motorized vehicles in the Pointe de l'Est and limit the impacts of this activity on the natural environments of the National Wildlife Area and adjacent lands. This now dissolved committee included the following organizations: Attention Fragîles, Comité ZIP des Îles-de-la-Madeleine, Nature Conservancy of Canada, the East Point Management Committee, the Canadian Wildlife Service of Environment and Climate Change Canada, the University of Moncton, the Municipality of Grosse-Île, the Municipality of Îles-de-la-Madeleine, La Salicorne, the Société de conservation des Îles-de-la-Madeleine and Géo Littoral Consultants. Workshops, information meetings and public consultations on this project were held in Grosse-Île and Grande-Entrée in March, June and December 2016 by the Comité de travail de la Pointe-de-l'Est, the Municipality of Grosse-Île and Environment and Climate Change Canada, respectively. The purpose of these sessions was also to collect information on certain activities as part of the process of updating the management plan for the National Wildlife Area. These consultations revealed that the residents are on the whole favourable to the establishment of an official ATV trail in the Pointe de l'Est area. However, they raised issues concerning access to this trail in the NWA and the routes selected, the use of vehicles on the beach in relation to the protection of the piping plover, the use of trucks and jeeps for migratory bird hunting, other activities in the NWA (migratory bird hunting and berry picking) and the potential impacts of these activities on fragile habitats as well as on plants and bird species at risk, such as the horned grebe. In addition, during an information meeting on the proposal to establish an official network of ATV trails in the Pointe de l'Est area which was held in Grosse-Île in April 2017, the some 15 participants indicated their preference for an official ATV trail managed locally rather than one managed by an ATV federation. The participants were concerned that a federation-managed trail would attract ATV enthusiasts from outside the islands as well as promote increased use of the network by residents of the Municipality of Îles-de-la-Madeleine.

In the summer of 2016, Environment and Climate Change Canada published in local newspapers and posted in the field public notices to inform the population that ATVs are permitted on the main ATV trail established and marked by the Quebec MRNF in 2007. Effective in 2019, the Comité de travail de la Pointe-de-l'Est has implemented a new model of ATV trails network (the minimal ATV trail network at the Pointe de l'Est) and a management structure for this network (the Comité de suivi du RMS, a monitoring committee of the minimal ATV trail

network) which will be adapted to the regional context and will encourage appropriate and sustainable oversight of the use of off-road motor vehicles as well as protection of the environment in the Pointe de l'Est area. The Comité de suivi du RMS will notably ensure the integrated management, sustainability, maintenance and monitoring of the network in collaboration with the land managers and the local representatives.

Consequently, under the current management plan, use of ATVs, trucks and jeeps will now be an authorized activity in the NWA under the terms and conditions presented in section 6.2.2 in the new minimal ATV trail network designated for this purpose in 2019 (see Figure 11). However, the use of trucks and jeeps and the environmental impacts of these vehicles will be studied as part of a pilot project that will be conducted from 2019 to 2022 in order to verify whether this activity can be maintained over the medium or long term in the NWA without adversely affecting habitat conservation. The establishment of this network in the Pointe de l'Est will make it possible to regulate this practice, limit its impacts on the area and better protect the habitats and the species that live there. However, serious efforts will be necessary in order to inform residents about this issue, encourage their involvement and raise awareness about the new rules aimed at ensuring that the use of motorized vehicles is more respectful of the environment, closing and rehabilitating certain unofficial ATV trails, monitoring the impacts of motorized vehicles on the environment and wildlife, monitoring use of the area and ensuring that users abide by the regulations.

Visitors

Visitors to the NWA can also cause certain environmental impacts through their activities. For example, hikers who sometimes stray off the official hiking trails can create new trails, trample fragile habitats and plants at risk, disturb wildlife and cause problems of erosion in the dunes. In addition, some visitors do not obey the regulations, build fires and leave garbage in the NWA. Finally, visitors may also illegally collect resources in the NWA (e.g. picking of plants at risk).

3.2 RESIDENTIAL AND COMMERCIAL DEVELOPMENT

3.2.1 Tourism and Recreation Areas

The territory of the NWA is very fragmented. It is interspersed with privately owned lands and federal lands without legal protection status. In addition, the NWA is surrounded by the provincially owned Pointe de l'Est Wildlife Preserve, where recreational activities are permitted. It is because of the private properties interspersing the NWA that the ATV access trails were originally created, which have been extended to the NWA and have significant environmental

impacts on the dunes and wetlands. The federal lands without status are exposed to various surrounding pressures, but are not subject to the regulations that apply to National Wildlife Areas and are intended to protect wildlife species and their habitats. Since the provincial wildlife preserve is subject to different regulations which permit recreational activities not authorized in the National Wildlife Area, it is essential to harmonize insofar as possible the approaches to management of the wildlife preserve and NWA in order to promote regulatory compliance and conservation of the natural environments of the Pointe de l'Est area.

In addition, in years past, there has been illegal construction of cottages in the NWA, mainly small cottages. The unauthorized construction of these homes and their outbuildings (outhouses) results in the cutting of trees, the accumulation of waste and risks of pollution of the soil and water table. The presence of these buildings in the NWA also leads to the creation of new access trails and the degradation of dunes and wetlands, and can sometimes result in intensive use of nearby biological resources. Even now, actions are taken if necessary to address this problem and enforce the regulations.

Finally, tourism development in the archipelago can result in the construction of visitor infrastructures (hotels, inns, restaurants) and new attractions (museums, festivals) as well as the introduction of new recreational activities (kite buggies, fat bikes, etc.) in the region which could increase the number of visitors to the NWA and the resulting pressures on this protected area.

3.3 BIOLOGICAL RESOURCE USE

3.3.1 Hunting and Collecting Terrestrial Animals

Hunting

Fall waterfowl hunting is authorized in the NWA (see 6.2.3 Migratory Bird Hunting and Figure 13). When not carried out in accordance with the applicable rules and regulations, hunting can result in the creation of new trails by hunters who access the hunting sites in motorized vehicles, the destruction of vegetation to build blinds, the spread of invasive plant species used to build blinds, the trampling of plants and fragile environments as well as the accumulation of waste. Beginning in July, hunters frequently go to the hunting sites to start baiting (spread grains), which results in significant motor vehicle traffic, alteration of the habitats as well as the disturbance of wildlife, particularly near ponds used by the horned grebe for nesting and brood-rearing. In addition, hunting can have impacts on the critical habitat of this bird, whose Magdalen Islands population is considered endangered under SARA, as a result of access to the ponds on foot or in motorized vehicles, the creation of unofficial trails, the trampling of vegetation and the use of plants and trees to build blinds. This critical habitat, which

was identified in March 2013 in the recovery plan for the species (Environment Canada, 2013a), offers sites important to the survival of this species in eastern North America.

Accidental Takes

Accidental takes of birds, such as the horned grebe, are also likely to occur during hunting activities. The horned grebe is particularly exposed to the risks of accidental takes during the fall hunting season, particularly at the Étang de l'Est, since many individuals of the species congregate there in September for the moulting period, when they are unable to fly (F. Shaffer, CWS, pers. comm., 2017).

Poaching

The poaching of waterfowl and baiting carried out outside the authorized regulatory period can result in over-harvesting and have an impact on the wildlife of the NWA. It is difficult to assess the real impact of poaching on duck populations.

3.3.2 Picking of Terrestrial Plants

Picking of berries, such as the black crowberry, mountain cranberry, small cranberry (*Vaccinium oxycoccos*), large cranberry, common bearberry, early lowbush blueberry, velvet-leaved blueberry (*Vaccinium myrtilloides*), cloudberry (*Rubus chamaemorus*) and creeping snowberry (*Gaultheria hispidula*), is a traditional activity that was formerly practised every fall by certain residents on the territory that is now part of the NWA. Under the current management plan, traditional berry picking is now an authorized activity at designated locations in the NWA (see 6.2.4 Berry Picking and Figure 14), but commercial harvesting or harvesting for resale is strictly prohibited. Small-scale berry picking probably has little impact on resources and habitats of the NWA if the berry pickers avoid trampling the fragile habitats (e.g. patches of woolly beach-heather, barrens, broom crowberry plants) and do not travel to the picking sites in motorized vehicles. However, intensive berry picking could alter the fragile environments of the NWA and adversely affect plant reproduction. In addition, early harvesting of berries (unripe berries) followed by later harvests can result in over-exploitation. Berry picking will therefore be monitored in order to prevent adverse effects on the environment. Surveys could make it possible to designate fragile habitats where berry picking would be restricted or prohibited for conservation purposes.

3.3.3 Tree Cutting

The illegal cutting of trees and branches occurs from time to time in the NWA for the creation of ATV trails and the construction and concealment of hunting blinds. This unauthorized cutting, which is carried out in very slow-growing forest habitats, causes a loss of biomass and

biodiversity, can destroy bird nesting sites and damage fragile environments, especially if motorized vehicles are used to access the cutting sites. The extent of this activity and its exact impacts on the ecosystems of the NWA are not known.

3.4 POLLUTION

3.4.1 *Garbage and Solid Waste*

Garbage is often discarded along the edge of the trails of the NWA. In addition, remains of illegal campfires and miscellaneous trash are sometimes left in the NWA after night-time gatherings. Tin cans, glass bottles, plastic containers, rifle cartridges as well as various papers that litter the ground are a source of pollution and can adversely affect wildlife.

3.4.2 *Accidental Spills*

A large number of ships navigate in the waters of the Gulf of St. Lawrence. An accidental spill of hydrocarbons or other chemicals by these ships could contaminate the water and the beaches surrounding the NWA and affect the birds that use these areas. Environment and Climate Change Canada and its partners have adopted an emergency response plan (ERP) to ensure that appropriate bird protection measures are in place in the event of a spill.

3.4.3 *Contamination by Lead Pellets*

The lead pellets that were previously used in hunting cartridges are still a source of pollution at the bottom of the ponds and marshes of the NWA. The animals that feed in these environments, including waterfowl and waterbirds — particularly the horned grebe, whose population is at risk in the archipelago — may ingest these lead pellets. Indeed, a case of lead poisoning was documented in the NWA: a female horned grebe that had ingested six lead pellets was found dead in 1995 in a pond located southwest of the Étang de l'Est (Shaffer and Laporte, 2003 in CWS, 2005). This type of lead contamination is probably not rare in this sector, given the extent of hunting in the Pointe de l'Est area, the many years during which lead pellets were used in cartridges and the large number of birds that feed at the bottom of the ponds. It is difficult to monitor the effects of poisoning due to lead shots given the great mobility of birds, which can succumb to poisoning far from the NWA (CWS, 2005). However, since 1997, application of the regulation prohibiting the use of lead shot for waterfowl hunting has probably helped to reduce this risk (Environment Canada, 2013a; Government of Canada, 2019).

3.5 TRANSPORTATION AND SERVICE CORRIDORS

3.5.1 Roads and Railroads

Route 199, which passes through the western part of the NWA, from north to south, between Cape Nord-Est (or Cap de l'Est) and Old-Harry, can adversely affect the natural dynamics of the ecosystems. This road fragments the territory of the NWA and can reduce ecosystem connectivity. It can also hinder the free movement of wide-ranging animals (e.g. foxes) and result in accidental mortality of birds and mammals from the NWA due to collisions with vehicles.

3.6 CLIMATE CHANGE AND EXTREME WEATHER EVENTS

3.6.1 Coastal Erosion

Archipelago

The Magdalen Islands are facing a serious problem of coastal erosion related particularly to climate change and the relative sea-level rise. This phenomenon is resulting in losses of land, damage to infrastructure and roads as well as economic losses in the Magdalen Islands archipelago (Bernatchez et al., 2008). In 2006, 68% of the coastline of the archipelago was affected by erosion processes (LDGIZC, 2006 in Drejza et al., 2014a; Bernatchez et al., 2012). In these islands heavily exposed to storm surges (Drejza et al., 2014a), retreat of the coastline of up to 15 m has been recorded following a single storm event (Drejza et al., 2014b). In addition, relative sea-level rise has increased from 1.6 mm/year during the last 600 years to 3.5 mm/year since 1950 (Juneau, 2012).

It is anticipated that coastal erosion problems will worsen in the archipelago in light of predicted climate change and phenomena already observed such as the 60% to 70% reduction in sea ice cover (Senneville and Saucier, 2007 in Drejza et al., 2014a), the increase in storms, the acceleration of sea-level rise (Vermeer and Rahmstorf, 2009 and Koohzare et al., 2008 in Drejza et al., 2014a) and the increase in freeze-thaw cycles and mild spells in winter. Future scenarios related to climate change for the Magdalen Islands archipelago predict an average retreat of approximately 80 metres (1.62 m/year) of the low-lying sandy coastline and of 38 metres (0.77 m/year) of the rocky cliffs (Bernatchez et al., 2008) by 2050. By 2060, 81% of the length of coastline is predicted to be affected by erosion and only 14% is expected to experience accumulation (Bernatchez et al., 2012).

Pointe de l'Est

A study carried out on the evolution of the coastline of the Pointe de l'Est between 1833 and 1977 showed that the northern part of the Pointe de l'Est was experiencing erosion, that the

southern part was experiencing coastal accretion, and that the trend was in hydrodynamic balance, since erosion was taking place at almost the same rate as sedimentation (Drapeau, 1980 in CWS, 2005). This trend continued from 1963 to 2008, since it was observed that the storms predominantly from the NW and from the NNE were causing heavy erosion of the north side of the Point and significant movement of sediments, resulting in heavy accumulation on the south side. For this period, the southern sector of the Point exhibited the greatest positive sedimentary balance (accumulation) in the archipelago (Bernatchez et al., 2012).

National Wildlife Area

Pointe de l'Est National Wildlife Area includes little coastline, except in its western part, which is sheltered by the Havre de la Grande Entrée. However, over the past few years, significant erosion on the north side of the Pointe de l'Est has caused the beach to retreat to the boundaries of the NWA. In addition, dune breaches have formed along the coastline, for example in Clarke Bay (Denise Clark, East Point Management Committee, pers. comm., 2015), following major storms which occurred in 2010. Such breaches can promote the penetration of saltwater and thus cause alteration of aquatic ecosystems and the loss of habitats in the Étang de l'Est. Also, over the past ten or so years, significant accumulations of water have been observed in depressions in the southeastern part of the NWA (Robert Saint-Onge, La Salicorne, pers. comm., 2014). The predicted increase in coastal erosion could cause more environmental impacts in this protected area.

3.7 COLLABORATION AMONG GOVERNMENTS, LOCAL STAKEHOLDERS AND RESIDENTS IN CONSERVATION EFFORTS

Collaboration between the Canadian Wildlife Service and various government bodies, local stakeholders and residents to promote the conservation of Pointe de l'Est National Wildlife Area remains a challenge. The problems and the high transportation costs related to the isolation of the NWA and its distance from the CWS's administrative office in Quebec City further complicate collaboration efforts.

The National Wildlife Area (federal) is adjacent to private lands, the Pointe de l'Est Wildlife Preserve (provincial) and the Grande Échouerie beach (municipal) on the Pointe de l'Est, but the management approaches of these neighbouring entities do not always align with the conservation imperatives of the NWA. The various government bodies must adopt a concerted and coherent approach to conservation that is effective and sustainable.

The collaboration of various local organizations working in the field of conservation, interpretation and environment can certainly promote the protection of the Pointe de l'Est and of

the NWA. However, owing to the sometimes different approaches of these organizations, it is important to develop a common vision with them and to put the expertise of the partners to effective use in a coordinated, complementary and collaborative manner.

In the past, owing to reduced resources, the CWS had few interactions and collaborations with local stakeholders and residents, apart from the granting of contracts to certain organizations to carry out interpretation and habitat restoration activities. In the coming years, increased collaboration between the CWS and local stakeholders should make it possible to carry out several projects, better explain to residents the rationale of the NWA and encourage them to participate actively in its protection.

3.8 INVASIVE OR OTHERWISE PROBLEMATIC SPECIES, DISEASES AND GENES

The reed canarygrass and the purple loosestrife have been found during an invasive plant survey carried out in the NWA in 2019 (BEA, 2020) (see 2.4 Invasive species). However, the authors of the study consider that the presence of these species is not a concern for the ecological integrity of the NWA (BEA, 2020).

This survey has also identified six invasive plant species near this protected area, including the reed canarygrass, Japanese knotweed, giant knotweed, purple jewelweed, Siberian elm, and smooth bedstraw. The presence of these species near the NWA is a source of concern given their high invasive potential. The presence of the Japanese knotweed at less than 100 meters from the NWA is particularly worrisome since it is considered a fierce invader (BEA, 2020). Measures must be put in place to prevent the spread of these species.

3.9 SCIENTIFIC KNOWLEDGE GAPS

Knowledge about several of the natural resources of the NWA is insufficient, particularly about vascular plants and plant communities, use of the area by waterfowl, shorebirds and colonial birds, the exact effects of coastal erosion and climate change, the presence of invasive or alien species as well as the presence of certain species at risk. Enhancing knowledge would make it possible to better assess the state of ecological health of this protected area and would facilitate management decision making.

4 GOALS AND OBJECTIVES

4.1 VISION

Pointe de l'Est National Wildlife Area protects important habitats for species at risk, priority bird species and other wildlife species. Priority bird species are those identified in the *Bird Conservation Strategy for Bird Conservation Region 14 in Quebec Region: Atlantic Northern Forest* (Environment Canada, 2013b).

4.2 GOALS AND OBJECTIVES

The following goals and objectives are intended to define the vision of the management plan, taking into account the threats and management challenges. The goals and objectives will be achieved through the actions set out in Table 5 (Management Approaches for Pointe de l'Est National Wildlife Area), which will be implemented in line with available resources.

Goal 1: Reduce the impact of human activities on the NWA.

Objectives:

- 1.1 Complete NWA signage and boundary marking to protect plant and animal species from the impact of human activities.
- 1.2 Raise the awareness of the local and regional population about the mission of the NWA and the applicable regulations and obtain their support and collaboration.
- 1.3 Reduce the impacts of the use of motorized vehicles in the NWA.
- 1.4 Ensure regular annual monitoring of the area in order to reduce the number of incidents related to regulatory non-compliance.
- 1.5 Limit the impacts related to the harvesting of resources in the NWA.
- 1.6 Reduce pollution in the NWA.
- 1.7 Evaluate the effects of Route 199 on the ecosystems and wildlife of the NWA and possible mitigation measures.

Goal 2: Protect and enhance significant habitats for species at risk, priority bird species and other wildlife species.

Objectives:

- 2.1 Protect the priority bird species of the NWA, including waterfowl and shorebird populations.
- 2.2 Maintain populations of species at risk and their habitats by implementing the recommendations and actions outlined in federal and provincial recovery documents.
- 2.3 Identify and preserve the most representative sensitive habitats and those most important for the conservation of the NWA.
- 2.4 Restore habitats disturbed by motorized vehicles.
- 2.5 Reduce the effects of coastal erosion and extreme weather events on the habitats and restore disturbed habitats, if possible.
- 2.6 Prevent the spread of invasive or alien species.

Goal 3: Consolidate the NWA's land holdings and promote the conservation of natural habitats on adjacent lands in order to foster connectivity between habitats and improve ecological conditions.

Objectives:

- 3.1 Identify federal lands adjacent to the NWA that should be protected.
- 3.2 Integrate into the NWA federal lands adjacent to the NWA that has ecological value.
- 3.3 Protect natural habitats on federal lands adjacent to the NWA that has ecological value.
- 3.4 Limit the potential impacts of human activities on lands adjacent to the NWA.

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

Objectives:

- 4.1 Encourage public and local and regional community outreach and communication activities on the importance of conservation and the role of the NWA.
- 4.2 Ensure that visitor reception facilities and infrastructure are in good condition and safe for the public.
- 4.3 Promote local community awareness of and involvement in the conservation of the NWA and adjacent lands.

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

Objectives:

5.1 Develop and implement an ecological monitoring plan.

5.2 Identify scientific knowledge gaps and fill those considered a priority.

4.3 EVALUATION

An annual review of the actions implemented and the results achieved will be conducted based on the availability of financial and human resources. This review will help identify future priorities for actions and resource investment. The management plan will be reviewed five years after its initial approval, and reviewed and updated every ten years thereafter.

Table 5 Management Approaches for Pointe de l'Est National Wildlife Area

Goals	Objectives	Actions (Priority Level ¹)
<p>Goal 1: Reduce the impact of human activities on the NWA.</p> <p>Threats and challenges:</p> <ul style="list-style-type: none"> • Human presence and disturbance • Residential and commercial development • Biological resource use • Pollution • Transportation and service corridors 	<p>Objective 1.1: Complete NWA signage and boundary marking to protect plant and animal species from the impact of human activities.</p>	<ul style="list-style-type: none"> • As required, review the cadastral boundaries of the NWA and make sure to mark the boundaries in the field. (1) • Install comprehensive signage and complete NWA boundary marking. (1)
	<p>Objective 1.2: Raise the awareness of the local and regional population about the mission of the NWA and the applicable regulations and obtain their support and collaboration.</p>	<ul style="list-style-type: none"> • Install posters displaying the regulations of the NWA. (1) • Publish public notices of the regulations in newspapers. (1) • Promote the development of NWA information and outreach tools (e.g. brochure, visitor's guide, discovery guide). (3)
	<p>Objective 1.3: Reduce the impacts of motorized vehicles in the NWA.</p>	<ul style="list-style-type: none"> • Participate actively in the Comité de travail de la Pointe-de-l'Est in order to provide oversight of the use of motorized vehicles in the NWA and in the Pointe de l'Est area and limit its environmental effects. (1) • Develop an approach and an action plan to regulate the use of motorized vehicles in collaboration with local stakeholders. (1) • Participate in the establishment of the new minimal ATV trail network according to the action plan of the Comité de travail de la Pointe-de-l'Est in the NWA and in the Pointe de l'Est area. (1, 2, 3) • Ensure the protection of species at risk, biodiversity and wildlife habitats through measures identified during studies and environmental assessments as well as during the planning, layout or maintenance of the minimal ATV trail network in the NWA. (2, 3) • Raise the awareness of the local population concerning the impacts of the use of motorized vehicles and encourage their participation in the planning and establishment of the minimal ATV trail network and in the restoration of natural environments. (2, 3) • Effectively plan the harmonious integration of the new minimal ATV trail network in the NWA with the adjacent trails, and plan appropriate enhancement works and signage. (3) • Arrange for monitoring of the use of motorized vehicles in the NWA by authorized officials. (3)

Table 5 Management Approaches for Pointe de l'Est National Wildlife Area

Goals	Objectives	Actions (Priority Level ¹)
	<p>Objective 1.4: Ensure regular annual monitoring of the area in order to reduce the number of incidents related to regulatory non-compliance.</p>	<ul style="list-style-type: none"> • Collaborate with the Wildlife Enforcement Branch (WEB) to promote monitoring of the area and enforcement. (1) • Take immediate action in the case of illegal construction of cottages and encroachment on the NWA and correct the situation. (1, 2, 3) • Regularly check the condition of signage. (1)
	<p>Objective 1.5: Limit the impacts related to the harvesting of resources in the NWA.</p>	<ul style="list-style-type: none"> • Develop best practice guides for the fall migratory bird hunt, use of ATVs and traditional berry picking, as well as awareness-raising guides to prevent the cutting down of trees. (2)
	<p>Objective 1.6: Reduce pollution in the NWA.</p>	<ul style="list-style-type: none"> • Raise the awareness of NWA users concerning the impact of waste in the NWA and encourage them not to leave garbage behind. (2) • Periodically organize waste pick-up campaigns in the NWA. (2) • Document the possible use of cartridges with lead shots and their effects on waterbirds in the NWA. If necessary, raise the awareness of hunters concerning this issue. (3)
	<p>Objective 1.7: Evaluate the effects of Route 199 on the ecosystems and wildlife of the NWA and possible mitigation measures.</p>	<ul style="list-style-type: none"> • Commission a brief study on the possible impacts of Route 199, such as ecosystem fragmentation and mortality of wildlife in the NWA (e.g. birds). (3)
<p>Goal 2: Protect and enhance significant habitats for species at risk, priority bird species and other wildlife species.</p> <p>Threats and challenges:</p> <ul style="list-style-type: none"> • Human presence and disturbance • Residential and commercial development • Biological resource use • Pollution • Climate change and extreme weather events 	<p>Objective 2.1: Protect the priority bird species of the NWA, including waterfowl and shorebird populations.</p>	<ul style="list-style-type: none"> • Conduct surveys of priority bird populations in the NWA, particularly breeding populations of waterfowl and shorebirds, and identify the factors affecting their numbers. (1) • Establish protection measures for the priority bird species of the NWA. (1) • If deemed necessary, conduct a post-hunt review of the number of birds harvested in order to assess the effect of the hunt on populations of priority bird species. (2)
	<p>Objective 2.2: Maintain populations of species at risk and their habitats by implementing the recommendations and actions outlined in federal and provincial recovery documents.</p>	<ul style="list-style-type: none"> • Identify the habitat protection and management needs to protect species at risk, such as the horned grebe and the broom crowberry. (1) • In response to the recommendations made in recovery documents, publish descriptions of the critical habitat of species at risk that occur in the NWA in the Canada Gazette. (2) • Continue the surveying and mapping of plants at risk or with a precarious status such as broom crowberry, Connecticut beggarticks and northern adder's-tongue in order to identify the areas that are important to protect from the possible impacts of berry picking. (1)

Table 5 Management Approaches for Pointe de l'Est National Wildlife Area

Goals	Objectives	Actions (Priority Level ¹)
<ul style="list-style-type: none"> • Invasive or other problematic species, diseases and genes 		<ul style="list-style-type: none"> • Collaborate with the WEB in order to ensure monitoring of the area and protection of habitats and species. (1) • Ensure the long-term protection of bird species and plants at risk or with a precarious status (e.g. horned grebe, broom crowberry) in collaboration with provincial authorities if necessary. (2) • Following the gazetting of the critical habitat descriptions, develop and implement critical habitat protection measures. (3)
	<p>Objective 2.3: Identify and preserve the most representative sensitive habitats and those most important for the conservation of the NWA.</p>	<ul style="list-style-type: none"> • Establish the conservation priorities of the NWA, taking into account fragile habitats and habitats of interest from a biodiversity perspective. (1) • Map species and fragile habitats in order to facilitate their protection in the event of an accidental spill of toxic substances on land or water. (1) • Implement habitat conservation and restoration priorities, including maintenance and restoration of the dunes. (2)
	<p>Objective 2.4: Restore habitats disturbed by the use of motorized vehicles.</p>	<ul style="list-style-type: none"> • Assess the ATV trails that must be closed and restore degraded habitats. (1) • In collaboration with local organizations and residents, close the chosen ATV trails and restore the degraded habitats. (2, 3)
	<p>Objective 2.5: Reduce the effects of coastal erosion and extreme weather events on the habitats and restore disturbed habitats, if possible.</p>	<ul style="list-style-type: none"> • Assess the impacts of coastal erosion on the wildlife habitats of the NWA. (1) • Develop and implement a coastal erosion monitoring program. (2) • Carry out priority restoration work of the shoreline and affected wildlife habitats if possible. (3)
	<p>Objective 2.6: Prevent the spread of invasive or alien species.</p>	<ul style="list-style-type: none"> • Establish monitoring stations for detecting invasive or alien species in the NWA and conduct regular monitoring. (1) • Take action to eliminate invasive or alien species detected in the NWA, if applicable. (3)
<p>Goal 3: Consolidate the NWA's land holdings and promote the conservation of natural habitats on adjacent lands in order to foster connectivity between habitats and improve</p>	<p>Objective 3.1: Identify federal lands adjacent to the NWA that should be protected.</p>	<ul style="list-style-type: none"> • Conduct a landscape analysis to identify habitat conservation gaps and opportunities, and establish a conservation strategy. (2) • Assess the ecological value and conservation potential of habitats and species at risk on land adjacent to the NWA that should be protected. (3)
	<p>Objective 3.2: Integrate into the NWA federal lands adjacent to the NWA that has ecological value.</p>	<ul style="list-style-type: none"> • Take the necessary steps to integrate into the NWA federal lands with ecological value. (1) • Consolidate the area of the NWA by integrating adjacent lands in order to conserve important habitats for species at risk and biodiversity. (3) • Review the legal description of the NWA. (3)

Table 5 Management Approaches for Pointe de l'Est National Wildlife Area

Goals	Objectives	Actions (Priority Level¹)
<p>ecological conditions.</p> <p>Threats and challenges:</p> <ul style="list-style-type: none"> • Human presence and disturbance • Residential and commercial development 	<p>Objective 3.3: Protect natural habitats on federal lands adjacent to the NWA that has ecological value.</p>	<ul style="list-style-type: none"> • Protect important habitats on federal lands adjacent to the NWA, particularly the wetlands adjoining the Étang de l'Est and Clark Bay. (2)
	<p>Objective 3.4: Limit the potential impacts of human activities on lands adjacent to the NWA.</p>	<ul style="list-style-type: none"> • Harmonize the NWA's public outreach, wildlife/habitat conservation and recreational measures with those of the Pointe de l'Est Wildlife Preserve and adjacent municipal or private lands. (1) • Identify habitat protection and management needs to protect species at risk, such as the piping plover and the horned grebe. (1)
<p>Goal 4: Raise awareness among the public and local and regional communities about the conservation of the NWA, wildlife species and their habitats.</p> <p>Threats and challenges:</p> <ul style="list-style-type: none"> • Human presence and disturbance • Residential and commercial development • Pollution 	<p>Objective 4.1: Encourage public and local and regional community outreach and communication activities on the importance of conservation and the role of the NWA.</p>	<ul style="list-style-type: none"> • Contribute to the development of the themes and activities of an interpretation program that would be supported by the CWS. (1) • Harmonize the communication activities conducted in the NWA by collaborators (e.g. La Salicorne, East Point Management Committee, Attention Fragiles, Comité ZIP des Îles-de-la-Madeleine). (1) • Foster activities promoting the aboriginal Mi'gmaq history and culture in the NWA. (1) • Collaborate with regional and local stakeholders to promote and protect the NWA and the Pointe de l'Est area. (2, 3)
	<p>Objective 4.2: Ensure that visitor reception facilities and infrastructure are in good condition and safe for the public.</p>	<ul style="list-style-type: none"> • Complete the implementation of the existing footpath sections giving access to the sea and lay out new facilities and infrastructure. (1) • Establish the official ATV trail in the NWA using minimal infrastructure and bilingual signage based on common place names. (2) • Conduct annual inspections of facilities and infrastructure. (1) • Ensure regular maintenance of facilities and infrastructure. (1) • Develop a public safety plan. (1)
	<p>Objective 4.3: Promote local community awareness of and involvement in the conservation of the NWA and adjacent lands.</p>	<ul style="list-style-type: none"> • Raise the awareness of managers and owners of adjacent lands concerning the importance of best habitat management practices and their benefits for the NWA. (2) • Encourage local community initiatives (e.g. La Salicorne, Attention Fragiles, Comité ZIP des Îles-de-la-Madeleine, East Point Management Committee, Grosse-Île school) to promote awareness and education efforts concerning the environment of the NWA. (2) • Increase local community awareness of the conservation of the area through the development of outreach tools concerning the NWA. (2)

Table 5 Management Approaches for Pointe de l'Est National Wildlife Area

Goals	Objectives	Actions (Priority Level ¹)
		<ul style="list-style-type: none"> • Increase local community awareness of the traditional ecological knowledge and of the role it can play in the conservation of the NWA. (3) • Promote the maintenance of connectivity zones between habitats for species that have large home ranges, species at risk or with a precarious status and species of specific interest, as well as important biodiversity areas outside the NWA. (3) • Encourage regional and local conservation initiatives (e.g. projects on species at risk, stewardship projects) in the NWA and surrounding area, and promote the maintenance of buffer zones and ecological corridors. (3)
<p>Goal 5: Ensure ecological monitoring of the NWA and improve knowledge of wildlife species and their habitats.</p>	<p>Objective 5.1: Develop and implement an ecological monitoring plan.</p>	<ul style="list-style-type: none"> • Determine the indicators and methodologies of the ecological monitoring program. (1) • Implement the ecological monitoring plan. (2) • Use the expertise of the Mi'gmaq, local conservation groups and government departments for the analysis and implementation of the ecological monitoring program. (2)
<p>Threats and challenges:</p> <ul style="list-style-type: none"> • Scientific knowledge gaps 	<p>Objective 5.2: Identify scientific knowledge gaps and fill those considered a priority.</p>	<ul style="list-style-type: none"> • Update the knowledge acquisition plan on the basis of the NWA conservation plan and recent plant and animal surveys. (1) • Include the native and non-native traditional knowledge in the management of the NWA ecosystems. (2) • Identify and communicate research priorities to encourage scientific work in the NWA. (1) • Promote research collaborations with educational institutions and government departments. (2) • Carry out priority resource survey and monitoring activities (e.g. plants, habitats, species at risk, invasive or alien plants, waterfowl, shorebirds, waterbirds, habitat characterization) in collaboration with local and government stakeholders. (2) • Share with the Mi'gmaq knowledge about approaches to conservation of species, habitats and land. (2) • Confirm the presence and breeding of species at risk in the NWA and adjacent habitats (e.g. Étang de l'Est and Clark Bay). (2) • Assess the impacts of certain human activities (e.g. hunting). (2) • Encourage research on the effects of coastal erosion and of climate change in the NWA. (3)

¹. **Implementation timeline:** 1 (0 to 3 years), 2 (4 to 6 years), 3 (7 to 10+ years)

Note: The priority levels assigned to the actions refer to the implementation timeline and not to their importance in terms of resource conservation. Priorities may change depending on the situation and available resources.

5 MANAGEMENT APPROACHES

This section summarizes the approaches and actions presented in Table 5 that could be used in the management of Pointe de l'Est National Wildlife Area. However, specific management actions will be determined during the annual work planning process and will be implemented as human and financial resources allow, consistent with the approaches described below.

5.1 HABITAT MANAGEMENT

Habitat management will be focused on the conservation of important habitats for waterfowl, particularly the American black duck, northern pintail and green-winged teal, on the recovery of species at risk such as the horned grebe, Nelson's sparrow, rusty blackbird, piping plover (outside the NWA), Connecticut beggarticks, broom crowberry and northern adder's-tongue, as well as on the protection of the critical habitat of some of these species and important habitat for other wildlife species. Studies and surveys will also be conducted to gain a better understanding of plant associations, to identify sensitive habitats and habitats of interest as well as to identify rare plants and plants at risk in the NWA.

Since the ecosystems of the NWA are being affected by the use of motorized vehicles, efforts will be made to provide better oversight of this activity with local organizations, to mitigate its effects and to restore degraded habitats. Efforts will also be made to document and, if possible, limit the effects of coastal erosion and climate change on the environment, mitigate human disturbance and the effects of pollution, and monitor the presence of alien or invasive species in the NWA. Monitoring of the area by the Wildlife Enforcement Directorate (WED) will also be encouraged in order to limit the number of incidents related to regulatory non-compliance. Finally, the CWS will pursue broader collaboration with the managers of the lands adjacent to the NWA and with local groups working in the field of conservation and the environment in order to harmonize land management approaches and develop convergent and complementary conservation initiatives.

5.2 WILDLIFE MANAGEMENT

Wildlife management will be based on the knowledge acquired through surveys and various studies. This knowledge will be useful in taking stock of various aspects of the biodiversity of the NWA. Monitoring efforts could be carried out to support better understanding and management of the waterfowl, waterbird and shorebird populations that use the NWA as well as the bird species at risk surveyed in the NWA such as the horned grebe. It will also be

necessary to better document the presence of the Nelson's sparrow, the rusty blackbird and bats of the genus *Myotis*. Surveys could also be conducted on certain wildlife groups about which little is known in the NWA, particularly fish and invertebrates. Also, cooperation with various government and university specialists for research or monitoring projects will be encouraged in order to ensure the best possible protection of species at risk. The recommendations provided in species at risk recovery strategies will guide critical habitat protection in the NWA and surrounding area.

5.3 MONITORING

Implementation of an ecological monitoring program over the next five years is planned in order to assess the ecological condition of the NWA and gather information that will be useful in making management decisions. The program will be based on biological monitoring conducted internally and additional monitoring conducted in collaboration with local, regional and provincial stakeholders. Ecological monitoring efforts could cover, among other things, habitats, species at risk and the priority or representative species of the NWA (e.g. waterfowl) as well as the ecological and human-induced stresses that the area is subjected to (e.g. use of motorized vehicles). Cooperation with various local stakeholders could be established in order to increase the effectiveness and sustainability of the monitoring program.

5.4 RESEARCH

Knowledge acquisition and research needs have been established for various plant and animal species and for the management challenges and threats associated with Pointe de l'Est National Wildlife Area. As a first step, it is planned to update the knowledge acquisition plan based on the current NWA conservation plan (CWS, 2005) and on surveys and studies conducted since this plan was drafted. One of the priorities is to better document the use of the NWA by waterfowl, including the American black duck, northern pintail, green-winged teal, American wigeon, shorebirds and waterbirds, as well as the presence of certain species at risk or with a precarious status, including the Nelson's sparrow, rusty blackbird, bats of the genus *Myotis*, Connecticut beggarticks, and northern adder's-tongue. It is very important to have a better understanding of the extent of the ecological threats that may be affecting the NWA, such as the use of motorized vehicles, coastal erosion and climate change, the effects and pressures of peripheral human activities, invasive or alien species and the fragmentation of the landscape related to the presence of road infrastructure. Lastly, it would also be useful to learn more about habitats, plants, insects and benthos.

To obtain a permit to conduct research in Pointe de l'Est National Wildlife Area and to receive instructions regarding the guidelines for research proposals, please contact:

National Wildlife Area – Permit Request
Environment and Climate Change Canada – Canadian Wildlife Service
801-1550 D'Estimauville Avenue
Quebec City, QC G1J 0C3
Email: ec.permisscfquebec-cwsquebecpermit.ec@canada.ca

5.5 PUBLIC INFORMATION AND OUTREACH

Since Pointe de l'Est National Wildlife Area is open to the public, Environment and Climate Change Canada can authorize outreach activities in the NWA. These activities could be carried out by municipalities or local and regional conservation organizations.

Since the creation of the NWA in 1978, the Canadian Wildlife Service implemented awareness-raising and interpretation activities for the public. For nearly 30 years, the organization La Salicorne has offered interpretation activities in this protected area, mainly to tourists. Although the NWA has been in existence for nearly 40 years, it is still not well known to residents of the archipelago, particularly in terms of its mission and conservation role. Efforts will be made, in collaboration with local stakeholders, to inform and raise the awareness of the public and local communities concerning the mission of this protected area and the applicable regulations. In addition, La Salicorne is currently developing an interpretation plan which may meet the awareness objectives established for the NWA.

6 AUTHORIZATIONS AND PROHIBITIONS

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

Activities within an NWA are authorized where notices have been posted at the entrance to or along the boundaries of the NWA or when notices have been published in local newspapers (see Appendix I). However, the Minister can issue a permit authorizing certain activities.

6.1 PROHIBITION OF ENTRY

Under the *Wildlife Area Regulations*, the Minister may publish a notice in a local newspaper or post notices at the entrance to any National Wildlife Area or along the boundaries prohibiting entry to the NWA (see Appendix I). These notices can be posted when the Minister is of the opinion that entry is a public health and safety concern or when entry may disturb wildlife and their habitats.

In Pointe de l'Est National Wildlife Area, such a notice would be posted at the entrances to the NWA, in the two parking lots of the access sectors, i.e. the Camarine Area and the Échouerie Area.

Access to Pointe de l'Est National Wildlife Area is prohibited:

- by motorized vehicle outside the minimal ATV trail network and outside the designated periods (see the authorized vehicles and other specifications in section 6.2.2), by snowmobile or by any other means of transportation (e.g. dune buggy, amphibious all-terrain vehicle, motorcycle, bicycle, fat bike, horse, kite buggy) (for ATVs, trucks and jeeps, see the specifications in section 6.2.2).

6.2 AUTHORIZED ACTIVITIES

The NWA is open to the public at all times year-round, but access is restricted to designated areas, unless otherwise indicated in notices published in local newspapers or posted at the entrance to or along the boundaries of the NWA. In addition, persons holding migratory bird hunting permits can access the migratory bird hunting areas in the NWA according to the dates set out in the regulations concerning migratory bird hunting, usually from the end of

September to the end of December, in the designated areas, which may be indicated by posters on site. Visitors must comply with all other restrictions unless they have a permit issued by the Minister.

The following activities are considered compatible with the conservation goals and objectives set out in this management plan and are therefore authorized in the NWA: hiking, snowshoeing, nature observation and photography on the trails and the annual and seasonal trails of the network of ATV trails, picnicking in authorized areas and hunting of migratory game birds (waterfowl) in designated areas.

6.2.1 Hiking, Snowshoeing, Nature Observation, Photography and Picnicking

These activities are authorized only on the marked trails of the NWA (hiking trails and annual and seasonal ATV trails) and at designated facilities and infrastructure, such as lookouts and service areas, year-round. Pets (dogs and cats only) are permitted, but must be kept on a leash. Picnicking is authorized at designated areas, i.e. benches, tables and lookouts.

6.2.2 Use of Motorized Vehicles

Since the summer of 2019, at the request of local communities, the use of motorized vehicles in the NWA is only authorized on the new minimal network of marked ATV trails (Figure 11 and Figure 12). This measure is intended to channel these vehicles toward specific locations, far from fragile natural resources, and to prevent their environmental impacts elsewhere in this protected area. Users of motorized vehicles who want to drive on this network of trails must comply with the applicable municipal by-laws and provincial regulations, as well as with the regulations of the NWA. These regulations stipulate that all-terrain vehicles (ATVs), i.e. quads (including side-by-side type vehicles), are authorized to use the “year-round” ATV trails of the network (Figure 11). During the fall migratory bird hunting season, ATVs are also authorized to use the “seasonal” trails, which are clearly identified on site. Seasonal trails may be used from September 15 to December 31. In addition, during this fall hunting season, trucks and jeeps are authorized to use the year-round ATV trails as well as the seasonal trails, but only for migratory bird hunting and only during the migratory bird hunting season (Figure 11) under a pilot project conducted from 2019 to 2022. Users of these vehicles must hold a permit issued for this purpose by ECCC. This pilot project may or may not be renewed or could be cancelled at any time depending on the behaviour of the users and the impacts of these vehicles on the habitats of the NWA and the conservation of resources. Use of motor vehicles is prohibited beyond this minimal ATV trail network, including in trails that are closed and undergoing revegetation. Any other means of transportation, whether motorized or not, is prohibited in the NWA. In addition,

conservation areas for the horned grebe (a bird species whose population is endangered in the Magdalen Islands) have been established in the NWA in order to restrict motorized vehicle and foot traffic within 50 m of the ponds where the species nests and raises its young, i.e. from May 1 to August 31, in order to prevent disturbance of the species (Figure 12). While access to these horned grebe conservation areas is not prohibited, they were considered in the planning of the minimal ATV trail network in the Pointe de l'Est with the goal of protecting this species at risk. Parking of motorized vehicles is permitted in the designated areas. Designated officials of ECCC or other organizations monitor and enforce the regulations concerning the use of motorized vehicles in the NWA.

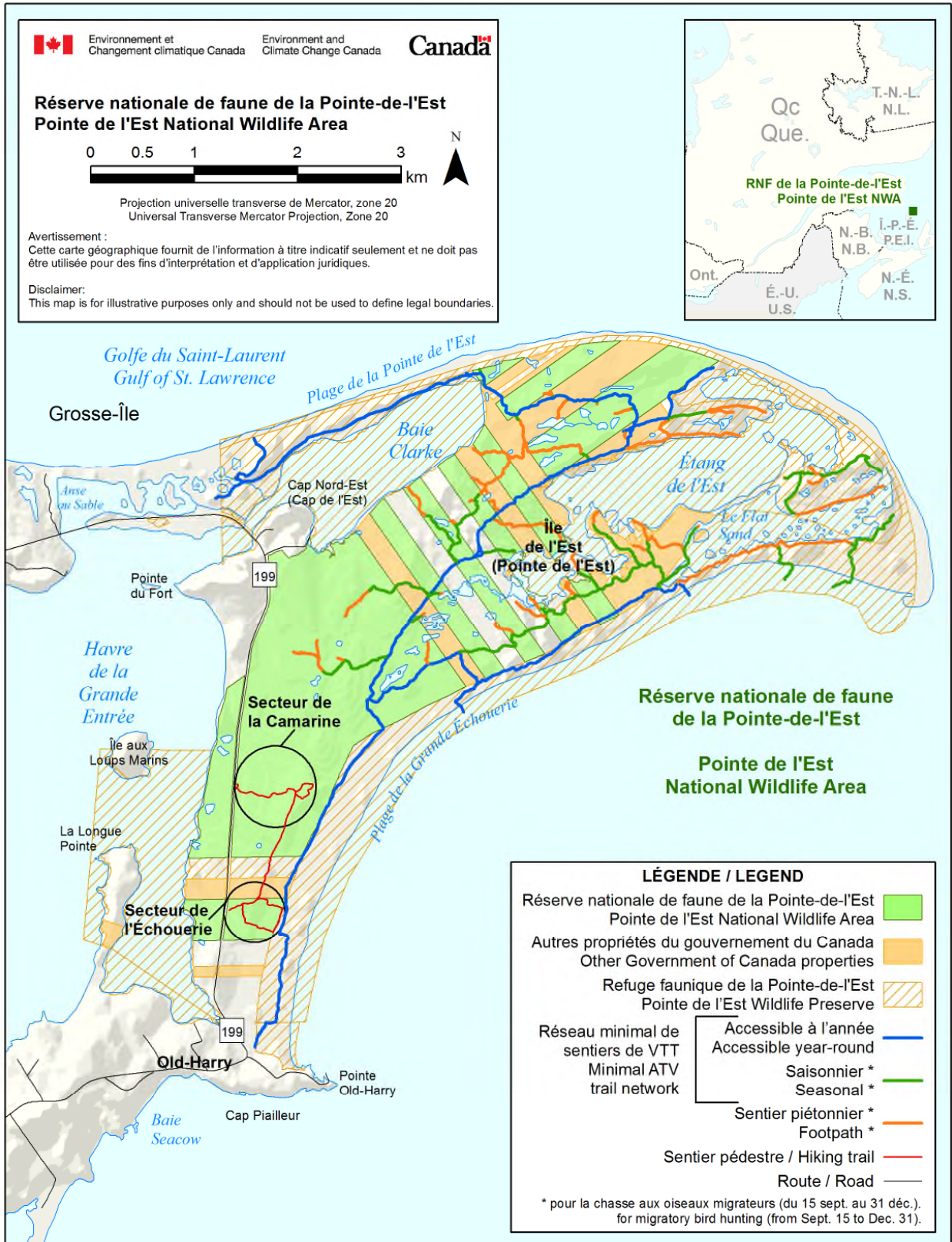


Figure 11 Minimal ATV trail network in the Pointe de l'Est, including Pointe de l'Est National Wildlife Area

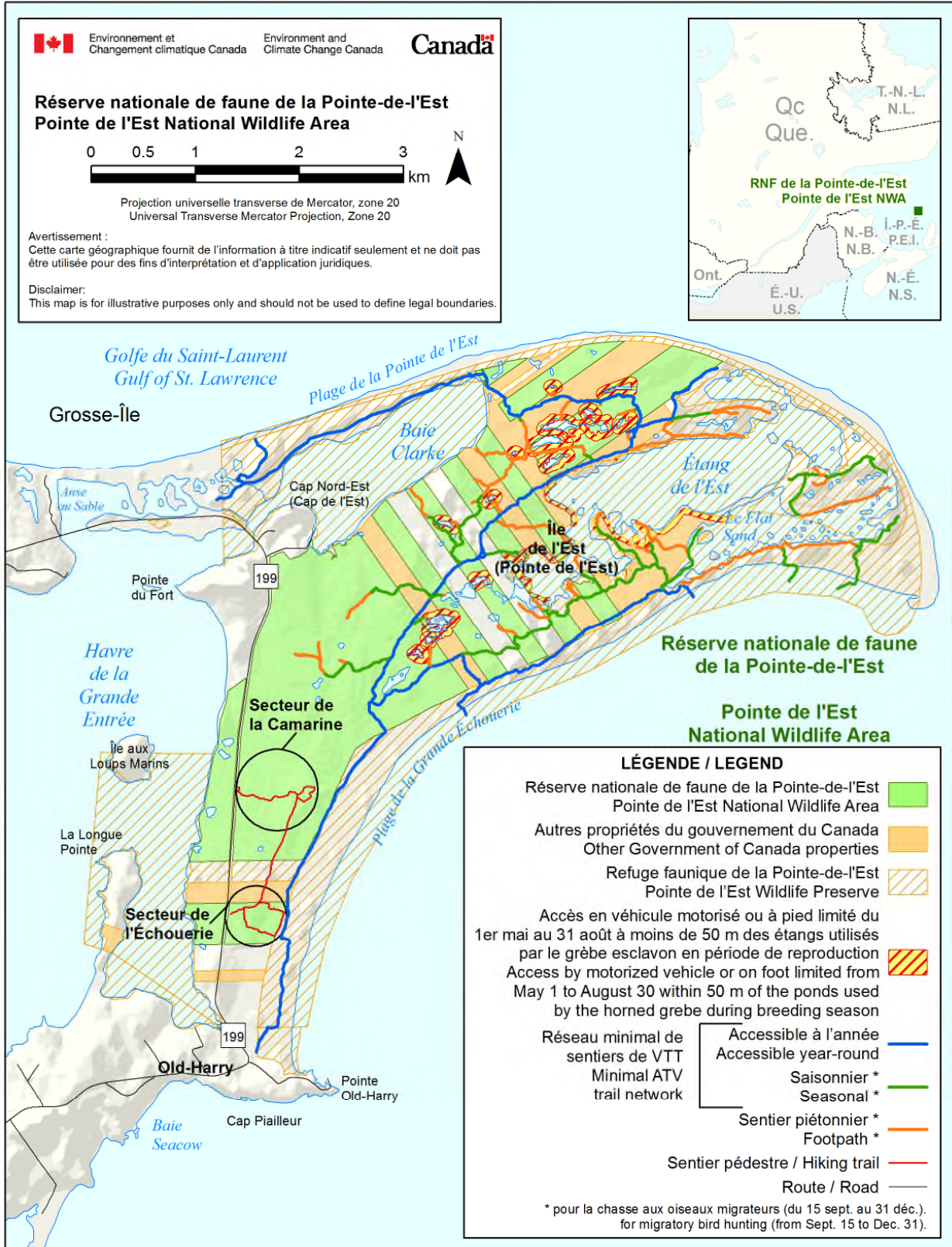


Figure 12 Horned grebe conservation areas intended to restrict motorized and foot traffic in order to prevent disturbance of this species during the breeding season in Pointe de l'Est National Wildlife Area

6.2.3 Migratory Bird Hunting

For a number of decades, waterfowl hunting has been a traditional activity in the Pointe de l'Est area. Migratory bird hunting is authorized in the NWA, provided the regulatory requirements respecting time periods, conditions, locations and hunting gear are met (Figure 13). For reasons of conservation and public safety, migratory bird hunting is prohibited in certain designated areas of the NWA, including in the Camarine and Échouerie areas less than 150 metres from the hiking trails. In addition, out of concern for the safety of users, it is recommended not to hunt in the network of ATV trails and less than 150 metres from these trails in the NWA. Furthermore, it is forbidden to use trees or branches to build blinds for migratory bird hunting in the NWA. In 2018, ECCC took steps to ban the practice of baiting in this protected area before the migratory bird hunting season in order to prevent frequent travel by motorized vehicles as well as the risks of disturbance of wildlife, degradation of the site and poaching. However, this proposal was not implemented, since it would have also been necessary to ban baiting elsewhere in the archipelago, which appears to be difficult. ECCC also planned to delay the beginning of the migratory bird hunting season until October 1 of each year in order to prevent accidental takes of horned grebes, a population at risk in the archipelago. These birds congregate notably at the Étang de l'Est from the beginning to the end of September for moulting, a period during which they are very vulnerable since they are unable to fly. However, hunters were reluctant to accept the idea of delaying the beginning of the hunting season in the NWA and in the archipelago, especially since the hunting season begins earlier in the Maritime provinces, which could deprive them of potential harvests of waterfowl.

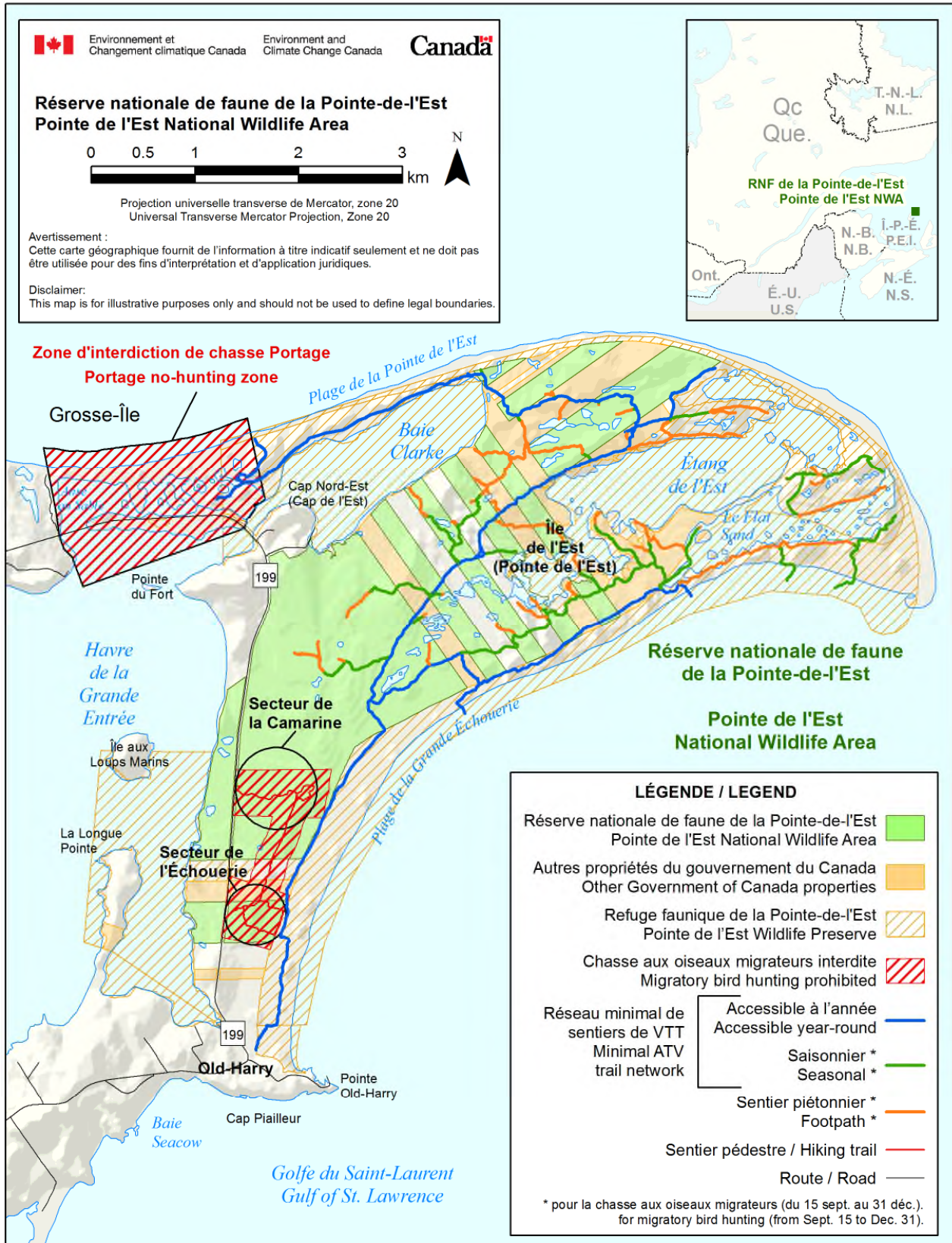


Figure 13 Areas where hunting is prohibited in Pointe de l'Est National Wildlife Area

6.2.4 Berry Picking

Under the current management plan, berry picking is a traditional activity which is now officially authorized in the NWA, but which, following surveys, could be restricted or prohibited in certain habitats in the geographic range of plant species at risk or with a precarious status (Figure 14), such as the broom crowberry, Connecticut beggarticks and northern adder's-tongue, and perhaps also the Gulf of St. Lawrence aster (to date, a species surveyed outside the NWA only), in order to ensure the survival of these species and their habitats. In such a case, these areas would be indicated on site. Harvesting of the following species is permitted in the NWA: black crowberry, mountain cranberry, common cranberry, large cranberry, common bearberry, early lowbush blueberry, velvet-leaved blueberry, cloudberry and creeping snowberry. However, commercial harvesting or harvesting for resale continues to be strictly prohibited in this protected area. In addition, berry picking must be done by hand and without the use of tools (e.g. combs, rakes) or mechanical or motorized equipment. The authorized maximum daily harvest is 20 litres (5 gallons) of berries (all species combined) per person per day, in order to reduce the risks of intensive exploitation and commercial sale.

A notice listing the activities permitted and prohibited in Pointe de l'Est National Wildlife Area is posted at the entrances to the NWA, i.e. in the two parking lots of the access sectors. This notice has also been published in the local newspapers.

Note: If there is a discrepancy between the information provided in this document and the notice, the notice shall prevail as it is the legal instrument authorizing the activity.

All other activities are prohibited in this NWA, including small and large game hunting, snaring, trapping, fishing, camping, and cycling as well as the use of motorized vehicles off the official access roads and parking lots and off the minimal ATV trail network. Furthermore, according to the modernized Wildlife Area Regulations, soon to be published, commercial activities such as sightseeing tours in ATV are forbidden in this protected area for conservation reasons.

6.2.5 Federal Lands Adjacent to the NWA

There are currently no visitor reception facilities or infrastructure on the federal lands adjacent to the NWA. The issue of authorization of public access and recreational activities will be considered in a subsequent analysis.

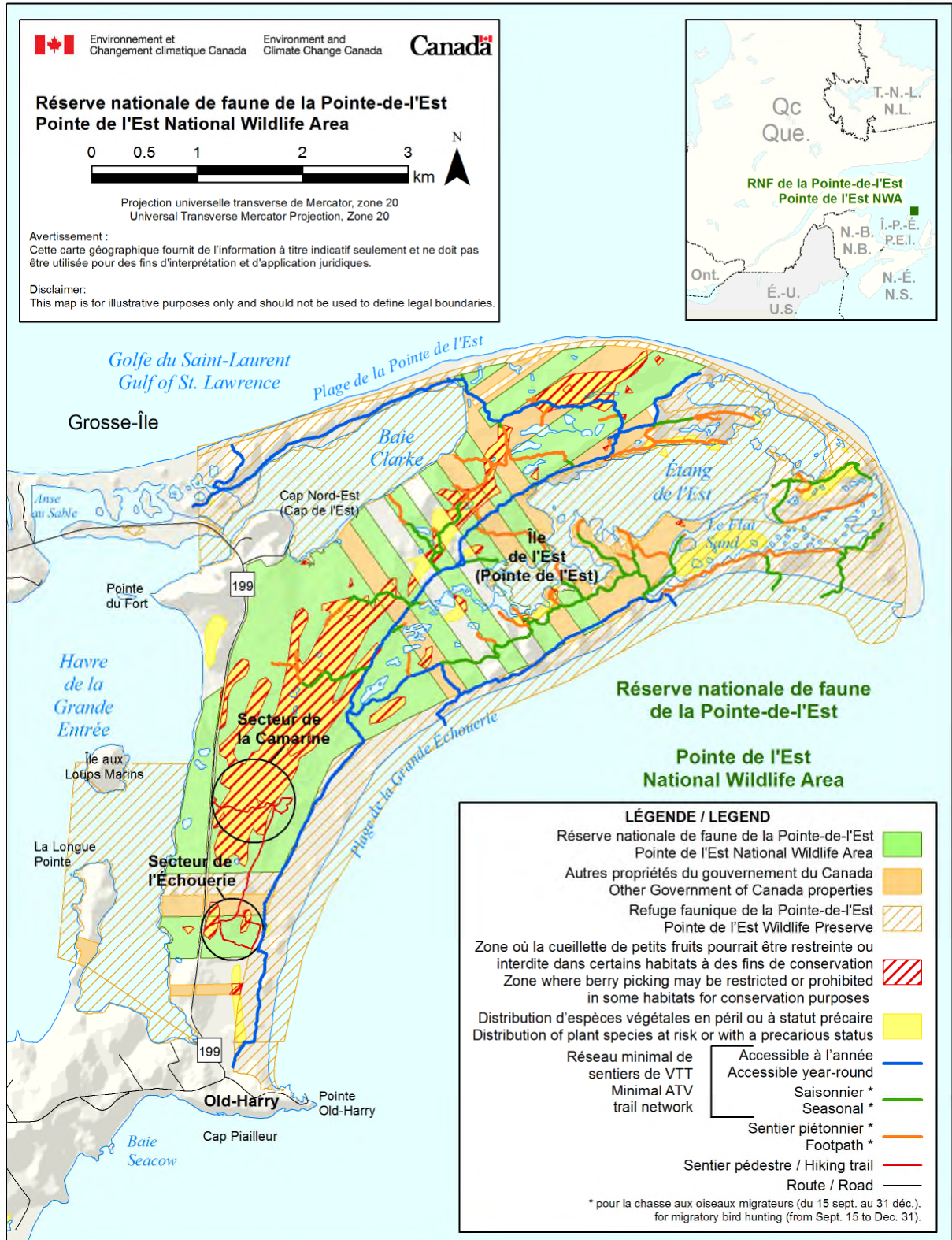


Figure 14: Areas where berry picking may be restricted or prohibited in some habitats to protect plants at risk or with a precarious status in Pointe de l'Est National Wildlife

6.3 AUTHORIZATIONS

Permits and notices authorizing an activity may be issued if the Minister is of the opinion that the activity is scientific research relating to wildlife or habitat conservation, that the activity benefits wildlife and their habitats or will contribute to their conservation, or is otherwise consistent with the criteria and purpose for which the NWA was established, as set out in the most recent management plan.

Upon issuing a permit, the Minister may add terms and conditions that he/she deems necessary to mitigate the activity's potential impacts on wildlife species and their habitats and to protect them.

For further information, please consult the "Policy when Considering Permitting or Authorizing Prohibited Activities in Protected Areas Designated under the *Canada Wildlife Act* and *Migratory Birds Convention Act, 1994*" (December 2011). This Environment and Climate Change Canada policy document is available on the Protected Areas website at:

<https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/protected-area-reference-documents/policy-guidelines.html>

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

Environment and Climate Change Canada – Canadian Wildlife Service
Quebec Region
801-1550 D'Estimauville Avenue
Quebec City, QC G1J 0C3
Email: ec.permisscfquebec-cwsquebecpermit.ec@canada.ca

6.4 EXCEPTIONS

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

- activities related to public safety, public 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 or plants;
- activities related to routine maintenance of NWAs, implementation of management plans and enforcement activities conducted by an officer or employee of Environment and Climate Change Canada or by delegated personnel.

6.5 OTHER FEDERAL AND PROVINCIAL AUTHORIZATIONS

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

For more information, contact the regional office of the competent federal or provincial authority.

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. In addition, Environment and Climate Change Canada staff will take all reasonable and necessary precautions to ensure their own health and safety as well as that of their coworkers. 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. Since natural environments contain some inherent dangers, visitors must take proper precautions to ensure their own safety. There are no Environment and Climate Change Canada staff permanently on site in this NWA or services for ensuring ongoing visitor safety. Environment and Climate Change Canada plans to implement a public safety plan to limit the risk of incidents and ensure public safety in the NWA.

Emergency incidents or situations can be reported to:

- **Environmental emergency:** ECCC's Canadian Environmental Emergencies Notification System at 514-283-2333 or 1-866-283-2333, or Quebec Department of Environment and the Fight Against Climate Change at 1-866-694-5454
- Regulatory non-compliance and poaching (federal): Enviro-info at 819-938-3860 or 1-800-668-6767
- SOS-Poaching (Quebec): 1-800-463-2191
- Maritime Search and Rescue (Canadian Coast Guard): 1-800-463-4393/cell: *16
- Sûreté du Québec: 310-4141/cell: *4141
- Civil Protection: 1-866-776-8345/cell: 911
- Forest fires: SOPFEU at 1-800-463-FEUX (3389)
- Local authorities (police or fire): 911

8 ENFORCEMENT

The management of NWAs is based on three acts and their associated regulations:

- 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 and Climate Change Canada's wildlife enforcement officers are responsible for ongoing monitoring of compliance with the acts and regulations and for conducting investigations, as required.

Here are some examples of activities that, if carried out on NWAs without authorization, may constitute an offence:

- entering the site outside the designated locations;
- destroying or disturbing migratory birds, their nests or their eggs;
- possessing a weapon or other instrument that could be used for hunting outside the designated periods and areas;
- picnicking or carrying on any other recreational activity outside the areas designated to that end;
- camping;
- lighting a fire;
- removing or damaging any natural artifact, building, fence, poster, sign or other structure;
- dumping or depositing any waste material or substance that would degrade or alter the quality of the environment;
- allowing a pet to run free;
- operating a motor vehicle (outside the official access roads, the parking lots and the minimal ATV trail network, where certain vehicles are authorized; see 6.2.2).

9 PLAN IMPLEMENTATION

The management plan will be implemented over a 10-year period. Annual work plans will be developed based on priorities and budgets. Depending on available resources and opportunities, some actions may be accelerated, postponed or cancelled. Environment and Climate Change Canada will take an adaptive management approach. Implementation of the plan will be evaluated five years after it is published and on the basis of the actions set out in Table 5.

10 COLLABORATORS

Collaboration with local agencies and organizations will be encouraged in order to contribute to the protection and conservation of wildlife species and their habitats in Pointe de l'Est National Wildlife Area. For instance, collaborations could be developed or pursued with universities and research centres to fill gaps in scientific knowledge, with the province to implement 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 is a list of the main organizations that may collaborate on the mission and activities of Pointe de l'Est National Wildlife Area.

Attention Fragîles
350 Chemin Principal, Suite 202
Cap-aux-Meules, QC G4T 1C9
Telephone: 418-986-6644
Fax: 418-986-6083
General email: action@attentionfragiles.org

Marie-Ève Giroux, Director
Mélanie Bourgeois, Project Manager, Biodiversity and Natural Areas

CEGEP de la Gaspésie et des îles (Magdalen Islands campus)
15 Chemin de la Piscine
L'Étang-du-Nord, QC G4T 3X4
Telephone: 418-986-5187
Fax: 418-986-6788

Club d'ornithologie des îles de la Madeleine
202-350 Chemin Principal
Cap-aux-Meules, QC G4T 1C9
Telephone: 418-986-5772
Email: lecorbijou@yahoo.fr

Comité ZIP des Îles-de-la-Madeleine
330 Chemin Principal, Suite 209
Cap-aux-Meules, QC G4T 1C9
Telephone: 418-986-6633 (Karine Rioux, Director)
Fax: 418-986-6633
Email: info@zipdesiles.org

Communauté maritime des Îles-de-la-Madeleine
460 Chemin Principal
Cap-aux-Meules, QC G4T 1A1
Telephone: 418-986-3100
Fax: 418-986-6962

East Point Management Committee
2A-006 Jerry Road
Grosse-Ile, QC G4T 6B9

Nancy Clark
Telephone: 418-937-3703
Email: Nancy.Clark@essb.qc.ca

Géo Littoral Consultants
419 Acadie Avenue
Dieppe, NB E1A 1H4
Telephone: 506-382-6766
Email: Geolittoral@gmail.com

Stéphane O'Caroll

La Salicorne
377 Route 199
Grande-Entrée, QC G4T 7A5
Telephone: 418-985-2833
Toll-free: 1-888-537-4537
Fax: 418-985-2226
Email: info@salicorne.ca

Robert St-Onge, Director
Email: direction@salicorne.ca

Ministère de la Faune, des Forêts et des Parcs (MFFP)
(Quebec Department of Wildlife, Forests and Parks)
Direction générale du secteur sud-est
195 Perron Boulevard East
Caplan, QC G0C 1H0
Telephone: 418-388-2125
Fax: 418-388-2444
Email: gaspesie-iles-de-la-madeleine@mffp.gouv.qc.ca

Ministère de la Faune, des Forêts et des Parcs (MFFP)
(Quebec Department of Wildlife, Forests and Parks)
Direction de la gestion de la faune de la Gaspésie-Îles-de-la-Madeleine
124 1st Avenue West
Sainte-Anne-des-Monts, QC G4V 1C5
Telephone: 418-763-3302
Fax: 418-764-2378
Email: gaspesie-iles-de-la-madeleine@mffp.gouv.qc.ca

Jean-Philippe Marcoux
Telephone: 418-763-3302, ext. 252
Email: Jean-Philippe.Marcoux@mffp.gouv.qc.ca

Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC)
(Quebec Department of Environment and the Fight Against Climate Change)
Îles-de-la-Madeleine (service point)
125 Chemin du Parc, Suite 104
Cap-aux-Meules, QC G4T 1B3
Telephone: 418-986-6116
Fax: 418-986-2884
Email: gaspesie-iles-de-la-madeleine@environnement.gouv.qc.ca

Municipality of Grosse-Île
1-006 Jerry Road
Grosse-Île, QC G4T 6B9
Telephone: 418-985-2510
Fax: 418-985-2297
Email: info@mungi.ca

Janice Turnbull, managing director
Email: jturnbull@mungi.ca

Municipality of Îles-de-la-Madeleine
460 Chemin Principal
Cap-aux-Meules, QC G4T 1A1
Telephone: 418-986-3100
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Réserve nationale de faune de la Pointe-de-l'Est

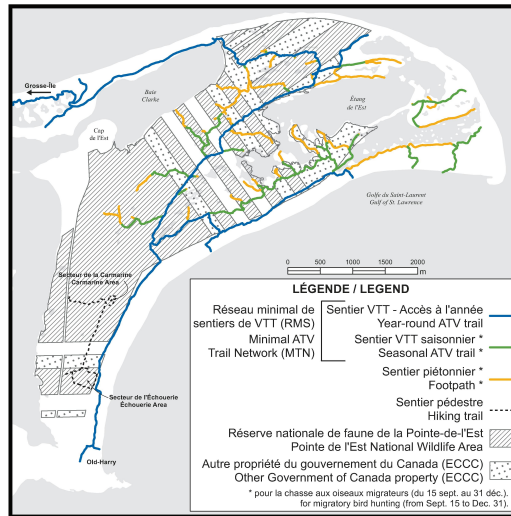
Environnement et Changement climatique Canada désire informer le public que la réserve nationale de faune (RNF) de la Pointe-de-l'Est, située dans la municipalité de Grosse-Île dans la région administrative Gaspésie–Îles-de-la-Madeleine, est un territoire protégé. La RNF a été créée en 1978 afin de protéger la faune et ses habitats, particulièrement ceux des oiseaux migrateurs et des espèces en péril présentes sur ce territoire.

Afin de protéger ce territoire, le Ministère informe les personnes qui circulent dans la RNF de leur obligation de se conformer aux règles dictées par la *Loi sur les espèces sauvages du Canada* et les règlements qui en découlent. Toute personne qui omet de se conformer à ces règles ou aux lois en vigueur est passible d'une amende et de poursuites.

La randonnée pédestre, la raquette, l'observation de la nature et la photographie sont autorisées dans les sentiers pédestres de la réserve (en pointillés sur la carte), ainsi que dans les sentiers de VTT accessibles à l'année (en bleu sur la carte) et les sentiers saisonniers (en vert sur la carte). Les sentiers piétonniers (en orange sur la carte) sont accessibles, sans véhicule, pour la chasse du 15 septembre au 31 décembre.

À moins de détenir un permis à cet égard, délivré par le ministre, il est notamment interdit à quiconque se trouve sur la réserve nationale de faune de :

- pêcher
- chasser, sauf les oiseaux migrateurs¹
- détruire ou enlever un végétal²
- laisser un animal domestique en liberté³
- nager, camper ou allumer un feu
- pique-niquer, sauf aux endroits désignés (tables, bancs)
- se livrer à une activité non autorisée
- utiliser tout moyen de transport hors des sentiers autorisés⁴
- enlever, endommager ou détruire une affiche, une enseigne ou toute autre structure
- jeter ou laisser des déchets.



PUBLIC NOTICE

Pointe-de-l'Est National Wildlife Area

Environment and Climate Change Canada would like to inform the public that the Pointe de l'Est National Wildlife Area (NWA) is a protected area. This NWA is located in the municipality of Grosse-Île, in the Gaspésie–Îles-de-la-Madeleine administrative region. The NWA was created in 1978 to protect wildlife and their habitats, particularly those of migratory birds and species at risk in this area.

To protect the area, the Department would also like to inform persons entering the NWA that they must comply with the rules under the *Canada Wildlife Act* and its regulations. Anyone who fails to follow these rules or obey the laws in effect may be subject to fines and prosecution.

Hiking, snowshoeing, nature viewing and photography are permitted on the NWA's hiking trails (shown as dotted lines on the map) as well as on the ATV trails, both year-round (in blue on the map) and seasonal (in green). The footpaths (in orange on the map) may be used without a vehicle for hunting from September 15 to December 31.

Unless a permit has been issued by the Minister, it is especially prohibited for anyone in the NWA to:

- fish
- hunt, except migratory birds¹
- destroy or remove a plant²
- allow any domestic animal to run at large³
- swim, camp or light a fire
- picnic, except in designated areas (tables, benches)
- carry on an unauthorized activity
- use any means of transportation except on authorized trails⁴
- remove, damage or destroy any poster, sign or other structure
- dump or deposit any waste material.

¹ aux périodes, aux conditions, aux endroits et avec les engins de chasse autorisés selon la réglementation en vigueur. Les chasseurs peuvent se rendre à pied à leur emplacement de chasse.

² à l'exception de la cueillette manuelle et non commerciale de petits fruits qui est autorisée, à pied uniquement. L'utilisation d'outils ou d'équipements pour leur récolte est interdite. La récolte maximale journalière autorisée (toutes espèces confondues) est de 20 litres (5 gallons) par personne. La revente est interdite.

³ Les chiens sans laisse sont autorisés pour la chasse uniquement.

⁴ Seuls les véhicules tout-terrain (VTT), soit les quads (incluant les véhicules de type côte à côte), sont autorisés sur les sentiers VTT accessibles à l'année. Lors de la période de chasse automnale aux oiseaux migrateurs, les VTT sont autorisés à circuler sur les sentiers saisonniers; les camions et les jeeps peuvent circuler sur les sentiers VTT accessibles à l'année et saisonniers durant cette période (voir NOTE ci-dessous). La période d'utilisation des sentiers saisonniers est du 15 septembre au 31 décembre. La circulation motorisée est interdite hors de ce réseau minimal de sentiers de VTT, y compris dans les sentiers fermés et en régénération. Tout autre moyen de transport, motorisé ou non, est interdit dans la réserve.

NOTE : L'utilisation des camions et des jeeps sur les sentiers accessibles à l'année et saisonniers sera autorisée uniquement pour la période de chasse automnale aux oiseaux migrateurs 2018. De 2019 à 2022, un projet pilote sera mis en place afin d'évaluer les impacts environnementaux de la circulation de ces véhicules et déterminer les actions à prendre. Durant ce projet, les utilisateurs de ces types de véhicules devront détenir un permis délivré par le ministre pour circuler sur le réseau minimal de sentiers de VTT durant la période de chasse aux oiseaux migrateurs.

¹ Only during the periods, subject to the conditions, in the areas and using the hunting equipment permitted by current regulations. Hunters may walk to their hunting locations.

² Other than non-commercial hand-picking of berries, which is permitted on foot only. No tools or equipment may be used to harvest berries. No more than 20 litres (5 gallons) of berries, of one or more kinds, may be gathered per day, per person. Resale is prohibited.

³ Off-leash dogs are permitted for hunting only.

⁴ Only all-terrain vehicles (ATVs), namely quads (which include side-by-side vehicles), are permitted on year-round ATV trails. During the fall hunting season for migratory birds, ATVs may be used on seasonal trails; trucks and jeeps may travel on year-round and seasonal ATV trails during this time (see NOTE below). Seasonal trails may be used from September 15 to December 31. Motor vehicles are prohibited beyond this minimal ATV trail network, including on closed trails and areas undergoing revegetation. Any other means of transportation, whether motorized or not, is prohibited in the NWA.

NOTE : Trucks and jeeps may be used on year-round and seasonal trails only for the 2018 fall hunting period for migratory birds. From 2019 to 2022, a pilot project will be launched to assess the environmental impacts of these motor vehicles and to determine any necessary actions. During the pilot project, users of such vehicles must hold a permit issued by the Minister to travel on the minimal ATV trail network during the migratory bird hunting season.

Ces interdictions constituent une version abrégée de la réglementation qui s'applique. Pour plus de détails, veuillez consulter la *Loi sur les espèces sauvages du Canada*, la *Loi de 1994 sur la convention concernant les oiseaux migrateurs* et leurs règlements en visitant le site Web suivant : www.laws-lois.justice.gc.ca.

Pour obtenir des informations générales ou rapporter une infraction, contactez le Centre de renseignements du ministère au 1-800-668-6767 ou à ec.enviroinfo.ec@canada.ca.

Rien dans le présent avis ne porte atteinte aux droits ancestraux ni à ceux issus de traités autochtones.

These prohibitions constitute an abridged version of the applicable regulations. For more information, refer to the *Canada Wildlife Act* and the *Migratory Birds Convention Act, 1994*, and their associated regulations, by visiting the following website: www.laws-lois.justice.gc.ca.

For more information or to report a violation, contact the Department's Public Inquiries Centre at 1-800-668-6767 or at ec.enviroinfo.ec@canada.ca.

This notice shall not be construed so as to abrogate or derogate from any Aboriginal treaty or other rights of Aboriginal peoples.