



# *Quebec Eastern Habitat Joint Venture Implementation Plan 2015-2020*



*North American Waterfowl  
Management Plan*  
*Plan nord-américain de  
gestion de la sauvagine*  
*Plan de Manejo de Aves  
Acuáticas de Norteamérica*



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## Approval

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# 1 Background

In May 1986, the Canadian Minister of the Environment and the United States Secretary of the Interior signed the North American Waterfowl Management Plan (NAWMP), agreeing on continent-wide objectives for maintaining waterfowl populations, as well as habitat conservation objectives. The NAWMP committed both two countries to spend \$1.5 billion over 15 years on habitat conservation. Mexico became a signatory to the NAWMP in 1994. There have been three updates to the document (1994, 1998, 2004), and a full review of the fundamental objectives was conducted in 2012.

The 2012 NAWMP Revision represented a major advance in the field of waterfowl conservation planning. While the NAWMP Revision remains focused on waterfowl populations and their habitats, emphasis has also been placed on revised and integrated objectives, with particular attention to the waterfowl conservation community, thereby providing a more comprehensive picture of future conservation actions.

Three basic goals were identified in the plan revision:

- **Goal 1** – Abundant and resilient waterfowl populations to support hunting and other uses without imperiling habitat.
- **Goal 2** – Wetlands and related habitats sufficient to sustain waterfowl populations at desired levels, while providing places to recreate and ecological services that benefit society.
- **Goal 3** – Growing numbers of waterfowl hunters, other conservationists and citizens who enjoy and actively support waterfowl and wetlands habitat conservation<sup>1</sup>.

The objectives of the NAWMP are implemented through joint ventures across North America. These joint ventures are joint public-private initiatives based on the *North American Wetlands Conservation Act* (NAWCA), a U.S. federal law. The goal of the NAWCA is to encourage partnerships between public agencies and other organizations by:

- Protecting, developing, restoring and managing an appropriate distribution and diversity of wetland ecosystems and other habitats associated with these ecosystems, as well as for other fish and wildlife of North America;
- Maintaining and improving the current distribution of wetlands associated with migratory bird populations;
- Maintaining an abundance of waterfowl and other wetland-associated migratory birds consistent with the objectives of the NAWMP, Partners in Flight (landbirds), the Shorebird Conservation Partnership (shorebirds), Waterbird Conservation for the Americas (waterbirds other than waterfowl) and other international obligations under treaties, migratory bird conventions and other agreements with Canada, Mexico and other countries.

<sup>1</sup> An international working group is responsible for this new goal, and objectives are expected to be formulated over the course of the period covered by this EHJV implementation plan. In order to incorporate these objectives in Quebec, it may be necessary to adjust this plan once the objectives are announced.

At the North American scale, the NAWMP is supported by three international joint ventures for specific species, which target the scientific needs necessary for the sound management of over 20 waterfowl species (over 50 different populations) and their habitats. These three joint ventures are:

- Black Duck Joint Venture;
- Arctic Goose Joint Venture;
- Sea Duck Joint Venture.

The habitat-related objectives, supported by the scientific recommendations made by Species Joint Ventures, are implemented through 25 Habitat Joint Ventures, including 18 in the United States, 5 in Canada and 2 in Mexico (see Figure 1).

**Figure 1. Territories covered by the various Habitat Joint Ventures in North America, in support of the North American Waterfowl Management Plan (source: <http://www.nabci-us.org/jvmap.html>).**



## 1.1 Eastern Habitat Joint Venture (EHJV)

The EHJV was established in 1989. Covering the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador, the EHJV encompasses the largest area in Canada compared to the other habitat joint ventures. There is usually a five-year implementation period, and the goals and objectives can thus be reviewed if necessary based on the most recent updates of the NAWMP.

All the activities of the EHJV are directed by a Board of Directors, which is responsible for the general oversight and monitoring of the actions carried out on the entire area concerned. Each province has established a steering committee and sometimes a technical committee, to oversee the planning, development, implementation and management of projects (see Appendix 1).

In Quebec, the six organizations that are currently EHJV partners are:

- Ducks Unlimited Canada
- Environment and Climate Change Canada – Canadian Wildlife Service
- Fondation de la faune du Québec
- Quebec Department of Sustainable Development, Environment and the Fight Against Climate Change
- Quebec Department of Forests, Wildlife and Parks
- Nature Conservancy of Canada – Quebec Region

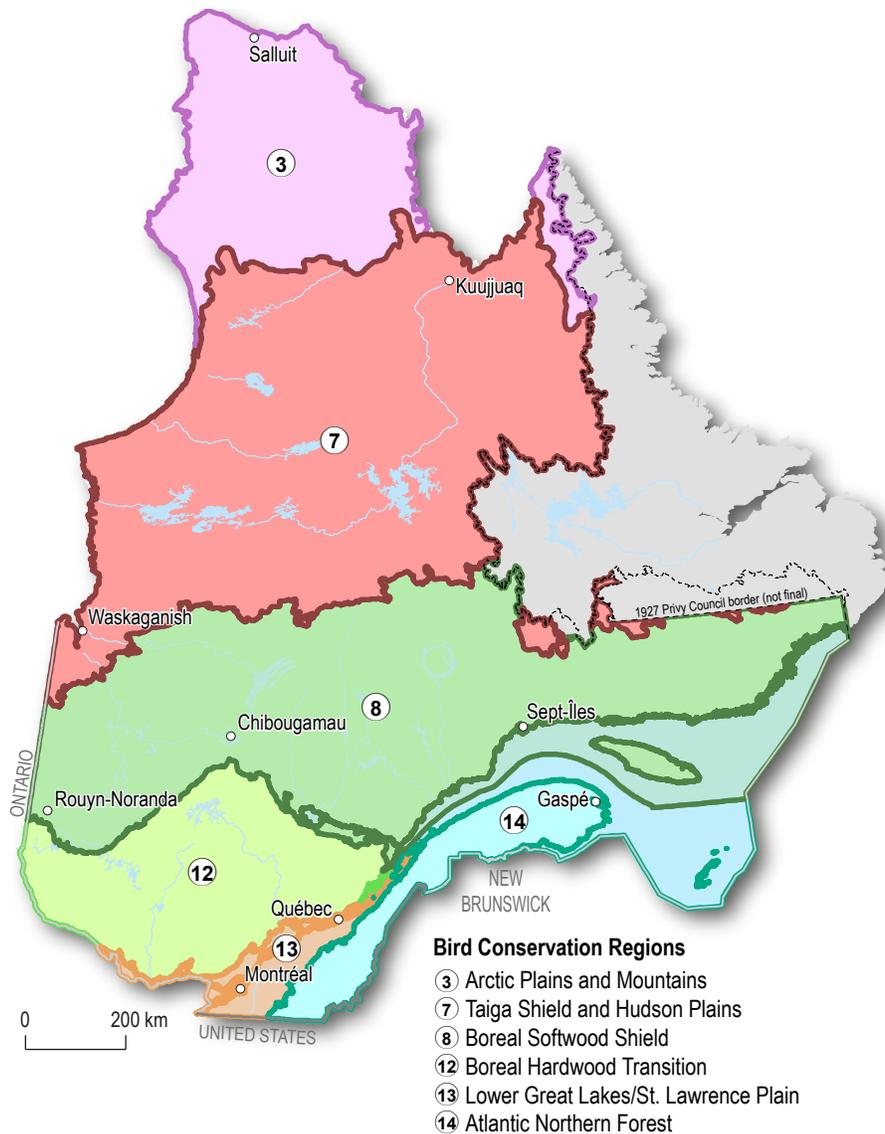
The mission of the EHJV is to provide leadership in order to ensure that populations of waterfowl and other species are sustainable and healthy through conservation partnerships. This leadership is articulated around a vision of maintaining and improving the landscape<sup>2</sup> to sustain bird populations while providing ecological and economic benefits to society.

## 1.2 Importance of Quebec for waterfowl

The province of Quebec covers a vast area, totalling 1,668,000 km<sup>2</sup>. The characteristics of this area vary primarily along a south-north gradient (climate, vegetation, soil), which explains why the province has been divided into different units such as Bird Conservation Regions (BCRs; Figure 3) and the Ecological Reference Framework (ERF). These units consist of assemblages with substantially similar characteristics. This gradient in characteristics explains why concentrations of human populations and activities are not homogeneous throughout Quebec. The same is true for the use of habitat by various waterfowl species.

<sup>2</sup> A landscape is a heterogeneous and dynamic mosaic composed of three main components: the matrix, the patch (habitats) and the corridors (Jobin et al. 2013). From a wildlife perspective in particular, a landscape is thus a mosaic of important habitats (patches) for a species or species group that are spread across a dominant component of the landscape (the matrix). Corridors are elements that connect patches.

**Figure 2.** Délimitation des six Régions de conservation des oiseaux au Québec (<http://nabci.net/International/Francais/bcrmap.html>).

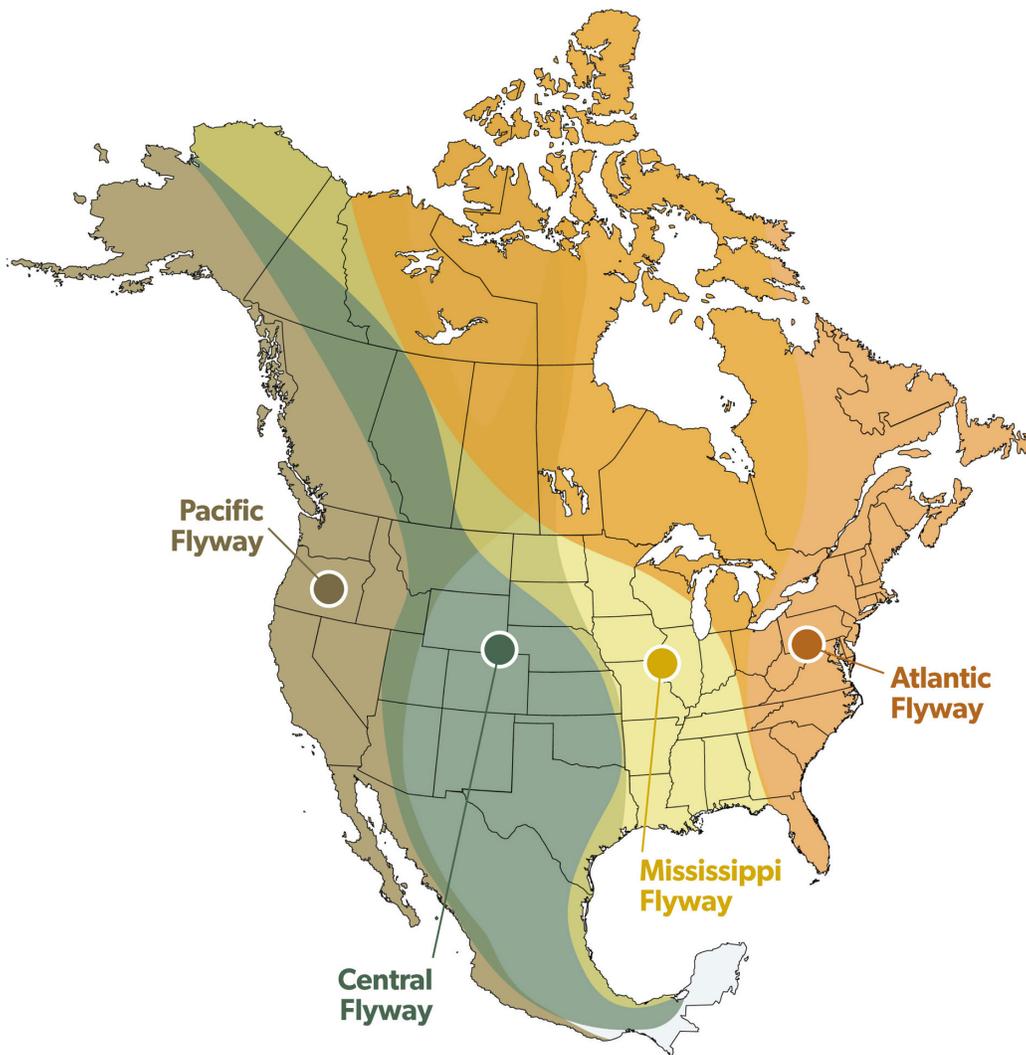


In Quebec, the St. Lawrence River and its shores key elements in determining land use, as well as representing habitats of exceptional value for waterfowl that follow the Atlantic Flyway and a portion of the Mississippi Flyway. This St. Lawrence River corridor, which intersects the axis of migration, offers a diversity of high quality habitats that provide breeding, rearing, moulting and winter gathering sites for birds. The use of this corridor by birds while areas further north are still subject to winter conditions makes it an essential migratory stopover, both in the spring for breeding and the continuation of migrations, and in the fall, when annual plant growth is at its peak and before the birds arrive at their wintering grounds located further south.

Quebec plays a critical role in the conservation of North American waterfowl populations, particularly for species that use the Atlantic Flyway (Figure 3). There are three reasons Quebec is important for the 37 waterfowl species that occur in this province (Appendix 4):

- Many of the province's wetlands and associated habitats are used as staging areas by Arctic breeding species during spring and fall migrations. For example, it is estimated that just over 9 million ducks and geese use the wetlands during the spring migration (D. Bordage, unpublished data).
- Approximately 3.6 million ducks and geese breed in Quebec, which is home to 51% of the world population of American Black Duck.
- A few hundred thousand waterbirds overwinter in Quebec.

**Figure 3.** Map of the different waterfowl migration routes in North America (<http://www.multivu.com/players/English/7804651-ducks-unlimited-migration/>).



Waterfowl use a wide variety of habitats, including freshwater marshes, lakes, beaver ponds, rivers, bogs and agricultural lands. Although waterfowl occur throughout the province, certain specific sites are considered more critical, either because of the number of species or individuals they support at specific times of the year or because of their geographic location (e.g. migratory stopover).

Waterfowl hunting generates close to \$20 million in economic activity in Quebec annually, while recreational birdwatching generates an estimated \$300 million annually.

The importance of the province of Quebec to waterfowl justifies the efforts made under the EHJV which, since its inception in 1989, has made investments of over \$145 million aimed at maintaining important habitats for waterfowl and other wildlife species that depend on them.

The following sections will present the main results of the EHJV obtained over the past few years, followed by the objectives and actions planned for their implementation for the next five years (2015 to 2020).

### ***1.3 Implementation of the EHJV in Quebec, 2007-2012***

The last five-year implementation plan (IP) developed by the EHJV partners covered the 2007-2012 period. The main objective of this plan was to protect and restore wetlands in eastern Canada that produce the majority of waterfowl populations in the Atlantic Flyway and also contribute to the Mississippi Flyway. The objective of its programs was to maintain, restore and enhance the abundance and quality of wetlands and adjacent uplands.

To ensure the success of this 2007-2012 plan, the following objectives were adopted:

- To promote large-scale wetland conservation through the modification of provincial and municipal land use, agricultural, and forestry policies;
- To protect, by securement and stewardship, the isolated wetlands and adjacent uplands subjected to high pressures resulting from urban, industrial, and agricultural development;
- To restore and enhance the most severely degraded wetlands and those having the greatest ecological potential.

The following sections present a progress report on the actions carried out during the period covered by this implementation plan as well as a few findings.



**Wood Duck (Jean-Maxime Pelletier)**

### 1.3.1 General results for the 2007-2012 period

Table 1 presents the areas affected by habitat-related actions as well as the associated costs.

**Table 1. Actions carried out under the EHJV in Quebec from 2007 to 2012 through its habitat programs<sup>A</sup> (hectares) and their cost.**

Program	Area (ha)	Cost (\$k)
Retention	13,193	46,728
Enhancement	7,356	5,290
Management	~ 17,000 <sup>B</sup>	1,850
Stewardship	13,492,645 <sup>C</sup>	5,596

A Habitat programs are those whose results are expressed in area.

B Under the management program, it should be pointed out that, on an annual basis, more than one action that generates an expense may be carried out on the same hectares, in which case they are not counted cumulatively in terms of area, but rather in terms of costs.

C Under the stewardship program, the area indicated corresponds to the actions carried out on both privately owned and publicly owned land. The figures for publicly owned land reflect the results of regulatory amendments (such as the reform of the Quebec *Regulation respecting standards of forest management for forests in the domain of the State* and other legislation).

Comparing the actions carried out with the projections established in 2007 for the following five years is a complex exercise. Five years is a short period of time from a biological and natural standpoint, but it is quite a different matter from a budgetary and policy standpoint. The projections made in 2007 reflect the context of the period and the authors' best estimate of future investments and actions. It is important to bear in mind that the context, particularly the financial context, can evolve radically and can thus have a major impact on results. Table 2 presents the habitat objectives identified under the intensive and extensive conservation programs (2007-2012) and the actions carried out to achieve those objectives. Figure 4 presents the breakdown of expenses by type of activity.



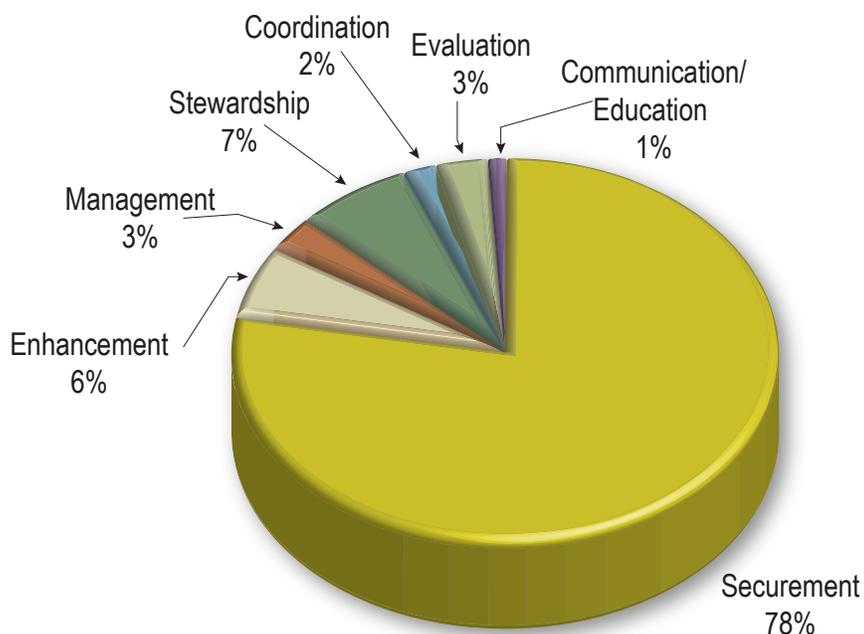
**Amqui Marsh, Ducks Unlimited Canada**

**Table 2. Habitat objectives identified under the intensive and extensive conservation programs (2007-2012) and objectives achieved.**

Program/activity	Objective identified (ha)	Objective achieved (ha)
<b>1. Habitat retention</b>		
a) Acquisition		
Fee simple acquisition	7,500	9,556
Land donations		
<b>TOTAL ACQUISITION</b>	<b>7,500</b>	<b>9,556</b>
b) Other than acquisition		
Conservation easements	350	964
Conservation agreements	12,100	2,673
<b>TOTAL OTHER THAN ACQUISITION</b>	<b>12,450</b>	<b>3,637</b>
<b>TOTAL RETENTION</b>	<b>19,950</b>	<b>13,193</b>
<b>2. Habitat enhancement</b>		
Habitat restoration	2,300	7,298
Nesting boxes for cavity-nesting ducks	500 nesting boxes	690 nesting boxes
Lure crops	n/a	58
<b>TOTAL ENHANCEMENT</b>	<b>2,300</b>	<b>7,356</b>
<b>3. Habitat management</b>	<b>17,500</b>	<b>~ 17,000</b>
<b>4. Stewardship</b>		
a) Outreach	9,700	564
b) Influence	123,000	
<b>TOTAL STEWARDSHIP</b>	<b>132,700</b>	<b>564</b>
<b>5. Communication and education</b>	n/a	
<b>6. Coordination</b>	n/a	
<b>7. Evaluation</b>	n/a	
<b>8. Influence of governments</b>	30,279,735*	13,492,645

\* In 2006, the Department of Sustainable Development, Environment and Parks implemented the directive entitled "Traitement des demandes d'autorisation des projets dans les milieux humides" [Processing of applications for authorization of projects in wetlands], which led to the expectation on the part of the EHJV in Quebec concerning the adoption of a policy on wetland conservation and a gain of 14,000,000 ha of conserved habitat. This policy was not adopted.

**Figure 4. Proportion of expenses incurred by type of activity, 2007-2012.**



### 1.3.2 Results by objective

**Objective 1** "To promote large-scale wetland conservation through the modification of provincial and municipal land use, agricultural, and forestry policies."

The following are a few examples of the actions carried out:

- The development of regional wetland conservation plans, which are intended to provide basic information on wetlands;
- The classification of forest wetlands on ecoforestry maps, which complement the mapping carried out for the regional plans (Ducks Unlimited Canada and Department of Natural Resources and Wildlife);
- Detailed mapping of the wetlands of a portion of the St. Lawrence Lowlands to provide an accurate and up-to-date tool for the location of wetlands, which facilitates their inclusion in land use planning;
- The submission of briefs during public consultations concerning the Metropolitan Land Use and Development Plan (PMAD) of the Montreal Metropolitan Community (MMC) and during the work of the parliamentary committee on Quebec Bill 71, "*An Act respecting compensation measures for the carrying out of projects affecting wetlands or bodies of water*";
- The inclusion of stronger provisions concerning wetland and riparian conservation during the development of the new forest regime (Quebec *Sustainable Forest Management Regulation*);
- Efforts to encourage municipal authorities to adopt wetland conservation plans;
- Enhancement of the Ruisseau de Feu area in Terrebonne as a demonstration site, with the goal of reconciling development and conservation in the urban setting.

The actions presented demonstrate that the stakeholders involved in the EHJV have been very active, but that additional efforts are needed to achieve the objectives. Furthermore, wetland losses continue, and the province of Quebec still does not have a conservation and sustainable use approach that specifically addresses this issue, although a new legal and regulatory framework is expected to be introduced by 2020. In addition, wetland conservation by municipal authorities remains a discretionary power in terms of land use planning. However, some progress has been noted, for example in the Montreal Metropolitan Community which, under its Metropolitan Land Use and Development Plan,<sup>3</sup> requires that the regional county municipalities (RCMs) within the MMC develop wetland conservation plans.

Finally, it should be recalled that the growth of the human population and its needs will constantly increase the pressure on isolated wetlands, particularly in the St. Lawrence Lowlands.

A number of actions have yet to be carried out, particularly with respect to the adoption of new legislation setting out clear rules and obligations in terms of wetland conservation. In accordance with their respective missions, the EHJV partners will closely monitor the parliamentary proceedings on this subject.

**Objective 2** "To protect, by securement and stewardship, the isolated wetlands and adjacent uplands subjected to high pressures resulting from urban, industrial, and agricultural development."

The purpose of this objective was to improve wetland conservation in areas of high human activity (urban, industrial, commercial, agricultural, forestry), primarily the St. Lawrence Lowlands (BCR 13) and the Appalachians (BCR 14). The land in this part of the province is largely privately owned, and the significant wetland losses in these areas make wetland conservation necessary.

Habitat securement measures implemented under this objective have ensured the long-term protection of over 13,000 ha of new habitats in areas under strong pressure of conversion to uses other than conservation. Similarly, efforts to consolidate wetlands considered a priority for the EHJV, particularly in the Outaouais and Montérégie (Rivière du Sud) regions, have continued.

Some \$52.3 M have been invested to purchase and protect land through private stewardship. The high costs associated with land acquisition can be explained by the increase in land value over the course of the period and by the fact that the wetlands to be protected were located near urban areas (the high cost of land made it necessary to adopt a different approach than the EHJV's past approach for this type of action).

3 <http://cmm.qc.ca/champs-action/amenagement/plans/pmad/>

A few examples of habitat securement measures:

- In 2008, a five-year financial partnership agreement to protect natural environments was signed by the provincial government, Ducks Unlimited Canada and the Nature Conservancy of Canada;
- Three sites are particularly noteworthy, both for their biological richness and the abundance and quality of the wetlands found on these sites: the Marguerite-d'Youville wildlife refuge, in Montérégie; Lochaber Bay, in the Outaouais; and the Lac-à-la-Tortue peat bog, in Mauricie.

In the Province of Quebec, where most land is privately owned, the objectives of the Plan have not been achieved in terms of protection, particularly with regard to the signing of conservation agreements. A similar situation applies with respect to landowner outreach and engagement. The continuing anthropogenic pressures on the area justify maintaining this objective in the new implementation period.

**Objective 3** "To restore and enhance the most severely degraded wetlands and also those having the greatest ecological potential."

The progress report shows that 7,356 ha of habitat have been the subject of restoration projects. These projects required investments of close to \$5.2 million, i.e. 24% less than planned. The majority of the sites concerned are located in the St. Lawrence Lowlands and in the St. Lawrence River corridor and include, for example, the Ruisseau de Feu in Terrebonne and the Commune de Baie-du-Febvre and SARCEL [Société d'Aménagement Récréatif pour la Conservation de l'Environnement du Lac Saint-Pierre] (segment 8) in Lake Saint-Pierre.

This result is largely attributable to the financial partnership agreement between certain EHJV partners for the restoration of wildlife sites. Under that agreement, waterfowl habitat enhancements were implemented, which also had a positive impact on fish.

The nest box program, which covers a substantial proportion of Quebec, also falls under the restoration component. A total of 690 new nest boxes have been installed and monitored. The average utilization rate of these nest boxes (40%) by certain waterfowl species (mainly Wood Duck, Common Golden Eye and Hooded Merganser) appears to be having a positive local effect on certain populations, such as Wood Ducks. Although the population trends for the three main species of cavity-nesting ducks are either stable or show modest growth, snags continue to be a limited and must sought-after type of natural habitat. The EHJV partners will continue to support the nest box program. In addition to producing very positive results, this program provides good opportunities for landowner outreach and engagement.

The disturbance and destruction of wetlands continue to be an ongoing concern, especially in the St. Lawrence Lowlands. Restoration activities constitute an important lever for increasing the number and quality of these habitats. This is why restoration will play an important role in the new implementation period.

It is generally relatively difficult to measure the direct effect on waterfowl of the results obtained in relation to the three objectives of the Plan. Are the upward trends in the populations of most waterfowl species over the last 40 years the result of the actions of the NAWMP partners, including those of the EHJV, or are they attributable to other factors over the same

period (e.g., decrease in the number of hunters, changes in agricultural practices, and acceleration of climate change in the north)? The answer may fall somewhere in between, with habitat retention and restoration actions combining with other factors to affect waterfowl populations. Nonetheless, the presence of significant wetland losses and disturbances in the St. Lawrence Lowlands (BCR 13) that affect the quality of breeding habitats argues in favour of maintaining all initiatives aimed at offering more new habitats. This is a particular concern in the St. Lawrence Lowlands, given their crucial importance for waterfowl in Quebec, and in other areas, particularly the Appalachians.

#### **1.4 2012-2015 period**

Depending on the development and approval of new objectives consistent with the goals set and recommendations made during the revision of the NAWMP, the EHJV objectives established for the 2007-2012 period were renewed annually until 2015. The partners have thus maintained the formal framework under which conservation actions are carried out, both in Quebec and in the other provinces concerned.

During this period, North American Wetlands Conservation Council (NAWCC) - Canada members also agreed to synchronize the habitat joint venture implementation plans so that they all end in 2020. This will facilitate the establishment of a Canadian overview of the objectives identified and, subsequently, of a five-year progress report on the actions carried out.

The information concerning investments and actions implemented under the projects carried out during the three-year period (2012-2013, 2013-2014 and 2014-2015) have been incorporated into the National Tracking System as have the data from other years (Table 3). An overview is provided in the following table:

**Table 3. Results of the EHJV in Quebec for the transition period (2012-2015) between the 2007-2012 implementation plan and this implementation plan.**

<b>Programs (Initiatives)</b>	<b>Investment (\$)</b>	<b>Area (ha)</b>
Habitat Retention(including Stewardship)	17,642,907	1,805,128
Habitat Enhancement (Restoration)	2,981,026	631
Land and Water Policy (Influence)	666,299	-
Habitat Asset Management	1,758,150	54,588*
Coordination (Conservation Planning)	1,002,178	-
Evaluation (Science)	281,096	-
Communication and Education	346,965	-

\* Average of the three years

The results presented in Table 3 indicate total investments of \$24,678, 621. Added to this is the approximately \$6 M in investments by Quebec EHJV partners other than Ducks Unlimited Canada and the Nature Conservancy of Canada, mainly in Evaluation (Science) and in Coordination (Conservation Planning).

While not exhaustive, the following are examples of projects carried out in Quebec between 2012 and 2015 under the "Habitat Retention" and "Habitat Restoration" initiatives:

#### Habitat Retention:

- **Marais Massettes-Ouest (Labelle) in the Outaouais** – This 140-ha property is heavily used as a migratory stopover and breeding habitat for waterfowl. Its acquisition made it possible to consolidate a large area along the Ottawa River as well as to restore the Marais aux Massettes marsh located partly on this property and partly on the adjacent lots already protected.
- **La Pointe Saint-Pierre in Gaspé** – This site is located not far from the Barachois de Malbaie and consists of fields, forests and riparian areas that provide habitat for thousands of birds, including certain species at risk. In addition to protection of this site, development work has been undertaken to make the site accessible to nature lovers, allowing them to appreciate its rich biodiversity.

#### Habitat Restoration:

- **Lavallière Bay – St. Louis Marsh in Montérégie** – The work involved installing a water level control structure, dikes and a pumping station, creating a perched marsh just over 100 ha in Lavallière Bay and offering high-quality breeding habitat for waterfowl and spawning habitat for Yellow Perch, among other species.
- **Poulin Marsh in Chaudière-Appalaches** – The work involved installing a new water level control structure to restore critical, high-quality habitat for waterfowl and for the other species that use this site to its original condition.

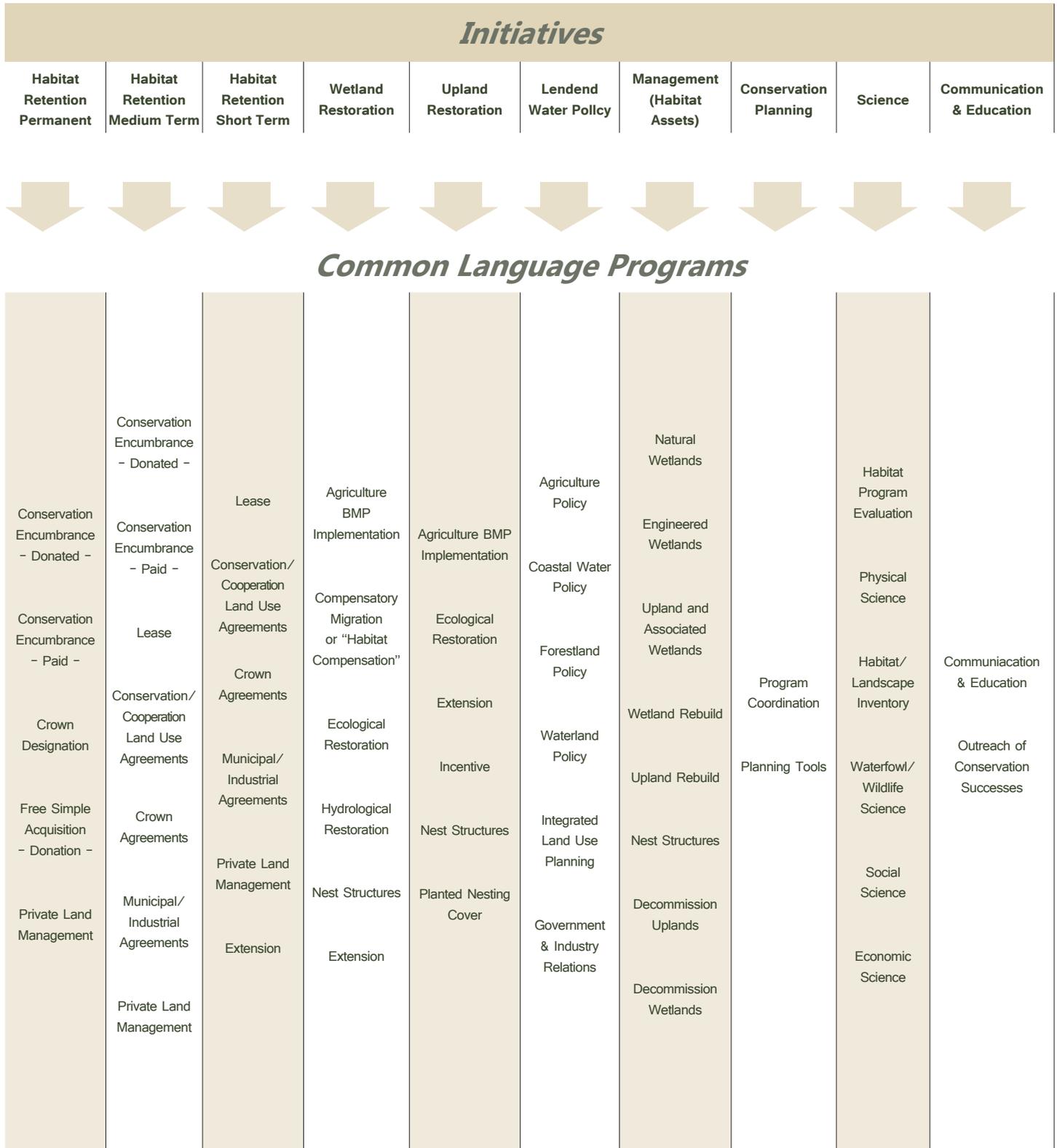
### 1.5 A common language

In July 2013, the NAWCC – Canada adopted a common terminology to harmonize the language used by the organizations involved in the implementation of habitat joint ventures in Canada. This "common language" includes 10 initiatives (7 of those related to habitat retention and restoration are grouped together) and 55 programs.<sup>4</sup> Figure 5 presents all the initiatives and programs.

Consequently, the Quebec EHJV partners have developed the 2015-2020 five-year planning in accordance with this common language for the period from April 1, 2015, to March 31, 2020. The main components of this planning are included in the "*EHJV NAWMP Implementation Plan 2015-2020 – Partners conserving wetlands and associated uplands for Birds*" (6 provinces; available at <http://www.ehfv.ca>).

4 <http://nawmp.wetlandnetwork.ca/publications/>

**Figure 5. Overview of common language initiatives and programs used in Canada since 2013 (excerpted from the document: "A Common Language for Canadian NAWMP Habitat Joint Ventures," Reference Document, July 9, 2013).**



Note: The application of these programs varies depending on the Canadian province or area.

## 2 The EHJV in Quebec from 2015 to 2020

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Knowledge of waterfowl biology and management has evolved since the last EHJV implementation plan was developed in 2007. The following section presents some of the work that provides new information on the status of the populations, major trends and threats to habitats, which today permits even more informed decision making, whether at the scale of the bird species concerned or of the area in which they are located. All of these documents were used in developing this implementation plan and the general goals and directions that will guide the EHJV in Quebec until 2020.

### 2.1 Overview of updated knowledge

#### 2.1.1 Status of Quebec Waterfowl Populations, 2009

This report<sup>5</sup> produced by the Canadian Wildlife Service of Environment and Climate Change Canada provides an update on the status of each of the 37 waterfowl species that occur in Quebec. Produced with the goal of supplementing the efforts undertaken by the North American Waterfowl Management Plan (NAWMP) and the North American Bird Conservation Initiative (NABCI), the *Status of Quebec Waterfowl Populations, 2009* identifies the priority waterfowl species, the sites of interest and the management and conservation measures that would have or could have an effect on these species. The findings of this report served as a basis for the development of the *Quebec Waterfowl Conservation Plan, 2011*.

#### 2.1.2 Quebec Waterfowl Conservation Plan, 2011

The *Quebec Waterfowl Conservation Plan, 2011*<sup>6</sup> was developed by the Canadian Wildlife Service of Environment and Climate Change Canada as a management tool at the BCR scale. This plan identifies the priority species as well as the specific issues to ensure waterfowl conservation in Quebec. This document was used to determine the habitat actions to be carried out from 2015 to 2020 (see section 2.3).

#### 2.1.3 The State of Canada's Birds 2012

This report<sup>7</sup> presents a picture of the current health of Canada's bird populations. It describes trends in the status of Canada's birds, the major threats they face, and conservation solutions that benefit them. The report is both a call to action and an acknowledgement of success for certain species. Continued progress on bird conservation requires action to conserve habitat and address threats, both within Canada and outside its borders, since three-quarters of Canada's bird species spend much of their lives outside Canada.

As shown in Figure 6, several groups of birds have declined in numbers over the past 40 years, while waterfowl populations have increased. One of the explanations offered is that international

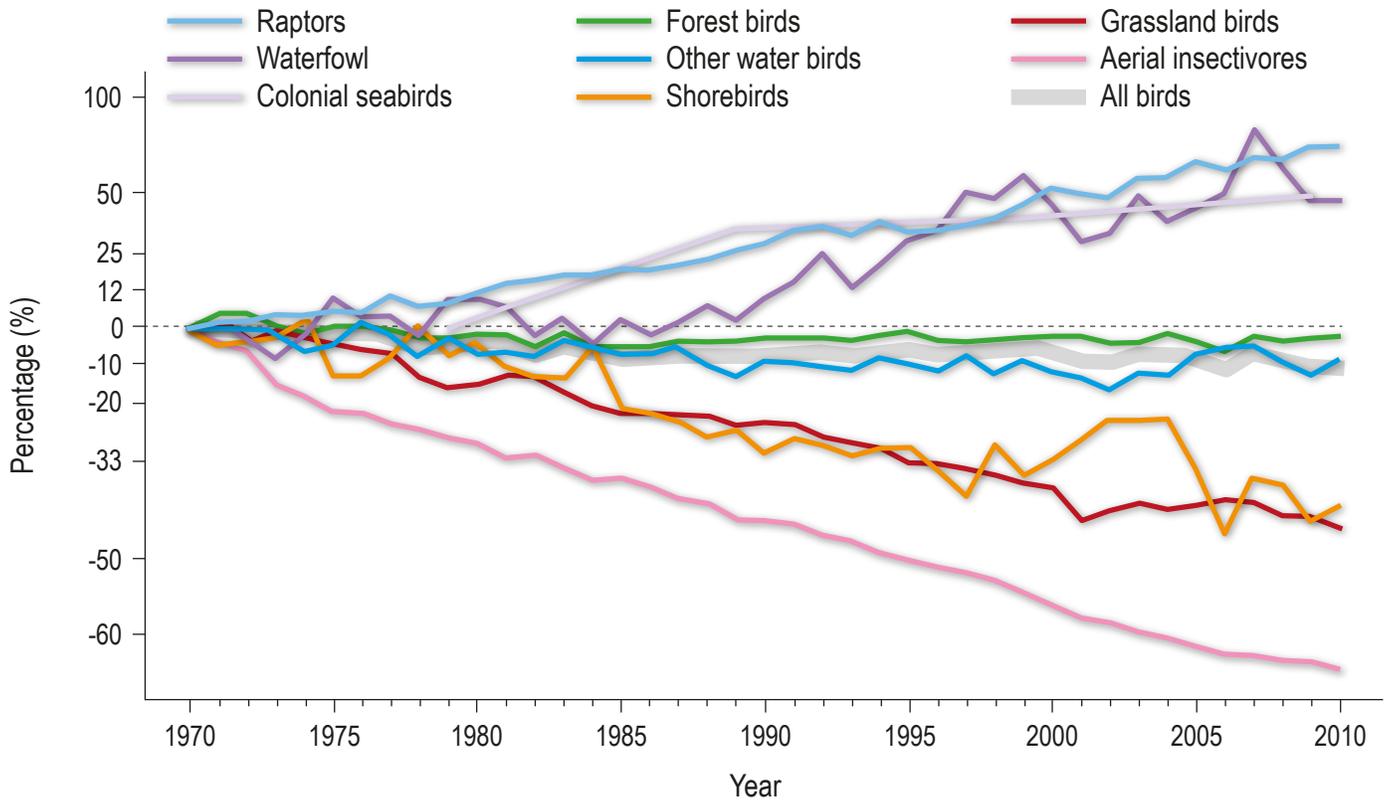
5 <http://www.ec.gc.ca/mbc-com/default.asp?lang=En&n=05B2C99E-1>

6 <http://www.ec.gc.ca/nature/default.asp?lang=En&n=54D83E91-1>

7 <http://www.stateofcanadasbirds.org/index.jsp>

cooperation among governments and conservation organizations, through the NAWMP, has led to more sustainable management of waterfowl hunting and to the protection or restoration of many wetlands. These successes demonstrate that habitat management can work to conserve birds. However, there are still many threats to wetlands (e.g. draining for agriculture and development, pollution, invasive alien species, and increasing droughts [mainly in Western Canada] due to climate change), underlining the importance of ongoing conservation efforts.

**Figure 6. Indicators of the national population status of all regularly occurring native bird species in Canada and eight selected subgroups (trend 1970-2010).**



#### 2.1.4 2012 Revision of the North America Waterfowl Management Plan

The revision of the NAWMP in 2012<sup>8</sup> by the scientific community of the United States, Canada and Mexico provided an opportunity to review the objectives considered important by all the stakeholders involved in the management, enhancement and conservation of waterfowl and their habitats in North America. The revision also made it possible to determine the “areas of greatest continental significance to North American ducks, geese and swans.” This map, reproduced as a reference in Figure 7, is an improved version of the map developed during the 2004 update of the NAWMP. It was designed by the national science support team (NSST) of the North American Waterfowl Management Plan, using information provided by the coordinators of the joint ventures, the science coordinators of the joint ventures and the members of the NSST. Five of these areas are located in Quebec:

- 28. Coastal Maritimes and St. Lawrence Gulf;
- 29. Eastern Boreal Hardwood Transition;
- 30. Lower Great Lakes and St. Lawrence River;
- 32. Hudson and James Bays;
- 33. Ungava Peninsula and Killinek/Button Islands.

The EHJV partners in Quebec relied heavily on this map to determine the areas for action for the period of this implementation plan (see section 2.2.2).

**Figure 7. Areas of greatest continental significance to North American ducks, geese and swans (excerpted from the North American Waterfowl Management Plan 2012: People Conserving Waterfowl and Wetlands, page 42).**



### 2.1.5 Conservation strategies of the Bird Conservation Regions

In 2014, all the conservation strategies of the various Bird Conservation Regions (BCRs)<sup>9</sup> in Canada, under the aegis of the North American Bird Conservation Initiative (NABCI), were made public by Environment and Climate Change Canada. Presented according to the same structure, they provide an overview of the status of all the bird species in each BCR. In Quebec, there are six BCRs (north to south; Figure 3):

- BCR 3: Arctic Plains and Mountains  
(<http://nabci.net/Canada/English/pdf/BCR%203QC%20FINAL%20Oct%202013.pdf>)
- BCR 7: Taiga Shield and Hudson Plains  
(<http://nabci.net/Canada/English/pdf/BCR%207%20QC%20FINAL%20May%202013.pdf>)
- BCR 8: Boreal Softwood Shield  
(<http://nabci.net/Canada/English/pdf/BCR%208%20QC%20FINAL%20Oct%202013.pdf>)
- BCR 12: Boreal Hardwood Transition  
(<http://nabci.net/Canada/English/pdf/BCR%2012%20QC%20FINAL%20May%202013.pdf>)
- BCR 13: Lower Great Lakes/St. Lawrence Plain  
(<http://nabci.net/Canada/English/pdf/BCR%2013%20QC%20FINAL%20Oct%202013.pdf>)
- BCR 14: Atlantic Northern Forest  
(<http://nabci.net/Canada/English/pdf/BCR%2014%20QC%20FINAL%20Oct%202013.pdf>)

The information contained in these strategies served as the basis for determining the priority taxa of the EHJV in Quebec for the period of the implementation plan (see section 2.2.1). In addition, since one of the objectives associated with the development of the strategies was to target certain habitat-related issues, the EHJV will work to identify these issues and to implement solutions.

### 2.1.6 Québec Breeding Bird Atlas

The first Québec Breeding Bird Atlas covered the survey period from 1984 to 1989. The atlas was based on surveys in which the participants looked for any breeding evidence within survey squares (10 km by 10 km) south of latitude 50°30'N. The atlas, published as a reference work in 1995, is presented in the form of a collection of maps illustrating the distribution of birds according to the squares surveyed, accompanied by a detailed text for each species.

The second field campaign of the Québec Breeding Bird Atlas<sup>10</sup> took place from 2010 to 2014, also south of latitude 50°30'N and within predetermined survey squares (10 km by 10 km). In addition to the surveys documenting the presence of breeding species, point counts were conducted to estimate the relative abundance of song birds. The analysis of the data and drafting of this second Québec Breeding Bird Atlas are currently under way; the publication of the results is expected in 2018. Another new feature of this second atlas is the monitoring of survey squares in northern Quebec (north of latitude 50°30'N) over a much longer timeframe.

9 [http://nabci.net/Canada/English/bird\\_conservation\\_regions.html](http://nabci.net/Canada/English/bird_conservation_regions.html)

10 [www.atlas-oiseaux.qc.ca/index\\_en.jsp](http://www.atlas-oiseaux.qc.ca/index_en.jsp)

This type of atlas provides information on the distribution of a very large number of bird species breeding in Quebec and also makes it possible to identify the areas where a given species is more or less common. For waterfowl, this information is particularly useful for less abundant species less adequately covered by waterfowl surveys. This is the case in particular for sea ducks such as the Harlequin Duck and certain species of scoters.

### ***2.1.7 Detailed mapping of wetlands***

Knowledge of the location of wetlands in the province is a prerequisite for promoting wetland conservation. The goal of this initiative, which began in 2009, is therefore to produce accurate and recent mapping data on wetlands in the inhabited regions of southern Quebec.

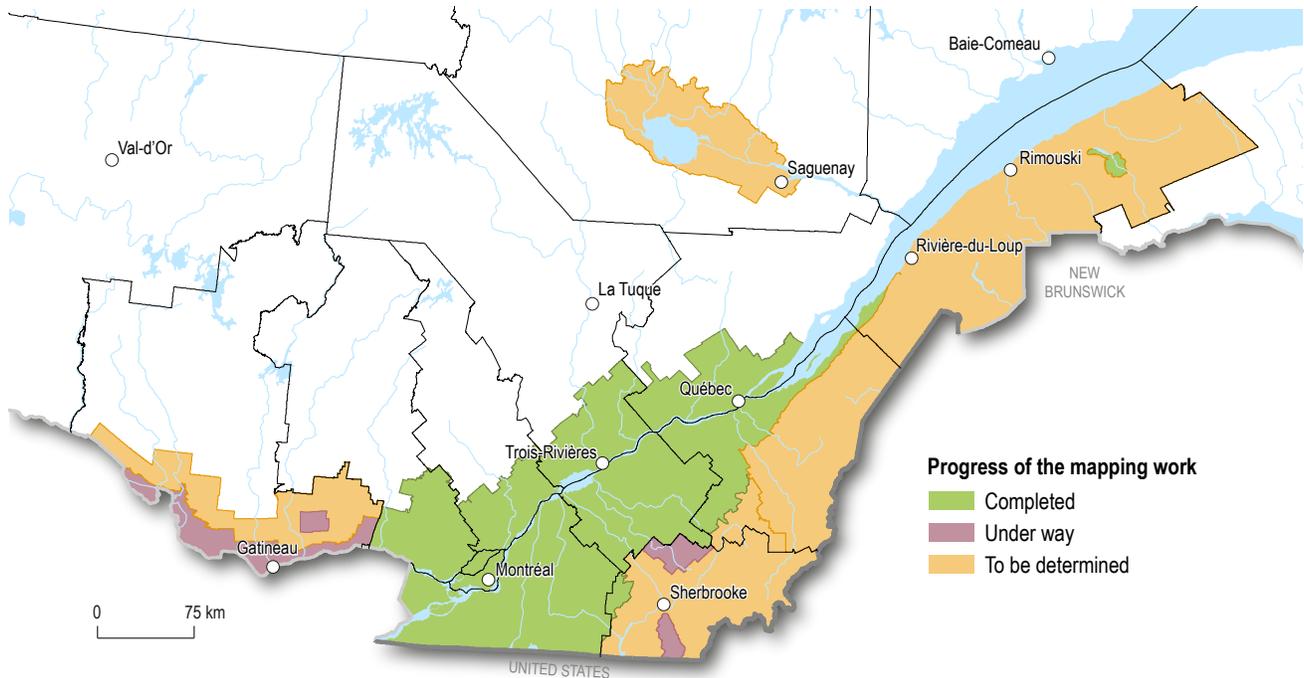
The production of mapping data relies on photointerpretation work of 3D images to identify and classify wetlands with an area of 0.5 ha or more. This level of precision makes it possible to identify wetlands covering a small area, which represent a significant proportion of the wetlands in southern Quebec. The photointerpretation results must then be validated, first by aerial reconnaissance and secondly by field visits to a sample of approximately 10%.

This mapping is accompanied by accessible consultation and dissemination tools available free of charge to the general public (see Figure 8). These data are particularly useful for decision making in land use planning and management. These tools include the following:

- A cartographic atlas;
- A data access service that allows Esri software users to consult and process the data on their own geographic information system;
- A web map that can be consulted by the general public;
- The entire database on DVD, which can be obtained on request at the following address: [outils@canards.ca](mailto:outils@canards.ca).

Developers, elected officials and land use planners can use these tools and data to better integrate wetlands in their land use planning and development plans, in order to optimize the planning process. They will also serve to raise public awareness of the importance of maintaining wetlands.

**Figure 8.** Progress of the detailed wetland mapping work, February 2016.



## ***2.2 Methodology for determining EHJV priorities in Quebec for the 2015-2020 period***

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On the basis of new scientific knowledge and the results obtained during the last implementation plan (2007-2012), the EHJV partners in Quebec have focused their work on three main areas to develop the 2015-2020 planning:

- Development of a list of priority waterfowl taxa;
- Production of a map of the areas for action;
- Determination of a common project on which all the partners will collaborate in synergy.

### ***2.2.1 Determination of the priority waterfowl taxa in Quebec***

A list of 66 taxa present in Quebec (appendix 4) was drawn up on the basis of the 190 waterfowl taxa listed in Table 1 (Breeding duck population estimates and objectives for North America), Table 2 (Objectives and estimates for North American goose populations) and Table 3 (Objectives and estimates for North American swan populations) of the NAWMP (2012 Revision).

Of these 66 waterfowl taxa, it was determined that only 37 used Quebec for one or more essential elements of their life cycle (breeding, migration, summering or wintering).

These 37 taxa were then analyzed according to the priority bird species identified in the conservation strategies of the six Bird Conservation Regions (BCRs) in Quebec. Since the EHJV is a joint habitat venture, it was determined that the habitat actions targeted mainly elements specific to the criteria for determining a conservation priority set out in the conservation strategies. To be selected as a priority waterfowl taxon for the EHJV in Quebec, the taxon had to

be considered a conservation priority in at least one BCR. Based on these criteria, 18 of these 37 waterfowl taxa were identified as priority taxa.

Two exceptions were made to these criteria, namely for the American Black Duck and the Canada Goose (North Atlantic population) owing to:

- The importance of Quebec for these taxa in North America;
- The existence of a joint venture dedicated to one of these taxa (American Black Duck);
- The importance of sport hunting in Canada of one of these taxa (Canada Goose, North Atlantic population).



**Common Goldeneye (Jean-Maxime Pelletier)**

Table 4 presents this list of priority waterfowl taxa for the Quebec EHJV implementation plan for the 2015-2020 period.

**Tableau 4. Priority waterfowl taxa of the EHJV in Quebec for the 2015-2020 period.**

English name	Scientific name
Brant (Atlantic)	<i>Branta bernicla</i>
Canada Goose (Atlantic population)	<i>Branta canadensis</i>
Canada Goose (North Atlantic population)	<i>Branta canadensis</i>
Wood Duck (Eastern population)	<i>Aix sponsa</i>
Gadwall	<i>Anas strepera</i>
American Black Duck	<i>Anas rubripes</i>
Blue-winged Teal	<i>Anas discors</i>
Redhead	<i>Aythya americana</i>
Greater Scaup	<i>Aythya marila</i>
Lesser Scaup	<i>Aythya affinis</i>
Common Eider (Northern subspecies)	<i>Somateria mollissima borealis</i>
Common Eider (America subspecies)	<i>Somateria mollissima dresseri</i>
Common Eider (Hudson Bay subspecies)	<i>Somateria mollissima sedentaria</i>
Harlequin Duck (Eastern population)	<i>Histrionicus histrionicus</i>
White-winged Scoter	<i>Melanitta fusca</i>
Common Golden Eye	<i>Bucephala clangula</i>
Barrow's Goldeneye (Eastern population)	<i>Bucephala islandica</i>
Hooded Merganser	<i>Lophodytes cucullatus</i>

Appendices 2 and 3 present the recommendations for habitat actions as indicated in the Quebec Waterfowl Conservation Plan (2011) for the 18 priority waterfowl taxa as well as a list of the other waterfowl taxa that would benefit from these actions.

### 2.2.2 Determination of the areas for action

As explained earlier, the priority taxa were determined on the basis of the boundaries of the BCRs. Three areas for action were identified (Figure 9) based on the intersection of the boundaries of these BCRs (Figure 3) with those of the areas of continental significance to waterfowl as illustrated in Figure 7:

- Intensive actions
- Extensive actions
- Sectoral actions

However, a significant proportion of Quebec is located outside these three areas for action. On the basis of the experience of the EHJV partners in Quebec and in view of the fact that certain initiatives could be carried out on a larger scale during the period concerned by this implementation plan, it was decided to include this "residual" area in a fourth area for action (Figure 9):

- Specific actions

Since the situation in each of these areas for action differs considerably from one area to another (e.g. land ownership, level and nature of threats, proportion of the area covered by wetlands and associated habitats, accessibility, etc.), the deployment of the actions under the EHJV will be adapted accordingly.

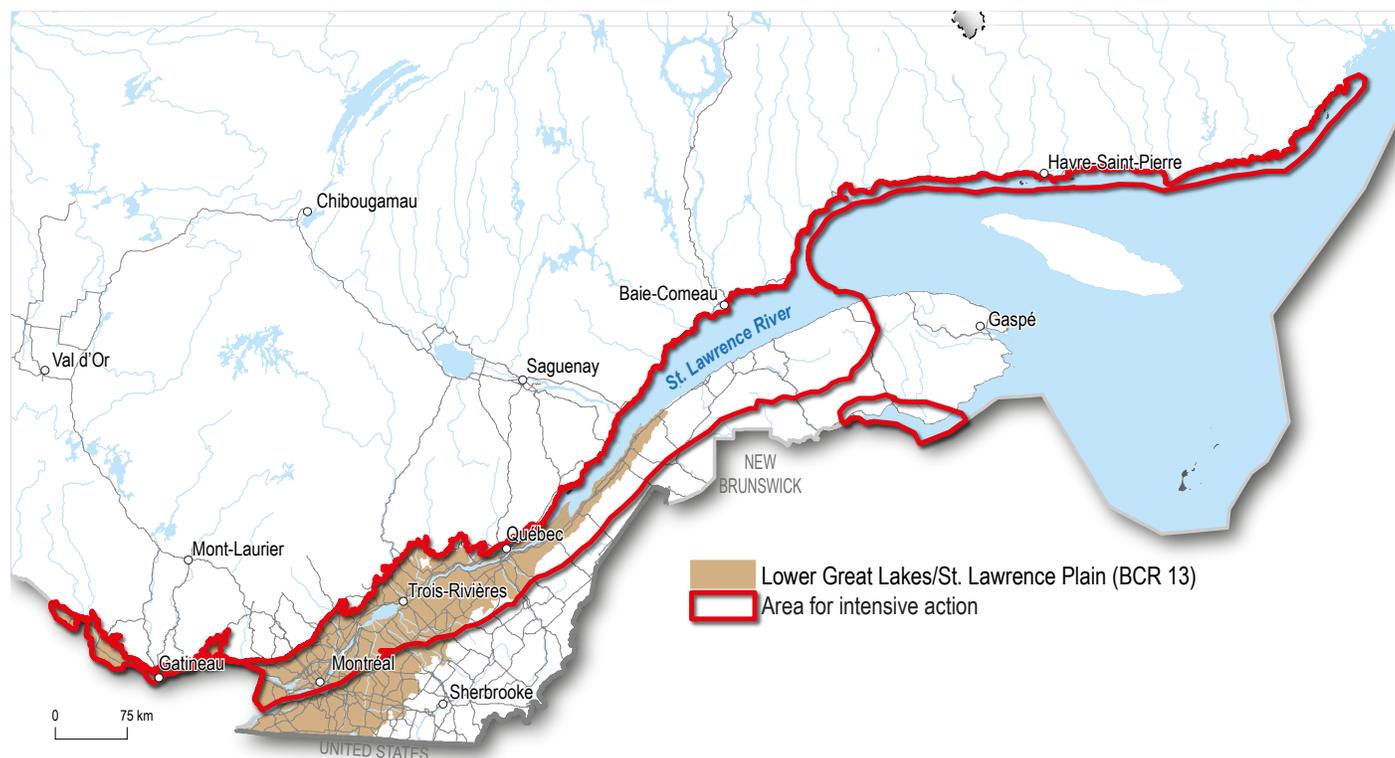
**Figure 9. Boundaries of the areas for action as well as the common language programs that will be deployed within these areas.**



### 2.2.2.1 Area for intensive action

Located in southern Quebec, this area covers approximately 72,000 km<sup>2</sup>. Almost all land in this area is privately owned. There is also a very significant human presence and a high proportion of agricultural activities. It is transected in a southwest-northeast axis by the St. Lawrence River and its lowlands (Figure 4). These lowlands are surrounded by the foothills of the Canadian Shield to the north and of the Appalachians to the south. Threats to waterfowl habitat of varying degrees are present throughout this area (e.g. urbanization, agriculture, industry, roads and navigable waterways). Natural environments in this area are often isolated and there are few forest patches larger than 1,000 ha.

**Figure 10. Boundaries of the area for intensive action.**



This area encompasses almost all of BCR 13. Its eastward extension, along the St. Lawrence River, Estuary and Gulf, adjoins BCRs 14, 12 and 8. Based on a brief analysis of the 1:250,000 scale topographic maps, we identified approximately 1,762 km<sup>2</sup> of habitats with potential for carrying out actions under the EHJV.<sup>11</sup>

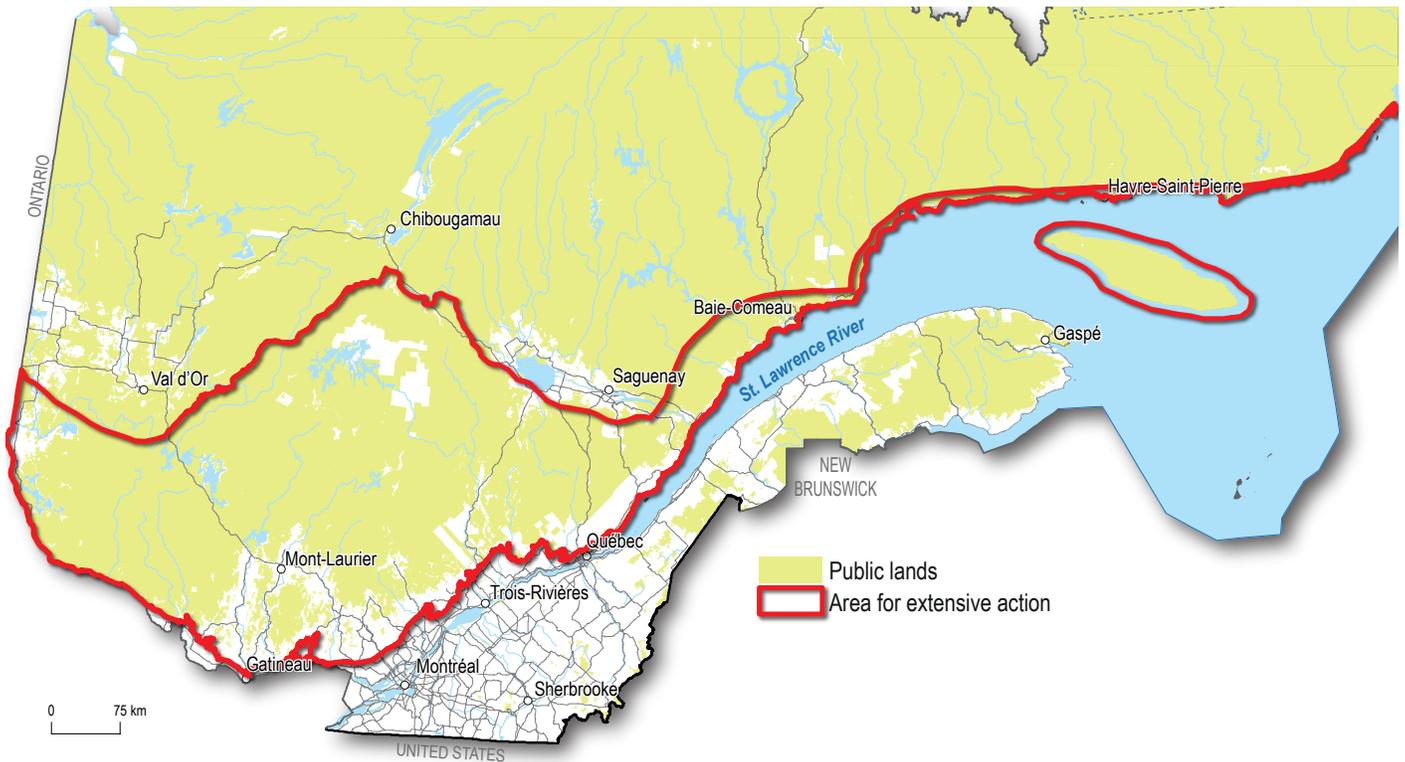
It is in this area for action that the majority of the programs concerning the following initiatives will be carried out: 1) Habitat Retention, 2) Restoration of Wetlands/Uplands, and 3) Habitat Asset Management (see section 2.3).

<sup>11</sup> The potential for action under the EHJV corresponds to land cover classes 80 (Wetland), 81 (Wetland-Treed), 82 (Wetland-Shrub), 83 (Wetland-Herb), 100 (Herb), 102 (Wet Sedge) and 110 (Grassland) of the Geobase Land Cover, Circa 2000-Vector.

### 2.2.2.2 Area for extensive action

Located to the north of the previous area and including Anticosti Island, most of this area lies within the Canadian Shield and covers approximately 197,000 km<sup>2</sup>. The land in this area is largely publicly owned. There is also a low human presence, but concentrated in certain areas (Figure 5). Agricultural activity is marginal, limited to the lowlands of certain watercourses. However, this area is the heart of the forest and mining industries. This is also a popular cottaging area. Natural environments in this area are extensive and connected; however, they are subject to disturbances, mainly associated with logging operations, which limit the abundance and distribution of mature forests.

**Figure 11. Boundaries of the area for extensive action.**



This area encompasses almost all of BCR 12. Its eastward extension to the north of the St. Lawrence River and the inclusion of Anticosti Island adjoin BCR 8. Based on a brief analysis of the 1:250,000 scale topographic maps, we identified approximately 3,843 km<sup>2</sup> of habitats with potential for carrying out actions under the EHJV.

In this area, the EHJV partners will focus their efforts mainly on the programs associated with the Land and Water Policy Initiative (see section 2.3).

### 2.2.2.3 Area for sectoral action

Located in the Canadian Shield, this area borders the coasts of James Bay (Figure 6), Hudson Bay (Figure 7) and Ungava Bay (Figure 8) and covers close to 168,000 km<sup>2</sup>. All the land in this area is publicly owned. This area includes the agreement territories as well as Nunavik. There are few, if any, roads in this area, and human presence is extremely low and concentrated in

**Figure 12. Boundaries of the area for sectoral action - James Bay.**



small communities mainly along the coast. Given the extremely limited access to the area, there are very few threats to habitat. However, it is important to note that the resources obtained from these natural environments are essential to the subsistence of the communities located there. In the southern part of this area, there are several large hydroelectric projects. Activities related to resource extraction, particularly mineral exploration and development, also affect this area.

This area for action, composed of disjunct patches, includes relatively small parts of BCRs 8, 7 and 3. On the basis of a brief analysis of the 1:250,000 scale topographic maps, we identified approximately 10,840 km<sup>2</sup> of habitats with potential for carrying out actions under the EHJV.

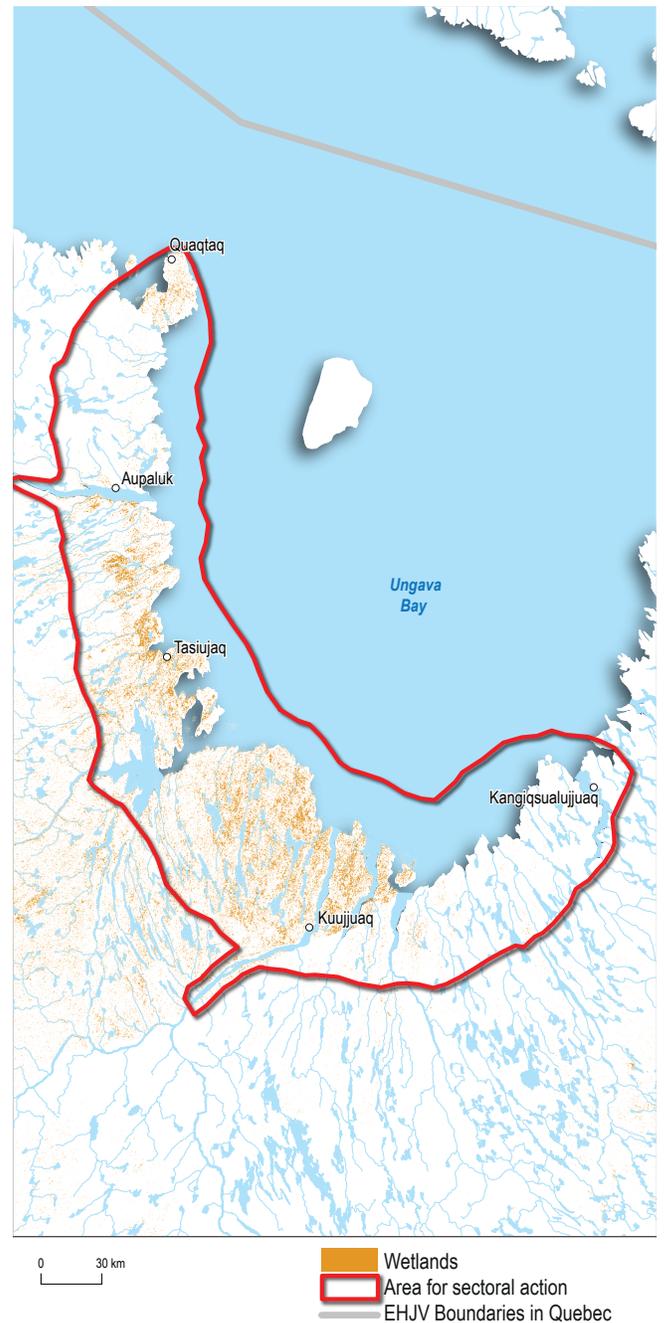
For the EHJV partners, this area presents a major challenge, owing to its remoteness and inaccessibility, with the result that the knowledge of waterfowl in the area is very limited (i.e. only in the context of impact studies and surveys or study projects involving small areas).

The goal is to have the beginning of a picture of the waterfowl gathering sites during the critical life cycle stages of the taxa present in this area by 2020.

**Figure 13. Boundaries of the area for sectoral action – Hudson Bay.**



**Figure 14. Boundaries of the area for sectoral action – Ungava Bay.**



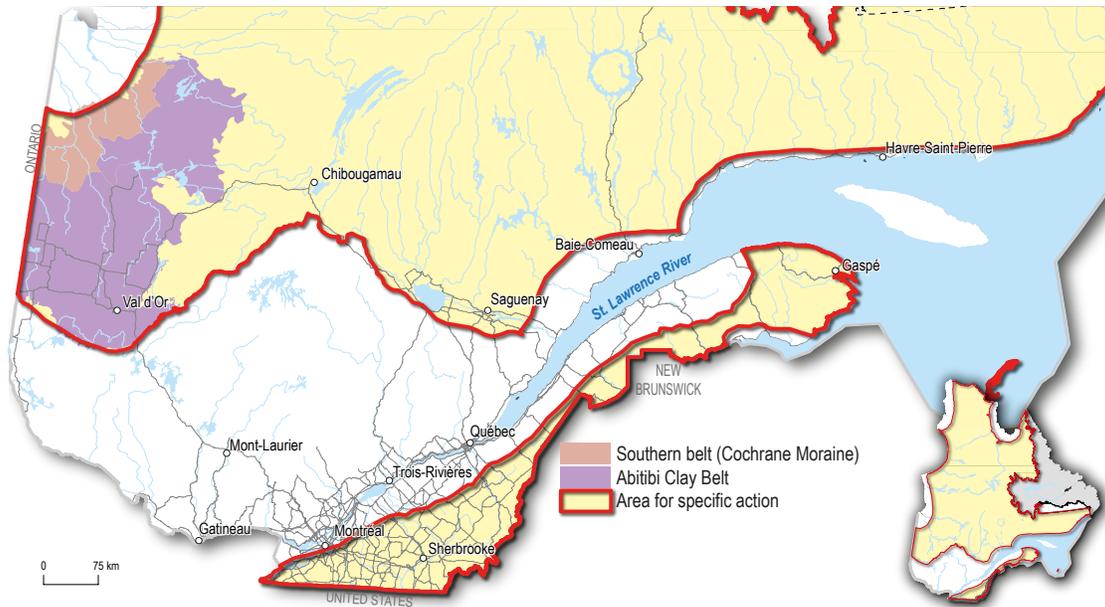
#### 2.2.2.4 Area for specific action

Since this area is an amalgam of the areas not included in the three preceding areas, it is difficult to characterize. It is composed of a southern portion and a northern portion of the province, and covers approximately 1,231,000 km<sup>2</sup>. This area includes quite variable proportions of the six Quebec BCRs (Figure 9).

The northern portion has a profile more or less identical to the area for sectoral action. For the EHJV partners, the northern portion of this area will present the same challenges as the area for sectoral action. The Southern belt (Cochrane Moraine) and the Abitibi Clay Belt offer interest for Black Duck's nesting.

Most of the land in the southern portion is privately owned. From the Chaudière River westward, this area is similar in profile to the area for intensive action. This area includes certain Monteregian hills as well as the Appalachians. There is a significant level of agricultural activity and this is also a very popular cottaging area. Natural environments are a little more

**Figure 15. Boundaries of the area for specific action and area of interest for the American Black Duck.**



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abundant than in the area for intensive action, but they suffer from a problem of connectivity. To the east of the Chaudière River lie the Appalachians, where agricultural activity becomes marginal, limited to the lowlands of certain watercourses. This is a very popular cottaging area with a heavy concentration of private forest producers.

Throughout this entire area, the deployment of programs under the habitat action initiatives could be considered on the basis of specific criteria such as: wetland class, integrity of the surrounding environment, area, diversity of habitats for waterfowl, connectivity with the aquatic environment, anthropogenic pressure (type and extent) and the priority natural conservation area.

Based on a brief analysis of the 1:250,000 scale topographic maps, we identified approximately 30,141 km<sup>2</sup> of habitats with potential for carrying out actions under the EHJV.

### ***2.2.3 Determination of a common project: Lake Saint-Pierre***

Lake Saint-Pierre is a biodiversity hotspot for wetlands. It is also an area of vital importance for waterfowl at the North American scale, being internationally recognized as a UNESCO Biosphere Reserve and as a Ramsar Site under the Ramsar Convention. The EHJV partners in Quebec have already made major investments in this area under the NAWMP, since it is located in a priority area under the EHJV. And yet, the situation of Lake Saint-Pierre in terms of the status of wetlands and of the impacts, particularly on its Yellow Perch population, which uses the flood plain as a spawning habitat, is currently a concern. The condition of the lake

depends on the quality of the water originating in its watershed and on the non-point source pollution coming from upstream. In addition, the conversion of agricultural practices from perennial crops to annual crops, in a vast portion of its flood plain, contributes to the sediment loading of the lake during spring floods.

During a workshop held on June 15, 2016, to develop a shared vision, and at which the most recent scientific data concerning Lake Saint-Pierre was presented, the six EHJV partners in Quebec agreed to collaborate, in accordance with their capabilities and their priorities for action, in the first phase of a common project in Lake Saint-Pierre (Figure 10). In resolution 2016-02 of the Quebec EHJV steering committee adopted following this workshop, the partners defined the general outline of this project as follows:

Title: Wildlife habitat restoration and protection in Lake Saint-Pierre

Area covered: The shoreline and adjacent land as well as the islands of the Lake Saint-Pierre archipelago; the priority area includes the land lying under the water level elevation of 6.2 m as measured at Sorel (Figure 9) and, more particularly, the sites where the EHJV partners have made investments in the past

Action target: 800 ha of habitats restored or protected

Project duration (phase 1): 2017 to 2022

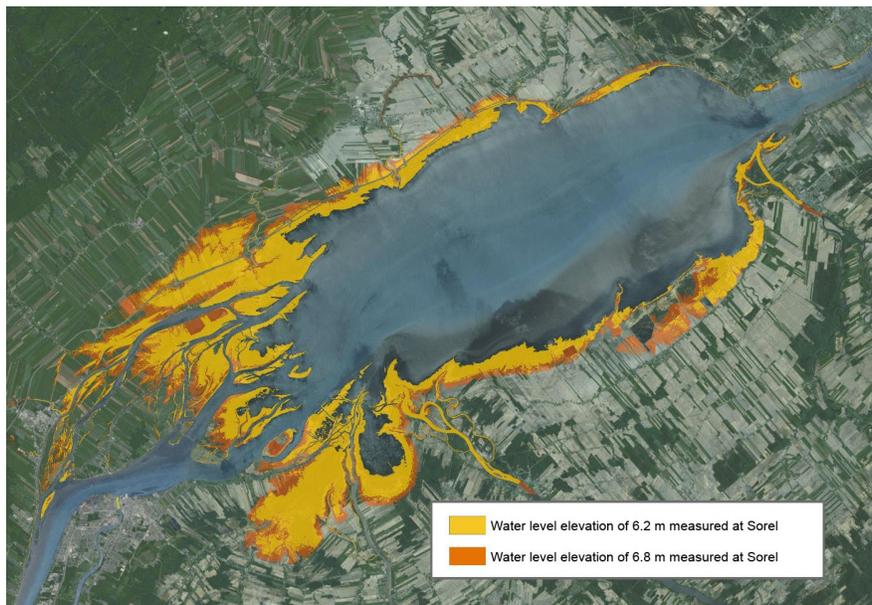
Actions: Without limitation, several tools may be used to meet the target identified:

- Restoration (e.g. change in land use, wildlife habitat enhancements);
- Protection of strategic habitat (e.g. land acquisition, conservation easements);
- Legislative, regulatory or administrative framework.

Oversight and support: In order to meet the target, the partners agree on the importance of supporting local stakeholders and project proponents.

It should be noted that this phase 1 extends beyond the period of this implementation plan.

**Figure 16.** Boundaries of the shoreline and adjacent land as well as of the islands of the Lake Saint-Pierre archipelago.



## 2.3 Provincial waterfowl habitat objectives

Table 5 presents the Quebec habitat objectives adopted by the EHJV partners in Quebec as well as the resources necessary to achieve them. The information concerning the areas is compiled by type of habitat. However, where they cannot be broken down, they are indicated in the column "Other hectares of habitat." Although it is difficult to establish a direct link, the EHJV partners are hopeful that these habitat objectives will contribute to maintaining or improving the conditions of the priority waterfowl species, while also benefitting other waterfowl taxa as well as other species that use these types of habitats.

**Table 5. Habitat objectives identified under conservation programs, 2015-2020.**

Initiatives and Programs	EHJV Objectives – Quebec, 2015 -2020			
	Hectares of wetlands	Hectares of associated habitats	Other hectares of habitats (if cannot be broken down between wetlands and associated habitats)	Necessary resources (\$)
<b>1. Habitat Retention</b>	3,992	2,340	4,860	12,307,625.00
1.1 Permanent	1,867	2,090	3,040	8,682,625.00
1.2 Medium Term	-	-	1,820	1,900,000.00
1.3 Short Term	2,125	250	-	1,725,000.00
<b>2. Restoration</b>	486	407	150	3,125,706.00
2.1 Wetlands	486	22	150	2,860,625.00
2.2 Uplands	-	385	-	265,081.00
<b>3. Land and Water Policy</b>	375	-	-	805,000.00
3.1 Policy	-	-	-	495,000.00
3.2 Integrated Land Use Planning	375	-	-	310,000.00
<b>4. Habitat Asset Management</b>	15,800	12,000	335	3,986,500.00
4.1 Wetlands	12,000	4,000	335	1,502,500.00
4.2 Upland and Associated Wetlands	3,400	8,000	-	1,234,000.00
4.3 Rebuild	400	-	-	1,250,000.00
<b>5. Conservation Planning</b>	-	-	-	3,344,765.00
5.1 Program Coordination	-	-	-	3,344,765.00
<b>6. Science</b>	-	-	-	1,783,030.00
6.1. Science	-	-	-	1,701,730.00
6.2 Habitat Program Evaluation	-	-	-	10,000.00
6.3 Habitat/Landscape Inventory	-	-	-	71,300.00
<b>7. Communication and Education</b>	-	-	-	1,118,000.00
7.1 Communication and Education	-	-	-	1,116,000.00
7.2 Outreach of Conservation Successes	-	-	-	2,000.00
<b>Subtotal of Columns</b>	20,653	14,747	5,345	26,470,626.00
<b>Grand Total (All Habitats Combined)</b>	<b>40,745</b>			<b>26,470,626.00</b>

**Habitat Retention:** protection (or preservation) of functional waterfowl habitat and the provision of suitable habitat for other bird species. Habitat retention can apply over three time scales: permanent (> 99 years), medium term (10 to 99 years) or short term (< 10 years).

For the Habitat Retention Initiative as a whole, the EHJV partners have set an objective of 11,192 ha and plan to allocate \$12,307,625 in resources to the achievement of this objective. This initiative accounts for just over 27% of the area and slightly more than 46% of the resources allocated to achieve all the objectives identified for the period.

The programs focused on permanent actions dominate this initiative in terms of the resources required, mainly for fee simple land acquisitions. Expenses for conservation purposes nonetheless account for approximately a third of the objectives in terms of area. Again in terms of area, short- and medium-term actions account for two-thirds of the objectives. All of these programs will be carried out primarily in the area for intensive action.

Property acquisitions will therefore take place in a coordinated manner in accordance with each partner's planning process. This will be carried out in a highly targeted manner in order to consolidate the protection of large priority sectors. Indeed, several areas have been the focus of protection efforts over the years, such as the Ottawa River Valley, the Rivière du Sud in Montérégie, the Lake Saint-Pierre flood plain and, more generally, the riparian zone of the St. Lawrence (including the lower estuary, the coastal habitats of the Gaspé Peninsula and the Magdalen Islands archipelago). The acquisition of new properties will therefore consolidate the previous conservation actions. In certain cases, it is planned to register conservation easements on the title of private property for these large consolidated sectors to ensure their permanent protection. These properties could subsequently be transferred to a third party, particularly the Quebec government. Several of these acquisitions can be considered protected areas. For the period of this implementation plan, the EHJV partners will focus their efforts on protecting close to 7,000 ha of natural areas, including wetlands and associated uplands. A planned investment of \$9 M will be directed to achieving this objective.

This initiative also includes the activities associated with the production of detailed wetlands mapping, which provides decision support tools for land use management in southern Quebec, particularly for municipalities. For the period of this IP, the EHJV partners plan to give priority to the regions of the St. Lawrence Lowlands for the portion located in the Outaouais region as well as the Lake Saint-Jean Plain (a physiographic unit under the Ecological Reference Framework of the Department of Sustainable Development, Environment and the Fight Against Climate Change). During a subsequent phase, the goal will be to extend coverage to all inhabited regions of southern Quebec, such as the Eastern Townships (Estrie). A planned investment of close to \$2 M will be directed to achieving this objective.

In terms of short-term actions, the EHJV partners plan to devote efforts to increasing the scope of conservation through landowner education and awareness. Landowners may own properties adjacent to land already protected under the EHJV or land that includes areas targeted for protection under the EHJV. Education and awareness activities are intended to support these landowners to encourage them to adopt behaviour or to manage their property so as to promote uses compatible with the natural areas. The experience may also convince many of these landowners to take an interest in medium-term or permanent habitat reten-

tion actions. During the period of this implementation plan, the EHJV partners will endeavour to engage with the owners of 2,375 ha of natural environments. A planned investment of \$1.725 M will be directed to achieving this objective.

**Wetland/Upland Restoration:** the creation or improvement of wetland habitat (and the services it provides to waterfowl and other bird species).

The goal of habitat restoration is to offset wetland loss and degradation that has taken place over time. It is a way to increase the productivity of a site by restoring habitat characteristics that have been lost or degraded, or by creating new habitats. A variety of habitat improvement techniques are used, including the construction of dikes and water level control structures or excavation, control of invasive species, planting of nesting cover, installation of nesting structures (nest boxes), etc. For the Restoration Initiative as a whole, the EHJV partners have set an objective of 1,043 ha and plan to allocate \$3.126 M in resources.

The Restoration Initiative accounts for approximately 3% of the area and slightly more than 11% of the resources allocated to achieve the objectives identified for the period. Wetland restoration programs will be the predominant component of this initiative. Most of these actions will be carried out in the area for intensive action.

The main focus of wetland restoration will be marsh enhancement. Such projects are planned mainly in the Ottawa River Valley and the St. Lawrence River corridor, with particular priority on the Lake Saint-Pierre flood plain. During the period of this implementation plan, the EHJV partners will focus their efforts on restoring 658 ha of wetlands, with a planned investment of \$2.86 M.

Upland restoration will be based on the implementation of beneficial management practices in agriculture, the addition and monitoring of nesting boxes, and the use of seeded nesting cover as habitat for waterfowl. During the period of this implementation plan, the EHJV partners will focus their efforts on restoring 385 ha of uplands, with a planned investment of \$0.265 M.

**Land and Water Policy:** the development or amendment of policies governing land use to encourage the adoption of more sustainable practices by providing science-based arguments to support the value of the proposed changes. This initiative is broken down into two elements: incentive-based policy and programs (policy-based initiatives directed at incentive-based programs where the partners are attempting to increase funding for these incentive-based programs or how they are administered) and regulatory-based policy: regulatory policy initiatives and regulatory strategies which are usually a government responsibility.

For the Land and Water Policy Initiative as a whole, the EHJV partners have set an objective of 375 ha and plan to allocate \$0.805 M in resources to achieve this objective. This initiative accounts for just under 1% of the area and for 3% of the resources allocated to achieve all the objectives identified for the period.

The future Quebec act on wetlands and bodies of water as well as integrated land use planning are the two programs planned under this initiative, which should cover the entire province of Quebec.

With respect to the act on wetlands and bodies of water, the EHJV partners are contributing in various ways to encourage the adoption of a new legislative framework for the protection and sustainable use of wetlands and associated habitats, with the goal of maintaining essential ecological services and water quality.

With respect to integrated land use planning, the EHJV partners will carry out a project in the Lower St. Lawrence administrative region aimed at demonstrating the feasibility of taking action on wetlands and associated habitats in order to support bird species other than waterfowl and by directly involving the local human communities.

**Habitat Asset Management:** the maintenance of the waterfowl productivity of existing projects and the provision of suitable habitat for other bird species.

For the Habitat Asset Management Initiative as a whole, the EHJV partners have set an objective of 28,135 ha and plan to allocate \$3.99 M in resources to achieve this objective. This initiative accounts for 69% of the area and for 15% of the resources allocated to achieve all the objectives identified for the period.

In this initiative, the actions always target protected properties and involve programs related to wetlands or associated habitats as well as the rebuilding of wildlife habitat sites. The scope of this initiative will cover only southern Quebec (part of the areas for intensive, extensive and specific action).

Asset management activities involving wetlands and associated habitats include in particular: monitoring, meetings with local communities, management of users, installation of signage, basic maintenance, payment of property taxes and other expenses. During the period of this implementation plan, the EHJV partners will manage 27,735 ha and will allocate a planned investment of \$2.74 M for this purpose.

With respect to Wetland Rebuild, the fact that several existing habitat enhancement projects are nearing the end of their useful life justifies investing resources in order to:

- Carry out maintenance of the enhancement projects;
- Re-assess the wildlife objectives and review the design of each enhancement project accordingly;
- Renew agreements with landowners (where applicable);
- Reduce public safety risks (where applicable);
- Reduce use conflicts (where applicable);
- Upgrade or replace infrastructures.

Several sites near the Beauharnois Canal, at the edge of Lake Saint-Pierre and in Abitibi will be considered in the context of this program. During the period of this implementation plan, the EHJV partners will focus their efforts on rebuilding 400 ha of wetlands, with a planned investment of \$1.25 M.

The following three initiatives (Conservation Planning, Science, and Communication and Education) are general to the entire EHJV and therefore do not deal specifically with territorial units.

**Conservation Planning:** planning and coordination of NAWMP conservation activities.

The goal of conservation planning is to identify actions in the various programs in order to meet the objectives of the EHJV. It is therefore important to be very familiar with the priority species and their habitat, to understand the issues that threaten them and to identify actions that will be beneficial for these species.

For the period, only the coordination of programs will be used by all the EHJV partners in Quebec in this initiative. They will allocate close to 13% of resources to achieve this objective.

**Science:** focuses on research, evaluation, monitoring and inventory outcome.

The goal of the EHJV Science and Monitoring Program is to continually work to improve the impact of investments in conservation actions. As is the case for the efforts made in the context of the EHJV, planning, implementation and evaluation are based essentially on proven scientific principles and on an approach focused on partnership.

Specifically, EHJV partners work to maintain high-quality wetland and upland habitats that sustain healthy and abundant populations of waterfowl and other birds. This is accomplished by understanding the habitats and environmental conditions needed to bolster target populations. By connecting habitat conditions (e.g. wetland abundance, land/water use, habitat quality and conservation actions) to bird population trends (e.g. recruitment, mortality and population growth rates), and by incorporating other environmental and landscape changes affecting birds into planning, biologists can determine the best use of conservation resources and actions.

With the goal of promoting recovery of the bird populations targeted by the EHJV, science will make it possible in particular to expand our knowledge of priority species, their habitats, their needs and the issues facing them. This new information will then provide guidance for priority actions to be carried out (e.g. habitat retention, restoration and asset management).

The Science Initiative will involve four programs, namely:

- Physical Science;
- Waterfowl/Wildlife Science;
- Program Evaluation;
- Habitat/Landscape Inventory.

During the period of this implementation plan, the EHJV partners will devote close to 7% of resources to this initiative.

**Communication and Education:** inform and educate the public and partners, to demonstrate leadership on issues which relate to government or industry policies, and to encourage new partnerships and funding opportunities. Specific activities are associated with the promotion of the NAWMP and the Joint Ventures and associated programs under this Initiative. Approximately 4% of resources will be allocated to this initiative during the period of this implementation plan.

The Communication and Education as well as the Outreach of Conservation Successes programs will be the main tools for deployment of this initiative.

These programs will have multiple impacts both on target groups and on the scope of the actions carried out. Activities such as the support and deployment of the EHJV website, lobbying for improved legislative tools for the protection of wetlands and uplands, and improvement of the current implementation plan are very general in scope. It is also planned to engage school groups, landowners, communities of farmers, hunters' and cottage owners' associations, as well as users of wetlands and associated habitats, in a more targeted manner. The topics that will be covered are varied: nature interpretation, guided tours, interpretative signage or communication tools (brochures and other documents, conferences and press releases), development and implementation of best management practices (agriculture, hunting, etc.), discovery of natural environments during activities for young people and others, etc.

The Education Initiative includes two programs aimed specifically at youth. Its main objectives are to contribute to the development of young people by giving them the opportunity to participate in stimulating experiences of contact with nature and to promote their integration within their community through conservation or awareness-raising projects.

A first program allows students to learn more about wetlands and associated habitats, as well as concerning the roles of these environments and the importance of preserving them, and to become ambassadors for their conservation. Through the *Wetland Centres of Excellence* (WCE), a Canadian network, partnerships will be established with schools and a recreational/tourism organization that has accessible wetlands where activities can be organized.

A second educational program aims to support young waterfowlers participating in the program to train the next generation of hunters (learning about the ethics of hunting and respect for the environment) and is carried out in collaboration with the *Fédération québécoise des chasseurs et pêcheurs* (FédéCP). Young people from across Quebec who participate in the training activities offered by the FédéCP and certain waterfowler associations receive various materials useful to their learning, including guides, a duck species identification poster and a duck call.

## ***2.4 Act respecting the conservation of wetlands and bodies of water***

In response to several legal cases highlighting the need to modernize and better define the legal and regulatory framework dealing with wetlands and bodies of water, as well as the legal and regulatory provisions for their protection, on May 23, 2012 the Quebec government assented to the *Act respecting compensation measures for the carrying out of projects affecting wetlands or bodies of water*. Section 2 of this act confirms the authority to "require from an applicant compensation measures designed, in particular, to restore, create, protect or ecologically enhance a wetland, a body of water or a piece of land near a wetland or a body of water." Section 5 specifies that the authority of the Department of Sustainable Development, Environment and the Fight Against Climate Change (MDDELCC) to require compensation ceases to have effect on April 24, 2015, unless an Act providing for rules on the preservation and sustainable management of wetlands and bodies of water is assented to by that date. In 2014, the enabling authority was extended to April 24, 2017.

Again in 2014, the MDDELCC proposed a modernization of the environmental authorization scheme of the *Environment Quality Act* (EQA) with the goal of streamlining, clarifying and optimizing the regulatory process. This reform of the EQA, adopted by the Quebec National Assembly in March 2017, was the first step in the process of improving the environmental oversight of wetlands and water bodies. At the same time, the MDDELCC is actively continuing the work begun since 2012 to improve the legal and regulatory framework governing Quebec wetlands. This work is intended to improve the protection and sustainable use of these ecosystems that provide essential ecological services, particularly for maintaining water quality, by placing greater emphasis on the principle of no loss of wetlands or bodies of water.

In April 2017, in light of these various efforts, the MDDELCC tabled Bill 132, *An Act respecting the conservation of wetlands and bodies of water*, which was intended to lead to a new legal and regulatory framework applicable to wetlands and bodies of water during the next few years. The proposed legislation deals with three major issues: the conservation of wetlands and bodies of water, the restoration and creation of wetlands, as well as the regulation of activities affecting wetlands and bodies of water based on the level of risk.

Bill 132 is expected to be passed in 2017-2018 following the parliamentary proceedings held in connection with this draft legislation. Pending the finalization of this process, the *Act respecting compensation measures for the carrying out of projects affecting wetlands or bodies of water* has been extended to March 1, 2018.

It is difficult at present to anticipate what the exact impact of this new legislative tool will be in terms of the protection of wetlands during the period of this implementation plan, but it is reasonable to expect that the legal protection of wetlands, particularly those considered provincially significant (rare, of exceptional quality, etc.), will be strengthened.

### 3 Conclusion

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The Eastern Habitat Joint Venture has been in place for almost 30 years. Through the EHJV, the Quebec partners work together to protect and restore wetlands and uplands for the benefit of waterfowl. The last Quebec EHJV implementation plan (2007-2012) was ambitious. During that period, the partners carried out actions on approximately 37,500 ha (retention, enhancement and management), for a total investment of over \$54 M. If coall initiatives are taken into account (coordination, communication and education, evaluation), total funding was close to \$60 M.

During the 2012-2015 transition period, the actions carried out continued to pursue the same objectives as in the 2007-2012 period. The partners carried out actions involving 69,811 ha (retention, enhancement and management) through investments of just over \$19 M. Total funding for all the initiatives (coordination, communication and education, evaluation) was close to \$24 M.

For the 2015-2020 period, the EHJV partners in Quebec have set the objective of carrying out actions (including all the initiatives) on 40,745 ha and will invest \$26.5 M to achieve this objective. The achievement of this objective is based mainly on two initiatives: Habitat Retention and Habitat Asset Management. This period could also coincide with the adoption of more comprehensive measures, through an act respecting the conservation and sustainable use of wetlands and bodies of water. However, we will not speculate about the potential impacts and benefits of this legislation before its adoption. The specific actions relating to the various objectives of the EHJV will be determined annually during the programming exercises and will depend on the availability of resources. It is important to bear in mind that the achievement of these objectives is largely dependent on the maintenance of various government financial assistance programs and on the financial resources available from the partners.

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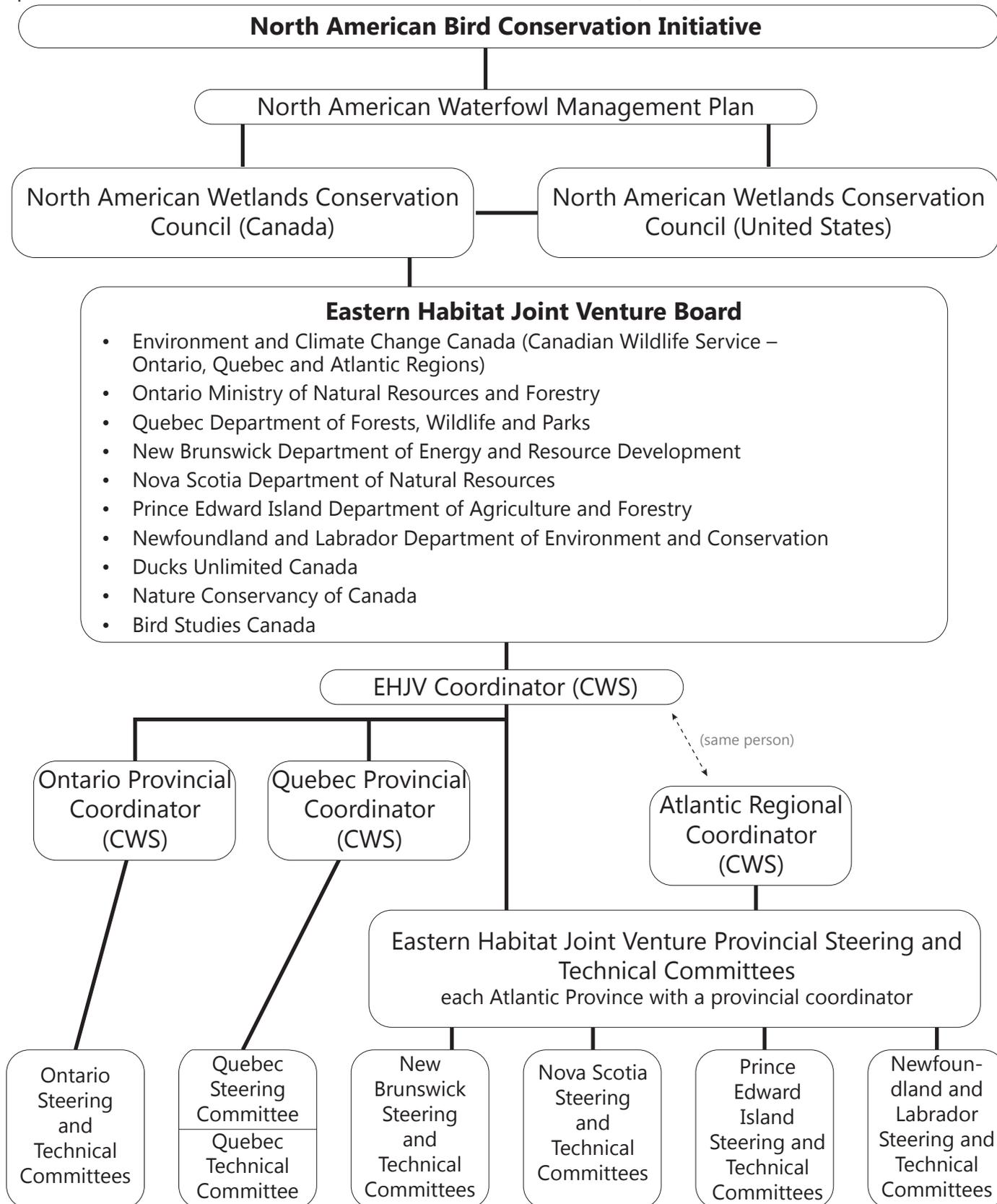
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# 5 Appendices

## Appendix 1

Operational structure of the Eastern Habitat Joint Venture (EHJV)



## Appendix 2

Breakdown of the total number of waterfowl taxa and of priority waterfowl taxa by habitat action identified in the Quebec Waterfowl Conservation Plan, all BCRs combined.

Habitat actions	All waterfowl taxa Quebec (total 37)	Priority taxa (total 18)	Ratio of priority taxa to all taxa
112. Acquire, restore or protect important cordgrass marshes that do not yet have protected status in the Lower St. Lawrence, in Chaleur Bay and on the North Shore (estuary and gulf) when possible.	7	4	57%
113. Acquire, restore or protect eelgrass beds (e.g. Cacouna Bay, mouth of the Rivière Trois-Pistoles, Mitis Bay, Chaleur Bay) when possible.	6	3	50%
114. 114. Acquire, restore or protect natural peatlands, for example: <ul style="list-style-type: none"> <li>• create a corridor of protected natural peatlands in the Arthabasca, Bécancour, L'Érable, Bellechasse, Lévis and Lotbinière RCMs;</li> <li>• increase the connectivity between peatlands in the vicinity of the Baie de L'Isle-Vert NWA (integrate the Bois-des-Bel bog with the NWA);</li> <li>• create a protected buffer zone around the Baie de L'Isle-Vert NWA;</li> <li>• protect some of the few large unaltered peatlands in the Estrie region (e.g. hills around Lake Memphrémagog and the Coaticook-Scotstown Plateau);</li> <li>• on the Upper and Middle North Shore (e.g. on the Manicouagan Peninsula).</li> </ul>	5	5	100%
115. Acquire, restore or protect emergent marshes in the Lake Saint-Louis-Lake Saint-Pierre section (particularly the Lake Saint-Pierre archipelago); specifically, restore marshes that are choked with vegetation.	10	6	60%
116. Stabilize banks to combat erosion and the loss of island habitat, particularly in the Îles de la Paix, Îles de Varennes and Îles de Contrecoeur (especially the barrier islands in the NWA) and the Lake Saint-Pierre archipelago.	10	6	60%
117. Restore salt marshes where the creation of drainage canals has resulted in the drying up of the marsh and pools.	8	5	63%
118. Restore aboiteaus that can be restored; removing dikes can restore exchanges between diked marshes and the St. Lawrence.	8	5	63%
119. Conserve and protect woodlots containing streams, ponds and lakes in agricultural and mixed agricultural and forest landscapes.	10	4	40%
120. For key moulting, wintering or staging areas used by priority species that are designated as a waterfowl gathering area, extend protection to this critical period of the birds' annual cycle.	22	12	55%
121. For key moulting, wintering or staging areas used by priority species that have no protection at all, ensure they are protected by having them designated as a marine wildlife area, for example.	22	12	55%

Habitat actions	All waterfowl taxa Quebec (total 37)	Priority taxa (total 18)	Ratio of priority taxa to all taxa
122. Acquire or protect key nesting sites of Common Eider that do not yet have protected status (e.g. North Shore, around the Ungava Peninsula).	3	3	100%
123. Propose the creation of marine wildlife areas (or other means of legal protection) for the Common Eider's main brood-rearing areas.	3	3	100%
124. Explore the possibility of protecting rivers used by the Harlequin Duck in the southern part of its breeding distribution (e.g. on the Gaspé Peninsula rivers other than the ones in the Parc national de la Gaspé or salmon rivers that are already protected).	1	1	100%
125. Offset the lack of snags in areas of intensive logging or where measures to maintain snags have not been effective by establishing a network of artificial nest boxes and monitoring them.	5	3	60%
126. Support the nest box program run by the Société d'aménagement de la baie Lavallière, to ensure its long-term existence.	7	4	57%
127. Protect important staging areas used by scaup that currently do not have protected status by having them designated as a waterfowl gathering area or marine wildlife area, for example.	3	2	67%
130. Encourage the establishment of an invasive plant monitoring network: use direct control or measures to prevent propagation.	12	6	50%

## Appendix 3

List of the 18 priority waterfowl taxa of the EHJV in Quebec for the 2015-2020 period and habitat action numbers

Priority waterfowl taxa	Habitat action numbers according to the Quebec Waterfowl Conservation Plan, 2011 (descriptions in Appendix 2)
Brant (Atlantic)	112 and 113
Canada Goose (Atlantic population)	114
Canada Goose (North Atlantic population)	114
Wood Duck (Eastern population)	119, 120, 121, 125 and 126
Gadwall	115, 116 and 130
American Black Duck	112, 113, 114, 115, 116, 117, 118, 119, 120, 121 and 130
Blue-winged Teal	112, 113, 115, 116, 117, 118 and 130
Redhead	115, 116 and 130
Greater Scaup	115, 116, 117, 118, 120, 121, 127 and 130
Lesser Scaup	115, 116, 117, 118, 120, 121, 127 and 130
Common Eider (Northern subspecies)	120, 121, 122 and 123
Common Eider (American subspecies)	112, 117, 118, 120, 121, 122 and 123
Common Eider (Hudson Bay subspecies)	120, 121, 122 and 123
Harlequin Duck (Eastern population)	120, 121 and 124
White-winged Scoter	120 and 121
Common Golden Eye	114, 119, 120, 121 and 126
Barrow's Goldeneye (Eastern population)	120, 121, 125 and 126
Hooded Merganser	114, 119, 120, 121 and 125

## Appendix 4

List of the 66 waterfowl taxa present in Quebec, 37 of which carry out an essential activity of their life cycle in Quebec. This list was drawn up based on the list of taxa in Tables 1, 2 and 3 of the 2012 Revision of the NAWMP.

Waterfowl listed on the Liste de la faune vertébrée du Québec [List of Quebec vertebrate wildlife]								
Taxa			Presence in Quebec by BCR					
English	French	Latin	BCR 14	BCR 13	BCR 12	BCR 8	BCR 7	BCR 3
Black-bellied Whistling-Duck	Dendrocygne à ventre noir	<i>Dendrocygna autumnalis</i>						
Fulvous Whistling-Duck	Dendrocygne fauve	<i>Dendrocygna bicolor</i>						
Taiga Bean-Goose	Oie des moissons	<i>Anser fabalis</i>						
Tundra Bean-Goose	Oie de la toundra	<i>Anser serrirostris</i>						
Pink-footed Goose	Oie à bec court	<i>Anser brachyrhynchus</i>						
Greater White-fronted Goose	Oie rieuse	<i>Anser albifrons</i>	Migration	Migration	Migration	Migration	-	-
Graylag Goose	Oie cendrée	<i>Anser anser</i>						
Emperor Goose	Oie empereur	<i>Chen canagica</i>						
Greater Snow Goose	Grande Oie des neiges	<i>Chen caerulescens</i>	Migration	Breeding and migration	Migration	Migration	Migration	-
Mid-continent Lesser Snow Goose	Petite Oie du milieu du continent	<i>Chen caerulescens</i>	Migration	Migration	-	Migration	Migration	Breeding and migration
Ross' s Goose	Oie de Ross	<i>Chen rossii</i>	Migration	Migration	-	-	-	-
Brant (Atlantic)	Bernache cravant (Atlantique)	<i>Branta bernicla</i>	Migration	Migration	Migration	Migration	Breeding and migration	-
Barnacle Goose	Bernache nonnette	<i>Branta leucopsis</i>						
Cackling Goose	Bernache de Hutchins	<i>Branta hutchinsii</i>	-	Breeding and migration		Breeding and migration	Breeding and migration	Breeding and migration
Canada Goose	Bernache du Canada	<i>Branta canadensis</i>						
Canada Goose (Atlantic population)	Bernache du Canada (population de l'Atlantique)	<i>Branta canadensis</i>	-	Breeding and migration				
Canada Goose (North Atlantic population)	Bernache du Canada (population de l'Atlantique Nord)	<i>Branta canadensis</i>	Breeding and migration	-	-	Breeding and migration	-	-

**Waterfowl listed on the Liste de la faune vertébrée du Québec [List of Quebec vertebrate wildlife]**

Taxa			Presence in Quebec by BCR					
English	French	Latin	BCR 14	BCR 13	BCR 12	BCR 8	BCR 7	BCR 3
Canada Goose (Atlantic Flyway resident population)	Bernache du Canada (population de la voie migratoire de l'Atlantique) (géante)	<i>Branta canadensis</i>	?	?	?	?	?	?
Canada Goose (resident population)	Bernache du Canada (population résidente)	<i>Branta canadensis</i>	Breeding and migration	Breeding, migration and wintering	Breeding	-	-	-
Mute Swan	Cygne tuberculé	<i>Cygnus olor</i>	-	Migration	-	-	-	-
Trumpeter Swan	Cygne trompette	<i>Cygnus buccinator</i>						
Tundra Swan (Eastern population)	Cygne siffleur (population de l'Est)	<i>Cygnus columbianus</i>	-	Migration	Migration	Migration	Breeding and migration	Breeding and migration
Whooper Swan	Cygne chanteur	<i>Cygnus cygnus</i>						
Egyptian Goose	Ouette d'Égypte	<i>Alopochen aegyptiaca</i>						
Ruddy Shelduck	Tadorne casarca	<i>Tadorna ferruginea</i>						
Common Shelduck	Tadorne de Belon	<i>Tadorna tadorna</i>						
Wood Duck Eastern population (Other Survey Areas)	Canard branchu pop. de l'Est (autres zones de relevés)	<i>Aix sponsa</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	-
Gadwall (Other Survey Areas)	Canard chipeau (autres zones de relevés)	<i>Anas strepera</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	-	-
Eurasian Wigeon	Canard siffleur	<i>Anas penelope</i>	Migration	Migration	Migration	Migration	-	-
American Wigeon (Other Survey Areas)	Canard d'Amérique (autres zones de relevés)	<i>Anas americana</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	-
American Black Duck (Other Survey Areas)	Canard noir (autres zones de relevés)	<i>Anas rubripes</i>	Breeding, migration and wintering	Breeding and migration	Breeding and migration			
Mallard (Other Survey Areas)	Canard colvert (autres zones de relevés)	<i>Anas platyrhynchos</i>	Breeding, migration and wintering	Breeding, migration and wintering	Breeding, migration and wintering	Breeding and migration	Breeding and migration	Breeding and migration
American Black Duck x Mallard Hybrid	Canard colvert x Canard noir	<i>Anas rubripes x platyrhynchos</i>						

**Waterfowl listed on the Liste de la faune vertébrée du Québec [List of Quebec vertebrate wildlife]**

Taxa			Presence in Quebec by BCR					
English	French	Latin	BCR 14	BCR 13	BCR 12	BCR 8	BCR 7	BCR 3
Blue-winged Teal (Other Survey Areas)	Sarcelle à ailes bleues (autres zones de relevés)	<i>Anas discors</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	-	-
Cinnamon Teal	Sarcelle cannelle	<i>Anas cyanoptera</i>						
Northern Shoveler (Other Survey Areas)	Canard souchet (autres zones de relevés)	<i>Anas clypeata</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration
White-cheeked Pintail	Canard des Bahamas	<i>Anas bahamensis</i>						
Northern Pintail (Other Survey Areas)	Canard pilet (autres zones de relevés)	<i>Anas acuta</i>	Breeding and migration	Breeding, migration and wintering	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration
Garganey	Sarcelle d'été	<i>Anas querquedula</i>						
Green-winged Teal (Other Survey Areas)	Sarcelle d'hiver (autres zones de relevés)	<i>Anas crecca</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration
Canvasback (Other Survey Areas)	Fuligule à dos blanc (autres zones de relevés)	<i>Aythya valisineria</i>	-	Migration	-	Migration	-	-
Redhead (Other Survey Areas)	Fuligule à tête rouge (autres zones de relevés)	<i>Aythya americana</i>	Migration	Breeding and migration	Migration	Breeding and migration	-	-
Common Pochard	Fuligule milouin	<i>Aythya ferina</i>						
Ring-necked Duck (Other Survey Areas)	Fuligule à collier (autres zones de relevés)	<i>Aythya collaris</i>	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	Breeding and migration	-
Tufted Duck	Fuligule morillon	<i>Aythya fuligula</i>						
Greater Scaup (Other Survey Areas)	Fuligule milouinan (autres zones de relevés)	<i>Aythya marila</i>	Breeding and migration	Migration	Migration	Breeding and migration	Breeding and migration	Breeding and migration
Lesser Scaup (Other Survey Areas)	Petit Fuligule (autres zones de relevés)	<i>Aythya affinis</i>	Migration	Breeding and migration	Migration	Breeding and migration	Breeding and migration	-
Steller's Eider	Eider de Steller	<i>Polysticta stelleri</i>						
King Eider Eastern population (Other Survey Areas)	Eider à tête grise pop. de l'Est (continentale)	<i>Somateria spectabilis</i>	Migration and wintering	-	-	Migration and wintering	Migration	Breeding, migration and wintering
Common Eider	Eider à duvet	<i>Somateria mollissima</i>						
Common Eider Northern subspecies (Other Survey Areas)	Eider à duvet sous-espèce du Nord (autres zones de relevés)	<i>Somateria mollissima ssp borealis</i>	Migration and wintering	-	-	Migration and wintering	Breeding, summering, migration and wintering	Breeding, summering, migration and wintering

**Waterfowl listed on the Liste de la faune vertebrée du Québec [List of Quebec vertebrate wildlife]**

Taxa			Presence in Quebec by BCR					
English	French	Latin	BCR 14	BCR 13	BCR 12	BCR 8	BCR 7	BCR 3
Common Eider American subspecies (Other Survey Areas)	Eider à duvet sous-espèce d'Amérique (autres zones de relevés)	<i>Somateria mollissima ssp dresseri</i>	Breeding, summering and migration	Breeding, summering and migration	Breeding, summering and migration	Breeding, summering and migration	-	-
Common Eider Hudson Bay subspecies (Other Survey Areas)	Eider à duvet sous-espèce de la baie d'Hudson (autres zones de relevés)	<i>Somateria mollissima ssp sedentaria</i>	-	-	-	-	Breeding, summering, migration and wintering	Breeding, summering, migration and wintering
Harlequin Duck Eastern Population (Other Survey Area)	Arlequin plongeur population de l'Est (autres zones de relevés)	<i>Histrionicus histrionicus</i>	Breeding, summering, migration and wintering	-	-	Breeding, summering and migration	Breeding, summering and migration	-
Labrador Duck	Eider du Labrador	<i>Camptorhynchus labradorius</i>						
Surf Scoter (Other Survey Areas)	Macreuse à front blanc (autres zones de relevés)	<i>Melanitta perspicillata</i>	Migration	-	Breeding and migration	Breeding and migration	Breeding and migration	-
White-winged Scoter (Other Survey Areas)	Macreuse brune (autres zones de relevés)	<i>Melanitta fusca</i>	Migration	Migration	-	Migration	Breeding and migration	-
Black Scoter Atlantic population (Other Survey Areas)	Macreuse à bec jaune pop. de l'Atlantique (autres zones de relevés)	<i>Melanitta americana</i>	Migration	-	-	Migration	Breeding and migration	Breeding and migration
Long-tailed Duck (Other Survey Areas)	Harelde kakawi (autres zones de relevés)	<i>Clangula hyemalis</i>	Migration and wintering	-	-	Breeding, migration and wintering	Breeding and migration	Breeding and migration
Bufflehead (Other Survey Areas)	Petit Garrot (autres zones de relevés)	<i>Bucephala albeola</i>	Migration	Migration	Breeding and migration	Breeding, migration and wintering	Breeding and migration	-
Common Goldeneye (Other Survey Areas)	Garrot à œil d'or (autres zones de relevés)	<i>Bucephala clangula</i>	Breeding, migration and wintering	Breeding, migration and wintering	Breeding, migration and wintering	Breeding, migration and wintering	Breeding and migration	-
Barrow's Goldeneye Eastern population (Other Survey Areas)	Garrot d'Islande population de l'Est (autres zones de relevés)	<i>Bucephala islandica</i>	Migration and wintering	-	Breeding, migration and wintering	Breeding, migration and wintering	-	-

**Waterfowl listed on the Liste de la faune vertébrée du Québec [List of Quebec vertebrate wildlife]**

Taxa			Presence in Quebec by BCR					
English	French	Latin	BCR 14	BCR 13	BCR 12	BCR 8	BCR 7	BCR 3
Hooded Merganser (Other Survey Areas)	Harle couronné (autres zones de relevés)	<i>Lophodytes cucullatus</i>	Breeding, summering, migration and wintering	Breeding, summering, migration and wintering	Breeding, summering and migration	Breeding, summering and migration	Breeding, summering and migration	-
Common Merganser (Other Survey Areas)	Grand Harle (autres zones de relevés)	<i>Mergus merganser</i>	Breeding, summering, migration and wintering	Breeding, summering and migration	-			
Red-breasted Merganser (Other Survey Areas)	Harle huppé (autres zones de relevés)	<i>Mergus serrator</i>	Breeding, summering, migration and wintering	Breeding, summering and migration	Breeding, summering and migration	Breeding, summering, migration and wintering	Breeding, summering and migration	Breeding, summering and migration
Ruddy Duck (Other Survey Areas)	Érismature rousse (autres zones de relevés)	<i>Oxyura jamaicensis</i>	Migration	Breeding and migration	Breeding and migration	Breeding and migration	-	-