

# Portobello Creek National Wildlife Area Management Plan



## Acknowledgements

This management plan was written by Colin M. MacKinnon of the Canadian Wildlife Service of Environment and Climate Change Canada. Thanks to Canadian Wildlife Service employees who were involved in the development or review of the document: Kevin Davidson, Al Hanson and Andrew Kennedy.

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

## What are Environment and Climate Change Canada protected areas?

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

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

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

## What is a management plan?

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

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

## **What is protected area management?**

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

## **The series**

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

## **To learn more**

To learn more about Environment and Climate Change Canada's protected areas, please visit our website at [www.ec.gc.ca/ap-pa](http://www.ec.gc.ca/ap-pa) or contact the Canadian Wildlife Service in Ottawa.

## Portobello Creek National Wildlife Area

Portobello Creek National Wildlife Area (NWA) is situated within the lower Saint John River floodplain, 20 km east of Fredericton and 8 km northeast of Oromocto, New Brunswick. This NWA is currently 2084 ha, but once land acquisition is completed, the NWA will encompass 4000 ha.

Portobello Creek NWA is part of the floodplain complex of the lower Saint John River. The wetlands of the lower Saint John River floodplain have been identified as one of the most productive habitats for wildlife in New Brunswick. Each spring following ice-out on the Saint John River, the rising waters flood the lowlands along the river. The spring freshet leaves behind a flush of nutrients on the floodplain that contributes to the highly productive character of the Saint John River wetlands (Choate 1973; Roberts 1992; Hanson *et al.* 1998; Conner and Gabor 2006). This floodplain complex is important not only for its significant habitat value, but also in reducing flooding events and minimizing related property damage.

Major habitat types within the NWA include mixed woods, shrub swamp, wooded swale, open marsh and open water (Whitman 1968). The area contains pockets of Eastern White Cedar (*Thuja occidentalis*) and numerous large Red Oak (*Quercus rubra*) bordering portions of the Portobello Creek. The entire wetland complex is used by waterfowl during spring and fall migration. Eight species of ducks commonly produce broods in the area during the summer months. This wetland complex and the adjacent Grand Lake Meadows Protected Natural Area, administered by the Province of New Brunswick, support several rare species, including a population of Yellow Rail (*Coturnicops noveboracensis*) at Grand Lake Meadows (Kehoe *et al.* 2000).

Portobello Creek remains largely an untouched gem. The floodplain remains intact despite the considerable forestry and agricultural activity along its borders. While many comparable areas have been dyked and channelized to control flood water, the diversity of wildlife and unaltered habitats of Portobello Creek NWA provide a glimpse of what the floodplain was in earlier times.

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

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# 1 DESCRIPTION OF THE PROTECTED AREA

Portobello Creek National Wildlife Area (NWA) (45°47'N 66°33'E) borders the Saint John River, New Brunswick, lying between the villages of Maugerville to the west and Sheffield to the east (Figure 1). The most prominent feature of the NWA is the Portobello Creek, some 12 km in length, which meanders through the lowlands (Whitman 1968). The Portobello Creek flows from west to east and terminates at the junction of Indian and French lakes, a branch of the greater Saint John River watershed (figures 2 and 3). Noonan Stream is the main tributary of the Portobello Creek, joining the creek from the north.

The most significant habitat within the NWA is the expansive floodplain forest that covers 49% of the area. The NWA falls within a warm microclimate that favours hardwood trees such as the Red Oak, Butternut and Silver Maple along the borders of the lower Saint John River. A diversity of wetland habitats is also found, such as shrub swamp, emergent marsh, and open water ponds and creeks.

The Portobello Creek wetlands, together with the adjacent Grand Lake Meadows to the southeast, comprise the largest natural floodplain system remaining in Canada's Maritime provinces. While development pressures in other locations have resulted in the diking, re-routing, and channelization of floodways and wetlands, the Portobello Creek system remains comparably pristine. Portobello Creek has been described as a "safety valve" for the Lower Saint John River by reducing the volume of water in the river channel (Wright and McIntyre 1970).

In 1974, 4000 ha of this floodplain forest-wetland complex were proposed for acquisition by fee simple purchase. To date, 2084 ha have been designated as an NWA under the *Wildlife Area Regulations* of the *Canada Wildlife Act* (Figure 1). Efforts are currently under way to acquire and designate additional lands.

**Table 1: Portobello Creek NWA Summary Information**

Protected area designation	National Wildlife Area
Province or territory	New Brunswick
Latitude and longitude	45°55'N 66°21'W
Size (ha)	2084 ha
Protected area designation criteria	Historic: Protecting a unique, undeveloped floodplain system with high value to waterfowl and other wetland obligate birds. Current: Meets criteria 1(a), where “the area supports a population of a species or subspecies or group of a species which is concentrated for any portion of the year”. A significant number and diversity of waterfowl use the National Wildlife Area as either breeding or migration habitat.
Protected area classification system	Category A – Conservation of species or critical habitat
International Union for Conservation of Nature (IUCN) classification	Ib
Order in Council number	PC 1995-473
Directory of Federal Real Property (DFRP) number	DFRP number 04103
Gazetted	August 30, 1995
Additional designations	A portion of the National Wildlife Area is listed within the Lower Saint John River Important Bird Area. An area contiguous with the National Wildlife Area is designated as a Protected Natural Area under the provincial Act.
Faunistic and floristic importance	Significant floodplain complex
Invasive species	Purple Loosestrife ( <i>Lythrum salicaria</i> )
Species at risk	The NWA supports six species at risk under the federal <i>Species at Risk Act</i> : Butternut ( <i>Juglans cinerea</i> ), Canada Warbler ( <i>Wilsonia canadensis</i> ), Chimney Swift ( <i>Chaetura pelagica</i> ), Common Nighthawk ( <i>Chordeiles minor</i> ), Monarch ( <i>Danaus plexippus</i> ) and Yellow Rail ( <i>Coturnicops noveboracensis</i> )
Management agency	Environment and Climate Change Canada – Canadian Wildlife Service
Public access and use	There is limited access over land, with public use of the area primarily through the waterways.
Other appropriate information	This area is relatively remote and is frequently accessed by water. In high winds, the more open waterways by French Island can be dangerous for small boats and canoes.

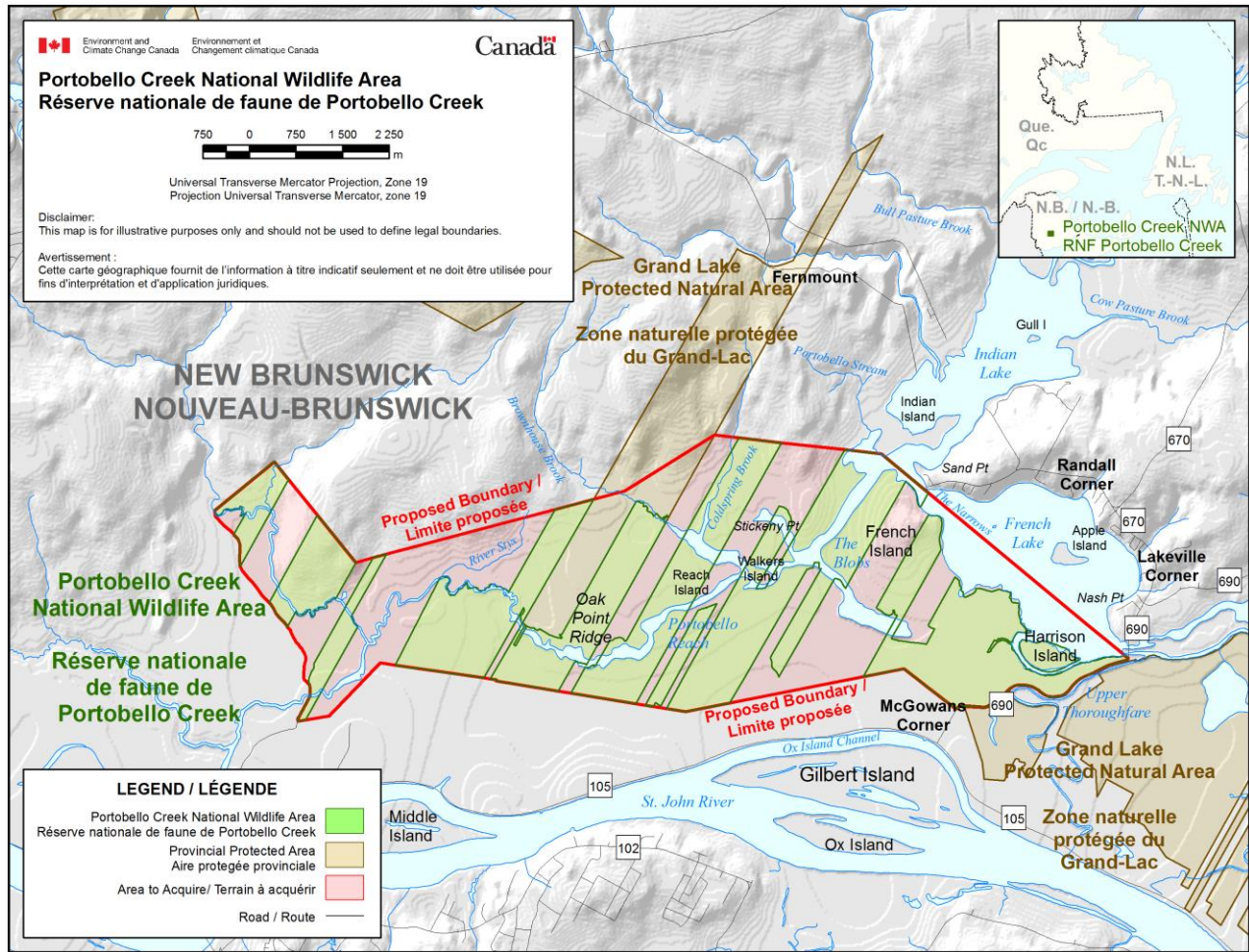
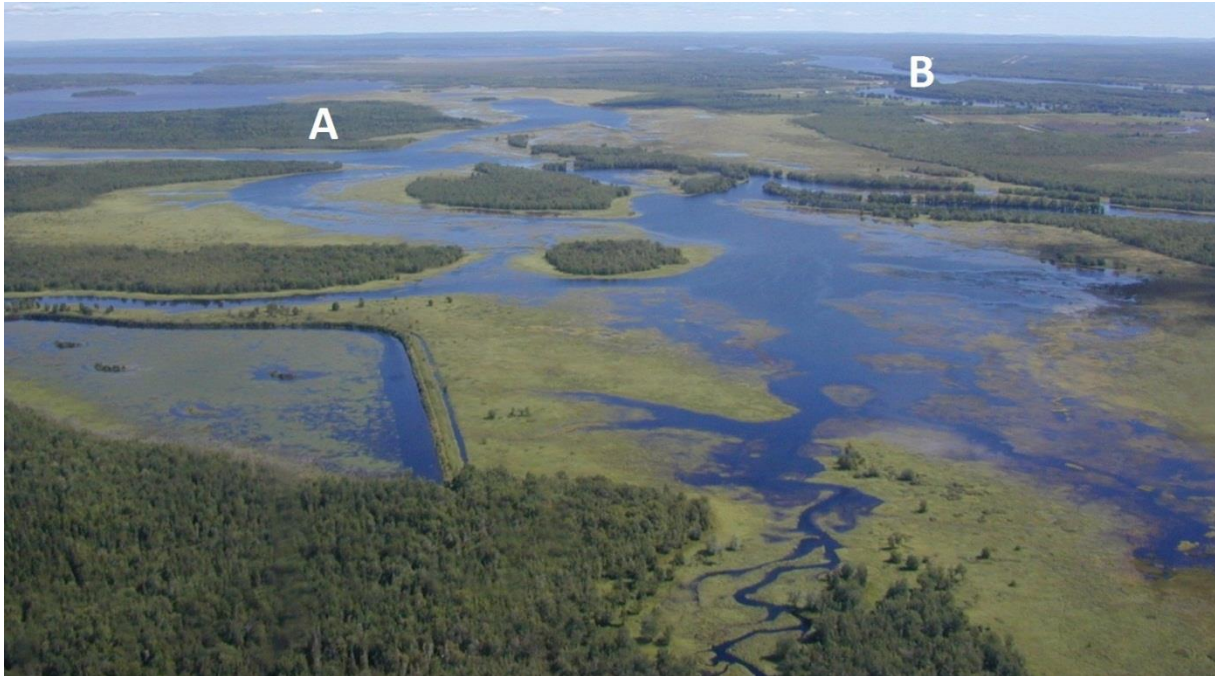


Figure 1: Portobello Creek NWA, New Brunswick



**Figure 2: Expansive floodplain in the Portobello Creek NWA. French Island is shown at top left (A), and the Saint John River (B) at extreme top right.**

Photo: A. Kennedy © Environment and Climate Change Canada, 2004



**Figure 3: At high water, the Portobello Creek floodplain becomes a maze of creeks, backwaters and lagoons. French Island is shown at left (A) and Stickney Point (B) at top centre.**

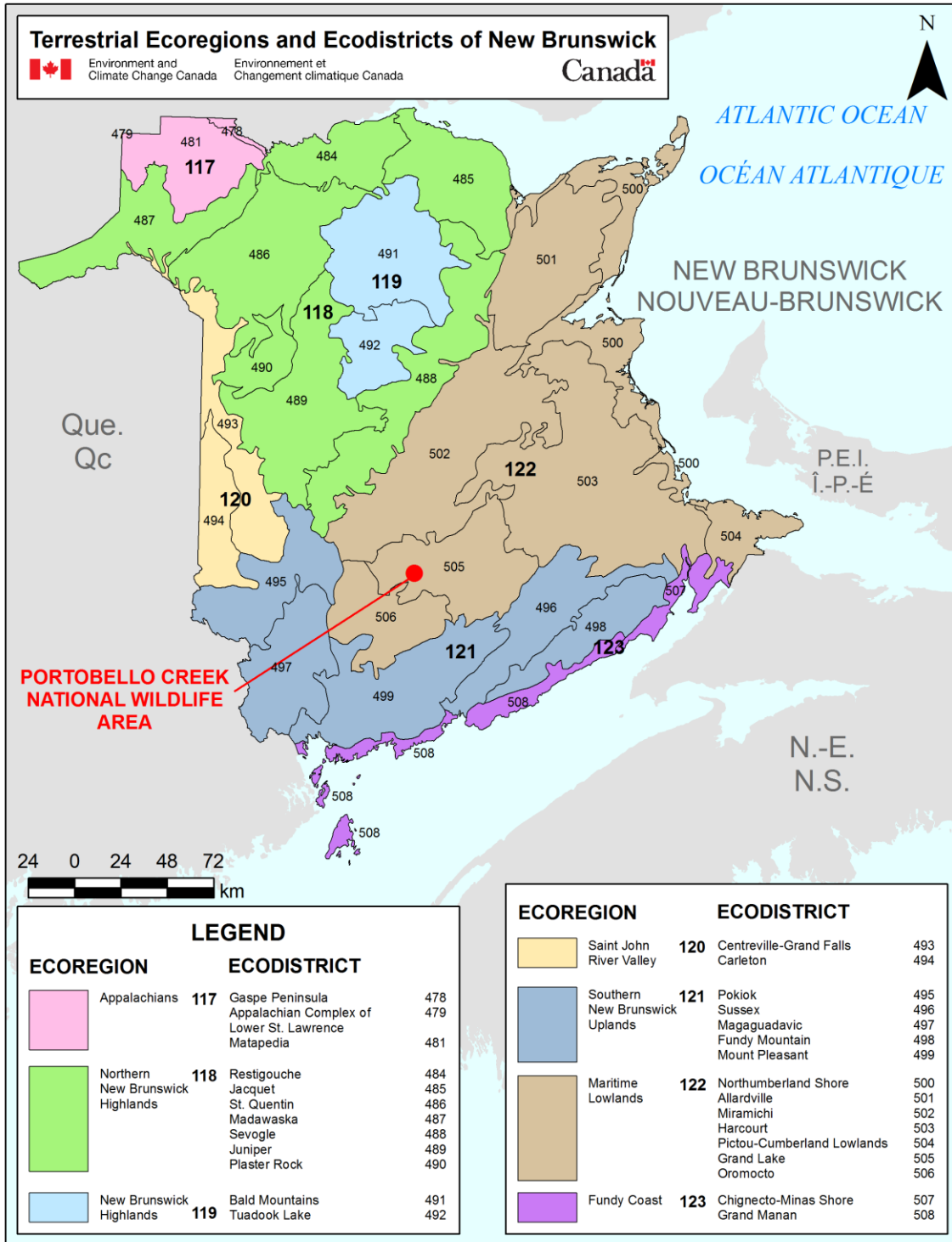
Photo: A. Kennedy © Environment and Climate Change Canada, 2004

## 1.1 REGIONAL CONTEXT

Portobello Creek NWA is located in the Atlantic Maritime Ecozone, which includes all of New Brunswick, Prince Edward Island, Nova Scotia and Quebec's Gaspé Peninsula. Within this ecozone, the NWA is part of the Maritime Lowlands Ecoregion (Figure 4), characterized by mixedwood forests and extensive wetlands. This region is typified by warm summers and mild, snowy winters. Total annual precipitation ranges from 1000–1300 mm. Mean temperatures reach 15.5°C in summer and -5.5°C in winter (Ecological Stratification Working Group 1995).

Portobello Creek NWA falls within the Grand Lake Ecodistrict (Figure 4). The unusually warm climate in this area allows for the presence of trees usually encountered further south, such as Green Ash (*Fraxinus pennsylvanica*), Butternut (*Juglans cinerea*) and Silver Maple (*Acer saccharinum*) (Ecoregions Working Group 1989; Zelazny 2007).

The soils of this area belong to the poorly drained phase of the interval series that is almost exclusively confined to the floodplain region of the Saint John River. These soils are flooded annually by the spring freshet, which deposits thin layers of silt on the surface. The interval soils are very fertile and are of considerable importance to the local economy, particularly for sod production and agriculture. The land immediately adjacent to the Saint John River is somewhat higher and better drained. Inland from the river, the land slopes downhill into poorly drained conditions where water from the spring freshet may remain through much of the growing season (Stobbe 1940).



**Figure 4: Terrestrial Ecoregions and Ecodistricts of New Brunswick. Portobello Creek NWA falls within Ecoregion No. 122 (Maritime Lowlands) and Ecodistrict No. 505 (Grand Lake)**

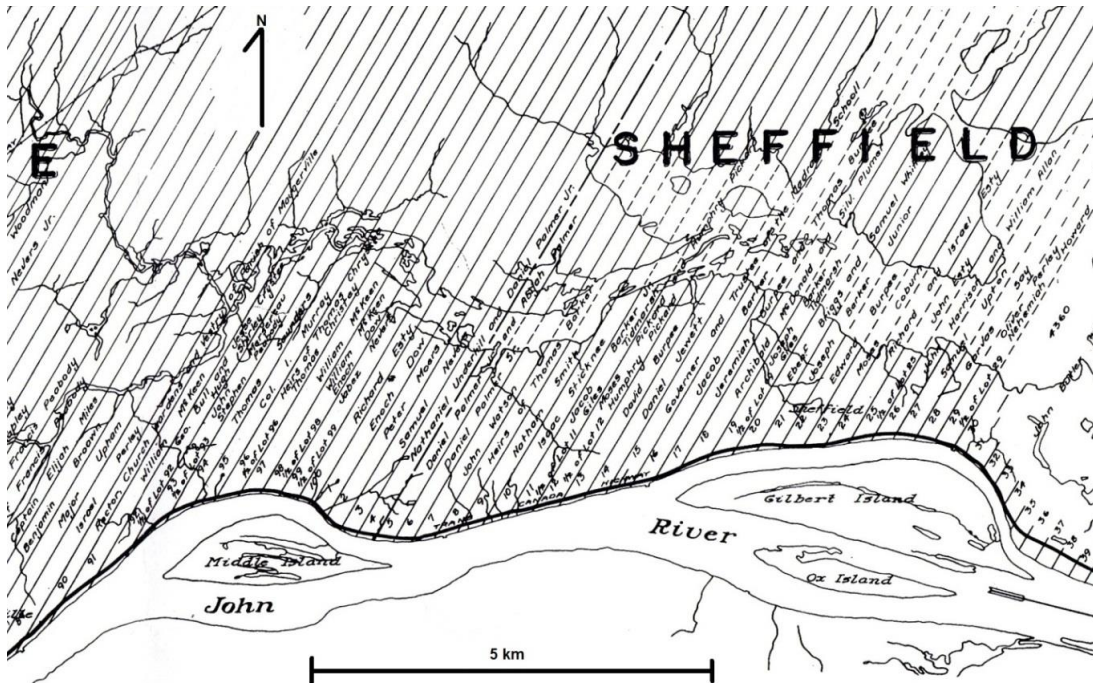
## 1.2 HISTORICAL BACKGROUND

The Saint John River has long been home to the Wolastoqiyik (Malecite) First Nation, and the many ancient camp sites along the river attest to this history (Raymond 1950). Lands to the east and south bordered the Mi'kmaq First Nation. Most of the place names in the area have Aboriginal origins. The waters of Portobello Creek eventually empty into the Jemseg River, whose name is derived from "Ajemseg," a Wolastoqiyik word meaning "gathering place." There are two registered archaeological sites (Borden designations BIDn-15 and BIDn-16) within Portobello Creek NWA.

The first English trading post on the Saint John River was established at the mouth of the Jemseg River in 1659. This trading post and adjacent land subsequently became the site of Fort Jemseg in 1667. Early French settlers abandoned the area in 1702 when the war between England and France resumed (Raymond 1950). French Acadians returned to Maugerville in 1718 and resettled the area until the expulsion of 1755 (Stobbe 1940; Raymond 1950). In the late 1700s, English settlers from Massachusetts arrived as part of the United Empire Loyalist immigration and took up land along the Saint John River. The configuration of land ownership patterns and parcels today reflects these late 18th-century land grants (Figure 5). Much of the higher and more valuable land adjacent to the river was quickly cleared and settled, while much of the backcountry wetland remained undeveloped.

One area of backcountry wetland that was developed was at Stickney Point, west of French Island (Figure 6). This site is now accessible primarily by boat, and although considered remote by today's standards, the site is central to the waterways that were once the primary means of navigation. The site at Stickney Point may have been the home of the Hon. Charles Burpee (1817–1909), who represented Sunbury in the House of Commons from 1867 to 1887 and was a member of the Senate in 1900.





**Figure 5: Late 18th-century land grants in Sheffield and Maugerville, New Brunswick. Portobello Creek falls in the centre of the map (N.B. Crown Grant Reference Map circa 1790).**



**Figure 6: Remains of a 19th-century horse-drawn hay mower found deep in the woods at Stickney Point, Portobello Creek NWA**

Photo: C. MacKinnon © Environment and Climate Change Canada, 2012

### 1.3 LAND OWNERSHIP

Portobello Creek NWA is owned by the Government of Canada and is administered by the Canadian Wildlife Service of Environment and Climate Change Canada. “Water lots,” where title may be held of temporarily or permanently flooded land, are common in the Portobello Creek region. Lands adjoining the NWA are owned by the province and private interests.

The configuration of the current protected area is fragmented, thus complicating both the site administration as well as being able to clearly communicate allowable activities to the public. Land assemblage to complete the proposed total acquisition of 4000 ha is ongoing. This is subject to the availability of acquisition funds. Lands are secured, subject to an independent appraisal, from willing vendors at fair market value, determined at highest and best use.

The federal government does not currently hold the subsurface mineral rights for Portobello Creek NWA.

### 1.4 FACILITIES AND INFRASTRUCTURE

Portobello Creek NWA is remote and contains no roads or trails, making maintenance requirements minimal (Table 2). Annual visits include site inspections, repairs and replacement of regulatory signage (including boundary, public notice and 2’ x 4’ NWA identification signage). Travel within the NWA is primarily by boat. Two small boat landings function as public points of access: the “Twin Bridges” on Route 690, south of Lakeville Corner, and Sandy Point at the eastern end of the NWA (Figure 7). The western boundary of the NWA can be approached from the Church Road off Route 105 at Maugerville.

**Table 2: Facilities and Infrastructure in the Portobello Creek NWA**

Type of Facility or Infrastructure	Approximate Size (m, m <sup>2</sup> , km, km <sup>2</sup> or m lin.) or Number	Responsibility Holder or Owner
Property boundary	34.6 km	Environment and Climate Change Canada – Canadian Wildlife Service (ECCC–CWS)
Boundary signs	700	ECCC–CWS
NWA entry signs	1	ECCC–CWS
Public notice signs	20	ECCC–CWS
Research cabin	1 (4 x 8 m)	ECCC–CWS
Boat landings	2 (Twin Bridges and Sandy Point)	Province – New Brunswick



**Figure 7: Entrance and boat landing to Portobello Creek NWA, near Lakeville Corner off Route 690**  
Photo : C. MacKinnon © Environment and Climate Change Canada, 2012

## 1.5 SOCIO-ECONOMIC ASSESSMENT

Although no specific socio-economic studies have been conducted regarding Portobello Creek NWA, more general surveys have highlighted the value that the Canadian public places on habitat set aside for wildlife (Gates 1975; Environment Canada 1991) and the economic significance of nature-related activities (Environment Canada 2000).

Public access to Portobello Creek NWA is permitted, although the area is not promoted as a tourism destination. The area is frequented by recreational bird watchers, canoeists and photographers; hunting, fishing and trapping are allowed, subject to applicable federal and provincial regulations. These outdoor pursuits support the local economy and provide health benefits to visitors, through leisure exercise and enjoyment.

The waters around French Island support an important harvest of Gaspereau (*Alosa pseudoharengus*) used as bait for the more lucrative American Lobster (*Homarus americanus*) fishery. The economic value of this product is considerable.

During flooding events, Portobello Creek and the adjacent floodplain allow water to bypass the communities along the main river, protecting a considerable infrastructure from loss. Wright and McIntyre (1970) describe the Portobello Creek as a “safety valve” for the Lower Saint John River.

## 2 ECOLOGICAL RESOURCES

### 2.1 TERRESTRIAL AND AQUATIC HABITATS

The flora of Portobello Creek NWA reflects the area's low-lying topography combined with a warm microclimate. The area contains a wide range of wetlands, including floodplain forest, shrub swamp, sedge meadow, wooded swale, open marsh and open water with dense submergent vegetation (figures 8 and 9). The extensive forested area within Portobello Creek NWA is dominated by Silver Maple (*Acer saccharinum*), White Birch (*Betula papyrifera*), Red Oak (*Quercus rubra*), American Elm (*Ulmus american*), Yellow Birch (*Betula lutes*), Red Spruce (*Picea rubra*), Black Spruce (*Picea mariana*) and Balsam Fir (*Abies balsamea*). The ground cover under the floodplain forest is generally sparse as a result of delayed development caused by the spring freshet. Ostrich Fern (*Pteretis penslyvanica*)—the iconic “fiddlehead”—and Sensitive Fern (*Onoclea sensibilis*) cover broad areas within this habitat (Figure 10).

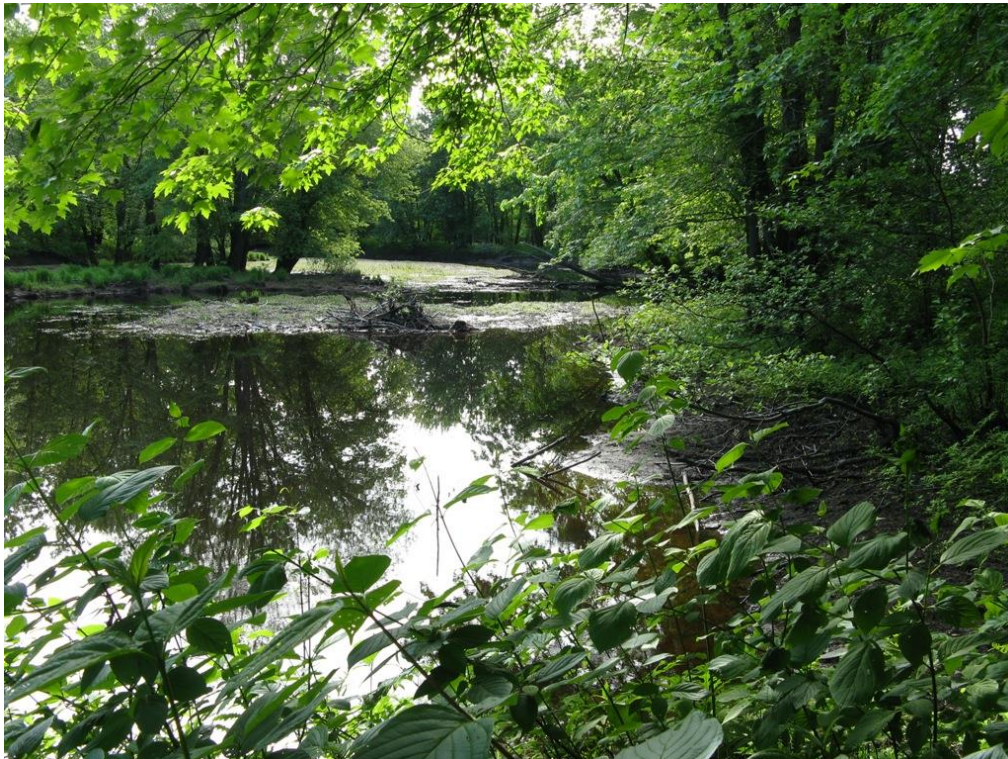
The majority of the ground cover within the shrub swamps consists of Leatherleaf (*Chamaedaphne calyculata*), Meadow Sweet (*Spiraea latifolia*), Sweet Gale (*Myrica gale*) and Speckled Alder (*Alnus rugosa*). Buckbean (*Menyanthes trifoliata*), Water Arum (*Calla palustris*), and a variety of sedges and grasses can be found in standing water within these swamps. The wooded swales are confined to margins and islands of the Portobello and Noonan streams. These open wetland areas are characterized by dense grass and sedge mats supporting a sparse cover of alder and willow (Hinds 1983; Blaney 2003; Deichmann 2004).

Within the marsh areas, emergent vegetation is dominated by sedges (*Carex* spp.), bulrush (*Scirpus* spp.), Wild Rice (*Zizania aquatica*), Pickerelweed (*Pontederia cordata*) and Buckbean. Blue-joint (*Calamagrostis canadensis*) and Fresh-water Cord Grass (*Spartina pectinata*) are also dominant in some areas. The dominant submergents in the marsh areas are Coontail (*Ceratophyllum demersum*) and Water Milfoil (*Myriophyllum* spp.). Other common floating-leaved and submergent vegetation include Duckweeds (*Lemna minor*) and (*Spirodella polyrhiza*), Bladderwort (*Utricularia* spp.), pondweeds (*Potamogeton* spp.), Fragrant Water Lily (*Nymphaea odorata*), Yellow Water Lily (*Nuphar* spp.) and Waterweed (*Elodea canadensis*).

Not surprisingly within such a diversity of wetlands, this area supports a large diversity of dragonflies and damselflies, with 61 species recorded (Brunelle 2011).



**Figure 8: Typical open water and tree-lined wetlands within Portobello Creek NWA**  
Photo: L. Wilson © Environment and Climate Change Canada, 2012



**Figure 9: Quiet headwaters of Portobello Creek NWA**  
Photo: C. MacKinnon © Environment and Climate Change Canada, 2011



**Figure 10: Typical floodplain forests in Portobello Creek NWA**  
Photo: C. MacKinnon © Environment and Climate Change Canada, 2011

## **2.2 WILDLIFE SPECIES**

### **2.2.1 Birds**

The wetlands of Portobello Creek provide quality breeding habitat for waterfowl (Carter 1952; Prince 1965; Wright 1967; Whitman 1968). The American Black Duck (*Anas rubripes*) is the most common breeding species, although other waterfowl such as Mallard (*Anas platyrhynchos*), Blue-winged Teal (*Anas discors*), American Wigeon (*Anas americana*), Wood Duck (*Aix sponsa*), Ring-necked Duck (*Aythya collaris*) and Common Goldeneye (*Bucephala clangula*) are common breeders. Other species of ducks frequent the area on a regular basis, such as Green-winged Teal (*Anas carolinensis*), Northern Shoveler (*Anas clypeata*), Northern Pintail (*Anas acuta*), Hooded Merganser (*Lophodytes cucullatus*) and Common Merganser (*Mergus merganser*). Canada Geese (*Branta canadensis*) use the area as a stopover during spring migration.

The composition of waterfowl species fluctuates as migrant populations pass through the area. Black Duck and Common Goldeneye are the first migrants to arrive in the spring. The number of waterfowl peaks in mid-April, and only breeding birds remain by the first week of May. Wood Duck, Ring-necked Duck and Blue-winged Teal arrive during the first week of April

but do not reach maximum numbers until late in the month. These species generally do not nest until May, after the spring freshet has subsided. During fall migration in September, large numbers of Wood Duck, Blue-winged Teal, Black Duck and Ring-necked Duck occur. Wood Duck and Blue-winged Teal usually depart by mid-September, while other species do not leave until October and November.

The large and older-growth hardwood trees within the floodplain, such as Silver Maple and American Elm, are essential to cavity-nesting waterfowl such as Wood Duck, Hooded Merganser and Common Goldeneye. The loss of many of the old elm trees to Dutch Elm Disease has severely limited the availability of cavities for these birds (Johnsen 1992).

Many other waterbirds use the area, primarily during the breeding season. There is one active Bald Eagle (*Haliaeetus leucocephalus*) nest on French Island and several Osprey (*Pandion haliaetus*) nests within the Portobello Creek system. Other frequently encountered wetland birds include Pied-billed Grebe (*Podilymbus podiceps*), Common Loon (*Gavia immer*), Sora Rail (*Porzana Carolina*), American Bittern (*Botaurus lentiginosus*), Spotted Sandpiper (*Actitis macularius*) and Belted Kingfisher (*Megaceryle alcyon*). Great Blue Heron (*Ardea herodias*), Black Tern (*Chlidonias niger*) and Common Tern (*Sterna hirundo*) are frequently seen foraging in the open marshes.

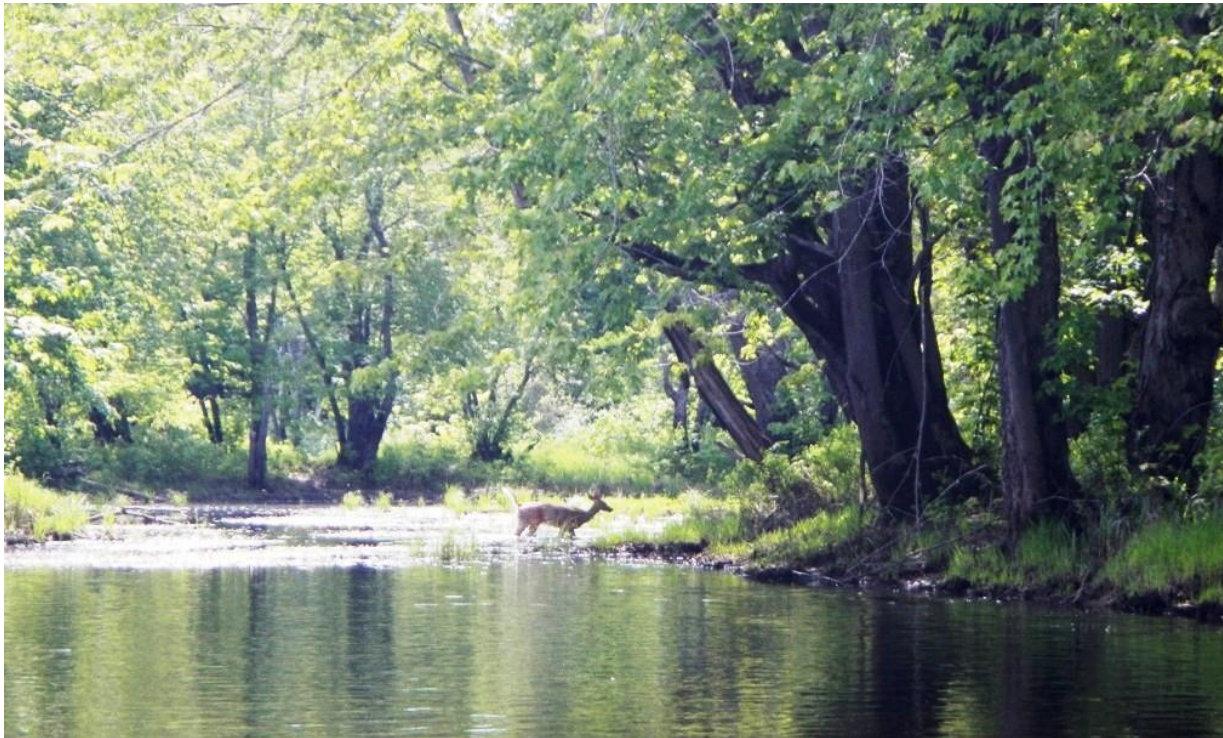
Common Snipe (*Gallinago gallinago*) nest in the marshes, and Woodcock (*Scolopax minor*) and Ruffed Grouse (*Bonasa umbellus*) breed in the wooded areas. Other land birds using the area during migration or nesting include Kestrel (*Falco sparverius*), Northern Harrier (*Circus cyaneus*), Broad-winged Hawk (*Buteo platypterus*), Great Horned Owl (*Bubo virginianus*), Barred Owl (*Strix varia*), Common Nighthawk (*Chordeiles minor*) and various woodpeckers, most notably the Pileated Woodpecker (*Dryocopus pileatus*). Many species of songbirds, such as Tree Swallow (*Tachycineta bicolor*), Veery (*Catharus fuscescens*), Yellow Warbler (*Setophaga petechia*) and Common Yellowthroat (*Geothlypis trichas*), breed and forage in the varied habitats.

### **2.2.2 Mammals**

Thirty-five species of mammals have been recorded within the Portobello Creek NWA. Moose (*Alces alces*) and White-tailed Deer (*Odocoileus virginianus*) are common summer inhabitants of the Portobello Creek complex (figures 11 and 12). Moose use shrub hummocks close to water during spring calving and are often forced onto high land while the wetland areas



are flooded. Deer are present in the hardwood stands and regenerating areas within the NWA. All provincially common furbearers, including Beaver (*Castor canadensis*), Muskrat (*Ondatra zibethicus*), Raccoon (*Procyon lotor*) and Eastern Coyote (*Canis latrans*) are known to frequent the area (Dilworth 1966). Also present are Mink (*Mustela erminea*), River Otter (*Lutra canadensis*), Red Fox (*Vulpes vulpes*), Fisher (*Martes pennanti*), Snowshoe Hare (*Lepus americanus*) and Porcupine (*Erethizon dorsatum*). Common small mammals in the area include Eastern Chipmunk (*Tamias striatus*), Red Squirrel (*Tamiasciurus hudsonicus*), Grey Squirrel (*Sciurus carolinensis*) and Deer Mouse (*Peromyscus maniculatus*). Habitat is present in the hardwood areas for Little Brown Bat (*Myotis lucifugus*) and Eastern Pipistrelle (*Perimyotis subflavus*) (Banfield 1974).



**Figure 11: White-tailed Deer crossing a wetland on the upper reaches of the Portobello Stream, Portobello Creek NWA**

Photo: L. Wilson © Environment and Climate Change Canada, 2012



**Figure 12: Bull Moose, Portobello Creek NWA**

Photo: A. Macfarlane © Environment and Climate Change Canada, 1996

### **2.2.3 Reptiles and Amphibians**

The entire area provides excellent habitat for reptiles and amphibians. At least nine species of reptiles and amphibians, such as Green Frog (*Rana clamitans*), Northern Spring Peeper (*Hyla crucifer*), American Toad (*Bufo americanus*) and Northern Leopard Frog (*Rana pipiens*), are found within Portobello Creek NWA. Additional species that would be expected to be present are Blue-spotted Salamander (*Ambystoma laterale*), Red-spotted Newt (*Notophthalmus viridescens*), Redback Salamander (*Plethodon cinereus*), Mink Frog (*Rana septentrionalis*), Wood Turtle (*Clemmys insculpta*), Maritime Garter Snake (*Thamnophis sirtalis*), Ringneck Snake (*Diadophis punctatus*), Smooth Green Snake (*Opheodrys vernalis*) and Redbelly Snake (*Storeria occipitomaculata*). Eastern Painted Turtle (*Chrysemys picta*) are quite common, while there is a small possibility that the Grey Tree Frog (*Hyla versicolor*) could be present, as a number of the latter have been identified in the Fredericton area (Brannen 2004).

### **2.2.4 Fish**

Chain Pickerel (*Esox niger*), White Perch (*Morone Americana*) and Yellow Perch (*Perca flavescens*) spawn in the flooded marshes in the spring. These species are commonly caught by anglers throughout the year and particularly during the ice fishing season. Economically or recreationally important fish species present in waters adjacent to the marsh areas include

Gaspereau, American Eel (*Anguilla rostrata*) and Smallmouth Bass (*Micropterus dolomieu*). There are commercial fisheries for Gaspereau (used as lobster bait) and American Eel within the Portobello Creek system.

### **2.3 SPECIES AT RISK**

Butternut (*Juglans cinerea*), a species of special concern listed under the *Species at Risk Act*, occurs within the Portobello Creek NWA. This species is found sporadically throughout the lower Saint John River floodplain. The closest notable assemblage of Butternut occurs on nearby Gilbert's Island (Table 3).

A single adult of the endangered Skillet Clubtail (*Gomphus ventricosus*), listed as Endangered by the Committee on the Status of Endangered Wildlife in Canada, was found within the NWA in 2004, but the species was not observed in more recent surveys in 2009.

**Table 3: Species at Risk in Portobello Creek NWA**

Common and Scientific Names of Species	Status			Presence or Potential of Presence <sup>4</sup>
	Canada		New Brunswick	
	SARA <sup>1</sup>	COSEWIC <sup>2</sup>	Provincial Ranking <sup>3</sup>	
<b>Birds</b>				
Barn Swallow <i>Hirundo rustica</i>	No Status	Threatened	No Status	Probable
Canada Warbler <i>Wilsonia canadensis</i>	Threatened	Threatened	No Status	Probable
Chimney Swift <i>Chaetura pelagica</i>	Threatened	Threatened	No Status	Probable
Common Nighthawk <i>Chordeiles minor</i>	Threatened	Threatened	No Status	Probable
Yellow Rail <i>Coturnicops noveboracensis</i>	Special Concern	Special Concern	No Status	Probable
<b>Vascular plants</b>				
Butternut <i>Juglans cinerea</i>	Special Concern	Special Concern	No Status	Confirmed
<b>Arthropods</b>				
Monarch <i>Danaus plexippus</i>	Special Concern	Special Concern	No Status	Probable
Skillet Clubtail <i>Gomphus ventricosus</i>	No Status	Endangered	-	Confirmed

<sup>1</sup> Species at Risk Act (SARA): extinct, extirpated, endangered, threatened, special concern, not at risk (assessed and deemed not at risk of extinction) or no status (not rated)

<sup>2</sup> Committee on the Status of Endangered Wildlife in Canada (COSEWIC)

<sup>3</sup> Provincial ranking using provincial codes, if applicable

<sup>4</sup> List as “Confirmed,” “Probable,” or “Potential”

## 2.4 INVASIVE SPECIES

Invasive fish such as Muskellunge (*Esox masquinongy*) and Smallmouth Bass (*Micropterus dolomieu*) are present within the Portobello Creek system, and further release and/or expansion of illegal or exotic fish are a concern because of the potential impacts on native fish populations and food web dynamics. The invasive Purple Loosestrife is present but has not, as yet, occupied large areas of wetlands.

### **3 MANAGEMENT CHALLENGES AND THREATS**

The challenges and threats faced by the Portobello Creek NWA are managed in the context of the broader Lower Saint John River ecosystem and in concert with the provincially administered Grand Lake Meadows Protected Natural Area. Although activities that occur outside of the boundary of the NWA are beyond the scope of this management plan, many of these activities have direct bearing on the successful management of the NWA.

#### **3.1 TOURISM**

Ever-increasing ecotourism, while often providing valuable education opportunities to the public, adds additional pressures to protected areas that are specifically set aside for wildlife first. The blurring of the lines between ecotourism and adventure tourism adds to the problem of cumulative environmental effects. As local communities and businesses try to attract tourism dollars, public lands and protected areas such as Portobello Creek NWA are advertised as destinations by external interests, often without a full understanding of the regulations by which an area is protected. Visitors to sites such as Portobello Creek NWA may not always understand the distinctions between a park (national, provincial, municipal) and an NWA. Increased public use needs to be in concert with public education to ensure that the conservation objectives of the NWA are met.

#### **3.2 COMMERCIAL FISHING**

The American Eel fishery has long been important in the Maritime provinces (Eales 1966; Cairns *et al.* 2008). The commercial fishery for American Eel within the Portobello Creek may impact on local fish populations through by-catch, where untargeted fish species (and probably some amphibians) are killed.

Gaspereau (Alewife) within the French Lake system at the mouth of Portobello Creek provides an important bait fishery for the lobster fishery. This is part of the “lower tributaries of the Saint John River” fishery managed by Fisheries and Oceans Canada. The overall Saint John River fishery exceeds 1000 tons annually and is the largest in the Bay of Fundy. This “lower tributaries of the Saint John River” unit has been below its 1950–1999 mean catch for over 20 years (Department of Fisheries and Oceans 2002). The overall biological implications to the Portobello Creek ecosystem from such a large annual removal of biomass are largely unknown.



**Figure 13: Majestic Red Oaks, such as this example bordering the Portobello Creek, are both an attraction and source of inspiration to outdoor enthusiasts**

Photo: C. MacKinnon © Environment and Climate Change Canada

### **3.3 RECREATIONAL BOATING**

The waterways of the Portobello Creek and connected backwaters are frequented by fishers, hunters and recreational boaters. The current fragmentation of the NWA hinders enforcement of the protected area regulations in open waters. Much of the problem can be

minimized through education, as operators of large-horsepower watercraft are frequently unaware of the harm their wake can cause to plants and animals (Figure 14). Nests of birds such as Common Loon and Ring-necked Duck are particularly susceptible to flooding and loss from this activity.



**Figure 14: The wake from large-horsepower motors can cause bank erosion and flood out over-water nesting birds**

Photo: © Environment and Climate Change Canada, 2012

### **3.4 AGRICULTURE AND FORESTRY**

The rich floodplains of the Saint John River, combined with a long growing season, make this an important agricultural area of the province. Many farms border the river and farm the higher and better-drained areas of the floodplain. The sites of lower elevation are predominantly hardwood forests that have been used for wood extraction.

Commercial production of the native Cranberry (*Vaccinium macrocarpon*) has increased substantially in recent years in New Brunswick, with an expansion of the industry in the area from Sheffield to Maugerville (Keith 2000). These projects consist of large growing beds encircled by a high dyke. The creation of these beds tends to be on the lower lands, with some

of the dykes often oriented perpendicular to the usual flow of water (Figure 15). The overall cumulative environmental effects on the floodplain ecosystem and ability of the Portobello Creek NWA to act as an overflow during extreme flood conditions are largely unknown.



**Figure 15: Development of large cranberry farming operations on the Lower Saint John River and adjacent to the Portobello Creek NWA. The NWA is situated to the right of the photograph.**  
Photo: A. Kennedy © Environment and Climate Change Canada

### **3.5 PREDICTED CLIMATE CHANGE IMPACTS**

As climate continues to warm, local plant and animal communities may not have significant time to respond. Areas such as Portobello Creek, with above-average temperature conditions in the province, may be one of the first to see the presence of more southern species. At the same time, these climatic conditions may increase the presence of insect pests that otherwise are kept in check by colder temperatures. Warmer temperatures do not always mean less snow. Climate change could lead to more frequent and damaging flooding events, making the Portobello Creek floodplain all the more important as a safeguard to adjacent communities.



### **3.6 OFF-ROAD VEHICLES**

Illegal use of off-road vehicles such as all-terrain vehicles, especially in regions abounding in wetlands, is a problem for protected area managers and landowners in general. Off-road vehicle use leads to the degradation or destruction of plant cover (Hosier and Eaton 1980; Ross 1992). It can also lead to soil compaction, removal of the top layer of soil, and alterations to drainage, which in turn may degrade or destroy plant cover and the habitat of most local animal species.

The use of off-road vehicles in streams and wetlands results in habitat destruction and loss. Often, the worst damage is in the form of “braiding,” where successive operators, in order to bypass a wet area, make a series of new and parallel trails adjacent to an existing one. Use of off-road vehicles is prohibited within Portobello Creek NWA.

### **3.7 HABITAT FRAGMENTATION**

As forest lands become more valuable, once-inaccessible areas are eventually harvested. Old-growth floodplain forests on private lands within the Portobello Creek system are being cut at an accelerated rate. This is being accomplished through the construction of roads through once-unaltered lands and the building of winter roads over frozen lakes and wetlands. However, biological processes are not only resilient but also are often measured in time scales longer than human life. It is hoped that this habitat fragmentation within the Portobello Creek floodplain will be recoverable as acquisition continues to protect this area.

## 4 GOALS AND OBJECTIVES

### 4.1 VISION

The long-term vision for Portobello Creek NWA is conservation: the protection and management of habitat for the benefit of native wildlife, particularly waterfowl, wetland birds, species at risk, and flora and fauna restricted to this unique floodplain system.

### 4.2 GOALS AND OBJECTIVES

Portobello Creek NWA was originally selected to be an NWA to preserve important diversity of wetland habitats for waterfowl. The original conservation priorities for the NWA were, and remain, the management of habitats for wetland birds and rare and unique species. The NWA is designated by the International Union for the Conservation of Nature as a category 1b protected area, being an area retaining its natural character and influence that is protected and managed to preserve its natural condition. Although the NWA has considerable tourism and public education potential, it has no infrastructure to support such activities, and management of expanded visitation could not be conducted given current resource levels. As such, the NWA is not promoted as a tourism destination or for on-site public education. Public visitation is not restricted, and some renewable and traditional uses such as canoeing, hunting and fishing are allowed.

The goals and objectives for the NWA seek to recreate conditions that would occur under natural ecological processes. These are goals to which Environment and Climate Change Canada aspires and, if achieved, would produce tangible benefits over the long term for habitat and wildlife, particularly migratory birds and species at risk. Specific goals and objectives are as follows.

#### **Goal 1: Conserve a large contiguous block of habitat particularly for migratory birds and species at risk within the Saint John River ecosystem.**

Objective:

**1.1** Subject to the availability of acquisition funds and willing vendors, complete the acquisition and consolidation of all 4000 ha, originally identified for inclusion within the area proposed as an NWA.

**Goal 2: Restore and manage important habitat and ecosystems, particularly for migratory birds and species at risk within the Saint John River ecosystem.**

Objectives:

**2.1** Reforest recently acquired sites that have been cut, through planting and other site management activities.

**2.2** Restore Butternut populations within the NWA by planting of disease-resistant Butternut (when they become available) in suitable sites.

**2.3** Restore floodplain wetlands by removing or minimizing interferences to natural hydrology.

**Goal 3: Human activities do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.**

Objectives:

**3.1** Manage visitor activities, such as motorboat use, so that waterfowl and waterbirds are able to feed and roost without disturbance from human activities.

**3.2** Inform visitors about waterfowl and waterbird ecology and conservation so they can become stewards of our natural heritage.

**3.3** Monitor and mitigate potential impacts of human activities in the vicinity of the NWA.

**Goal 4: Unauthorized and prohibited activities, such as the use of off-road vehicles and large-horsepower watercraft, do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.**

Objectives:

**4.1** Document and report the occurrence of illegal activities within Portobello Creek to the Wildlife Enforcement Division and, where evidence is sufficient, seek enforcement action, thereby reducing or eliminating the occurrence of such activities in the NWA.

**4.2** Inform potential visitors to Portobello Creek NWA of the regulations governing the NWA.

### **4.3 EVALUATION**

Annual monitoring will be performed within the limits imposed by the availability of financial and human resources. The management plan will be reviewed 5 years after its initial approval, and reviewed and updated every 10 years thereafter. The evaluation will take the form of an annual review of monitoring data obtained from the monitoring and research projects outlined below. This monitoring will be used to establish priorities for action and to allocate resources.

## **5 MANAGEMENT APPROACHES**

This section and the following table contain a description of all the possible approaches that could be used in the management of Portobello Creek NWA. However, management actions will be determined during the annual work planning process and will be implemented as human and financial resources permit.

**Table 4: Management Approaches for Portobello Creek NWA**

<b>Management Challenge or Threat</b>	<b>Goal and Objective(s)</b>	<b>Management Approaches (actions, including level of priority)<sup>1</sup></b>
<p>Tourism activities such as camping, campfires and high-horsepower boating may become a cumulative environmental effect.</p>	<p><b>Goal 3: Human activities do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 3.1:</b> Manage visitor activities, such as motorboat use, so that waterfowl and waterbirds are able to feed and roost without disturbance from human activities.</p> <p><b>Objective 3.2:</b> Inform visitors about waterfowl and waterbird ecology and conservation so they can become stewards of our natural heritage.</p>	<ul style="list-style-type: none"> <li>• Communicate with local tourism operators and the provincial tourism department in order to inform them of the protected status of Portobello Creek NWA, and to provide material outlining the ecological values of the area. <b>(1)</b></li> <li>• Collaborate with other conservation organizations to deliver a consistent message towards minimizing disturbance to habitat and wildlife. <b>(1)</b></li> </ul>
	<p><b>Goal 4: Unauthorized and prohibited activities, such as the use of off-road vehicles and large-horsepower watercraft, do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 4.1:</b> Document and report the occurrence of illegal activities within Portobello Creek to the Wildlife Enforcement Division and, where evidence is sufficient, seek enforcement action, thereby reducing or eliminating the occurrence of such activities in the NWA.</p>	<ul style="list-style-type: none"> <li>• Document and report the number, nature and evidence of illegal activities within the NWA to the Wildlife Enforcement Division. <b>(1)</b></li> </ul>
<p>Off-road vehicles (ORVs), and especially amphibious vehicles, cause extensive and long-lasting damage to the fragile wetland habitats within the NWA.</p>	<p><b>Goal 4: Unauthorized and prohibited activities, such as the use of ORVs and large-horsepower watercraft, do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 4.1:</b> Document and report the occurrence of illegal activities within Portobello Creek to the Wildlife Enforcement Division and, where evidence is sufficient, seek enforcement action, thereby reducing or eliminating the occurrence of such activities in the NWA.</p> <p><b>Objective 4.2:</b> Inform potential visitors to Portobello Creek NWA of the regulations governing the NWA.</p>	<ul style="list-style-type: none"> <li>• Communicate with ORV rider associations regarding the regulations pertaining to Portobello Creek NWA and damage caused by inappropriate use of ORVs. <b>(1)</b></li> <li>• Maintain regulatory signs. <b>(1)</b></li> <li>• Contribute to communication products highlighting the impact of indiscriminate ORV use. <b>(1)</b></li> </ul>

Management Challenge or Threat	Goal and Objective(s)	Management Approaches (actions, including level of priority) <sup>1</sup>
<p>The wake from large-horsepower recreational boats can cause bank erosion and destroy nests of over-water nesting birds.</p>	<p><b>Goal 3: Human activities do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 3.1:</b> Manage visitor activities, such as motorboat use, so that waterfowl and waterbirds are able to feed and roost without disturbance from human activities.</p> <p><b>Objective 3.2:</b> Inform visitors about waterfowl and waterbird ecology and conservation so they can become stewards of our natural heritage.</p>	<ul style="list-style-type: none"> <li>• Communicate with local tourism operators and the provincial tourism department in order to inform them of the protected status of Portobello Creek NWA, and to provide material outlining the ecological values of the area. <b>(1)</b></li> <li>• Collaborate with other conservation organizations to deliver a consistent message on minimizing disturbance to habitat and wildlife. <b>(1)</b></li> </ul>
	<p><b>Goal 4: Unauthorized and prohibited activities, such as the use of off-road vehicles and large-horsepower watercraft, do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 4.1:</b> Document and report the occurrence of illegal activities within Portobello Creek to the Wildlife Enforcement Division and, where evidence is sufficient, seek enforcement action, thereby reducing or eliminating the occurrence of such activities in the NWA.</p>	<ul style="list-style-type: none"> <li>• Document and report the number, nature and evidence of illegal activities within the NWA to the Wildlife Enforcement Division. <b>(1)</b></li> </ul>
<p>The biological implications and overall cumulative environmental effects for the NWA from commercial fishing, forestry and agriculture in the vicinity are largely unknown.</p>	<p><b>Goal 3: Human activities do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 3.3:</b> Monitor and mitigate potential impacts of human activities in the vicinity of the NWA.</p>	<ul style="list-style-type: none"> <li>• Provide industry interests with information as required in support of management decisions that minimize impacts on wildlife and wildlife movement. <b>(1)</b></li> <li>• Assist in developing industry standards for development projects outside the NWA that could result in impacts on flora or fauna. <b>(2)</b></li> </ul>

<b>Management Challenge or Threat</b>	<b>Goal and Objective(s)</b>	<b>Management Approaches (actions, including level of priority)<sup>1</sup></b>
Climate change could result in changes to flooding regime of floodplain wetlands. Climate change may increase colonization by non-native species.	<p><b>Goal 3: Human activities do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 3.3:</b> Monitor and mitigate potential impacts of human activities in the vicinity of the NWA.</p>	<ul style="list-style-type: none"> <li>• Understand potential impacts of climate change and how the valued ecosystem components of the protected area can be maintained. <b>(2)</b></li> <li>• Conduct long-term annual monitoring (ortho-rectified aerial photography) to retain a historical record of habitat changes as well as to document significant tidal and climatic events. <b>(1)</b></li> </ul>
Habitat fragmentation is a concern within Portobello Creek NWA due to forestry activities within the proposed boundaries of the NWA as well as adjacent lands.	<p><b>Goal 1: Conserve a large contiguous block of habitat, particularly for migratory birds and species at risk within the Saint John River ecosystem.</b></p> <p><b>Objective 1.1:</b> Subject to the availability of acquisition funds and willing vendors, complete the acquisition and consolidation of all 4000 ha originally identified for inclusion within the area proposed as an NWA.</p>	<ul style="list-style-type: none"> <li>• Secure lands from willing vendors at fair market value, subject to an independent appraisal at highest and best use. <b>(2)</b></li> </ul>
	<p><b>Goal 2: Restore and manage important habitat and ecosystems, particularly for migratory birds and species at risk within the Saint John River ecosystem.</b></p> <p><b>Objective 2.1:</b> Reforest recently acquired sites that have been cut through planting and other site management activities.</p>	<ul style="list-style-type: none"> <li>• American Elm, Eastern White Cedar, Silver Maple and Red Oak will be planted in areas where they formerly existed and natural regeneration has not been sufficient. Exclosures will be used as needed to protect saplings from damage from herbivores. <b>(2)</b></li> <li>• Butternut that is disease resistant will be planted in suitable locations when it becomes available. <b>(2)</b></li> </ul>
	<p><b>Goal 3: Human activities do not negatively impact the habitat and/or wildlife of Portobello Creek NWA.</b></p> <p><b>Objective 3.3:</b> Monitor and mitigate potential impacts of human activities in the vicinity of the NWA.</p>	<ul style="list-style-type: none"> <li>• Assist in developing industry standards for development projects outside the NWA that could result in impacts on flora or fauna. <b>(2)</b></li> </ul>

<sup>1</sup> Level of priority: 1 (from 0 to 3 years); 2 (from 4 to 6 years); 3 (from 7 to 10 years)



## **5.1 HABITAT MANAGEMENT**

### **5.1.1 *Forests***

Large-scale forest management within the Portobello Creek NWA is not desirable or anticipated. American Elm, Eastern White Cedar, Silver Maple and Red Oak will be planted in areas where they formerly existed and natural regeneration has not been sufficient. Enclosures will be used, as needed, to protect saplings from damage from herbivores.

### **5.1.2 *Wetlands***

The large floodplain wetlands within Portobello Creek NWA are highly dependent on large-scale hydrological processes. Wetland management will consist of removing anthropogenic barriers to the natural flow of water across the landscape such as undersized road culverts, dikes and water control structures.

## **5.2 WILDLIFE MANAGEMENT**

### **5.2.1 *Species at Risk***

No significant management anticipated; however, protection of Butternut may include re-planting of disease-resistant trees when they become available.

### **5.2.2 *Invasive Species***

Purple Loosestrife, although present in the NWA, is not widespread or abundant. Control measures, such as the introduction of herbivorous beetles, in the lower Saint John River basin are considered adequate at present. The management of exotic fish species such as Smallmouth Bass and Muskellunge will be done in cooperation with provincial and federal fisheries managers if deemed necessary. Coordinated regional management would need to be conducted because the waterways of Portobello Creek NWA are continuous with the Saint John River system.

## **5.3 MONITORING**

Most monitoring within the NWA consists of periodic habitat evaluation by conducting botanical inventories and mapping. Other studies, either by the Canadian Wildlife Service or in cooperation with researchers from universities and other institutions, are conducted as required and where resources permit.

Effective and efficient monitoring requires careful planning and a coordinated approach. Monitoring will be carried out in a manner that contributes to the goals of recovery documents

generated in support of the federal and/or the New Brunswick species at risk Acts. Ongoing monitoring needs are as follows:

1. Monitoring of the distribution and abundance of waterfowl, marsh birds, such as Pied-billed Grebe, American Coot, Yellow Rail, Sora and Virginia Rail every 5 years.
2. Monitoring of songbird distribution and abundance within the wooded floodplain interior of the NWA every 5 years.
3. Distribution and density of alien invasive plant species within the NWA every 5 years.
4. Monitoring or survey of reptiles and amphibians within the NWA every 5 years.
5. Monitoring for Skillet Clubtail within the NWA every 5 years.
6. Monitoring of species at risk (to confirm distribution or occurrence) within the NWA every 5 years.
7. Muskellunge and bass monitoring within the NWA every 5 years.
8. Air photo acquisition and habitat mapping annually.

#### **5.4 RESEARCH**

Research activities will be considered for permitting when the research results have the potential for the following:

1. Protecting, maintaining, restoring or enhancing naturally occurring habitats.
2. Recovering species at risk or conserving migratory birds.
3. Reducing the encroachment of invasive species in the NWA.
4. Assessing the trends in species populations (especially species at risk) and habitats of concern.
5. Maintaining wetlands in a state most beneficial to wetland-dependent wildlife.
6. Reducing illegal activities within the NWA.
7. Reforestation techniques for Red Oak, Silver Maple, Eastern White Cedar and American Elm.

To obtain a permit in order to conduct research in Portobello Creek NWA and to receive instructions concerning guidelines for a research proposal, please contact:

National Wildlife Area – Research Request  
Environment and Climate Change Canada, Canadian Wildlife Service  
17 Waterfowl Lane, P.O. Box 6227  
Sackville NB E4L 1G6

Permit requests should be directed to: [Permit.Atl@ec.gc.ca](mailto:Permit.Atl@ec.gc.ca)

## **5.5 PUBLIC INFORMATION AND OUTREACH**

Public access for recreational purposes within the Portobello Creek is subject to the federal *Wildlife Area Regulations* of the *Canada Wildlife Act*. Activities such as overnight camping and open fires are not permitted. Activities such as hunting, fishing, trapping, canoeing and birdwatching are allowed by virtue of a public notice posted at all main entrances to the protected area. Hunting, fishing and trapping activities require the applicable provincial and/or federal permits.

The unique character of Portobello Creek NWA and its significance as an important wetland complex has been highlighted in a national “Protected Area” poster series. A limited number of these are available to educators, students and the general public on request. Information on Portobello Creek NWA can be found on the Environment and Climate Change Canada website.

## 6 AUTHORIZATIONS AND PROHIBITIONS

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

Activities within an NWA are authorized where notices have been posted at the entrance to or along the boundaries of the NWA or when notices have been published in local newspapers. All activities in an NWA are prohibited unless a notice has been posted or published authorizing the activity to take place. However, in addition to notices, certain activities may be authorized by obtaining a permit from the Minister of the Environment.

### 6.1 PROHIBITION OF ENTRY

Under the *Wildlife Area Regulations*, the Minister may publish a notice in a local newspaper or post notices at the entrance of any wildlife area or on the boundary of any part thereof prohibiting entry to any wildlife area or part thereof. These notices can be posted when the Minister is of the opinion that entry is a public health and safety concern or when entry may disturb wildlife and their habitat.

For Portobello Creek NWA, entry is allowed.

### 6.2 AUTHORIZED ACTIVITIES

For Portobello Creek NWA, notices authorizing the following non-commercial activities have been posted at all designated access points.

Authorized activities **without** special restrictions:

1. Wildlife observation
2. Hiking
3. Skating
4. Skiing
5. Snowshoeing
6. Photography

Authorized activities **with** special restrictions:

1. Hunting, fishing and trapping (subject to federal and provincial regulations)
2. Canoeing (outboard motors should be less than 10 horsepower)
3. Berry picking (non-commercial berry-picking only)

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

### **6.3 AUTHORIZATIONS**

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

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

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

National Wildlife Area – Permit Request  
Environment and Climate Change Canada, Canadian Wildlife Service  
17 Waterfowl Lane, P.O. Box 6227  
Sackville NB E4L 1G6

For further information, please consult the Policy when Considering Permitting or Authorizing Prohibited Activities in Protected Areas Designated under the *Canada Wildlife Act* and *Migratory Birds Convention Act, 1994* (December 2011). This Environment and Climate Change Canada policy document is available on the Protected Areas website at [www.ec.gc.ca/ap-pa](http://www.ec.gc.ca/ap-pa).

#### **6.4 EXCEPTIONS**

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

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

#### **6.5 OTHER FEDERAL AND PROVINCIAL AUTHORIZATIONS**

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

Contact your regional federal and provincial permitting office for more information.

National Wildlife Area – Permit Request

Environment and Climate Change Canada, Canadian Wildlife Service, Atlantic Region

17 Waterfowl Lane, P.O. Box 6227

Sackville NB E4L 1G6

## 7 HEALTH AND SAFETY

Any environmental emergency pertaining to Portobello Creek NWA must be reported to the Environmental Emergencies Response Centre:

**1-800-565-1633**

Life-threatening emergencies should be reported using the 911 system.

General inquiries regarding health and safety issues at Portobello Creek NWA should be directed to:

National Wildlife Area Program  
Environment and Climate Change Canada, Canadian Wildlife Service  
17 Waterfowl Lane, P.O. Box 6227  
Sackville NB E4L 1G6  
Telephone: 506-364-5044  
Fax: 506-364-5062

All reasonable efforts will be made to protect the health and safety of the public, including adequately informing visitors of any known or anticipated hazards or risks. Annual site inspections are conducted to identify and address any health and safety issues. Furthermore, Environment and Climate Change Canada staff will take all reasonable and necessary precautions to assure their health and safety and that of their co-workers. However, visitors (including researchers and contractors) not working directly with or under the employ of Environment and Climate Change Canada are responsible for their own health and safety and must make all reasonable efforts to inform themselves of risks and hazards and must be prepared and self-sufficient. Natural areas are inherently dangerous, and proper precautions must be taken by visitors, recognizing that Environment and Climate Change Canada staff neither regularly patrol nor offer services for visitor safety in NWAs.

Inland rivers and lakes, and activities on water in general, present issues of safety. In general, the public must seek and heed expertise to operate in these environments and obtain specialized training and certification where required.

Portobello Creek NWA is remote and has no permanent staff presence. Any emergency should be reported immediately to the appropriate responding authorities. The report should include date, time and nature of the incident, who is reporting, contact information of the

reporting party for follow-up information, and all relevant details. Multiple authorities should be advised, if the situation warrants, as soon as possible (Table 5).

**Table 5: Emergency Contacts**

<b>Emergency Contacts for Portobello Creek NWA, New Brunswick 45°55'N 66°21'E</b>	
Any life-threatening emergency	911
Police/fire/ambulance	911
Royal Canadian Mounted Police (RCMP) 4 Doyle Drive, Oromocto, New Brunswick, E2V 2V3	1-888-506-7267
Rescue Coordination Centre to report air and marine emergencies	1-800-565-1582
Environmental emergencies (oil, pesticide, chemical spills)	1-800-565-1633
Environment and Climate Change Canada – Wildlife Enforcement Division	506-364-5036
Environment and Climate Change Canada – Canadian Wildlife Service	506-364-5044
New Brunswick Department of Natural Resources and Energy Fish and Wildlife Branch, Fredericton (general inquiry)	506-453-2440



## 8 ENFORCEMENT

The management of NWAs is based on three Acts:

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

To promote compliance with the *Canada Wildlife Act* and *Wildlife Area Regulations*, Environment and Climate Change Canada's Canadian Wildlife Service posts signs along the NWA boundaries and at main access points that identify what activities are authorized within each NWA and any conditions on those activities.

Environment and Climate Change Canada's Wildlife Enforcement Division (ECCC–WED) is responsible for enforcement of federal and provincial wildlife laws, and will perform on-site inspections and investigations, patrol the NWA to promote compliance, and prevent prohibited activities within the NWA.

ECCC–WED officers monitor compliance with the *Canada Wildlife Act*, *Wildlife Area Regulations*, *Migratory Birds Convention Act, 1994*, *Species at Risk Act*, *Fisheries Act* and the provincial *Wildlife Act, 1989* on an ongoing basis and will initiate investigations when required. ECCC–WED officers will respond to violations and take appropriate enforcement actions. Canadian Wildlife Service Atlantic staff provides details from site inspections that may require investigation.

## 9 PLAN IMPLEMENTATION

The management plan will be implemented over a 10-year period. Annual work plans will be developed in accordance with priorities and budgets, and the details of management plan implementation will be developed through Environment and Climate Change Canada’s annual work planning process and will be implemented as human and financial resources allow. An adaptive management approach will be favoured for the implementation of the management plan. The implementation of the plan will be evaluated 5 years after its publication, on the basis of the actions identified in Table 6.

**Table 6: Implementation Strategy Timeline**

Activity	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Site inspection (health and safety)	x	x	x	x	x	x	x	x	x	x
Bio-blitz	x									
Forest bird inventory					x					
Site integrity (land acquisition)	x	x	x	x	x	x	x	x	x	x
Boundary line maintenance	x	x	x	x	x	x	x	x	x	x
Marsh bird monitoring				x						
Habitat mapping	x	x	x	x	x	x	x	x	x	x

### 9.1 MANAGEMENT AUTHORITIES AND MANDATES

Canadian Wildlife Service, Atlantic Region is responsible for site management of Portobello Creek NWA.

### 9.2 MANAGEMENT PLAN REVIEW

This management plan will be reviewed 5 years after its formal approval by the Canadian Wildlife Service of Environment and Climate Change Canada, and every 10 years thereafter.

Addition of new information may be appended to the document as required to aid in site management and decision making.

## **10 COLLABORATORS**

There are no formal arrangements with collaborators or partners pertaining to the management or administration of Portobello Creek NWA. There are other government agencies and organizations that have interests and mandates consistent with the management vision and objectives for the NWA.

The Canadian Wildlife Service of Environment and Climate Change Canada works in close cooperation with the New Brunswick Department of Natural Resources and Energy, Fish and Wildlife Branch, which administers the adjacent Grand Lake Meadows Protected Natural Area. Where regulations allow, similar public activities are permitted in both areas.

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## APPENDIX I: CONDITIONS OF RESEARCH REQUESTS

Permission under the *Wildlife Area Regulations* to undertake research may be given subject to the following conditions:

1. All requests for research must be accompanied by a written proposal outlining objectives, project duration, collection of data and specimens and measurements if any, number of participants, funding sources, and location where work is to be undertaken, benefits to the NWA, potential detractors and proposed mitigation measures (all proposals may be subject to a review by the Animal Care Committee of either Environment and Climate Change Canada's Canadian Wildlife Service or the submitting institution);
2. No research shall be undertaken without a permit issued under the *Wildlife Area Regulations* of the *Canada Wildlife Act* and must be consistent with the respective NWA management plan and other relevant legislation (such as the *Species at Risk Act* or *Migratory Birds Convention Act, 1994*);
3. All researchers must conform to regulations in effect regarding the NWA;
4. Copies of raw data (field books and maps), preliminary reports of the research activities and a copy of the final manuscript must be provided to Environment and Climate Change Canada's Canadian Wildlife Service Atlantic at the end of each field season;
5. Priority will be given to researchers whose work has direct management implications for the NWA and species at risk;
6. Applications to undertake a minor research study must be submitted to the Environment and Climate Change Canada's Canadian Wildlife Service Atlantic office ([Permi.Atl@ec.gc.ca](mailto:Permi.Atl@ec.gc.ca)), in writing, prior to commencement of the project. **Minor proposals without problems or issues require at least seven (7) weeks for review, processing and issuance of a permit.** Major proposals (for example, proposals that may require expert review or are multiyear) require a longer review period (minimum six months);
7. A statement must be provided to Environment and Climate Change Canada, Canadian Wildlife Service, Atlantic on why the research project cannot be undertaken elsewhere;

8. Any proposed work is subject to the *Canada Labour Code*, Part II (subject to the strictest safety certification, training, operational experience and mandatory use of appropriate safety equipment).

All projects and activities in the NWA are subject to environmental screening and then, if necessary, to further steps in the Environmental Assessment and Review Process (Environment and Climate Change Canada).



## APPENDIX II: LEGISLATION

### Federal Legislation

*Canada Wildlife Act*

<http://laws-lois.justice.gc.ca/eng/acts/W-9/index.html>

*Fisheries Act*

<http://laws.justice.gc.ca/eng/acts/F-14/>

*Migratory Birds Convention Act, 1994*

<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>

*Wildlife Area Regulations*

<http://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 1609/index.html>

*Species at Risk Act*

[www.sararegistry.gc.ca/default\\_e.cfm](http://www.sararegistry.gc.ca/default_e.cfm)

[www.registrelep-sararegistry.gc.ca](http://www.registrelep-sararegistry.gc.ca)

## APPENDIX III: GOVERNMENT OF CANADA SPECIES AT RISK GLOSSARY

**Species at Risk Act (SARA):** The federal legislation that provides protection to species at risk in Canada. This act establishes Schedule 1 as the legal list of wildlife species at risk to which the SARA provisions apply. It classifies those species as being: extirpated, endangered, threatened or special concern. Once listed, the measures to protect and recover a listed wildlife species are implemented. Schedules 2 and 3 contain lists of species that, at the time SARA came into force, needed to be reassessed. After species on Schedules 2 and 3 are reassessed and found to be at risk, they undergo the SARA listing process to be included in Schedule 1. [www.sararegistry.gc.ca/status/status\\_e.cfm](http://www.sararegistry.gc.ca/status/status_e.cfm)

**COSEWIC:** Committee on the Status of Endangered Wildlife in Canada. In Canada, species at risk are assessed and classified by COSEWIC. Species designated as at risk before the creation of the *Species at Risk Act* must be re-assessed by COSEWIC according to the new criteria of the Act before they can be added to Schedule 1. These species are listed on Schedules 2 and 3, and are not yet officially protected under SARA.

**COSEWIC assessments and status reports:** [www.sararegistry.gc.ca/status/status\\_e.cfm](http://www.sararegistry.gc.ca/status/status_e.cfm)

**Critical habitat:** The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.

**ECCC–CWS:** Environment and Climate Change Canada – Canadian Wildlife Service.

**Schedule 1:** The official list of species that are classified as extirpated, endangered, threatened and of special concern.

**Schedule 2:** Species listed in Schedule 2 are species that had been designated as endangered or threatened, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

**Schedule 3:** Species listed in Schedule 3 are species that had been designated as special concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

**Species at risk:** An extirpated, endangered, threatened species, or a species of special concern.

**Wildlife species:** A species, subspecies or biologically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and native to Canada or has been present in Canada without human intervention for at least 50 years.

<b>Species at Risk Act COSEWIC Status</b>		<b>Definition</b>
<b>EXT</b>	<b>Extinct</b>	A wildlife species that no longer exists.
<b>EXP</b>	<b>Extirpated</b>	A wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.
<b>END</b>	<b>Endangered</b>	A wildlife species that is facing imminent extirpation or extinction.
<b>THR</b>	<b>Threatened</b>	A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
<b>SC</b>	<b>Special Concern</b>	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

