CANADA 17: CHIGNECTO NATIONAL WILDLIFE AREA, NOVA SCOTIA

Information Sheet on Ramsar Wetlands

Effective Date of Information: The information provided is taken from text submitted at the time of designation to the List of Wetlands of International Importance, October 1985 updated by the Canadian Wildlife Service - Atlantic Region in October 2001.

Reference: 17th Ramsar site designated in Canada.

Name and Address of Compiler: Canadian Wildlife Service, Environment Canada, P.O. Box 6227, 17 Waterfowl Lane, Sackville, N.B. E4L 1G6.

Date of Ramsar Designation: 16 October 1985.

Geographical Coordinates: 45°48'N., 64°16'W.

General Location: Located on Cumberland Basin at the head of the Bay of Fundy, 5 km southwest of the town of Amherst, Cumberland County, Nova Scotia.

Area: 1 020 ha.

Wetland Type (Ramsar Classification System): *Marine and coastal wetlands:* Type H - intertidal marshes; Type K - freshwater lagoons and marshes. *Inland wetlands:* Type O - permanent freshwater lakes. *Man-made wetlands:* Type 6 - impoundments.

Altitude: Range is from sea level to 15 m.

Overview (Principal Characteristics): The wildlife area consists of John Lusby Salt Marsh and Amherst Point Bird Sanctuary, two very different wetlands, and separated by a narrow, one km-wide upland ridge.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): The 600 ha John Lusby section is dominated by salt marsh. Small saline ponds (with depths from 15-30 cm) are interspersed throughout the marsh, and two brackish impoundments (20 ha with average depths of 45 cm) have been developed along the upland edge. Amherst Point Sanctuary section is a mosaic of freshwater wetlands of several natural types ranging from sink hole ponds to small lakes (with average depths of 60 cm, with the exception of a sink hole depression in one of the lakes that descends to 11 m), bogs and marshes. However, shallow controlled water-level impoundments (with depths from 30-60 cm) comprise nearly half of the wetland area. Wetlands at the site are the most productive in the province, and derive this fertility from the gypsum-limestone bedrock and from marine silt deposits.

Ecological Features (Habitats, Vegetation): The John Lusby section is predominantly vegetated by *Spartina* spp. Amherst Point Sanctuary section is dominated by wetlands ranging from ponds to small lakes, bogs and cattail (*Typha* sp.) marshes. Cattails and burreeds (*Sparganium* sp). are the most common emergent plants, with water milfoil (*Myriophyllum* sp.) and pondweeds (*Potamogeton* sp.) common throughout.

Land Tenure:

(a) Site: The area is federal Crown land.

(b) Surrounding Area: The surrounding uplands adjacent to the John Lusby section consist of open farmland and is all under private ownership. The Amherst Point Sanctuary is bounded by privately-held lands and by property owned by the Domtar Chemical Company.

Conservation Measures Taken: 1 020 ha are designated as a National Wildlife Area under the National Wildlife Area Regulations of the *Canada Wildlife Act* of 1973. The Amherst Point section (433 ha) is scheduled as a migratory bird sanctuary under the Migratory Birds Sanctuary Regulations of the *Migratory Birds Convention Act*.

Conservation Measures Proposed: The management plan for this site is to be updated.

Current Land Use/Activities in:

(a) Site: Ongoing management is designed to protect the unique ecological and aesthetic features of the area to maintain habitat diversity and to educate visitors.

(b) Surrounding Area: Farms, woodlots, and private homes surround the site. The Domtar Chemical Company operates a salt extraction plant on an adjacent site and also owns an abandoned gypsum quarry.

Threats to Integrity of:

(a) Site: Urban expansion around the town of Amherst will increase recreational use pressures on the site, but is not expected to cause serious damage. The site is regulated by the Wildlife Area Regulations of the *Canada Wildlife Act*. The possibility of development of a major tidal power installation on Cumberland Basin is potentially a serious threat to the salt marsh section of the wildlife area. Should a tidal barrage ever be developed across Cumberland Basin, tidal amplitudes will be reduced greatly changing the ecology of the John Lusby Salt Marsh.

(b) Surrounding Area: Changing land use from farms and woodlots to housing developments is an increasing threat to the integrity of this Ramsar site. The main line of the Canadian National Railway forms the eastern boundary of the site. A Domtar Chemical Company salt plant and possible quarry operations remain nearby.

Hydrological/Physical Values: The John Lusby Salt Marsh is the largest continuous section of salt marsh left in the Bay of Fundy ecosystem. The sink-hole landscape and wide diversity of habitats at the Amherst Point Sanctuary make it a very special place and unique in the region.

Social/Cultural Values: The site is traditionally used for bird watching and outdoor recreation.

Noteworthy Fauna: The salt marsh supports flocks of up to 6 000 Canada Geese (*Branta canadensis)* during spring migration and lesser numbers of Black Duck (*Anas rubripes)*, Green-winged Teal (*Anas crecca carolinensis)* and Northern Pintail (*Anas acuta)*. In summer, broods of Black Duck are common on the impoundments and salt marsh ponds, where Greater Yellowlegs (*Tringa melanoleuca)* are frequently observed. Throughout fall the wetland supports flocks of mixed waterfowl species (numbering in the hundreds). Waterfowl and other marsh birds are abundant in the freshwater wetlands and include most species commonly found in the region, along with the regular occurrence of regionally rare species such as Gadwall (*Anas strepera)*, Redhead (*Aythya americana)*, Ruddy Duck (*Oxyura jamaicensis)*, Virginia Rail (*Rallus limicola)*, Common Moorhen (*Gallinula chloropus)*, American Coot (*Fulica americana)* and Black Tern (*Chlidonias niger)*. One 40 ha impoundment in the Amherst Pint Sanctuary supports the highest densities of Pied-billed Grebe (*Podilymbus podiceps)* ever recorded in the literature. Over 200 species of birds have been recorded at the Sanctuary.

Noteworthy Flora: Uplands in the Sanctuary support a relict stand of eastern hemlock and a single sugar maple tree that is estimated to be over 200 years old. Plants that are unique to a gypsum-rich environment are noteworthy here.

Current Scientific Research and Facilities: Research studies have been conducted on the ecology and productivity of John Lusby Salt Marsh and on a unique limnological phenomenon that occurs at Layton's Lake within the Amherst Point Sanctuary. A recent study on Pied-billed Grebe at one of the artificial impoundments has been completed.

Current Conservation Education: Nature trails and interpretation signs and facilities have been installed. A brochure and species checklist is available to the visiting public. Display areas are in place on the site.

Current Recreation and Tourism: Trails and observation decks on site are used by naturalists, hikers, and bird watchers during spring, summer and autumn. In the winter, the Sanctuary is used for cross country skiing and outdoor skating.

Management Authority: The site is managed by the Canadian Wildlife Service, Atlantic Region, Environment Canada in cooperation with the Province of Nova Scotia and with development assistance from Ducks Unlimited Canada.

Canadian Wildlife Service
Environment Canada
P.O. Box 6227, 17 Waterfowl Lane
Sackville, New Brunswick
E4L 1G6

Jurisdiction: Federal - Environment Canada.

Selected Bibliography:

- Forbes, M.R.L. 1982. The Nesting Ecology and Breeding Behaviour of the Pied-billed Grebe (*Podilymbus podiceps*) at a National Wildlife Area in Nova Scotia. Honours thesis, Acadia University. Wolfville, Nova Scotia.
- Foshay, G.M. 1974. The Limnology of Layton's Lake, N.S. B.Sc. thesis, Mount Allison University. Sackville, New Brunswick.

- Monartz, D.L. 1976. Productivity and export from a marsh with 15 m tidal range, and the effects of impoundment of selected areas. M.Sc. thesis, Dalhousie University. Halifax, Nova Scotia.
- Van Zoost, J.R. 1970. The ecology and waterfowl utilization of the John Lusby National Wildlife Area. M.Sc. thesis, Acadia University. Wolfville, Nova Scotia.

Reasons for Ramsar Designation: The site was designated due to the high waterfowl usage of the John Lusby Salt Marsh and the high productivity of the Amherst Point Sanctuary wetlands.

Status of Management Plan: The *Chignecto National Wildlife Area Management Plan* was released by Environment Canada in August 1984.