

CANADA 27: MUSQUODOBOIT HARBOUR OUTER ESTUARY, NOVA SCOTIA

Information Sheet on Ramsar Wetlands

Effective Date of Information: The information provided is taken from text supplied at the time of designation to the List of Wetlands of International Importance, May 1987 updated by the Canadian Wildlife Service - Atlantic Region in October 2001.

Reference: 27th 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: 27 May 1987.

Geographical Coordinates: 44°42'N., 63°06'W.

General Location: The outer estuary of Musquodoboit Harbour is located approximately 50 km north-east of the Halifax/Dartmouth Metropolitan area in Halifax County, Nova Scotia.

Area: Approximately 1 925 ha.

Wetland Type (Ramsar Classification System): *Marine and coastal wetlands:* Type E - sand beaches; Type F - estuarine waters; Type H - intertidal marshes.

Altitude: Ranges from 2 m below mean sea level at the outlet of the Musquodoboit River to 40 m above mean sea level on the islets.

Overview (Principal Characteristics): A long narrow estuary consisting of intertidal flats and scattered islands behind a long barrier beach sandspit.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): Musquodoboit Harbour Estuary is intertidal with several shallow saline ponds with depths from 15-30 cm. The outer intertidal estuary has islands scattered throughout. The inner tidal area is protected from the sea in part by the 5 km-long Martinique Beach and Bayers Island.

Ecological Features (Habitats, Vegetation): Rapid tidal flow into both the western arm behind the beach and into the eastern main Musquodoboit River portion maintain eel grass *Zostera marina* and sand flats free of ice for wintering waterfowl except under the most severe weather conditions. Broadly categorised, the site is composed of 648 ha (30%) eel grass flats, 206 ha (11%) salt marsh with *Spartina* sp.; 327 ha (17%) sand beach and sand and mud flats; 23 ha (1%) beach grass *Ammophila bravigulata*; 404 ha (21%) upland islands; and 317 ha (17%) tidal waters at low tide.

Land Tenure:

(a) **Site:** Martinique Beach Provincial Park and Martinique Beach Game Sanctuary are administered by the Province of Nova Scotia. The upland islands are largely in private ownership as is a small portion of the salt marsh. The remaining area is intertidal land with unknown ownership.

(b) **Surrounding Area:** Private holdings.

Conservation Measures Taken: The Province of Nova Scotia owns the 60 ha Martinique Beach Provincial Park. The backshore of the park abuts in part the provincially-declared Martinique Beach Game Sanctuary.

Conservation Measures Proposed: Securement of key habitat sites will be done through the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan.

Current Land Use/Activities in:

(a) **Site:** The park provides a controlled, maintained gravel road access to designated and controlled parking sites along the first half of the beach. A boat launch is maintained for use by clam diggers, hunters and bird-watchers. Recreational and regulated commercial clamming at present levels are compatible with the management of the area.

(b) **Surrounding Area:** Private homes, cottages and woodlots.

Threats to Integrity of:

(a) **Site:** Recreational use is approaching the acceptable maximum and will have to be maintained at near present levels. The principal threat to the area is the erosion of the sand dune that protects the western arm from the open ocean. Development of the surrounding uplands and islands could pose a threat to this area's integrity.

(b) **Surrounding Area:** Additional housing units on privately held lands.

Hydrological/Physical Values: The site is a highly significant coastal landscape and the beach is one of the most popular in the province.

Social/Cultural Values: The area is a high use recreational site for swimming, beachcombing, and sailboarding in summer and bird watching and hunting in areas outside the designated protection zones in fall and early winter.

Noteworthy Fauna: The area supports wintering populations of 2 000-3 000 American Black Duck *Anas rubripes* and 4 000-6 000 Canada Geese *Branta canadensis*. A variety of other waterfowl, including up to 3 000 Green-winged Teal *Anas crecca carolinensis*, use the area during fall migration. Shorebirds common to the area from late July to September are: Common Snipe *Gallinago gallinago*, Short-billed Dowitcher *Limnodromus griseus*, Least Sandpiper *Calidris minutilla*, Semi-palmated Sandpiper *Calidris pusilla*, Greater Yellowlegs *Tringa melanoleuca*, Lesser Yellowlegs *Tringa flavipes*, Spotted Sandpiper *Actitis macularia*, Black-bellied Plover *Pluvialis squatarola*, Semi-palmated Plover *Charadrius semipalmatus*, Ruddy Turnstone *Arenaria interpres* and Purple Sandpiper *Calidris maritima*, common in winter.

Occasional visitors include: Stilt Sandpiper *Micropalama himantopus*, Redknot *Calidris canutus*, Pectoral Sandpiper *Calidris melanotos*, White-rumped Sandpiper *Calidris fuscicollis*, Dunlin *Calidris alpina*, Hudsonian Godwit *Limosa haemastica* and Whimbrel *Numenius phaeopus*.

Noteworthy Flora:

Current Scientific Research and Facilities: No major scientific research is being conducted at present. However, waterfowl population counts are undertaken annually, pre- and post-season Black Duck banding is conducted, and eel grass density is monitored.

Current Conservation Education: There is no organized conservation education at the site.

Current Recreation and Tourism: Picnic tables, toilet facilities, and a change house are provided in the Martinique Beach Provincial Park. These facilities are managed by the Nova Scotia Department of Natural Resources. The area is designated as a visitor site on a Nova Scotia wildlife tour. Consideration is being given to the construction of observation platforms to enhance viewing of the bird populations.

Management Authority:

Wildlife Division
Nova Scotia Department of Natural Resources
136 Exhibition Street
Kentville, Nova Scotia
B4N 4E5

Jurisdiction: Provincial - Nova Scotia Department of Natural Resources.

Selected Bibliography:

- Erskine, A.J. (in prep.) *Canada Goose studies in the Maritime Provinces 1950-1992, interpreted in a flyway context.*
- Harrington, B.A. and R.I.G. Morrison. 1979. *Semi-palmated sandpiper migration in North America.* Studies in Avian Biology 2: 83-100. Cooper Ornithological Society, Los Angeles, California.
- Hicklin, P.W. 1987. *The migration of shorebirds in the Bay of Fundy.* Wilson Bulletin 99(4): 540-570.
- MacKinnon, C.M., D. Amirault, and J. Hicks. 1993. *A review of migratory bird sanctuaries in southwestern Nova Scotia.* Canadian Wildlife Service, Environment Canada. Sackville, New Brunswick. Unpublished.
- Majka, M. 1978. Wings over Fundy. Nature Canada 7(3).
- Morrison, R.I.G. 1974 to 1978. *Annual Reports of the Maritime Shorebird Survey.* Canadian Wildlife Service, Ottawa, Ontario.
- Morrison, R.I.G. 1976. Use of the Bay of Fundy by shorebirds. In Daborn, G.R. (editor). *Proceedings, Workshop of Fundy Tidal Power and the Environment.* Acadia University, Wolfville, Nova Scotia.

Reasons for Ramsar Designation: The area is a major maritime stop for American Black Duck *Anas rubripes* and Canada Goose *Branta canadensis*, and supports the largest wintering population of these two species in eastern Canada.

Status of Management Plan: Portions of this Ramsar site are, or are proposed as, project areas under the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan. A management plan for this area is currently under development.