

NATURAL HERITAGE AREA – LIFE SCIENCE CHECKSHEET

Name Amherst to Long Point Bays Coastal Wetland		Map Name Bath		Map Number 31 C/2	UTM Ref. 635865
County Lennox and Addington		Lat. 44° 07'N	Long. 76° 42'W	NAD 27	Min. Alt. 75.2 m
Locality Southern portion of Amherst Island					
Township Loyalist (formerly Amherst Island Twp.)					
Area 400 ha					
Ownership Mostly public, multiple private owners					
MNR Region Southcentral	Ecoregion and Ecodistrict 6E-15				
Landform Unit(s) 39 Napanee Plain					
MNR District Peterborough					
Aerial Photographs Year – Roll – Flight Line – Numbers					
78 25 4410 245-247					
78 51 4409 360-366					
78 34 4408 280-283					
92 343 5 65-68					

Physical and Biological Features

Note: In 1997 a large dyke was constructed within the site by Ducks Unlimited, which may have altered the site ecology. As most of the site descriptions presented here are based on reports dated prior to the construction of the dyke, it is not known how representative these descriptions are.

Representation:

The biota of the site are representative of typical coastal wetland and shore landforms within the site district. The site's portrayal of these features complements those of the other ANSIs on the coastal environment, particularly that of Wolfe Island Big Sandy Bay (3I C/I 850850), but is more diverse than the several other similar complexes on Amherst Island (3I C/2 575865, 590850). This is a large, well-developed coastal wetland and shoreline complex, which is representative of the Napanee Plain Physiographic Region. The site occurs in a coastal bay that has developed between Amherst Island's main body and a peninsula. A low, narrow barrier bar has formed across the bay, and wetland has subsequently developed in its lee. The standing water in the basin is derived primarily from a stream at its northern end and percolation from adjacent Lake Ontario. Soil development is predominantly fibric mucks, although there is more peat-like materials found around a pond within the site. Shallow dune ridges occur along the barrier bar in the site's western half. Two low-lying drumlins also are present, the northeastern of which is undisturbed, with mesic forest soils. Notable features include extensive marsh, swamp and open water communities.

(continued)

Major Information Sources

Reconnaissance work by Ian D. Macdonald, review of recent aerial photography, wetland evaluation, OMNR files.

Significance Level (Provincial/Regional/Local) and Brief Summary of Major Representative Values

This is a Regionally Significant ANSI, which presents a good example of coastal wetland vegetation, with drumlin forest and shoreline bar features.

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as well as a forested drumlin, and a coastal barrier with sand bar features. A number of regionally significant flora and fauna have been reported, and the site provides breeding and migratory habitat for waterfowl and other wildlife. The features of this area are better represented in the Site District at Wolfe Island Big Sandy Bay.

Condition:

The most visual disturbance to the site is from a dyke constructed in the wetland parallel to the barrier beach. It was constructed by Ducks Unlimited in 1997 with the intention of increasing vegetative diversity by simulating the historic water level extremes no longer experienced by coastal wetlands. It has been theorized that the dampened hydrological cycles resulting from Great Lakes water management have contributed to the monotypic dominance of cattail stands. Ducks Unlimited have a range of water level capabilities at the site with the use of dykes, control structures, and two-way pumps (Armson pers. comm.) Alterations of this nature can have both positive and negative impacts, and it is not possible without detailed study to determine the overall impact. It is too early in the project to make conclusions, but Ducks Unlimited is confident that improvements to the site ecology will be evident within a few years (Armson pers. comm.). Upland portions of the site include forested drumlin that have been selectively cut and managed for maple syrup production, but they remain in good condition (Norris 1992). Portions of the sandy barrier bars have been developed for seasonal and apparently permanent residential use. The surrounding clay plain is intensively farmed, and the remnant groves are regularly cleaned of fallen trees for firewood. Seasonal hunting takes place in the marsh.

Diversity:

Norris (1992) has reported on the site diversity and notes that the site contains at least sixteen vegetation communities; eight wetland, three lowland forests; two upland; two beach; and one dune community. Norris (1992) also noted that the site contains approximately 350 species of vascular plants, 77 species of birds, 11 species of herpetofauna, and eight species of mammals. Emergent marsh is the most extensive community within the site, and is dominated by broad leaved cattail (*Typha latifolia*), with a sub-dominant assemblage of sensitive and marsh ferns (*Onoclea sensibilis* and *Thelypteris palustris*), bulb bearing water hemlock (*Cicuta bulbifera*), water loosestrife (*Lysmachia thysiflora*), and spotted jewelweed (*Impatiens capensis*). Algal mats have been reported in the open water communities, which often contain duckweeds (e.g., *Lemna minor*), European frogbit (*Hydrocharis morus-ranae*), pondweeds (*Potamogeton* species) and yellow cowlily (*Nuphar variegata*). The several shrub swamps present are located mainly in peripheral patches. Dominant shrubs include speckled alder (*Alnus rugosa*), willows (*Salix* species), dogwoods (*Cornus* species), and buttonbush (*Cephalanthus occidentalis*). There are also treed swamps within the site, usually dominated by either red ash (*Fraxinus pennsylvanicus*) or silver maple (*Acer saccharinum*). They contain lesser amounts of red maple (*A. rubrum*), bur oak (*Quercus macrocarpa*), and American elm (*Ulmus americana*), and understory species such as narrow leaved meadowsweet (*Spiraea alba*), black holly (*Ilex verticillata*), wood nettle (*Laportea canadensis*), fowl manna grass (*Glyceria striata*), jack-in-the-pulpit (*Arisaema triphyllum*), and sedges (*Carex* species). The site contains some small deciduous mesic-forest patches, found mainly to the east. They typically contain sugar maple (*Acer saccharum*), American basswood (*Tilia americana*), American beech (*Fagus grandifolia*), red oak (*Quercus rubra*), shagbark hickory (*Carya ovata*), white ash (*Fraxinus americana*). Typical understory species include violets (*Viola* species), spring beauty (*Claytonia caroliniana*), trilliums (*Trillium* species), wild leeks (*Allium tricoccum*), and ferns (e.g., interrupted fern – *Osmunda claytoniana*). The beach and dune communities typically contain eastern cottonwood (*Populus deltoides*), crack willow (*Salix fragilis*), riverbank grape (*Vitis riparia*), poison ivy (*Rhus radicans*), horsetails (*Equisetum* species), and grasses and sedges. The adjacent uplands are actively cultivated and support croplands or old field communities. A small remnant fen community was reported by Norris (1992) containing eastern white cedar (*Thuja occidentalis*), American larch (*Larix laricina*), leatherleaf (*Chamedaphne caliculata*), Loesel's twayblade (*Liparis loeselii*), and dense mats of Sphagnum moss (*Sphagnum* species). However, much of this community appeared to be degraded or lost during a site visit by one of the authors in 1997.

Ecological Considerations:

This large site (400 ha) is mainly composed of common regional wetland and upland communities. It is one of the few significant natural sites on Amherst Island, which is predominately covered by agricultural land. It is also part of a string of three coastal wetlands on the western coast of the island. The site has a high diversity of communities, and contains a number of rarities. The 1997 construction of a dyke within the wetland has altered the wetland hydrology.

Special Features:

Several floral and faunal rarities have been reported within this site that also contains a provincially significant wetland. For the flora these include the provincially rare to uncommon halberd-leaved tearthumb (*Polygonum arifolium*) (S3), and several regionally interesting or uncommon species such as sand dropseed (*Sporobolus cryptandrus*), tall millet grass (*Milium effusum*), and hoary sedge (*Carex canescens*). Provincially significant fauna include the black tern (*Chlidonias niger* - S3, Vul.), Caspian tern (*Sterna caspia* - S3), red-shouldered hawk (*Buteo lineatus* - S4, Vul.), and red-bellied woodpecker (*Melanerpes carolinus* - S3S4). Another species of interest is the Snowy Owl, which commonly uses both Amherst and Wolfe Islands as winter habitat. Additionally, the wetlands provide good breeding habitat for waterfowl and passerines, and the offshore waters are a staging area for migrating waterfowl. Spawning conditions for bass also occur offshore, and a variety of fish spawn near the stream outlet in the site's southeastern portion.

Recommendations:

1. Macdonald (1987) recommended this site as regionally significant, but it was subsequently raised within OMNR files to provincially significant status because of its large size, rarities, and interesting landform features. However, there are several coastal wetlands behind a beach bar in the site district, and it is felt that this site offers representation secondary to that of Wolfe Island Big Sandy Bay. It is also not known how the 1997 dyke construction has altered the nature of the site ecology. Therefore, it is recommended that this site be considered Regionally Significant.
2. Due to the dated nature of the wetland evaluation (1986), missing wetland records, confusion about wetland boundaries, and possible changes to boundaries and wetland communities resulting from the 1997 dyke construction, it is recommended that a 3rd ed. wetland evaluation and a three-season species inventory be conducted to assess the status of this wetland.
3. The Ducks Unlimited project is intended to increase habitat and species diversity, and may increase the ecological value of this area (Armson, pers. comm.); success of the project is being monitored, and the area may have potential ANSI value in the future. It is recommended that MNR keep abreast of this work, to monitor its potential value as an ANSI, and as it may be applicable to other ecological enhancement opportunities in the site district.

References:

- Armson, Erling. January 2001. Biologist. Ducks Unlimited, Kingston, Ontario. (613) 389-0418.
- Macdonald, I.D. 1987. Check sheets for areas of natural and scientific interest in site district 6-15. Draft. Ontario Ministry of Natural Resources, Eastern Region, Kemptonville. SR. OFER 8603. viii + 149 pp.
- Mosquin, T., Wilson, J.R., and P. Mosquin. 1986. Wetland Data Record and Evaluation - Amherst Island Complex. Second Edition. July - September. Mosquin Bio-Information. Manuscript 17 pp. + 7 pp. Supplement.
- Norris, T. 1992. A Life Science Inventory of Amherst to Long Point Bay Area of Natural and Scientific Interest. OMNR. Tweed District. 40 pp.