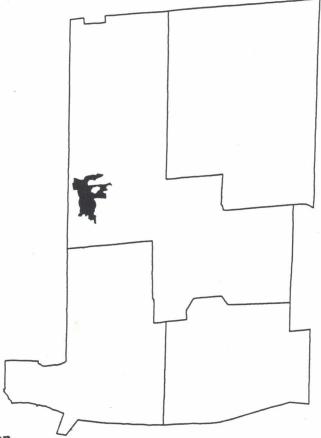
## **Environmentally Sensitive Area Study**

### **Guelph Junction Woods**

ESA N° 20



**General Description** 

The Guelph Junction Woods is an extensive undisturbed mixed forest and wetlands located on the Flamborough Plain physiographic region with thin soils over dolomite bedrock. The area features extensive rock outcrops and wetland areas (Crawford Lake Calcium Pits and Guelph Junction Woods wetlands) with several tributaries of the Bronte Creek dissecting the area. The varied topography affords a diversity of biological communities and it is among the top ten botanical sites in the Region (Varga and Allen 1990).

The Guelph Junction Woods is largely undeveloped with the exception of some rural estate strip development along concession roads and disturbance and encroachment in the area northeast of Guelph Junction and to the west of Second Line. The area encompasses part of the provincially significant, class 1 Guelph Junction Woods and Crawford Lake wetlands. The extreme topography and poor drainage of these large wetlands has historically limited the use of the land. The area is in public and private ownership with a forest tract owned

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by the Regional Municipality of Halton and managed by the Ministry of Natural Resources and parts of the ESA owned by the Halton Region Conservation Authority.

Size: 747 hectares (1848 acres)

Plant Species: 153

Plant communities: Meadow Marsh (3.2)

Larch-Eastern White Cedar Swamp (3.6.2.3)

Red Maple Swamp (3.6.3.2)

Rich Sugar Maple-Mixed Hardwood (4.1.2.15)

Red Maple-Red Oak Forest (4.1.2.20) Mixed Conifer-Broadleaf Forest (4.1.3)

Shrub Thicket (4.2)

Hawthorn Thicket (4.2.0.4) Conifer Plantation (6.3.1)

Animal Species: No data

Other Designations: Provincially significant class 1 wetland

Ownership: Largely Private (80%) Public 20%

#### Criteria Fulfilled

#### Primary Criteria

4) Areas that contain (in a regional context), relatively undisturbed expanses of natural, native plant communities.

The Guelph Junction escarpment forest is an extensive forest tract providing suitable habitat for large game animals such as white-tailed deer (*Odocoileus virginianus*). In addition, the complex is surrounded by further woodland areas and river valley links to other blocks of suitable habitat.

6) Areas that contain plant and/or animal species that are rare provincially or nationally.

The provincially rare sedge (Carex formosa) is found in this ESA.

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#### **Guelph Junction Woods**

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8) Areas that are determined to contribute significantly to local and/or regional groundwater recharge.

The area is part of an extensive headwater region of the Bronte Creek. Major recharge is evident as water infiltrates into the shallow permeable overburden and recharges the fractured dolomite aquifer. Groundwater also occurs as numerous seeps along the Escarpment face (Ecologistics 1977).

11) Areas that contribute to maintaining surface water quality.

The large (116 hectare, class 1) wetland areas serve to contribute towards the maintenance of high surface water quality.

#### Secondary Criteria

12) Areas that contain regionally rare plants.

This ESA contains the following regionally rare plants: wood horsetail (Equisetum sylvaticum) interrupted fern (Osmunda claytoniana) northern beech-fern (Phegopteris connectilis) black spruce (Picea mariana) pondweed (Potamogeton amplifolius) pondweed (P. pusillus) sedge (P. vaginata) black willow (Salix nigra) great water-dock (Rumex orbiculatus) yellow water-crowfoot (Ranunculus flabellaris) cuckoo-flower (Cardamine pratensis) avens (Geum rivale) mountain-holly (Nemopanthus mucronata) fireweed (Epilobium angustifolium) sweet cicely (Osmorhiza longistylis) speedwell (Veronica catenata) lobelia (Lobelia spicata) goldenrod (Solidago uliginosa)

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13) Areas that contain high quality assemblages of native plant and/or animal species.

The low number of non-native species in this ESA qualify this area as a high quality assemblage.

#### **Sources of Information**

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# LEGEND ESA09 ESA17 ENVIRONMENTALLY SENSITIVE AREAS ESA18 ESA19 ESA20 ESA25 AMF\_HYDROGRAPHY BUILDING DRAINAGE - DRAINLINES - TRANAIRS TRANAWCL - TRANBRDG - TRANBRMC — TRANMSCT - TRANRAIL - TRANRDED - TRANSPORT TRANTRAL TRANTUNN BUILDING CONSNRCN CONSRBCN 20 Miles 0.5