

Study Site TH-02

Port Robinson Duck Ponds

Municipality City of Thorold

Formerly Port Robinson Duck Ponds (Brady et al., 1980)

Approximate Area 329 hectares

Watershed The majority of this study site drains south/ east to the Welland Canal North subwatershed. There is a small area to the north that drains to the Lake Gibson system.

Ownership Mostly private

General Summary

This Study site is located within the City of Thorold between Niagara St./Merrittville Highway to the west and the Welland Canal to the east. The northern boundary is Highway 20 and Port Robinson Road makes up the southern boundary.

Physical Description

The western portion of this natural area is characterized by the well drained sand and loamy sand of the Sand Plain. The eastern portion is characteristic of the flat, poorly drained, clay and silty clay soils of the Clay Plain.

The entire areas in underlain by the dolostone of the Guelph Formation.

The soils of the canal lands in the far east of this study site are inverted due to the digging operations during the canal construction.

Soils

| Soil Type | Percentage of the Study Site |
|-----------------------|-------------------------------------|
| ALLUVIUM | 7.08 |
| BERRIEN | 3.31 |
| BEVERLY | 8.92 |
| BEVERLY - LOAMY PHASE | 12.45 |
| BRANTFORD | 4.73 |
| TOLEDO | 38.06 |
| TOLEDO - LOAMY PHASE | 8.12 |
| TUSCOLA | 0.09 |
| TUSCOLA - RED PHASE | 0.22 |
| VINELAND | 0.22 |
| WAUSEON | 0.70 |
| WATER | 2.08 |
| NOT MAPPED | 14.03 |
| Total % | 100.00 |

Ecological Land Classification

Summary

Deciduous Swamp communities in this study site were dominated by Red Oak (*Quercus rubra*), Green Ash (*Fraxinus pennsylvanica*), White Elm (*Ulmus americana*) and, Pin Oak (*Quercus palustris*) with a few stands of Eastern White Pine (*Pinus strobus*) on the driest ridges.

The understory was largely Glossy Buckthorn (*Rhamnus frangula*), Grey Dogwood (*Cornus foemina* ssp. *racemosa*), Siky Dowood (*Cornus amomum* sp. *obliqua*) and, Common Buckthorn (*Rhamnus cathartica*).

The herbaceous layer was a mix of Sedges (*Carex* sp.), Avens (*Geum* sp.), Goldenrod (*Solidago* sp.) and, Asters (*Aster* sp.).

This bottomland and riparian areas supported a floodplain community with dense thickets of Glossy Buckthorn. An open canopied riparian Green Ash swamp with expansive marshes, along the creek channel and adjacent floodplain was noted. This community was dominated by Reed Canary Grass (*Phalaris arundinacea*), Panicked Aster (*Aster lanceolatus* ssp. *lanceolatus*) or One-sided Aster (*Aster lateriflorus* var. *lateriflorus*) and Moneywort (*Lysimachia nummularia*).

Also noted was the community for which this study site was originally named. Most of this study site is located on old canal excavation material. A railroad line prevents drainage creating large ponds. NAI teams did not visit the site however it was noted through air photo interpretation that the inundated valley wetlands were likely Duckweed (*Lemna* sp.) ponds, Buttonbush (*Cephalanthus occidentalis*) Thicket Swamps, and Bur-reed (*Sparganium* sp.) and Cattail (*Typha* sp.) Marshes in a reoccurring pattern.

Steep and well drained valley slopes supported the drier Deciduous Forest communities dominated by Red Oak, Shagbark Hickory (*Carya ovata*) and White Oak (*Quercus alba*). Occassionally, Sugar Maple (*Acer saccharum* ssp. *saccharum*) or American Beech (*Fagus grandifolia*) were also present.

The understory was largely Hop Hornbeam (*Ostrya virginiana*), Black Cherry (*Prunus serotina*), Blue Beech (*Carpinus caroliniana*) and Downy Serviceberry (*Amelanchier arborea*).

The herbaceous layer was a mix of Goldenrods and Asters with some Wild Leek (*Allium tricoccum*).

Vegetation Communities

There are a total of 83 recorded taxa (unique plant records) for this study site.

Community Series

Deciduous Forest (FOD)
Deciduous Swamp (SWD)
Thicket Swamp (SWT)

Vegetation Type

Dry-Fresh Oak-Hickory Deciduous Forest Type (FODM2-2)
Dry-Fresh Oak-Red Maple Deciduous Forest Type (FODM2-1)
Dry-Fresh Sugar Maple-Beech Deciduous Forest Type (FODM5-2)
Fresh-Moist Green Ash-Hardwood Lowland Deciduous Forest Type (FODM7-2)
Fresh-Moist Oak-Maple Deciduous Forest Type (FODM9-2)
Green Ash Mineral Deciduous Swamp Type (SWDM2-2)
Non-native Mineral Deciduous Thicket Swamp Type (SWTM5-8)
Red Maple Mineral Deciduous Swamp Type (SWDM3-1)

Significant Flora

Species at Risk

Cornus florida (Eastern Flowering Dogwood) (Brady et al., 1980) - Endangered

Provincially Rare Species- None noted.

Points of Interest

Faunal Records:

3- Reptiles & Amphibians
2- Birds
1- Mammal

Site Visits

September 1, 1980
Brady et al.

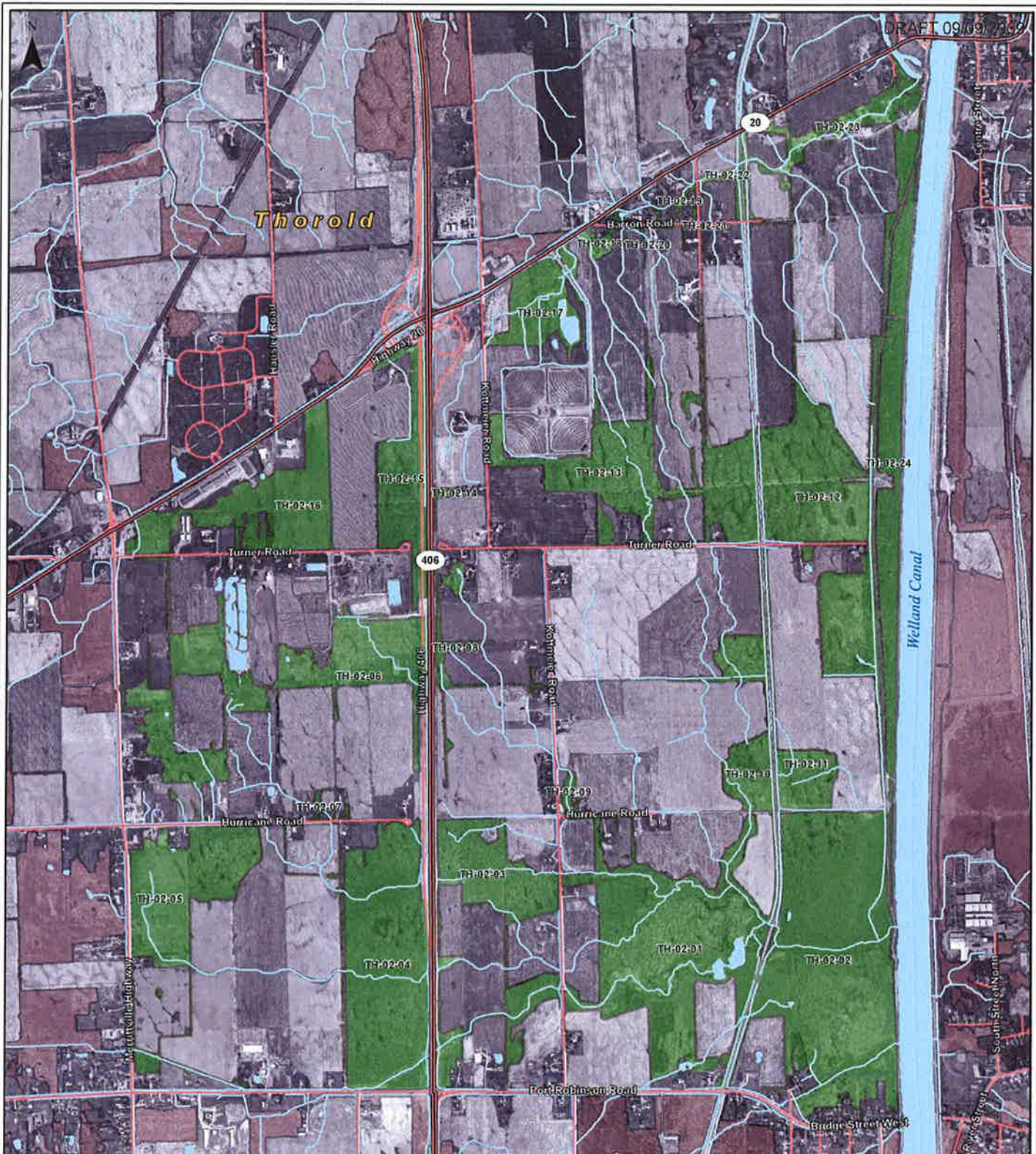
November 5, 2008
A. Garofalo

% of site visited

3.85 % of the total study site was visited by NAI teams.

References Cited

- Brady, R., et al. 1980. *Environmentally Sensitive Areas*. Regional Municipality of Niagara, Brock University, Department of Geography, St. Catharines, Ontario.
- Government of Ontario, Ministry of Natural Resources. 2009. Deciduous Forest. Species at Risk in Ontario. Retrieved 11/05, 2009, from <http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/276504.html>
- Natural Heritage Areas Inventory 2006-2009. Unpublished database, Niagara Peninsula Conservation Authority, Welland, Ontario.
- Oldham, M. J., & Brinker, S. R. 2009. *Rare Vascular Plants of Ontario (Fourth Edition ed.)*. Peterborough, Ontario: Natural Heritage Information Centre, Ontario Ministry of Natural Resources.
- Ontario Ministry of Agriculture and Food. 1989. *The Soils of The Regional Municipality of Niagara*, Report No. 60 of the Ontario Institute of Pedology, Guelph, Ontario.

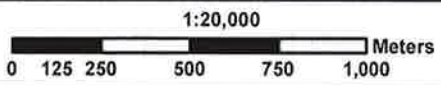


- Legend**
- Major Highways
 - Regional Highways
 - Roads
 - Watercourses
 - Waterbodies
 - Municipal Boundaries
 - Study Sites
 - Study Site TH-02



Natural Areas Inventory

Study Site TH-02



Produced by the Niagara Peninsula Conservation Authority, 2009.
 Portions of this map produced under license with the Ontario Ministry of Natural Resources Queen's printer for Ontario, 2009. Reproduced with permission.
 All Frames: North American Datum 1983, Universal Transverse Mercator 6° Projection, Zone 17N, Central Meridian 81° West



There are a total of 83 recorded taxa (unique plant records) for this study site.
Community Series:
 Deciduous Forest (FOD)
 Deciduous Swamp (SWD)