



# Severn Sound

*Environmental Association*

## WETLAND EVALUATION OF MIDLAND SWAMP MIDLAND



**NOVEMBER 2006**

**WETLAND EVALUATION OF MIDLAND SWAMP  
MIDLAND, ONTARIO**

**November 2006**

**Prepared for  
THE TOWN OF MIDLAND  
THE TOWN OF PENETANGUISHENE  
and  
THE ONTARIO MINISTRY OF NATURAL RESOURCES**

**by  
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## FOREWORD

This document reports on the major findings of the Wetland Evaluation of Midland Swamp, conducted during 2005 by the Severn Sound Environmental Association (SSEA) for the Town of Midland, the Town of Penetanguishene, and the Ontario Ministry of Natural Resources.

The evaluation was conducted using the standards set out in the Ontario Wetland Evaluation System, Southern Manual, 3<sup>rd</sup> edition. The Midland Swamp wetland evaluation has been reviewed and accepted by the Ontario Ministry of Natural Resources Midhurst District.

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The project team would like to thank the staff at the Midhurst District Ontario Ministry of Natural Resources for their assistance with the evaluation. We received background information, support and expertise from Brad Allan (Biologist), Suzanne Robinson (Acting District Ecologist), Greg Cull (Fish & Wildlife Technical Specialist), and Paul Jurjans (GIS Officer).

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# 1. INTRODUCTION

## 1.1 Background

Midland Swamp is located inland of Midland Bay, within the Town of Midland (Figure 1). The Town of Midland owns approximately 74% of this wetland complex, and the remainder is under private ownership.

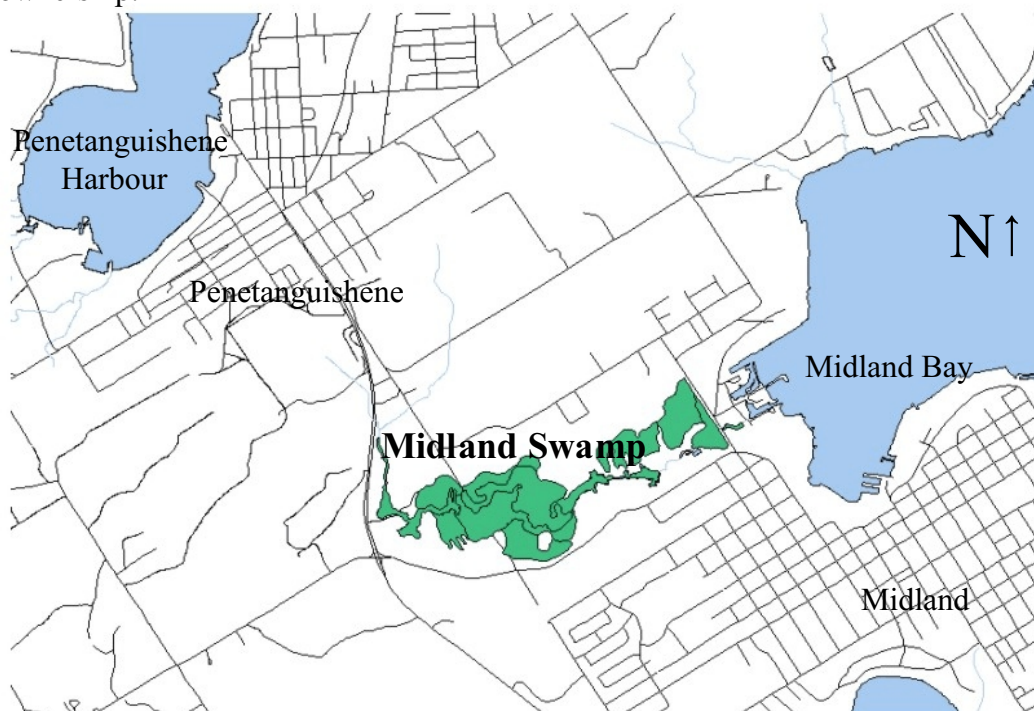


Figure 1: Location of Midland Swamp

A wetland evaluation was conducted in 1985 by the Ontario Ministry of Natural Resources (OMNR), and Midland Swamp was evaluated as a Class 5 Wetland (now termed Locally Significant Wetland).

## 1.2 Purpose

The purpose of this project was to conduct field work, and prepare and submit a revised evaluation for Midland Swamp, upgraded to the 3<sup>rd</sup> edition standards of the Ontario Wetland Evaluation System.

## 1.3 Study Team

Severn Sound Environmental Association (SSEA) undertook the wetland evaluation, funded by the Town of Midland and the Town of Penetanguishene, with support from the Ontario Ministry of Natural Resources. The municipalities provided assessment data and background information, and OMNR provided direction and technical advice during the project.

Contractor Bob Bowles and SSEA Wetlands & Habitat Biologist Michelle Hudolin conducted field work for the project, with additional field support provided by Margaret Killing (volunteer), David Killing (SSEA seasonal staff), Nils Lichtenberg, Joachim Reinhardt and Martin Friebe (SSEA interns), and Amanda Barnstaple (volunteer). SSEA Coordinator Keith Sherman provided guidance, input and assistance throughout the project. Geographic Information System (GIS) support and mapping was provided by Lex McPhail, SSEA GIS/Applications Specialist, and SSEA Ecosystem Technologist Paula Madill assisted with water temperature data collection and provided the analysis of water temperature data for the thermal classification of the Midland Swamp stream.

## **1.4 Fieldwork and Data Collection**

Midland Swamp was visited during the spring, summer and fall of 2005, to assess features in the wetland, map and describe vegetation communities, and collect information on species utilizing the wetland. Field work was conducted on May 9, May 24, June 16, July 8, July 22, August 22, September 27, and September 30, 2005. During field visits, the field crew noted plant species observed, and wildlife species observed or heard; minnows were trapped and identified on July 8 and September 27. Temperature loggers were installed in the stream in the wetland to monitor water temperature throughout the summer.

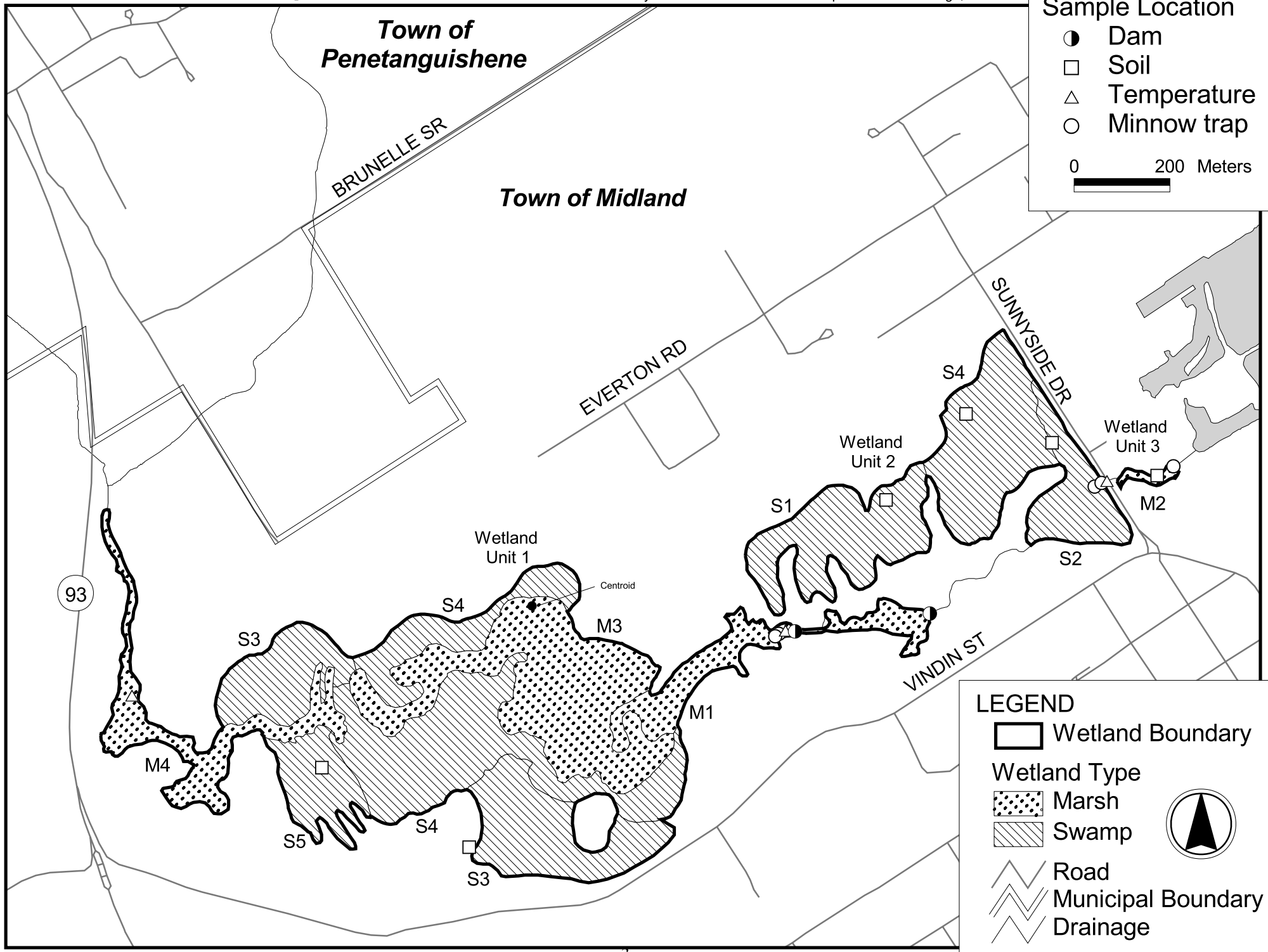
Access was not granted to all parcels of land within the study area, therefore some information was not directly obtainable from field observations. In these cases, existing information and aerial photograph interpretation was used to determine the wetland boundary and describe the wetland communities. If an opportunity arises in the future to access these lands, the vegetation communities and wetland evaluation record should be updated accordingly.

## **2. WETLAND EVALUATION**

A map of the wetland communities in the complex was produced (Figure 2). The communities are divided into wetland types (M=marsh, S=swamp), and each community has been given an alpha-numeric identifier according to the evaluation system protocol.

Two small areas identified as wetland habitat when field surveys were undertaken in 2005 were excluded from the final wetland boundary. One area is located to the northwest of Wetland Unit 1, on the west side of County Road 93; a second area is located to the south of Wetland Unit 3, east of Sunnyside Drive. Although these areas contained wetland vegetation at the time they were surveyed, the properties have approved development proposals associated with them, and therefore the OMNR advised SSEA that these wetland areas should be excluded from the final wetland boundary and evaluation scoring record.





Under the 3<sup>rd</sup> Edition Ontario Wetland Evaluation System Southern Manual, a wetland evaluation is scored in four main categories: Biological, Social, Hydrological, and Special Features components. The Biological section assesses ecological and biological values of the wetland. The Social component evaluates the uses that wetlands provide to people, like recreational opportunities and natural resources such as timber and furbearers. The Hydrological category evaluates factors such as flood attenuation and water quality improvement. The Special Features component allows attributes such as significant wildlife habitat and rare species to be evaluated. The Extra Information section of the evaluation provides an opportunity for reporting additional information that does not receive points toward the evaluation score, such as the presence of invasive species or other notable species such as Osprey (*Pandion haliaetus*) and Loon (*Gavia immer*).

Points are awarded for each category, based on the evaluation system protocol. The sum of the points from all categories results in the final score for the wetland or wetland complex, and represents the status of the wetland at the time of the study. Each of the four components can score a maximum of 250 points, and thus a wetland or wetland complex can score a maximum of 1000 points. Wetlands that receive a total score of 600 points (or greater) or score 200 points (or greater) in either the Biological or Special Features scoring components are categorized as Provincially Significant Wetlands. Wetlands that receive a total score of less than 600 points and score less than 200 points in each of the Biological and Special Features scoring components are categorized as Non-provincially Significant Wetlands, and are often designated Locally Significant Wetlands by municipalities. The significant findings of the field work for the Midland Swamp wetland evaluation are outlined below.

## **2.1 Biological Component**

The Midland Swamp wetland complex contains two distinct wetland types: marsh and swamp. Overall, the wetland is dominated by swamp (67%), including deciduous swamp and tall shrub swamp habitat. The marsh component of the wetland (33%) is primarily emergent marsh habitat. Three individual wetland units make up the 61.4 hectare Midland Swamp complex (Figure 2).

Wetland Unit 1, the largest wetland unit, is located on the east side of County Road 93, north of Vindin Street. This 45.1 hectare area is composed of emergent marsh habitat along the stream corridor (Figure 3), in the central marsh area (Figure 4), and downstream of the dam (Figure 5). Deciduous swamp habitat is situated to the north and south of the central marsh area (Figure 6).



Figure 3: Wetland Unit 1, Emergent Marsh Community M4



Figure 4: Wetland Unit 1, Emergent Marsh Community M1



Figure 5: Wetland Unit 1, Emergent Marsh Community M1, Downstream of Dam



Figure 6: Wetland Unit 1, Deciduous Swamp Community S4

The 16.0 hectare Wetland Unit 2 is a deciduous swamp located west of Sunnyside Drive and slightly northeast of Wetland Unit 1. This portion of the wetland is fed by several groundwater seeps and a small creek. Wetland Unit 3 is a 0.3 hectare emergent marsh community along the banks of the creek (Figure 7), to the east of Sunnyside Drive, where Midland Swamp outlets into Midland Bay.



Figure 7: Wetland Unit 3, Emergent Marsh Community M2

The habitat and topography surrounding Midland Swamp is a diverse mixture of row crops, deciduous, coniferous and mixed forest, open lake, creek flood plains, and hilly terrain. In addition, Midland Swamp is hydrologically connected by surface water to Midland Bay, and is located within approximately 2.5 km of Penetang Marsh and Lalligan Lake Provincially Significant Wetlands. Habitat variety adjacent to wetlands and connectivity to other natural areas is valuable from a biological perspective, because high ecological diversity typically supports a large number of species of plants and animals.

## 2.2 Social Component

The field crew noted the presence of a number of potential resources in Midland Swamp that contribute to the scoring for the social component of the evaluation, including wood products and wildlife species. Approximately 38 hectares of the wetland is dominated by deciduous forest. The field crew directly observed or found evidence (e.g., scat, tracks, browse) of several economically valuable wildlife species, including Beaver (*Castor canadensis*), Muskrat (*Ondatra zibethica*), and Raccoon (*Procyon lotor*). In addition, Mark Pinkney from the Town of Midland reported Coyote (*Canis latrans*) in the area, and Mink (*Mustela vison*) and Bobcat (*Lynx rufus*) were mammal species reported in the 1985 evaluation. Minnows and Snapping Turtle (*Chelydra serpentina serpentina*) were observed by the field crew in the wetland in 2005, and Bullfrog (*Rana catesbeiana*) was reported in the 1985 evaluation, with suitable habitat still existing in the wetland for this species.



A large portion of Midland Swamp is owned by the Town of Midland. Since the area contributes to the municipal water supply, access to much of the area is restricted, and therefore there is relatively little recreational use of the wetland. No evidence of hunting in the wetland was observed by the field crew. However, there were paths trampled along the edges of the stream in the fall, as well as a minnow trap in the stream at the Sunnyside crossing, indicating the wetland is occasionally used for fishing.

Human disturbances to the wetland include concrete dams (Figure 8), a utility corridor, and culverts (Figure 9) where the wetland outlets to Midland Bay. In addition, there is localized water pollution as a result of untreated stormwater discharging into the wetland at several locations. Although there is a walking/biking trail in the uplands adjacent to the wetland, it is not located in the wetland itself, and does not contribute to the score for the wetland. There are no known visits to the wetland by educational groups.

Midland Swamp is located on the border of the settlement area of the Town of Midland, with 74% of the wetland area municipally owned, and the remaining 26% in private ownership.



Figure 8: Dam in Midland Swamp with Beaver Activity



Figure 9: Culverts from Midland Swamp to Midland Bay

In addition to the original 1985 wetland evaluation, a number of studies have been done on the Midland Swamp area, including fisheries studies (C. Portt & Associates, 2001). In conjunction with the wetland evaluation, SSEA prepared a report on the Midland Reservoir watershed (Severn Sound Environmental Association, in prep.).

Jamie Hunter from Huronia Museum provided information on the cultural resources of the area surrounding Midland Swamp. He identified the old Penetanguishene Road, which passes directly through Midland Swamp, as an important Historical Road. The Road dates from 1811 to 1821, was used by naval and military personnel, and was the first settlement road in Simcoe County. The original switchbacks of the road are still present in some areas. The presence of this cultural feature contributes additional points to the Social component of the evaluation.

## 2.3 Hydrological Component

Midland Swamp is the main detention area in its catchment (Figure 10). As such, it receives a relatively high score for flood attenuation in the catchment area. In addition, due to its location in the watershed, it receives a moderate score for short term water quality improvement and long term nutrient trapping capabilities.

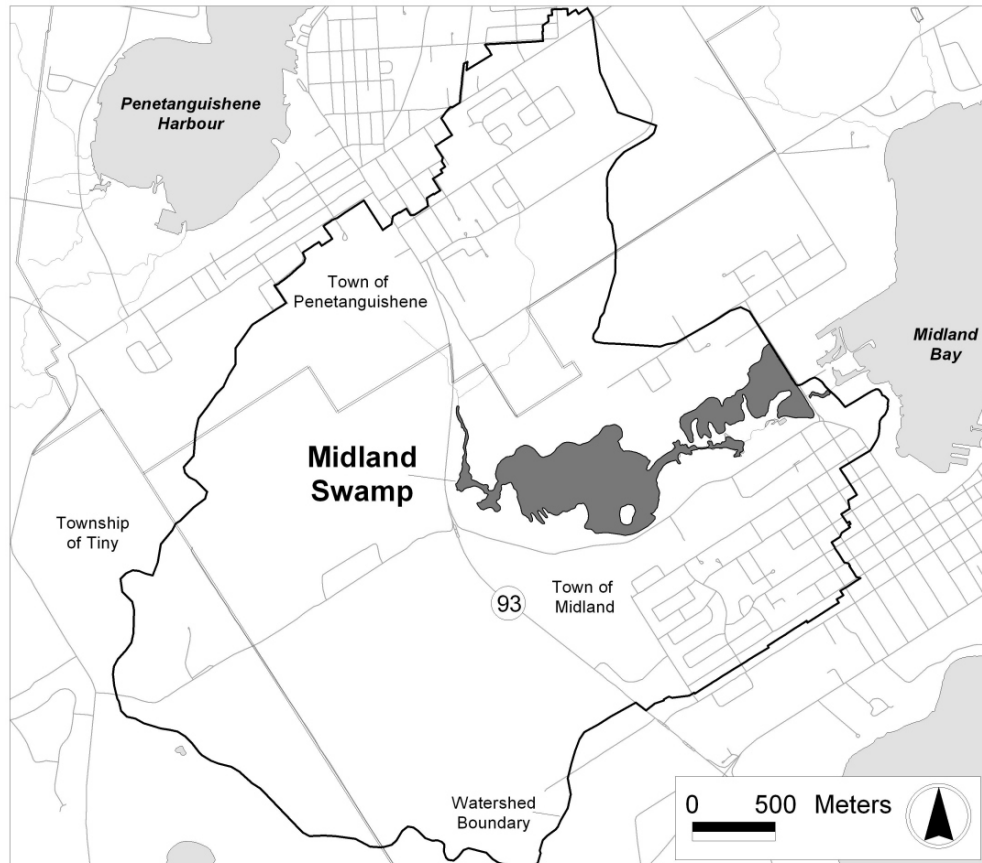


Figure 10: Midland Swamp Catchment Area

There are numerous springs and seeps in Midland Swamp, and the wetland is located within 1 km of a major aquifer, surrounded by hilly topography. These factors contribute to a relatively high score for groundwater discharge. There is also relatively high potential for groundwater recharge based on the wetland site type and soils surrounding the wetland. The wetland is mainly palustrine in site type, meaning there is intermittent surface water inflow and intermittent or permanent outflow from the wetland; the surrounding soils are predominantly sand. These factors translate into a relatively high score for groundwater recharge capability.

## 2.4 Special Features Component

During field visits to Midland Swamp, the field crew recorded 189 plant species (Appendix A) and 120 wildlife species, including birds, mammals, amphibians, butterflies and moths, dragonflies and damselflies, and fish (Appendix B) in the wetland and adjacent uplands.

The field crew documented 61 species of birds in the wetland during field visits, including breeding birds, summer residents and migrants. Waterfowl utilizing the wetland included Canada Goose (*Branta canadensis*), Wood Duck (*Aix sponsa*), and Mallard (*Anas platyrhynchos*). Other wetland avifauna noted included American Bittern (*Botaurus lentiginosus*), Great Blue Heron (*Ardea herodias*), Green Heron (*Butorides virescens*), Sora (*Porzana carolina*), Northern Rough-winged Swallow (*Stelgidopteryx serripennis*), Barn Swallow (*Hirundo rustica*), Sedge Wren (*Cistothorus platensis*), and Northern Waterthrush (*Seiurus noveboracensis*), among many others. Breeding evidence (nest and/or eggs) was noted for Mourning Dove (*Zenaida macroura*), and American Goldfinch (*Carduelis tristis*). Migrant birds observed using the wetland in spring/fall included: Solitary Sandpiper (*Tringa solitaria*), Golden-crowned Kinglet (*Regulus satrapa*), Ruby-crowned Kinglet (*Regulus calendula*), Yellow-rumped Warbler (*Dendroica coronata*), Western Palm Warbler (*Dendroica palmarum palmarum*), White-crowned Sparrow (*Zonotrichia leucophrys*) and Rusty Blackbird (*Euphagus carolinus*). Many additional bird species were observed outside the wetland boundaries, including Pileated Woodpecker (*Dryocopus pileatus*), Eastern Bluebird (*Sialia sialis*), Pine Warbler (*Dendroica pinus*), and Rose-breasted Grosbeak (*Pheucticus ludovicianus*).

Five species of amphibian and three species of reptile were observed in the wetland during the field season, including Spring Peeper (*Pseudacris crucifer*), American Toad (*Bufo americanus*), Wood Frog (*Rana sylvatica*), Northern Leopard Frog (*Rana pipiens*), Green Frog (*Rana clamitans melanota*), Common Snapping Turtle (Figure 11), Midland Painted Turtle (*Chrysemys picta marginata*) and Eastern Garter Snake (*Thamnophis sirtalis sirtalis*).



photo: B. Bowles

Figure 11: Snapping Turtle (*Chelydra serpentina serpentina*)

Mammal observations included direct observations of species and/or observations of tracks, scat, and browse. The six mammal species noted during 2005 field work included Beaver, Muskrat, Raccoon, White-tailed Deer (*Odocoileus virginianus*), Snowshoe Hare (*Lepus americanus*), and Gray Squirrel (*Sciurus carolinensis*).

Minnows were trapped on July 8 and September 27, 2005 (Figure 12). Minnow traps were placed at five locations in Midland Swamp (Figure 2). Species trapped included Common Shiner (*Luxilus cornutus*), Blacknose Shiner (*Notropis heterolepis*), Northern Redbelly Dace (*Phoxinus eos*), Blacknose Dace (*Rhinichthys atratulus*), Creek Chub (*Semotilus atromaculatus*), and Brook Stickleback (*Culaea inconstans*). In addition, Mottled Sculpin (*Cottus bairdi*) and Brown Trout (*Salmo trutta*) were observed by SSEA staff sampling benthic invertebrates in the Midland Swamp stream on October 17, 2005.



Figure 12: Minnow Sampling in Midland Swamp

Fourteen species of dragonflies and damselflies, and twelve species of butterflies and moths were observed in Midland Swamp during field visits. Two species uncommon in Simcoe County were observed, including an uncommon dragonfly species, Band-winged Meadowhawk (*Sympetrum semicinctum*), and an uncommon butterfly species, Delaware Skipper (*Anatrytone logan*).

#### 2.4.1 Regionally Significant Species

Two Regionally Significant species were observed in Midland Swamp in 2005. Two additional Regionally Significant species were observed just outside the boundaries of the wetland.

Gray's Sedge (*Carex grayi*) and Nodding Sedge (*Carex gynandra*) were observed within the wetland boundaries of Midland Swamp. These species are both considered rare in OMNR Central Region (Riley, 1989), making them Regionally Significant plants for the purposes of scoring for the evaluation. Black Walnut (*Juglans nigra*) and Jerusalem Artichoke (*Helianthus tuberosus*), although also rare in OMNR Central Region, were observed outside the wetland boundaries, and therefore do not receive points for Regional Significance in the evaluation. Black Walnut appears to have been originally planted along the Midland Waterfront.



### 2.4.2 Fish and Wildlife Habitat

Midland Swamp contains stands of coniferous trees mixed with deciduous trees and shrubs, and the wetland is used by wildlife such as White-tailed Deer in winter. This can be considered locally significant winter cover for wildlife species (Brad Allan, pers. comm.).

While waterfowl breeding and staging occur in Midland Swamp, they are not known to be of national, provincial or regional significance, and thus score low in the evaluation.

Fish habitat is present in Midland Swamp, as evidenced by the minnows trapped and larger fish observed during 2005 field visits, and results from previous fish studies (C. Portt & Associates, 2001). Spawning and nursery habitat, and migration and staging habitat are considered locally significant by the OMNR (Brad Allan, pers. comm.).

### 2.4.3 Great Lakes Coastal Wetlands

Midland Swamp is classified as a Great Lakes Coastal Wetland, and receives a score based on its size. Midland Swamp is considered a coastal wetland under the evaluation system because it is on a tributary to Georgian Bay, and approximately 55 hectares of the wetland lie downstream of a line located 2 km upstream of the 1:100 year flood line of Georgian Bay.

## 2.5 Extra Information

Non-native, invasive species are of concern in many wetlands, including Midland Swamp. Although Purple Loosestrife (*Lythrum salicaria*) was observed in Midland Swamp in several locations, it had not formed a monoculture that excludes native species. The non-native, invasive Glossy Buckthorn (*Rhamnus frangula*) was observed throughout Midland Swamp (Figure 13), and may soon out-compete native species for habitat and reduce overall biological diversity of the wetland.



Figure 13: Invasive, Non-native Glossy Buckthorn (*Rhamnus frangula*)

The temperature of waters flowing through the wetland indicates that there is groundwater input into the wetland and the stream. Cold seeps and springs originate in the valley lands and at the bottom of slopes adjacent to the wetland and stream. Most of these discharges flow year round. Spot temperatures of the seeps were approximately 13°C, even on warm days.

Water temperature data was collected at three locations in Midland Swamp during the summer (Figure 2), through the use of temperature data loggers (Onset Stow Away Tidbit Temp Logger data loggers, Hobo ®). The upstream temperature logger was installed in the wetland on June 16, but was removed on July 8, 2005 due to low water levels at the sampling location. There were two continuous temperature monitoring sites: the central site and the downstream site. The temperature logger at the central site was installed in the wetland on June 15, and removed on September 27, while the downstream logger was installed on June 7 and removed on September 23, 2005.

The temperature loggers collected water temperature data every 30 minutes; this data was analysed according to the methods used by Fisheries and Oceans Canada and OMNR to determine the thermal classification of the streams as fish habitat (Fisheries and Oceans Canada & Ontario Ministry of Natural Resources, n.d.). Under this methodology, water temperature measurements between 4:00 p.m. and 4:30 p.m. are considered representative of the maximum daily water temperature, and are graphed against the maximum daily air temperature for days when the air temperature is at or above 25°C. The sampling period used to determine the thermal classification at the central and downstream sites is July 1 to September 10. Thermal classification of the upstream location was not possible, due to low water levels interfering with temperature data collected during the sampling period.

Based on temperature, the central site, immediately downstream of the upper reservoir dam, borders on coolwater fish habitat (Figure 14), while the downstream site is considered to have coolwater fish habitat (Figure 15).

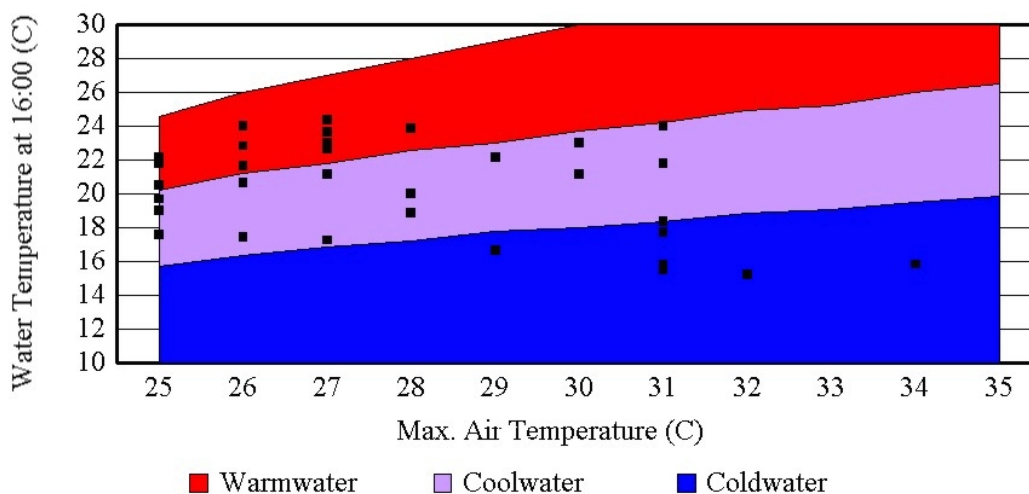


Figure 14: Thermal Classification of Midland Swamp Stream at Central Site

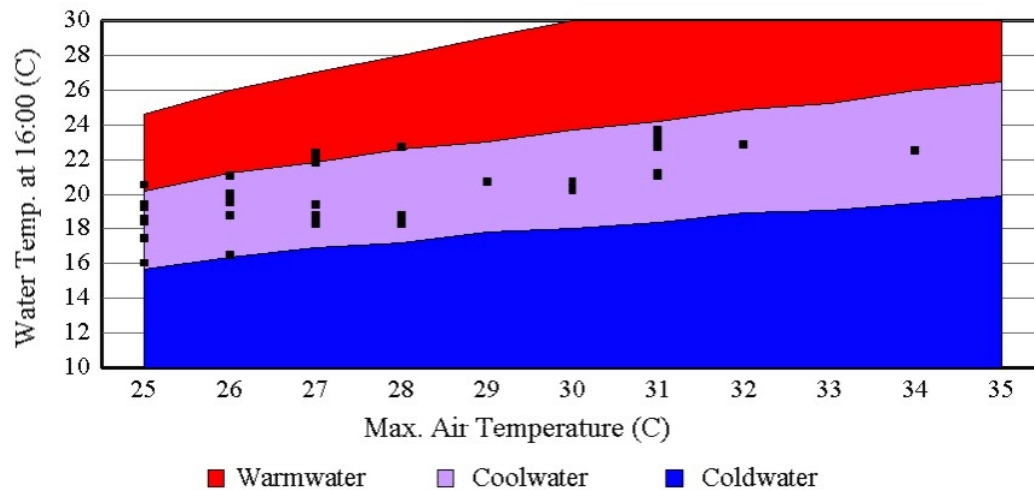


Figure 15: Thermal Classification of Midland Swamp Stream at Downstream Site

## 2.6 Evaluation Score

The total score for Midland Swamp is 647, making it a Provincially Significant Wetland. Midland Swamp scores 106 in the Biological component, 144 in the Social component, 190 in the Hydrological component, and 207 in the Special Features component, due to the presence of significant species and habitat. The Data and Scoring Record is on file with the OMNR Midhurst District.

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**Appendix A**  
**Plants of Midland Swamp**  
Observed during 2005 Wetland Evaluation field work

Family Name	Genus	Species	Common Name	Additional Notes
PINACEAE	<i>Abies</i>	<i>balsamea</i>	Balsam Fir	
ACERACEAE	<i>Acer</i>	<i>negundo</i>	Manitoba Maple	observed outside wetland boundaries
ACERACEAE	<i>Acer</i>	<i>rubrum</i>	Red Maple	
ACERACEAE	<i>Acer</i>	<i>saccharum ssp. saccharum</i>	Sugar Maple	observed outside wetland boundaries
RANUNCULACEAE	<i>Actaea</i>	<i>rubra</i>	Red Baneberry	observed outside wetland boundaries
ROSACEAE	<i>Agrimonia</i>	<i>gryposepala</i>	Agrimony	
ALISMATACEAE	<i>Alisma</i>	<i>plantago-aquatica</i>	Common Water-plantain	
BETULACEAE	<i>Alnus</i>	<i>incana ssp rugosa</i>	Speckled Alder	
RANUNCULACEAE	<i>Anemone</i>	<i>acutiloba</i>	Sharp-lobed Hepatica	observed outside wetland boundaries
ARALIACEAE	<i>Aralia</i>	<i>nudicaulis</i>	Wild Sarsaparilla	observed outside wetland boundaries
ASTERACEAE	<i>Arctium</i>	<i>minus</i>	Common Burdock	introduced species
ARACEAE	<i>Arisaema</i>	<i>triphyllum</i>	Small Jack-in-the-Pulpit	observed outside wetland boundaries
ASCLEPIADACEAE	<i>Asclepias</i>	<i>incarnata ssp. incarnata</i>	Swamp Milkweed	
ASTERACEAE	<i>Aster</i>	<i>lateriflorus</i>	Calico Aster	
ASTERACEAE	<i>Aster</i>	<i>macrophyllus</i>	Large-leaved Aster	observed outside wetland boundaries
ASTERACEAE	<i>Aster</i>	<i>novae-angliae</i>	New England Aster	
ASTERACEAE	<i>Aster</i>	<i>puniceus</i>	Purple-stemmed Aster	
ASTERACEAE	<i>Aster</i>	<i>umbellatus</i>	Flat-topped White Aster	
ASTERACEAE	<i>Aster</i>	<i>urophyllus</i>	Arrow-leaved Aster	

Family Name	Genus	Species	Common Name	Additional Notes
POLYPODIACEAE	<i>Athyrium</i>	<i>filix-femina ssp angustum</i>	Lady Fern	
BERBERIDACEAE	<i>Berberis</i>	<i>thunbergii</i>	Japanese Barberry	introduced species; observed outside wetland
BETULACEAE	<i>Betula</i>	<i>alleghaniensis</i>	Yellow Birch	
BETULACEAE	<i>Betula</i>	<i>papyrifera</i>	White Birch	
ASTERACEAE	<i>Bidens</i>	<i>cernua</i>	Nodding Beggarticks	
URTICACEAE	<i>Boehmeria</i>	<i>cylindrica</i>	False Nettle	observed outside wetland boundaries
POACEAE	<i>Brachyeletum</i>	<i>erectum</i>	Long Awned Woodgrass	observed outside wetland boundaries
POACEAE	<i>Calamagrostis</i>	<i>canadensis</i>	Canada Blue-Joint	
RANUNCULACEAE	<i>Caltha</i>	<i>palustris</i>	Marsh Marigold	
CAMPANULACEAE	<i>Campanula</i>	<i>aparinoides</i>	Bedstraw Bellflower	
BRASSICACEAE	<i>Cardamine</i>	<i>diphylla</i>	Two-leaved Toothwort	observed outside wetland boundaries
CYPERACEAE	<i>Carex</i>	<i>bebbii</i>	Bebb's Sedge	
CYPERACEAE	<i>Carex</i>	<i>comosa</i>	Bristly Sedge	
CYPERACEAE	<i>Carex</i>	<i>flava</i>	Yellow Sedge	
CYPERACEAE	<i>Carex</i>	<i>gracillima</i>	Graceful Sedge	observed outside wetland boundaries
CYPERACEAE	<i>Carex</i>	<i>grayi</i>	Sedge	Regionally Significant Species
CYPERACEAE	<i>Carex</i>	<i>gynandra</i>	Nodding Sedge	Regionally Significant Species
CYPERACEAE	<i>Carex</i>	<i>hystericina</i>	Porcupine Sedge	
CYPERACEAE	<i>Carex</i>	<i>lacustris</i>	Lake Bank Sedge	
CYPERACEAE	<i>Carex</i>	<i>lurida</i>	Sallow Sedge	observed outside wetland boundaries
CYPERACEAE	<i>Carex</i>	<i>oligosperma</i>	Few-seeded Sedge	
CYPERACEAE	<i>Carex</i>	<i>pedunculata</i>	Peduncled Sedge	observed outside wetland boundaries

Family Name	Genus	Species	Common Name	Additional Notes
CYPERACEAE	<i>Carex</i>	<i>pseudo-cyperus</i>	Cypress-like Sedge	
CYPERACEAE	<i>Carex</i>	<i>scoparia</i>	Pointed Broom Sedge	observed outside wetland boundaries
CYPERACEAE	<i>Carex</i>	<i>spicata</i>	Sedge	introduced species; observed outside wetland
CYPERACEAE	<i>Carex</i>	<i>stipata</i>	Awl-fruited Sedge	
CYPERACEAE	<i>Carex</i>	<i>stricta</i>	Tussock Sedge	
CYPERACEAE	<i>Carex</i>	<i>vulpinoidea</i>	Fox Tail Sedge	
BERBERIDACEAE	<i>Caulophyllum</i>	<i>thalictroides</i>	Blue Cohosh	observed outside wetland boundaries
ASTERACEAE	<i>Centaurea</i>	<i>jacea</i>	Brown Knapweed	introduced species
PAPAVERACEAE	<i>Chelidonium</i>	<i>majus</i>	Celandine	introduced species; observed outside wetland
SCROPHULARIACEAE	<i>Chelone</i>	<i>glabra</i>	Turtlehead	
APIACEAE	<i>Cicuta</i>	<i>bulbifera</i>	Bulb-bearing Water-hemlock	
ASTERACEAE	<i>Cirsium</i>	<i>vulgare</i>	Bull Thistle	introduced species
RANUNCULACEAE	<i>Clematis</i>	<i>virginiana</i>	Virgin's-bower	
LILIACEAE	<i>Clintonia</i>	<i>borealis</i>	Yellow Clintonia	observed outside wetland boundaries
OROBANCHACEAE	<i>Conopholis</i>	<i>americana</i>	Squawroot	observed outside wetland boundaries
CORNACEAE	<i>Cornus</i>	<i>alternifolia</i>	Alternate-leaved Dogwood	
CORNACEAE	<i>Cornus</i>	<i>amomum ssp. obliqua</i>	Silky Dogwood	
CORNACEAE	<i>Cornus</i>	<i>stolonifera</i>	Red-osier Dogwood	
ORCHIDACEAE	<i>Cypripedium</i>	<i>reginae</i>	Showy Lady's Slipper	
APIACEAE	<i>Daucus</i>	<i>carota</i>	Wild Carrot/Queen Anne's Lace	introduced species
LYTHRACEAE	<i>Decodon</i>	<i>verticillatus</i>	Swamp Loosestrife	
CAPRIFOLIACEAE	<i>Diervilla</i>	<i>lonicera</i>	Bush Honeysuckle	

Family Name	Genus	Species	Common Name	Additional Notes
POACEAE	<i>Echinochloa</i>	<i>crusgalli</i>	Barnyard Grass	introduced species
CYPERACEAE	<i>Eleocharis</i>	<i>smallii</i>	Small's Spike Rush	
ONAGRACEAE	<i>Epilobium</i>	<i>ciliatum ssp. glandulosum</i>	Sticky Willow-herb	observed outside wetland boundaries
ORCHIDACEAE	<i>Epipactis</i>	<i>helleborine</i>	Helleborine	introduced species
EQUISETACEAE	<i>Equisetum</i>	<i>arvense</i>	Field Horsetail	
EQUISETACEAE	<i>Equisetum</i>	<i>fluviatile</i>	Water or Swamp Horsetail	
EQUISETACEAE	<i>Equisetum</i>	<i>sylvaticum</i>	Wood Horsetail	
ASTERACEAE	<i>Erigeron</i>	<i>philadelphicus</i>	Philadelphia Fleabane	
LILIACEAE	<i>Erythronium</i>	<i>americanum</i>	Trout Lily/Yellow Adder's Tongue	
ASTERACEAE	<i>Eupatorium</i>	<i>maculatum</i>	Spotted Joe-pye-weed	
ASTERACEAE	<i>Eupatorium</i>	<i>perfoliatum</i>	Boneset	
ASTERACEAE	<i>Euthamia</i>	<i>graminifolia</i>	Grass-leaved Goldenrod	
FAGACEAE	<i>Fagus</i>	<i>grandifolia</i>	American Beech	
OLEACEAE	<i>Fraxinus</i>	<i>americana</i>	White Ash	
OLEACEAE	<i>Fraxinus</i>	<i>nigra</i>	Black Ash	
OLEACEAE	<i>Fraxinus</i>	<i>pennsylvanica</i>	Red Ash	observed outside wetland boundaries
RUBIACEAE	<i>Galium</i>	<i>triflorum</i>	Fragrant Bedstraw	
ERICACEAE	<i>Gaylussacia</i>	<i>baccata</i>	Black Huckleberry	
ROSACEAE	<i>Geum</i>	<i>aleppicum</i>	Yellow Avens	
ROSACEAE	<i>Geum</i>	<i>rivale</i>	Water Avens	
POACEAE	<i>Glyceria</i>	<i>striata</i>	Fowl Meadow or Manna Grass	
ASTERACEAE	<i>Helianthus</i>	<i>tuberosus</i>	Jerusalem Artichoke	observed outside wetland boundaries



Family Name	Genus	Species	Common Name	Additional Notes
AQUIFOLIACEAE	<i>Ilex</i>	<i>verticillata</i>	Winterberry	
BALSAMINACEAE	<i>Impatiens</i>	<i>capensis</i>	Spotted Touch-me-not	
IRIDACEAE	<i>Iris</i>	<i>versicolor</i>	Large Blue-flag	
JUGLANDACEAE	<i>Juglans</i>	<i>nigra</i>	Black Walnut	introduced species; observed outside wetland
JUNCACEAE	<i>Juncus</i>	<i>effusus ssp. solutus</i>	Soft or Bog Rush	
PINACEAE	<i>Larix</i>	<i>laricina</i>	Tamarack/American Larch	
FABACEAE	<i>Lathyrus</i>	<i>palustris</i>	Marsh Vetchling	
POACEAE	<i>Leersia</i>	<i>oryzoides</i>	Rice Cut Grass	
CAMPANULACEAE	<i>Lobelia</i>	<i>kalmii</i>	Kalm's Lobelia	
CAPRIFOLIACEAE	<i>Lonicera</i>	<i>canadensis</i>	Fly Honeysuckle	
CAPRIFOLIACEAE	<i>Lonicera</i>	<i>tatarica</i>	Tartarian Honeysuckle	introduced species; observed outside wetland
FABACEAE	<i>Lotus</i>	<i>corniculatus</i>	Bird's-foot Trefoil	introduced species
LAMIACEAE	<i>Lycopus</i>	<i>americanus</i>	Cut-leaved Water-horehound	
PRIMULACEAE	<i>Lysimachia</i>	<i>terrestris</i>	Swamp Candles	observed outside wetland boundaries
LYTHRACEAE	<i>Lythrum</i>	<i>salicaria</i>	Purple Loosestrife	introduced species
LILIACEAE	<i>Maianthemum</i>	<i>canadense</i>	Canada Mayflower	
LILIACEAE	<i>Maianthemum</i>	<i>stellatum</i>	Starry False Solomon's-Seal	
LAMIACEAE	<i>Mentha</i>	<i>arvensis ssp borealis</i>	Wild Mint	
RUBIACEAE	<i>Mitchella</i>	<i>repens</i>	Partridge-berry	
MYRICACEAE	<i>Myrica</i>	<i>gale</i>	Sweet Gale	
BRASSICACEAE	<i>Nasturtium</i>	<i>microphyllum</i>	Water-cress	introduced species
NYMPHACEAE	<i>Nuphar</i>	<i>variegatum</i>	Bullhead pond-lily	

Family Name	Genus	Species	Common Name	Additional Notes
POLYPODIACEAE	<i>Onoclea</i>	<i>sensibilis</i>	Sensitive Fern	
POACEAE	<i>Oryzopsis</i>	<i>asperifolia</i>	White Grass	observed outside wetland boundaries
OSMUNDACEAE	<i>Osmunda</i>	<i>cinnamomea</i>	Cinnamon Fern	
OSMUNDACEAE	<i>Osmunda</i>	<i>claytoniana</i>	Interrupted Fern	
OSMUNDACEAE	<i>Osmunda</i>	<i>regalis</i>	Royal Fern	
BETULACEAE	<i>Ostrya</i>	<i>virginiana</i>	Ironwood / Hop Hornbeam	
SAXIFRAGACEAE	<i>Parnassia</i>	<i>glauca</i>	Carolina Grass-of-Parnassus	
VITACEAE	<i>Parthenocissus</i>	<i>inserta</i>	Virginia Creeper	
APIACEAE	<i>Pastinaca</i>	<i>sativa</i>	Wild Parsnip	introduced species; observed outside wetland
POACEAE	<i>Phalaris</i>	<i>arundinacea</i>	Reed Canary Grass	
POACEAE	<i>Phragmites</i>	<i>australis</i>	Reed Grass	introduced species
PINACEAE	<i>Picea</i>	<i>glauca</i>	White Spruce	
PINACEAE	<i>Picea</i>	<i>mariana</i>	Black Spruce	
PINACEAE	<i>Pinus</i>	<i>strobus</i>	Eastern White Pine	
PLANTAGINACEAE	<i>Plantago</i>	<i>lanceolata</i>	Narrow-leaved Plantain	introduced species
PLANTAGINACEAE	<i>Plantago</i>	<i>major</i>	Common Plantain	introduced species
LILIACEAE	<i>Polygonatum</i>	<i>pubescens</i>	Hairy Solomon's-Seal	observed outside wetland boundaries
POLYGONACEAE	<i>Polygonum</i>	<i>cuspidatum</i>	Japanese Knotweed	introduced species
POLYGONACEAE	<i>Polygonum</i>	<i>lapathifolium</i>	Pale Smartweed	
POLYPODIACEAE	<i>Polystichum</i>	<i>acrostichoides</i>	Christmas Fern	
SALICACEAE	<i>Populus</i>	<i>balsamifera</i>	Balsam Poplar	observed outside wetland boundaries
SALICACEAE	<i>Populus</i>	<i>tremuloides</i>	Trembling Aspen	

Family Name	Genus	Species	Common Name	Additional Notes
POTAMOGETONACEAE	<i>Potamogeton</i>	<i>crispus</i>	Curly Muck Pondweed	introduced species
POTAMOGETONACEAE	<i>Potamogeton</i>	<i>epihydus</i>	Nuttall's Pondweed	
ROSACEAE	<i>Potentilla</i>	<i>anserina</i>	Silverweed	
ASTERACEAE	<i>Prenanthes</i>	<i>alba</i>	White Lettuce	observed outside wetland boundaries
ROSACEAE	<i>Prunus</i>	<i>serotina</i>	Wild Black Cherry	observed outside wetland boundaries
ROSACEAE	<i>Prunus</i>	<i>virginiana</i>	Choke Cherry	
POLYPODIACEAE	<i>Pteridium</i>	<i>aquilinum</i>	Eastern Bracken-fern	observed outside wetland boundaries
FAGACEAE	<i>Quercus</i>	<i>rubra</i>	Red Oak	
RANUNCULACEAE	<i>Ranunculus</i>	<i>abortivus</i>	Kidney-leaf Buttercup	
RANUNCULACEAE	<i>Ranunculus</i>	<i>longirostris</i>	White Water Buttercup	
RANUNCULACEAE	<i>Ranunculus</i>	<i>pensylvanicus</i>	Bristly Buttercup	
RANUNCULACEAE	<i>Ranunculus</i>	<i>reptans</i>	Creeping Spearwort	
RHAMNACEAE	<i>Rhamnus</i>	<i>alnifolia</i>	Alder-leaved Buckthorn	observed outside wetland boundaries
RHAMNACEAE	<i>Rhamnus</i>	<i>frangula</i>	Glossy Buckthorn	introduced species
ANACARDIACEAE	<i>Rhus</i>	<i>rydbergii</i>	Rydberg's Poison-ivy	
ANACARDIACEAE	<i>Rhus</i>	<i>typhina</i>	Staghorn Sumac	observed outside wetland boundaries
GROSSULARIACEAE	<i>Ribes</i>	<i>glandulosum</i>	Skunk Current	
ROSACEAE	<i>Rosa</i>	<i>palustris</i>	Swamp Rose	
ROSACEAE	<i>Rubus</i>	<i>idaeus ssp. melanolasius</i>	Wild Red Raspberry	observed outside wetland boundaries
ROSACEAE	<i>Rubus</i>	<i>pubescens</i>	Dwarf Red Blackberry	
POLYGONACEAE	<i>Rumex</i>	<i>crispus</i>	Curly-leaf Dock	introduced species
POLYGONACEAE	<i>Rumex</i>	<i>obtusifolius</i>	Broad-leaved Dock	introduced species

Family Name	Genus	Species	Common Name	Additional Notes
POLYGONACEAE	<i>Rumex</i>	<i>orbiculatus</i>	Great Water Dock	
CAPRIFOLIACEAE	<i>Sambucus</i>	<i>canadensis</i>	Common Elderberry	
CAPRIFOLIACEAE	<i>Sambucus</i>	<i>racemosa ssp. pubens</i>	Red-berried Elderberry	
CYPERACEAE	<i>Scirpus</i>	<i>atrovirens</i>	Dark Green Bulrush	
CYPERACEAE	<i>Scirpus</i>	<i>cyperinus</i>	Wool-grass	
CYPERACEAE	<i>Scirpus</i>	<i>validus</i>	Softstem Bulrush	
SOLANACEAE	<i>Solanum</i>	<i>dulcamara</i>	Climbing Nightshade	introduced species
ASTERACEAE	<i>Solidago</i>	<i>canadensis</i>	Canada Goldenrod	
ASTERACEAE	<i>Solidago</i>	<i>rugosa ssp. rugosa</i>	Rough Goldenrod	
ROSACEAE	<i>Sorbus</i>	<i>aucuparia</i>	European Mountain-ash	introduced species
SPARGANIACEAE	<i>Sparganium</i>	<i>americanum</i>	American Bur-reed	
SPARGANIACEAE	<i>Sparganium</i>	<i>emersum ssp. emersum</i>	Green-fruited Bur-reed	
ROSACEAE	<i>Spiraea</i>	<i>alba</i>	Narrow-leaved Meadowsweet	
ASTERACEAE	<i>Tanacetum</i>	<i>vulgare</i>	Common Tansy	introduced species; observed outside wetland
ASTERACEAE	<i>Taraxacum</i>	<i>officinale</i>	Common Dandelion	introduced species
TAXACEAE	<i>Taxus</i>	<i>canadensis</i>	Canadian Yew	
RANUNCULACEAE	<i>Thalictrum</i>	<i>pubescens</i>	Tall Meadow-rue	
POLYPODIACEAE	<i>Thelypteris</i>	<i>palustris var. pubescens</i>	Marsh Fern	
CUPRESSACEAE	<i>Thuja</i>	<i>occidentalis</i>	N. White Cedar	
TILIACEAE	<i>Tilia</i>	<i>americana</i>	American Basswood	observed outside wetland boundaries
COMMELINACEAE	<i>Tradescantia</i>	<i>ohiensis</i>	Ohio Spiderwort	introduced species; observed outside wetland
PRIMULACEAE	<i>Trientalis</i>	<i>borealis</i>	Star-flower	

Family Name	Genus	Species	Common Name	Additional Notes
LILIACEAE	<i>Trillium</i>	<i>erectum</i>	Purple Trillium/Wake-robin	observed outside wetland boundaries
LILIACEAE	<i>Trillium</i>	<i>grandiflorum</i>	White Trillium	observed outside wetland boundaries
PINACEAE	<i>Tsuga</i>	<i>canadensis</i>	Eastern Hemlock	
ASTERACEAE	<i>Tussilago</i>	<i>farfara</i>	Coltsfoot	introduced species
TYPHACEAE	<i>Typha</i>	<i>angustifolia</i>	Narrow-leaved Cattail	
TYPHACEAE	<i>Typha</i>	<i>latifolia</i>	Broad-leaved or Common Cattail	
TYPHACEAE	<i>Typha</i>	<i>x glauca</i>	Hybrid Cattail	
ULMACEAE	<i>Ulmus</i>	<i>americana</i>	American Elm	
LENTIBULARIACEA	<i>Utricularia</i>	<i>vulgaris</i>	Greater Bladderwort	
SCROPHULARIACEAE	<i>Verbascum</i>	<i>thapsus</i>	Common Mullein	introduced species
VERBENACEAE	<i>Verbena</i>	<i>hastata</i>	Blue Vervain	
CAPRIFOLIACEAE	<i>Viburnum</i>	<i>lantanoides</i>	Hobblebush	
CAPRIFOLIACEAE	<i>Viburnum</i>	<i>lentago</i>	Nannyberry	
CAPRIFOLIACEAE	<i>Viburnum</i>	<i>trilobum</i>	Highbush-cranberry	
FABACEAE	<i>Vicia</i>	<i>cracca</i>	Cow Vetch	introduced species
VITACEAE	<i>Vitis</i>	<i>riparia</i>	Riverbank Grape	observed outside wetland boundaries

*Regionally Significant* designations are reported in: Riley, J.L. 1989. Distribution and status of the vascular plants of Central Region. OMNR Open File Ecological Report SR 8902. 110 pp.

**Appendix B**  
**Fauna of Midland Swamp**  
Recorded During 2005 Wetland Evaluation Field Work

Common Name	Scientific Name	Additional Notes
<b>Birds</b>		
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	
American Bittern	<i>Botaurus lentiginosus</i>	
Great Blue Heron	<i>Ardea herodias</i>	
Green Heron	<i>Butorides virescens</i>	
Turkey Vulture	<i>Cathartes aura</i>	
Canada Goose	<i>Branta canadensis</i>	
Wood Duck	<i>Aix sponsa</i>	
Mallard	<i>Anas platyrhynchos</i>	
Broad-winged Hawk	<i>Buteo platypterus</i>	
Sora	<i>Porzana carolina</i>	
Killdeer	<i>Charadrius vociferus</i>	
Solitary Sandpiper	<i>Tringa solitaria</i>	migrant
Spotted Sandpiper	<i>Actitis macularia</i>	observed outside wetland; breeding evidence (4 eggs)
Ring-billed Gull	<i>Larus delawarensis</i>	
Mourning Dove	<i>Zenaida macroura</i>	breeding evidence - nest
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	
Belted Kingfisher	<i>Ceryle alcyon</i>	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	observed outside wetland boundaries
Downy Woodpecker	<i>Picoides pubescens</i>	
Hairy Woodpecker	<i>Picoides villosus</i>	observed outside wetland boundaries
Northern Flicker	<i>Colaptes auratus</i>	
Pileated Woodpecker	<i>Dryocopus pileatus</i>	observed outside wetland boundaries
Alder Flycatcher	<i>Empidonax alnorum</i>	
Eastern Phoebe	<i>Sayornis phoebe</i>	
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	
Warbling Vireo	<i>Vireo gilvus</i>	observed outside wetland boundaries
Red-eyed Vireo	<i>Vireo olivaceus</i>	
Blue Jay	<i>Cyanocitta cristata</i>	
American Crow	<i>Corvus brachyrhynchos</i>	
Tree Swallow	<i>Tachycineta bicolor</i>	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	
Barn Swallow	<i>Hirundo rustica</i>	
Black-capped Chickadee	<i>Poecile atricapillus</i>	
Red-breasted Nuthatch	<i>Sitta canadensis</i>	
White-breasted Nuthatch	<i>Sitta carolinensis</i>	
Brown Creeper	<i>Certhia americana</i>	

Common Name	Scientific Name	Additional Notes
House Wren	<i>Troglodytes aedon</i>	
Winter Wren	<i>Troglodytes troglodytes</i>	
Sedge Wren	<i>Cistothorus platensis</i>	
Marsh Wren	<i>Cistothorus palustris</i>	
Golden-crowned Kinglet	<i>Regulus satrapa</i>	migrant
Ruby-crowned Kinglet	<i>Regulus calendula</i>	migrant
Eastern Bluebird	<i>Sialia sialis</i>	observed outside wetland boundaries
Wood Thrush	<i>Hylocichla mustelina</i>	observed outside wetland boundaries
American Robin	<i>Turdus migratorius</i>	
Gray Catbird	<i>Dumetella carolinensis</i>	
European Starling	<i>Sturnus vulgaris</i>	
Cedar Waxwing	<i>Bombycilla cedrorum</i>	
Nashville Warbler	<i>Vermivora ruficapilla</i>	
Yellow Warbler	<i>Dendroica petechia</i>	
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	observed outside wetland boundaries
Yellow-rumped Warbler	<i>Dendroica coronata</i>	migrant
Black-throated Green Warbler	<i>Dendroica virens</i>	observed outside wetland boundaries
Pine Warbler	<i>Dendroica pinus</i>	observed outside wetland; breeding - fledged young
Western Palm Warbler	<i>Dendroica palmarum palmarum</i>	migrant
Black-and-White Warbler	<i>Mniotilta varia</i>	
American Redstart	<i>Setophaga ruticilla</i>	
Ovenbird	<i>Seiurus aurocapillus</i>	
Northern Waterthrush	<i>Seiurus noveboracensis</i>	
Common Yellowthroat	<i>Geothlypis trichas</i>	
Song Sparrow	<i>Melospiza melodia</i>	
Swamp Sparrow	<i>Melospiza georgiana</i>	
White-throated Sparrow	<i>Zonotrichia albicollis</i>	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	migrant
Northern Cardinal	<i>Cardinalis cardinalis</i>	
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	observed outside wetland boundaries
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	
Rusty Blackbird	<i>Euphagus carolinus</i>	migrant
Common Grackle	<i>Quiscalus quiscula</i>	
Baltimore Oriole	<i>Icterus galbula</i>	
American Goldfinch	<i>Carduelis tristis</i>	breeding evidence - nest
<b>Amphibians</b>		
American Toad	<i>Bufo americanus</i>	
Spring Peeper	<i>Pseudacris crucifer</i>	
Wood Frog	<i>Rana sylvatica</i>	
Northern Leopard Frog	<i>Rana pipiens</i>	
Green Frog	<i>Rana clamitans melanota</i>	

Common Name	Scientific Name	Additional Notes
<b>Reptiles</b>		
Common Snapping Turtle	<i>Chelydra serpentina serpentina</i>	photo
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	
Eastern Garter Snake	<i>Thamnophis sirtalis sirtalis</i>	
<b>Mammals</b>		
Snowshoe Hare	<i>Lepus americanus</i>	
Gray Squirrel	<i>Sciurus carolinensis</i>	
Beaver	<i>Castor canadensis</i>	dam, browse
Muskrat	<i>Ondatra zibethicus</i>	
Raccoon	<i>Procyon lotor</i>	tracks
White-tailed Deer	<i>Odocoileus virginianus</i>	observed; tracks
<b>Dragonflies and Damselflies</b>		
Ebony Jewelwing	<i>Calopteryx maculata</i>	
Marsh Bluet	<i>Enallagma ebrium</i>	
Eastern Forktail	<i>Ischnura verticalis</i>	
Sedge Sprite	<i>Nehalinnia irene</i>	
Common Green Darner	<i>Anax junius</i>	
Common Baskettail	<i>Epithea cynosura</i>	
Dot-tailed Whiteface	<i>Leucorrhinia intacta</i>	
Red-waisted Whiteface	<i>Leucorrhinia proxima</i>	
Widow Skimmer	<i>Libellula luctuosa</i>	
Common Whitetail	<i>Libellula lydia</i>	
Twelve-spotted Skimmer	<i>Libellula pulchella</i>	
Four-spotted Skimmer	<i>Libellula quadrimaculata</i>	
White-faced Meadowhawk	<i>Sympetrum obtrusum</i>	
Band-winged Meadowhawk	<i>Sympetrum semicinctum</i>	uncommon species in Simcoe County
<b>Butterflies and Moths</b>		
Canadian Tiger Swallowtail	<i>Papilio canadensis</i>	
Mustard White	<i>Pieris napi</i>	
Cabbage White	<i>Pieris rapae</i>	
Clouded Sulphur	<i>Colias philodice</i>	
Northern Crescent	<i>Phyciodes selenis</i>	
Red Admiral	<i>Vanessa atalanta</i>	
Eyed Brown	<i>Satyrodes eurydice</i>	
Monarch	<i>Danaus plexippus</i>	
European Skipper	<i>Thymelicus lineola</i>	
Peck's Skipper	<i>Polites peckius</i>	
Delaware Skipper	<i>Anatrytone logan</i>	uncommon species in Simcoe County
Large Maple Spanworm	<i>Prochoerodes transversata</i>	



Common Name	Scientific Name	Additional Notes
<b>Fish</b>		
Common Shiner	<i>Luxilus cornutus</i>	identified in minnow trap
Blacknose Shiner	<i>Notropis heterolepis</i>	identified in minnow trap
Northern Redbelly Dace	<i>Phoxinus eos</i>	identified in minnow trap
Blacknose Dace	<i>Rhinichthys atratulus</i>	identified in minnow trap
Creek Chub	<i>Semotilus atromaculatus</i>	identified in minnow trap
Brown Trout	<i>Salmo trutta</i>	observed in wetland
Brook Stickleback	<i>Culaea inconstans</i>	identified in minnow trap
Mottled Sculpin	<i>Cottus bairdi</i>	observed in wetland

Uncommon designations are reported in: Bowles, R. L. 1998. Butterflies of Simcoe County  
Bowles, R. L. 1999. Odonata of Simcoe County.