Severn Sound

Environmental Association

SUCKER CREEK WETLANDS EVALUATION

APRIL 2004

WETLAND EVALUATION OF SUCKER CREEK WETLANDS, MIDLAND & PENETANGUISHENE

April 2004

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

by
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SEVERN SOUND ENVIRONMENTAL ASSOCIATION

FOREWORD

This document reports on the major findings of the Wetland Evaluation of Sucker Creek Wetlands, conducted during 2003 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, 3rd edition. The Sucker Creek Wetlands Evaluation has been reviewed and accepted by the Ontario Ministry of Natural Resources Midhurst District.

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I would like to acknowledge Bob Bowles' invaluable contributions to this project. Bob has extensive natural history knowledge that he readily shares with others, and he is incredibly dedicated to studying and protecting wildlife and habitat. The support and professional expertise of Severn Sound Environmental Association staff, especially Keith Sherman and Lex McPhail, was essential to the preparation of the Sucker Creek Wetlands Evaluation. I am also indebted to volunteer Margaret Killing for her significant assistance with this project. An integral part of the project team, Margaret provided support in the field, and maintained and updated the plant species list for the project.

The project team would like to thank the staff at the Ministry of Natural Resources Midhurst District for their support and assistance with the evaluation. In particular, we would like to express our sincere appreciation to Acting District Ecologist Angela McConnell, for accompanying us into the field on numerous occasions and providing guidance and input throughout the project.

Special thanks to Bryan MacKell and Sandra Mattson of the Town of Midland, and Paul Hodgins of the Town of Penetanguishene, for municipal information and support. Kevin Rich of Ducks Unlimited and Don Fraser of Gartner Lee Limited provided additional information and background on Sucker Creek Wetlands, and Jamie Hunter of Huronia Museum provided information on the cultural resources of the area.

Landowner support was crucial to this project. Many of the landowners surrounding the Sucker Creek Wetlands complex granted the field crew permission to access their property for the purposes of the wetland evaluation. A number of these people also contributed valuable information on human and wildlife use of the wetlands. We are grateful to the following property owners and residents for their support of the project:

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All photographs in this report were taken by Bob Bowles.

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1. INTRODUCTION

1.1 Background

Sucker Creek Wetlands are located on Tay Point, partly within the Town of Midland and partly within the Town of Penetanguishene (Figure 1). This complex of wetlands is entirely under private ownership.

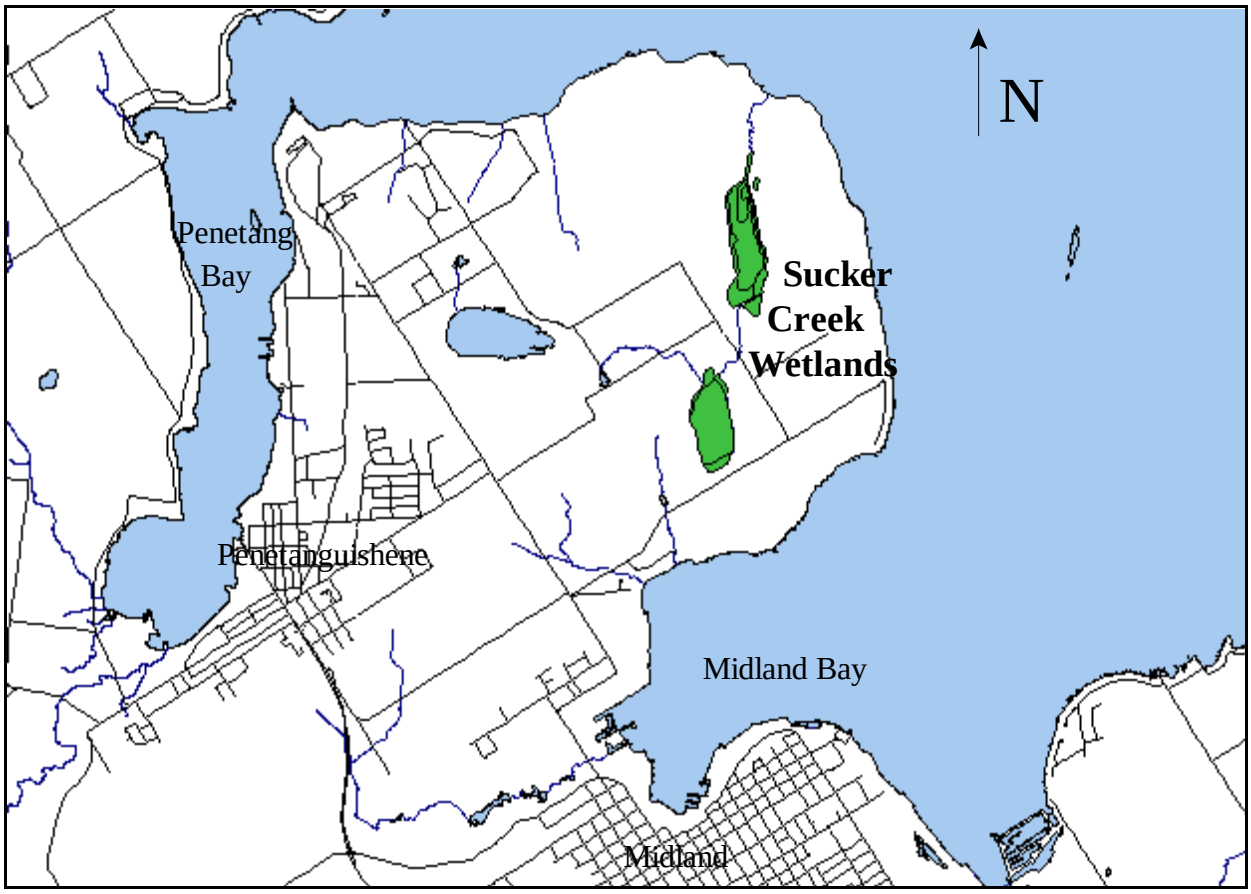

Figure 1: Location of Sucker Creek Wetlands

A wetland evaluation was conducted in 1985 by the Ontario Ministry of Natural Resources (OMNR), and Sucker Creek Wetland was evaluated as a Class 3 Wetland (now termed Provincially Significant Wetland). In 2000, a desktop revision to third edition Wetland Evaluation Standards was undertaken by the OMNR, resulting in Sucker Creek Wetland being evaluated as Provincially Significant. This revision was an in-office exercise, with no additional field work being conducted at that time.

1.2 Project Goals and Objectives

A report prepared for the Town of Penetanguishene by Gartner Lee Limited (2001) identified a swamp unit through aerial photograph interpretation, located north of Midland Point Road and west of Curry Road. As this area was not previously evaluated using OMNR standards for wetland evaluation, the goal of this project was to prepare and submit a wetland evaluation for the swamp unit. The project also included a review and update of the evaluation for Sucker Creek Wetland, to include the swamp unit as part of the wetland complex. Severn Sound Environmental Association staff conducted field work to determine which areas support wetland vegetation, assess features in the wetlands, and prepare a revised wetland evaluation for Sucker Creek Wetlands.

1.3 Study Team

The Severn Sound Environmental Association (SSEA) undertook the evaluation, funded by the Town of Midland, the Town of Penetanguishene, and the Ontario Ministry of Natural Resources. The municipalities provided assessment information, and OMNR provided direction, technical advice, and field assistance throughout the project. Contractor Bob Bowles and SSEA Wetlands and Habitat Biologist Michelle Hudolin conducted field work. Additional field support was provided by volunteer Margaret Killing, and Angela McConnell, Acting District Ecologist for Midhurst District OMNR. Geographic Information System support and mapping was provided by Lex McPhail, SSEA Applications Specialist, and SSEA Coordinator Keith Sherman provided guidance and input during the project.

1.4 Fieldwork and Data Collection

Sucker Creek Wetlands were visited during the spring, summer and fall of 2003, to collect information on wetland habitat, vegetation forms, and species present in the wetlands. Field work was conducted on May 28th, June 24th, August 22nd, September 15th, September 26th, October 8th and October 10th of 2003. The field crew noted plant species observed, and wildlife species observed or heard. Wetland vegetation communities were mapped and described in the field, including soils information. Water samples were taken on September 26th and sent to a laboratory for analysis.

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, W=open water marsh), and each community has been given an alpha-numeric identifier.

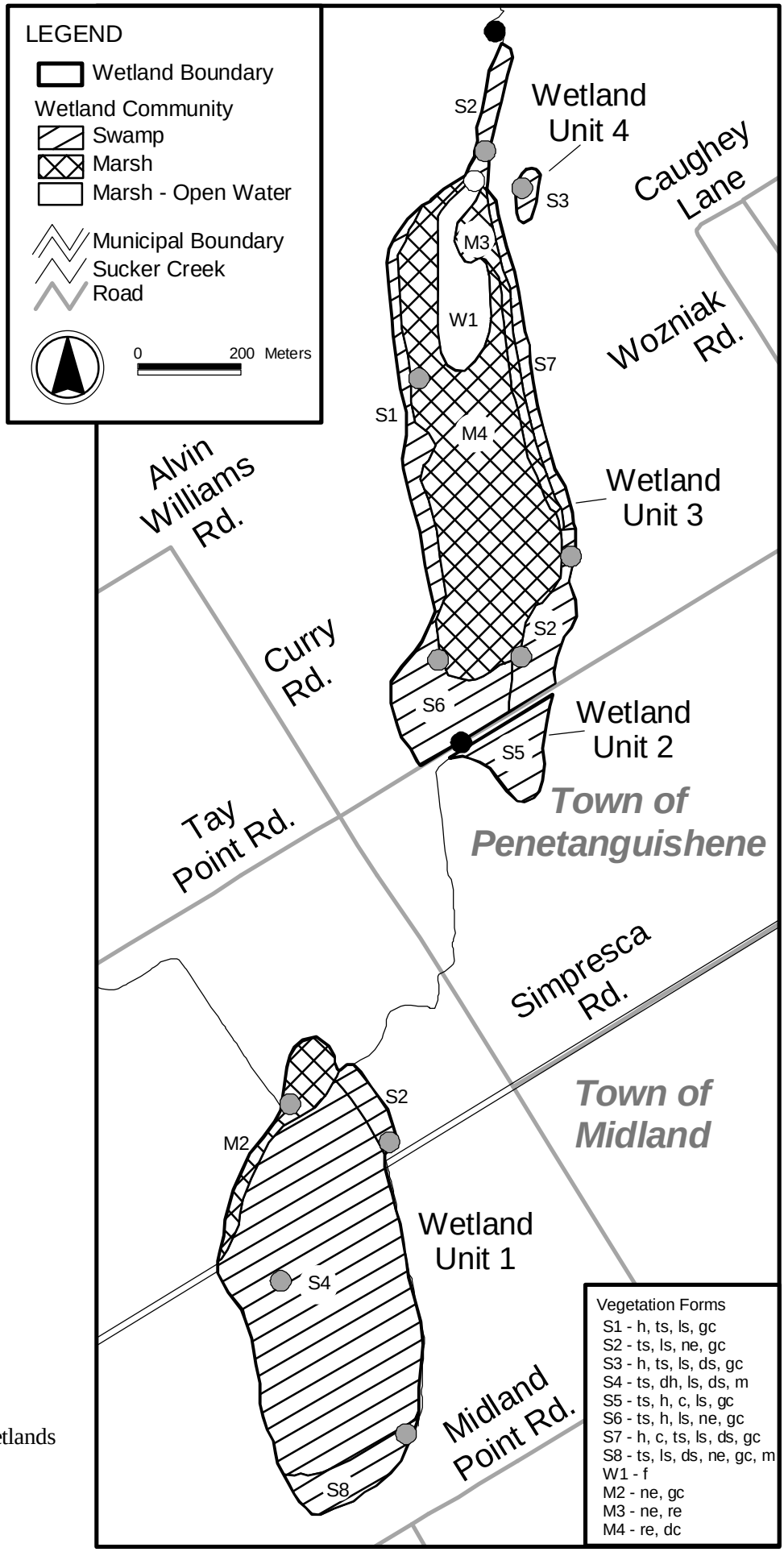

Figure 2: Sucker Creek Wetlands

Under the Ontario Wetland Evaluation System, a wetland evaluation is scored in four main categories: Biological, Social, Hydrological, and Special Features components. The Biological section assesses the ecological and biological values of the wetland; the Social component evaluates the uses that wetlands provide to people, such as recreation and natural resources; 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 to report additional information that is not scored in the evaluation, such as invasive species or other notable species.

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), and/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 do not score 200 points (or greater) in either the Biological or Special Features scoring components are categorized as Non-Provincially Significant Wetlands, and are often designated Locally Significant Wetlands by the municipality. The significant findings of the field work for the Wetland Evaluation are outlined below.

2.1 Biological Component

The Sucker Creek Wetlands complex contains two distinct wetland types: marsh and swamp. Overall, the wetlands are dominated by swamp (62%), including tall shrub swamp and deciduous swamp habitat. Marsh habitat in the wetlands (38%) includes emergent marsh and a small portion of open water marsh.

Four individual wetland units make up the 53.8 hectare Sucker Creek Wetlands complex (Figure 2). Wetland Unit 1, the swamp north of Midland Point Road and west of Curry Road (Figure 3), is 23.7 hectares in size and is composed primarily of tall shrub swamp and dead trees, with emergent marsh habitat along the north-west edge.

Figure 3: Sucker Creek Wetlands, Wetland Unit 1

Wetland Unit 2, a 1.7 hectare tall shrub swamp, is separated from Wetland Unit 3 by Tay Point Road. Wetland Unit 3 (Figure 4) is 28.1 hectares in size and is made up of tall shrub swamp to the north and south, deciduous swamp along the east and west sides, and emergent marsh and open water marsh in the centre.

Figure 4: Sucker Creek Wetlands, Wetland Unit 3

Wetland Unit 4 is a small 0.3 hectare deciduous swamp depression to the east of Wetland Unit 3. This small wetland unit was part of a larger wetland vegetation community mapped in this area in the 1985 wetland evaluation.

The habitat and topography surrounding Sucker Creek Wetlands is a highly diverse mixture of pasture, abandoned agricultural land, deciduous forest, mixed forest, fence rows with cover, a creek flood plain and hilly terrain. In addition, Sucker Creek Wetlands are hydrologically connected by surface water (Sucker Creek) to Georgian Bay, and are approximately 1 km east of St. Andrew's Lake Provincially Significant Wetland, which is also the Penetang Lake Regionally Significant Life Science Area of Natural and Scientific Interest. Habitat variety adjacent to wetlands and connectivity to other natural areas is valuable biologically, because greater ecological diversity tends to support more species.

2.2 Social Component

The field crew observed or found evidence (e.g. scat, tracks) of a number of economically valuable species in Sucker Creek Wetlands. These include Bullfrog (*Rana catesbeiana*), Snapping Turtle (*Chelydra serpentina serpentina*), Muskrat (*Ondatra zibethica*), Raccoon (*Procyon lotor*), Beaver (*Castor canadensis*), Red Squirrel (*Tamiasciurus hudsonicus*), and minnows (bait fish) in the creek and open water marsh. In addition, local residents provided anecdotal information that other furbearers, including Mink (*Mustela vison*), Otter (*Lutra canadensis*), and Skunk (*Mephitis mephitis*), utilize the wetlands and adjacent uplands. The presence of these potential resources contribute to the scoring for the social component of the evaluation.

The wetland units are privately owned, which results in a relatively low level of recreational activity in Sucker Creek Wetlands. The field crew observed spent shotgun shells in a number of locations, indicating that low intensity hunting occurs; fishing also occurs occasionally, according to residents. Landowners use the wetlands for nature enjoyment, and one resident reported that several school groups have used the wetlands and associated uplands in the past, however, this practice has not occurred recently. Human disturbances to the wetlands include a water control dam in Wetland Unit 3 (Figure 5) and the roadway and ditches at Tay Point Road.

Figure 5: Sucker Creek Control Dam, Blocked by Beaver Activity

Studies and reports that contain information on portions of the wetlands include the Ducks Unlimited Biological Inspection Report for Sucker Creek (1998), the Natural Heritage and Hazard Land Study produced for the Town of Penetanguishene by Gartner Lee Limited (2001), and the Sunnyside/Midland Point/East Penetanguishene Land Use Study report prepared by The Planning Partnership (1997).

Approximately 1/3 of the wetland area is in private ownership with a Ducks Unlimited wetland conservation agreement on the land, which scores higher in the evaluation than land in public or private ownership without a conservation agreement.

2.3 Hydrological Component

Sucker Creek Wetlands score high for attenuating flooding in the catchment area, due to wetland size in relation to factors such as extent of upstream detention areas and catchment size (Figure 6).

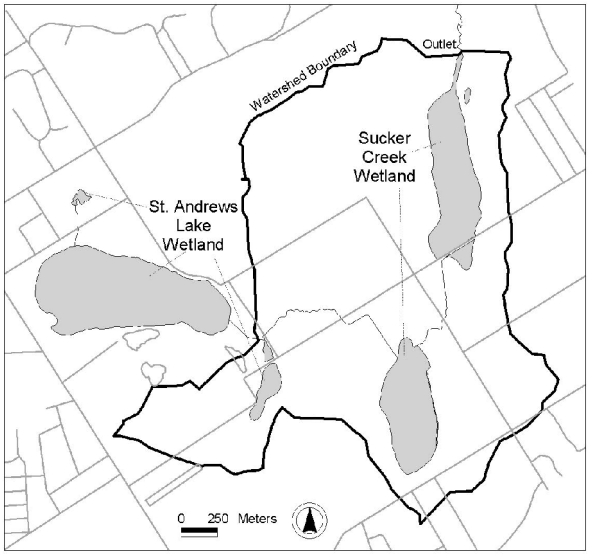

Figure 6: Sucker Creek Wetlands Catchment Area

The wetlands also contribute to short term and long term water quality improvement and uptake of pollutants in the Sucker Creek watershed. The presence of trees and shrubs along the shoreline and floodplain of the wetlands results in a high score for shoreline erosion control.

There is evidence of groundwater discharge into Sucker Creek Wetlands, in the form of springs/seeps. There were at least four locations on the east side and two locations on the west side of Wetland Unit 3 where water was seeping from the hillside. There is also high potential for groundwater recharge based on the wetland site type and soils surrounding the wetlands. The wetlands are mainly palustrine in site type, meaning there is either absent or intermittent surface water inflow, and intermittent or permanent surface water outflow from the wetlands; the surrounding soils are predominantly sand. These factors translate into a high score for potential groundwater and soil recharge.

2.4 Special Features Component

The field crew recorded 113 plant species in the wetlands and an additional 33 species adjacent to the wetland boundaries during field visits (Appendix A). While not a species of significance, Showy Lady's Slipper (*Cypripedium reginae*) was an interesting species found growing in the wetlands (Figure 7).

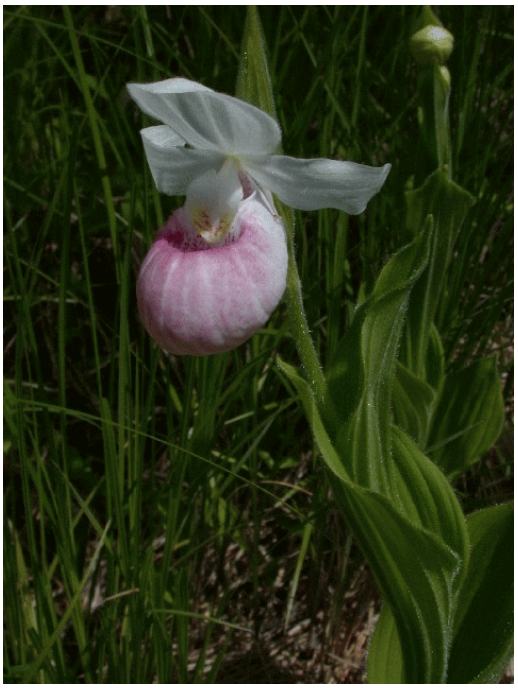

Figure 7: Showy Lady's Slipper (*Cypripedium reginae*)

Eighty-seven species of wildlife were recorded in the wetlands, with an additional 20 species noted adjacent to the wetland boundaries (Appendix B). This includes birds, mammals, reptiles and amphibians, butterflies and moths, dragonflies and damselflies, and fish.

The field crew documented 69 species of birds during field visits, including breeding birds, summer residents and migrants. Eleven species of birds observed were found outside the wetland boundary, including Barred Owl (*Strix varia*), Barn Swallow (*Hirundo rustica*), Yellow-bellied Sapsucker (*Sphyrapicus varius*) and Pileated Woodpecker (*Dryocopus pileatus*). Although not observed within the wetland boundaries, these species may be utilizing the wetlands for the part of their life cycle (e.g. feeding or breeding). The remaining 58 species were observed directly in the wetlands.

Evidence of breeding (e.g. agitated behaviour, nest, young) was observed for a number of bird species, including Canada Goose (*Branta canadensis*), Trumpeter Swan (*Cygnus buccinator*), Wood Duck (*Aix sponsa*), Red-tailed Hawk (*Buteo jamaicensis*), Virginia Rail (*Rallus limicola*), Barred Owl, Yellow-bellied Sapsucker, Eastern Bluebird (*Sialia sialis*), Bobolink (*Dolichonyx orysivorus*), and Red-winged Blackbird (*Agelaius phoeniceus*, Figure 8). Many of the other species recorded could potentially be nesting, given that they were singing on territory in suitable habitat during the breeding season.

Figure 8: Nest of Red-winged Blackbird (*Agelaius phoeniceus*)

A number of migratory bird species were recorded during spring and/or fall field visits, including Ruby-crowned Kinglet (*Regulus calendula*), Yellow-rumped Warbler (*Dendroica coronata*), Western Palm Warbler (*Dendroica palmarum palmarum*), Wilson's Warbler (*Wilsonia pusilla*), and White-crowned Sparrow (*Zonotrichia leucophrys*).

Five species of reptiles were observed, including three species of snake and two turtle species. Eastern Garter Snake (*Thamnophis sirtalis sirtalis*, Figure 9), Northern Water Snake (*Nerodia sipedon sipedon*), Brown Snake (*Storeria dekayi*), and Midland Painted Turtle (*Chrysemys picta marginata*) were observed directly in the wetland. In addition, a Common Snapping Turtle was seen laying eggs in a sandy area immediately adjacent to the wetlands.

Figure 9: Eastern Garter Snake (*Thamnophis sirtalis sirtalis*)

Seven amphibian species were observed in the wetlands, including American Toad (*Bufo americanus*), Gray Treefrog (*Hyla versicolor*), Spring Peeper (*Pseudacris crucifer*), Wood Frog (*Rana sylvatica*), Northern Leopard Frog (*Rana pipiens*), Green Frog (*Rana clamitans melanota*) and Bullfrog. Eggs of Spotted Salamander (*Ambystoma maculatum*) were observed in a small upland pool outside the wetland boundaries.

Other fauna recorded in the wetlands include eight mammal species, seven species of butterflies/moths, and two species of dragonflies/damselflies; many additional species were observed outside the wetland boundaries.

There is no known breeding, migration or feeding habitat for Endangered species in Sucker Creek Wetlands. Two Provincially Significant animal species, one Regionally Significant species, and one Locally Significant species were observed in the wetlands in 2003. One additional Provincially Significant animal species was scored in the 1985 evaluation, and, although it was not observed in 2003, habitat for this species still exists in the wetlands, and thus it has been included in the scoring for this evaluation.

2.4.1. Provincially Significant Animal Species

A Green-striped Darner (*Aeshna verticalis*) was observed in the wetlands and identified by Bob Bowles on October 8th, 2003. This dragonfly has not been given a status by OMNR, but as a tracked species receives Provincially Significant status under the Wetland Evaluation System.

A pair of free-flying Trumpeter Swans were observed in the wetland on May 28th, June 24th and August 22nd, 2003. The Trumpeter Swan's provincial rank is 'S3' (rare to uncommon), and thus it scores as a Provincially Significant species.

2.4.2 Regionally Significant Species

Nodding Sedge (*Carex gynandra*) was observed and identified by Bob Bowles in the wetlands. This species is considered rare in OMNR Central Region (Riley, 1989), making it a Regionally Significant plant species for the purposes of scoring for the evaluation.

2.4.3 Locally Significant Species

One Locally Significant Species was observed in the wetlands during field work. Purple-leaved Willow-herb (*Epilobium coloratum*) is considered rare in Simcoe County (Riley, 1989), making it a Locally Significant Species under the evaluation system.

2.4.4 Fish and Wildlife Habitat

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

The field crew observed minnows in the open water areas of the wetlands and in Sucker Creek, but no larger fish species were observed. Fish habitat is present within the wetlands, however, the significance of it is unknown. Consequently, spawning and nursery habitat were scored according to dominant vegetation types, and migration and staging habitat were scored based on wetland site type.

2.4.5 Great Lakes Coastal Wetlands

Sucker Creek Wetlands are classified as Great Lakes Coastal Wetlands, and receive a score based on size. Sucker Creek Wetlands are coastal under the evaluation system because they are on a tributary to Georgian Bay, and 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 Sucker Creek Wetlands. No invasive Purple Loosestrife (*Lythrum salicaria*) was observed in Sucker Creek Wetlands, however, a great deal of non-native, invasive Glossy Buckthorn (*Rhamnus frangula*) was observed in swamp communities throughout the wetlands. This European species can out-compete native species for habitat and reduce overall diversity.

There are reports of two other notable wildlife species using the wetlands, although no points are awarded for their presence. Black Duck (*Anas rubripes*) was noted in an inspection report by Ducks Unlimited (K. Rich, pers.comm.); in addition, evidence of Moose (*Alces alces*) was reported by one resident. Under the Ontario Wetland Evaluation System, these two species are scored under the Northern Manual only. Since Sucker Creek Wetlands fall under the Southern Manual scoring system, no points are attributed to these two species in this evaluation.

Severn Sound Environmental Association collected water chemistry samples and water temperature data at various locations in Sucker Creek Wetlands (Figure 10).

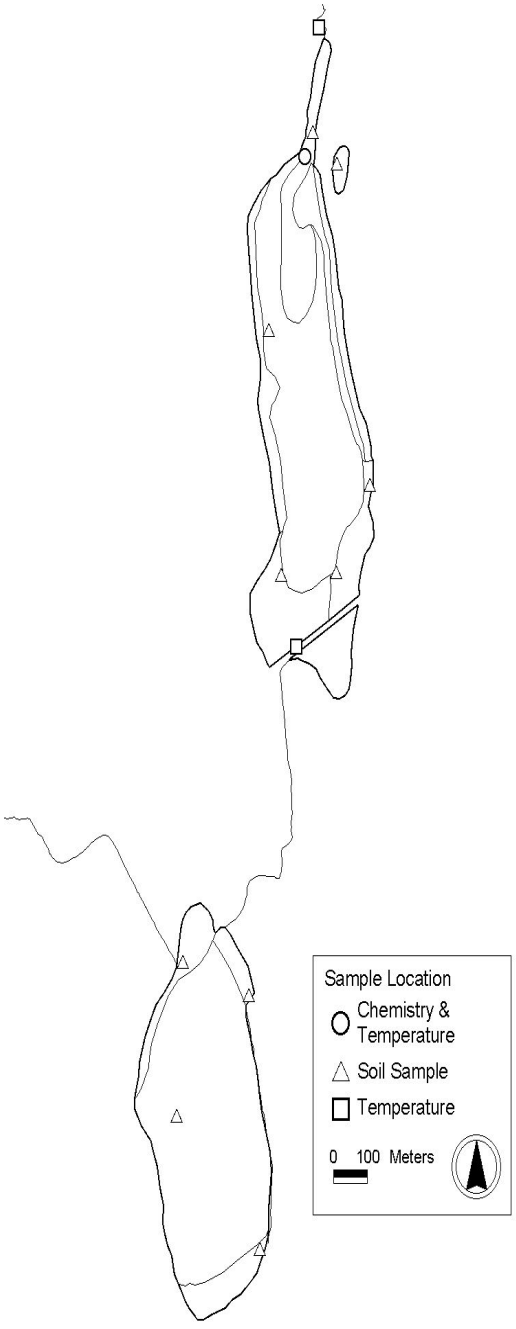

Figure 10: Sampling Locations - Water Chemistry, Water Temperature and Soils

The water temperature results from Sucker Creek Wetlands are provided in Table 1.

Table 1: Sucker Creek Wetlands Evaluation - Water Temperature Results

Date	Water Temperature (°C)
May 28, 2003	20
September 26, 2003	17
October 10, 2003	14

It would appear from the outlet water temperature data (Table 1) that the stream flowing out of Wetland Unit 3 is relatively warm water, despite the groundwater seeps that supply this Unit. The stream from Wetland Unit 1 was intermittent. Wetland Unit 2 outlet was flowing at times during the study but did dry up during the summer.

The results of the water samples taken in Sucker Creek Wetlands by Severn Sound Environmental Association on September 26th, 2003 are provided in Table 2.

Table 2: Sucker Creek Wetlands Evaluation - Water Chemistry Results

pH	7.77
Alkalinity (mg/L)	116
Calcium (mg/L)	36.90
Magnesium (mg/L)	8.23
Sodium (mg/L)	4.50
Potassium (mg/L)	1.44
Chlorides (mg/L)	5.88
Sulphate (mg/L)	4.48
Ammonia (ug/L)	277
Total nitrate (ug/L)	41
Total Kjeldahl Nitrogen (ug/L)	1133
Organic nitrogen (ug/L)	856
Total Nitrogen (ug/L)	1174
Total phosphorus (ug/L)	13.4
N:P ratio	87.6
DIC (mg/L)	28.8
DOC (ug/L)	16.7
Colour (hazen units)	99
Cond (uS)	241
TURB (NTU)	3.95

A single sample taken on September 26, 2003 at the outlet dam of Wetland Unit 3 indicated that the basic water chemistry of Sucker Creek Wetlands (Table 2) was alkaline with hard, well buffered water (pH 7.77, alkalinity 116 mg/L). The basic chemistry of the water is dominated by calcium, magnesium and bicarbonate (DIC). Potassium is a minor component of cations. Low concentrations like this are typical of undisturbed waters. The water was highly coloured (99 Hazen units) which probably accounts for the relatively high dissolved organic value of 16.7 mg/L. It is typical for wetland waters to be coloured with humic acids and tannins leached from the wetland vegetation and organic matter. Sodium, chlorides and sulphate concentrations and conductivity are favourably low which is consistent with an area that is not significantly influenced by road salt or other concentrated sources of salts.

The nutrient concentrations for total phosphorus and total nitrogen (13.4 and 1174 ug/L) indicate that the water is moderately enriched and will support moderate growths of algae. The ratio of total nitrogen to total phosphorus of 87.6 indicates that the plant growth in the wetland waters is controlled by phosphorus. The filtered ammonia value includes ammonia and ammonium and is slightly elevated but below the Provincial water quality objective for unionized ammonia.

2.6 Evaluation Score

The total score for Sucker Creek Wetlands is 685, making it a Provincially Significant Wetland. Sucker Creek Wetlands score 99 in the Biological component, 111 in the Social component, 225 in the Hydrological component, and 250 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.

3. REFERENCES

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Appendix A
Plants of Sucker Creek Wetlands
Observed during 2003 Wetland Evaluation field work

Family Name	Genus	Species	Common Name	Additional Notes
PINACEAE	*Abies*	*balsamea*	Balsam Fir	
ACERACEAE	*Acer*	*pensylvanicum*	Striped Maple	observed outside wetland boundary
ACERACEAE	*Acer*	*rubrum*	Red Maple	
ACERACEAE	*Acer*	*spicatum*	Mountain Maple	
ARACEAE	*Acorus*	*americanus*	Sweetflag	
POLYPODIACEAE	*Adiantum*	*pedatum*	Northern Maidenhair Fern	observed outside wetland boundary
SCROPHULARIACEAE	*Agalinis*	*paupercula*	Sml-flwrd Agalinis/Purp Gerardia	observed outside wetland boundary
LILIACEAE	*Allium*	*tricoccum*	Wild Leek	observed outside wetland boundary
BETULACEAE	*Alnus*	*incana ssp rugosa*	Speckled Alder	
ARALIACEAE	*Aralia*	*nudicaulis*	Wild Sarsaparilla	
ARACEAE	*Arisaema*	*triphyllum*	Small Jack-in-the-Pulpit	observed outside wetland boundary
ASCLEPIADACEAE	*Asclepias*	*incarnata ssp. incarnata*	Swamp Milkweed	
ASTERACEAE	*Aster*	*lanceolatus ssp. lanceolatus*	Panicled Aster	
ASTERACEAE	*Aster*	*lateriflorus*	Calico Aster	
POLYPODIACEAE	*Athyrium*	*filix-femina ssp. angustum*	Lady Fern	
BETULACEAE	*Betula*	*alleghaniensis*	Yellow Birch	
BETULACEAE	*Betula*	*papyrifera*	White Birch	
ASTERACEAE	*Bidens*	*cernua*	Nodding Beggarticks	
POACEAE	*Calamagrostis*	*canadensis*	Canada Blue-Joint	
RANUNCULACEAE	*Caltha*	*palustris*	Marsh Marigold	
BRASSICACEAE	*Cardamine*	*diphylla*	Two-leaved Toothwort	observed outside wetland boundary
CYPERACEAE	*Carex*	*comosa*	Bristly Sedge	
CYPERACEAE	*Carex*	*crinita*	Fringed Sedge	
CYPERACEAE	***Carex***	***gynandra***	**Nodding Sedge**	**Regionally Significant Species**

Family Name	Genus	Species	Common Name	Additional Notes
CYPERACEAE	*Carex*	*intumescens*	Bladder Sedge	
CYPERACEAE	*Carex*	*lurida*	Sallow Sedge	observed outside wetland boundary
CYPERACEAE	*Carex*	*pseudo-cyperus*	Cypress-like Sedge	
CYPERACEAE	*Carex*	*retrorsa*	Beaked Sedge	
CYPERACEAE	*Carex*	*scabrata*	Rough Sedge	
CYPERACEAE	*Carex*	*scoparia*	Pointed Broom Sedge	
CYPERACEAE	*Carex*	*stricta*	Tussock Sedge	
CYPERACEAE	*Carex*	*tuckermanii*	Tuckerman's Sedge	
BERBERIDACEAE	*Caulophyllum*	*thalictroides*	Blue Cohosh	observed outside wetland boundary
APIACEAE	*Cicuta*	*bulbifera*	Bulb-bearing Water-hemlock	
RANUNCULACEAE	*Clematis*	*virginiana*	Virgin's-bower	
LILIACEAE	*Clintonia*	*borealis*	Yellow Clintonia	
OROBANCHACEAE	*Conopholis*	*americana*	Squawroot	observed outside wetland boundary
RANUNCULACEAE	*Coptis*	*trifolia spp. groenlandica*	Goldthread	
CORNACEAE	*Cornus*	*amomum ssp. obliqua*	Silky Dogwood	
CORNACEAE	*Cornus*	*canadensis*	Bunchberry	
CORNACEAE	*Cornus*	*rugosa*	Round-leaved Dogwood	
CORNACEAE	*Cornus*	*stolonifera*	Red-osier Dogwood	
ORCHIDACEAE	*Cypripedium*	*reginae*	Showy Lady's Slipper	
POLYPODIACEAE	*Cystopteris*	*bulbifera*	Bulblet Bladder Fern	
APIACEAE	*Daucus*	*carota*	Wild Carrot/Queen Anne's Lace	introduced; observed outside wetland boundary
POLYPODIACEAE	*Dryopteris*	*carthusiana*	Spinulose Wood Fern	
POLYPODIACEAE	*Dryopteris*	*intermedia*	Intermediate Wood Fern	
POACEAE	*Elymus*	*hystrix*	Bottle-brush Grass	
ONAGRACEAE	*Epilobium*	*ciliatum ssp. glandulosum*	Sticky Willow-herb	
ONAGRACEAE	***Epilobium***	***coloratum***	**Purple-leaved Willow-herb**	**Locally Significant Species**
EQUISETACEAE	*Equisetum*	*hyemale ssp. affine*	Scouring-rush	
EQUISETACEAE	*Equisetum*	*palustre*	Marsh Horsetail	

Family Name	Genus	Species	Common Name	Additional Notes
EQUISETACEAE	*Equisetum*	*sylvaticum*	Wood Horsetail	
ASTERACEAE	*Eupatorium*	*maculatum*	Spotted Joe-pye-weed	
ASTERACEAE	*Eupatorium*	*perfoliatum*	Boneset	
ASTERACEAE	*Euthamia*	*graminifolia*	Grass-leaved Goldenrod	
FAGACEAE	*Fagus*	*grandifolia*	American Beech	observed outside wetland boundary
ROSACEAE	*Fragaria*	*vesca ssp. americana*	Woodland Strawberry	
OLEACEAE	*Fraxinus*	*americana*	White Ash	observed outside wetland boundary
OLEACEAE	*Fraxinus*	*nigra*	Black Ash	
OLEACEAE	*Fraxinus*	*pennsylvanica*	Red Ash	
RUBIACEAE	*Galium*	*trifidum*	Small Bedstraw	
RUBIACEAE	*Galium*	*triflorum*	Fragrant Bedstraw	
ROSACEAE	*Geum*	*rivale*	Water Avens	
POACEAE	*Glyceria*	*canadensis*	Rattlesnake Manna Grass	
POACEAE	*Glyceria*	*striata*	Fowl Meadow or Manna Grass	
AQUIFOLIACEAE	*Ilex*	*verticillata*	Winterberry	
BALSAMINACEAE	*Impatiens*	*capensis*	Spotted Touch-me-not	
IRIDACEAE	*Iris*	*versicolor*	Large Blue-flag	
JUNCACEAE	*Juncus*	*alpino-articulatus*	Alpine Rush	observed outside wetland boundary
JUNCACEAE	*Juncus*	*effusus ssp. solutus*	Soft or Bog Rush	
ERICACEAE	*Kalmia*	*polifolia*	Bog-laurel	
URTICACEAE	*Laportea*	*canadensis*	Wood Nettle	
POACEAE	*Leersia*	*oryzoides*	Rice Cut Grass	
LEMNACEAE	*Lemna*	*minor*	Lesser Duckweed	
CAMPANULACEAE	*Lobelia*	*kalmii*	Kalm's Lobelia	observed outside wetland boundary
CAMPANULACEAE	*Lobelia*	*siphilitica*	Great Lobelia	observed outside wetland boundary
FABACEAE	*Lotus*	*corniculatus*	Bird's-foot Trefoil	introduced; observed outside wetland boundary
LAMIACEAE	*Lycopus*	*americanus*	Cut-leaved Water-horehound	
PRIMULACEAE	*Lysimachia*	*terrestris*	Swamp Candles	

Family Name	Genus	Species	Common Name	Additional Notes
LYTHRACEAE	*Lythrum*	*salicaria*	Purple Loosestrife	introduced; observed outside wetland boundary
LILIACEAE	*Maianthemum*	*canadense*	Canada Mayflower	
POLYPODIACEAE	*Matteuccia*	*struthiopteris*	Ostrich Fern	
SCROPHULARIACEAE	*Mimulus*	*ringens*	Square-stemmed Monkey-flower	observed outside wetland boundary
RUBIACEAE	*Mitchella*	*repens*	Partridge-berry	
MONOTROPACEAE	*Monotropa*	*uniflora*	Indian-pipe	observed outside wetland boundary
BRASSICACEAE	*Nasturtium*	*microphyllum*	Water-cress	introduced
NYMPHACEAE	*Nuphar*	*variegatum*	Bullhead pond-lily	
NYMPHACEAE	*Nymphaea*	*odorata*	Fragrant Water-lily	
POLYPODIACEAE	*Onoclea*	*sensibilis*	Sensitive Fern	
OSMUNDACEAE	*Osmunda*	*cinnamomea*	Cinnamon Fern	
OSMUNDACEAE	*Osmunda*	*regalis*	Royal Fern	
OXALIDACEAE	*Oxalis*	*acetosella ssp. montana*	Wood-sorrel	
VITACEAE	*Parthenocissus*	*inserta*	Virginia Creeper	
POACEAE	*Phalaris*	*arundinacea*	Reed Canary Grass	
POACEAE	*Phleum*	*pratense*	Timothy	introduced; observed outside wetland boundary
PINACEAE	*Picea*	*mariana*	Black Spruce	
POLYGONACEAE	*Polygonum*	*amphibium*	Water Smartweed	
POLYGONACEAE	*Polygonum*	*persicaria*	Lady's-thumb	introduced
SALICACEAE	*Populus*	*balsamifera*	Balsam Poplar	observed outside wetland boundary
SALICACEAE	*Populus*	*tremuloides*	Trembling Aspen	
POTAMOGETONACEAE	*Potamogeton*	*natans*	Common Floating Pondweed	
ROSACEAE	*Potentilla*	*anserina*	Silverweed	observed outside wetland boundary
ASTERACEAE	*Prenanthes*	*altissima*	Tall White Lettuce	
ROSACEAE	*Prunus*	*pensylvanica*	Pin Cherry	
ROSACEAE	*Prunus*	*serotina*	Wild Black Cherry	
POLYPODIACEAE	*Pteridium*	*aquilinum*	Eastern Bracken-fern	
FAGACEAE	*Quercus*	*rubra*	Red Oak	observed outside wetland boundary

Family Name	Genus	Species	Common Name	Additional Notes
RHAMNACEAE	*Rhamnus*	*frangula*	Glossy Buckthorn	introduced
ANACARDIACEAE	*Rhus*	*radicans ssp. rydbergii*	Rydberg's Poison-ivy	
ROSACEAE	*Rubus*	*allegheniensis*	Alleghany Blackberry	
ROSACEAE	*Rubus*	*hispidus*	Northern Dewberry	
ROSACEAE	*Rubus*	*idaeus ssp. melanolasius*	Wild Red Raspberry	
ALISMATACEAE	*Sagittaria*	*latifolia*	Broad-leaved Arrowhead	
SALICACEAE	*Salix*	*amygdaloides*	Peachleaf Willow	observed outside wetland boundary
SALICACEAE	*Salix*	*bebbiana*	Bebb Willow	
SALICACEAE	*Salix*	*discolor*	Pussy Willow	
SALICACEAE	*Salix*	*fragilis*	Crack Willow	introduced
SALICACEAE	*Salix*	*lucida*	Shining Willow	observed outside wetland boundary
CAPRIFOLIACEAE	*Sambucus*	*canadensis*	Common Elderberry	
CAPRIFOLIACEAE	*Sambucus*	*racemosa ssp. pubens*	Red-berried Elderberry	
CYPERACEAE	*Scirpus*	*acutus*	Hard-stemmed Bulrush	observed outside wetland boundary
CYPERACEAE	*Scirpus*	*atrovirens*	Dark Green Bulrush	observed outside wetland boundary
CYPERACEAE	*Scirpus*	*cyperinus*	Wool-grass	
CYPERACEAE	*Scirpus*	*pungens*	Three Square Bulrush	observed outside wetland boundary
SOLANACEAE	*Solanum*	*dulcamara*	Climbing Nightshade	introduced
ASTERACEAE	*Solidago*	*canadensis*	Canada Goldenrod	observed outside wetland boundary
ASTERACEAE	*Solidago*	*rugosa ssp. rugosa*	Rough Goldenrod	observed outside wetland boundary
SPARGANIACEAE	*Sparganium*	*americanum*	Large-fruited Bur-reed	
ROSACEAE	*Spiraea*	*alba*	Narrow-leaved Meadowsweet	
ASTERACEAE	*Taraxacum*	*officinale*	Common Dandelion	
TAXACEAE	*Taxus*	*canadensis*	Canadian Yew	
POLYPODIACEAE	*Thelypteris*	*palustris var. pubescens*	Marsh Fern	
CUPRESSACEAE	*Thuja*	*occidentalis*	Northern White Cedar	
TILIACEAE	*Tilia*	*americana*	American Basswood	observed outside wetland boundary
PRIMULACEAE	*Trientalis*	*borealis*	Star-flower	

Family Name	Genus	Species	Common Name	Additional Notes
LILIACEAE	*Trillium*	*grandiflorum*	White Trillium	
PINACEAE	*Tsuga*	*canadensis*	Eastern Hemlock	
ASTERACEAE	*Tussilago*	*farfara*	Coltsfoot	introduced; observed outside wetland boundary
TYPHACEAE	*Typha*	*angustifolia*	Narrow-leaved Cattail	
TYPHACEAE	*Typha*	*x glauca*	Hybrid Cattail	
TYPHACEAE	*Typha*	*latifolia*	Broad-leaved or Common Cattail	
URTICACEAE	*Urtica*	*dioica ssp. gracilis*	Stinging Nettle	observed outside wetland boundary
VERBENACEAE	*Verbena*	*hastata*	Blue Vervain	
CAPRIFOLIACEAE	*Viburnum*	*lentago*	Nannyberry	
VITACEAE	*Vitis*	*riparia*	Riverbank Grape	

Provincially Significant designations are given by the OMNR and reported on the NHIC web-site: http://www.mnr.gov.on.ca/MNR/nhic/species/species_list.cfm
Regionally Significant and *Locally 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 Sucker Creek Wetlands
Recorded During 2003 Wetland Evaluation Field Work

Common Name	Scientific Name	Additional Notes
Birds		
Great Blue Heron	*Ardea herodias*	
Green Heron	*Butorides virescens*	
Turkey Vulture	*Cathartes aura*	
Canada Goose	*Branta canadensis*	confirmed nesting - 6 goslings
Trumpeter Swan	***Cygnus buccinator***	**Provincially Significant Species -confirmed nesting**
Wood Duck	*Aix sponsa*	confirmed nesting - fledged young
Mallard	*Anas platyrhynchos*	
Northern Harrier	*Circus cyaneus*	
Red-tailed Hawk	*Buteo jamaicensis*	probable nester
Ruffed Grouse	*Bonasa umbellus*	
Virginia Rail	*Rallus limicola*	probable nester
Common Snipe	*Gallinago gallinago*	
American Woodcock	*Scolopax minor*	
Ring-billed Gull	*Larus delawarensis*	
Mourning Dove	*Zenaida macroura*	
Black-billed Cuckoo	*Coccyzus erythropthalmus*	
Barred Owl	*Strix varia*	observed outside wetland boundary - pair
Ruby-throated Hummingbird	*Archilochus colubris*	
Belted Kingfisher	*Ceryle alcyon*	
Yellow-bellied Sapsucker	*Sphyrapicus varius*	observed outside wetland boundary-confirmed nesting
Downy Woodpecker	*Picoides pubescens*	
Northern Flicker	*Colaptes auratus*	
Pileated Woodpecker	*Dryocopus pileatus*	observed outside wetland boundary
Eastern Wood-Pewee	*Contopus virens*	
Least Flycatcher	*Empidonax minimus*	
Eastern Phoebe	*Sayornis phoebe*	
Great Crested Flycatcher	*Myiarchus crinitus*	
Eastern Kingbird	*Tyrannus tyrannus*	
Warbling Vireo	*Vireo gilvus*	
Red-eyed Vireo	*Vireo olivaceus*	
Blue Jay	*Cyanocitta cristata*	
American Crow	*Corvus brachyrhynchos*	
Common Raven	*Corvus corax*	
Barn Swallow	*Hirundo rustica*	observed outside wetland boundary
Black-capped Chickadee	*Poecile atricapillus*	
Ruby-crowned Kinglet	*Regulus calendula*	migrant

Common Name	Scientific Name	Additional Notes
Eastern Bluebird	*Sialia sialis*	observed outside wetland boundary - pair
Veery	*Catharus fuscescens*	
Wood Thrush	*Hylocichla mustelina*	
American Robin	*Turdus migratorius*	
Gray Catbird	*Dumetella carolinensis*	
Brown Thrasher	*Toxostoma rufum*	
European Starling	*Sturnus vulgaris*	
Cedar Waxwing	*Bombycilla cedrorum*	
Nashville Warbler	*Vermivora ruficapilla*	
Yellow Warbler	*Dendroica petechia*	
Chestnut-sided Warbler	*Dendroica pensylvanica*	
Yellow-rumped Warbler	*Dendroica coronata*	migrant
Black-throated Green Warbler	*Dendroica virens*	observed outside wetland boundary
Western Palm Warbler	*Dendroica palmarum palmarum*	migrant
Black-and-White Warbler	*Mniotilta varia*	
American Redstart	*Setophaga ruticilla*	
Ovenbird	*Seiurus aurocapillus*	observed outside wetland boundary
Northern Waterthrush	*Seiurus noveboracensis*	
Common Yellowthroat	*Geothlypis trichas*	
Wilson's Warbler	*Wilsonia pusilla*	migrant
Savannah Sparrow	*Passerculus sandwichensis*	observed outside wetland boundary
Song Sparrow	*Melospiza melodia*	
Swamp Sparrow	*Melospiza georgiana*	
White-throated Sparrow	*Zonotrichia albicollis*	
White-crowned Sparrow	*Zonotrichia leucophrys*	migrant
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	observed outside wetland boundary
Bobolink	*Dolichonyx oryzivorus*	observed outside wetland boundary - territorial males
Red-winged Blackbird	*Agelaius phoeniceus*	confirmed nesting - nest with 3 eggs
Eastern Meadowlark	*Sturnella magna*	observed outside wetland boundary
Common Grackle	*Quiscalus quiscula*	
Brown-headed Cowbird	*Molothrus ater*	
Baltimore Oriole	*Icterus galbula*	
American Goldfinch	*Carduelis tristis*	
Reptiles		
Common Snapping Turtle	*Chelydra serpentina serpentina*	laying eggs in uplands
Midland Painted Turtle	*Chrysemys picta marginata*	
Eastern Garter Snake	*Thamnophis sirtalis sirtalis*	
Northern Water Snake	*Nerodia sipedon sipedon*	
Brown Snake	*Storeria dekayi*	

Common Name	Scientific Name	Additional Notes
Amphibians		
Spotted Salamander	*Ambystoma maculatum*	observed outside wetland boundary (eggs)
American Toad	*Bufo americanus*	
Tetraploid Gray Treefrog	*Hyla versicolor*	
Spring Peeper	*Pseudacris crucifer*	
Wood Frog	*Rana sylvatica*	
Northern Leopard Frog	*Rana pipiens*	
Green Frog	*Rana clamitans melanota*	
Bullfrog	*Rana catesbeiana*	
Mammals		
Water Shrew	*Sorex palustris*	
Snowshoe Hare	*Lepus americanus*	
Red Squirrel	*Tamiasciurus hudsonicus*	
Beaver	*Castor canadensis*	
Deer Mouse	*Peromyscus maniculatus*	
Muskrat	*Ondatra zibethicus*	
Coyote	*Canis latrans*	observed outside wetland boundary
Raccoon	*Procyon lotor*	
White-tailed Deer	*Odocoileus virginianus*	
Fish		
Northern Redbelly Dace	*Phoxinus eos*	observed outside wetland boundary (in Sucker Creek)
Brook Stickleback	*Culaea inconstans*	observed outside wetland boundary (in Sucker Creek)
Butterflies and Moths		
Black Swallowtail	*Papilio polyxenes*	observed outside wetland boundary
Mustard White	*Pieris napi*	observed outside wetland boundary
Eastern Comma	*Polygonia comma*	
Mourning Cloak	*Nymphalis antiopa*	observed outside wetland boundary
Red Admiral	*Vanessa atalanta*	
Viceroy	*Limenitis archippus*	
Common Wood Nymph	*Cercyonis pegala*	
Monarch	*Danaus plexippus*	
Fingered Dagger Moth	*Acronicta dactylina*	larva stage
Milkweed Tussock Moth	*Euchaetes egle*	
Dragonflies and Damselflies		
Tule Bluet	*Enallagma carunculatum*	observed outside wetland boundary
Black-tipped Darner	*Aeshna tuberculifera*	observed outside wetland boundary
Green-striped Darner	***Aeshna verticalis***	**Provincially Significant Species**
White-faced Meadowhawk	*Sympetrum obtrusum*	

Provincially Significant designations include tracked species, and are given by the OMNR and reported on the NHIC web-site: http://www.mnr.gov.on.ca/MNR/nhic/species/species_list.cfm