

**SCOPED ENVIRONMENTAL IMPACT STUDY  
CHIPPAWA CREEK ROAD PROPERTY  
CITY OF NIAGARA FALLS**

**PREPARED FOR:**

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## **1.0 INTRODUCTION**

Colville Consulting Inc. was retained by Mr. Rob Atalick - Niagara Kung Fu Academy to prepare an Environmental Impact Study (EIS) to assess potential ecological impacts associated with the construction of a multi-use facility, as well as associated parking areas, a meditation walkway and amenity areas on the property located south of Chippawa Creek Road and Heartland Forest Road, in the City of Niagara Fall. This EIS has been prepared to assess potential impacts the proposed development may have on natural heritage features located on and adjacent to the Subject Property. This EIS has been prepared in accordance with the Niagara Region's Environmental Impact Assessment Guidelines. A summary of our assessment is included below.

### **1.1 Description of the Subject Property**

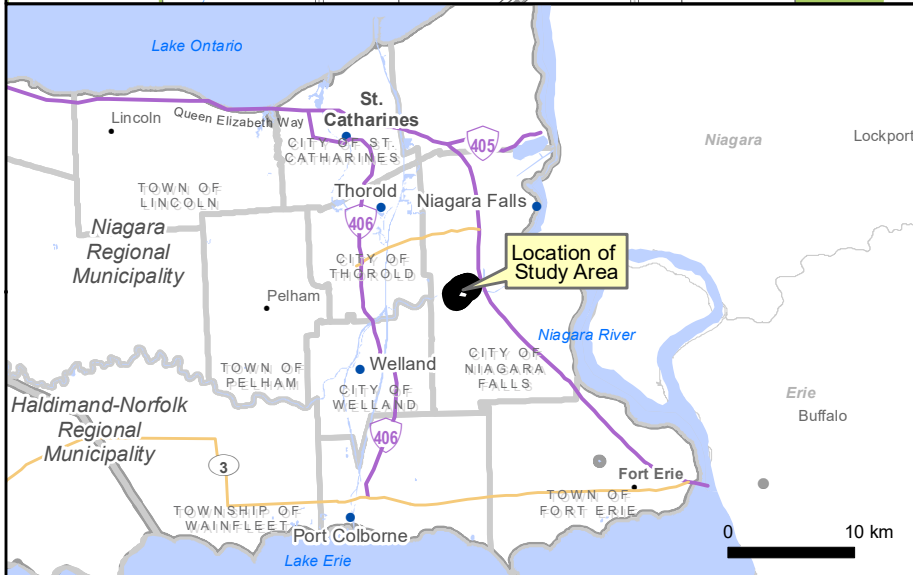
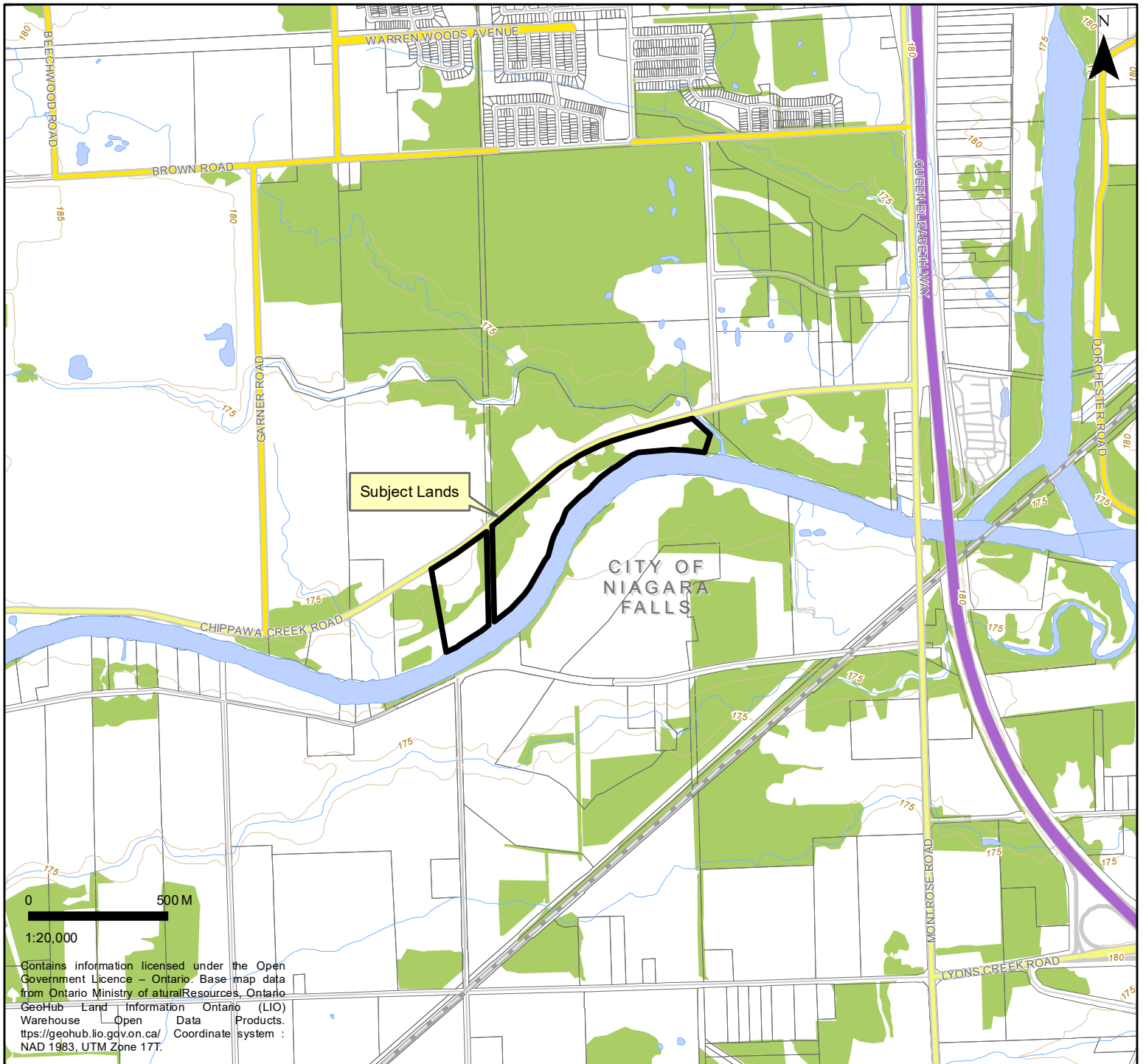
The Subject Property is located south of Chippawa Creek Road, north of the Welland River, with the eastern boundary of the lot located approximately 800m west of the Queen Elizabeth Way Highway. The Subject Property has not been assigned a municipal address; however, the property is legally described as Part lot 207 and Part lot 208, Township of Stamford (See Figure 1 below). The property is irregular in shape and measures 12.84 hectares (31.73 acres) in size. Structures on the property are limited to a barn on the east side of the property. Land use in the immediate vicinity of the property is industrial, recreational, commercial as well as open space.

Air Photos from 1934, 1954 and 1965 indicate that this property was formerly in agricultural production, with a house, barn and former horse paddock present on the property in 1934. Surrounding landuse historically has also been limited to agriculture.

Mapped natural heritage features identified on and adjacent to the property include the Welland River and associated Welland River East Provincially Significant Wetland Complex (hereafter referred to as the PSW), as well as a portion of a Significant Woodland and a small watercourse that functions as the outlet for roadside ditching along Chippawa Creek Road. It is understood that the woodland on and adjacent to the Subject Property has been designated as significant due to its size, proximity to water, the potential for rare species, and proximity to the PSW.

Due to the presence of these features, the portion of the property associated with the PSW has been designated as an Environmental Protection Area (EPA) within the Niagara Region and City of Niagara Falls Official Plans, while the Significant Woodland on the property has been designated as Environmental Conservation Area (ECA) within these plans. Potential Niagara Peninsula Conversation Authority (NPCA) regulated features on the property include the Welland River, PSW and the watercourse. The extent of mapped natural heritage features on the Subject Property are illustrated in Figure 2.

As mapping indicates that natural heritage features are located on and adjacent to the Subject Property, any development within or adjacent to these features will be subject to environmental policies of the Niagara Region and the City of Niagara Falls, as well as policies of the NPCA. These policies generally require that proposed development demonstrate no negative impacts on the natural heritage features or their ecological functions.



**Figure 1**  
**Location of Subject Lands**

**Chippawa Creek Road Property**  
**Part Lot 207 and Part Lot 208**

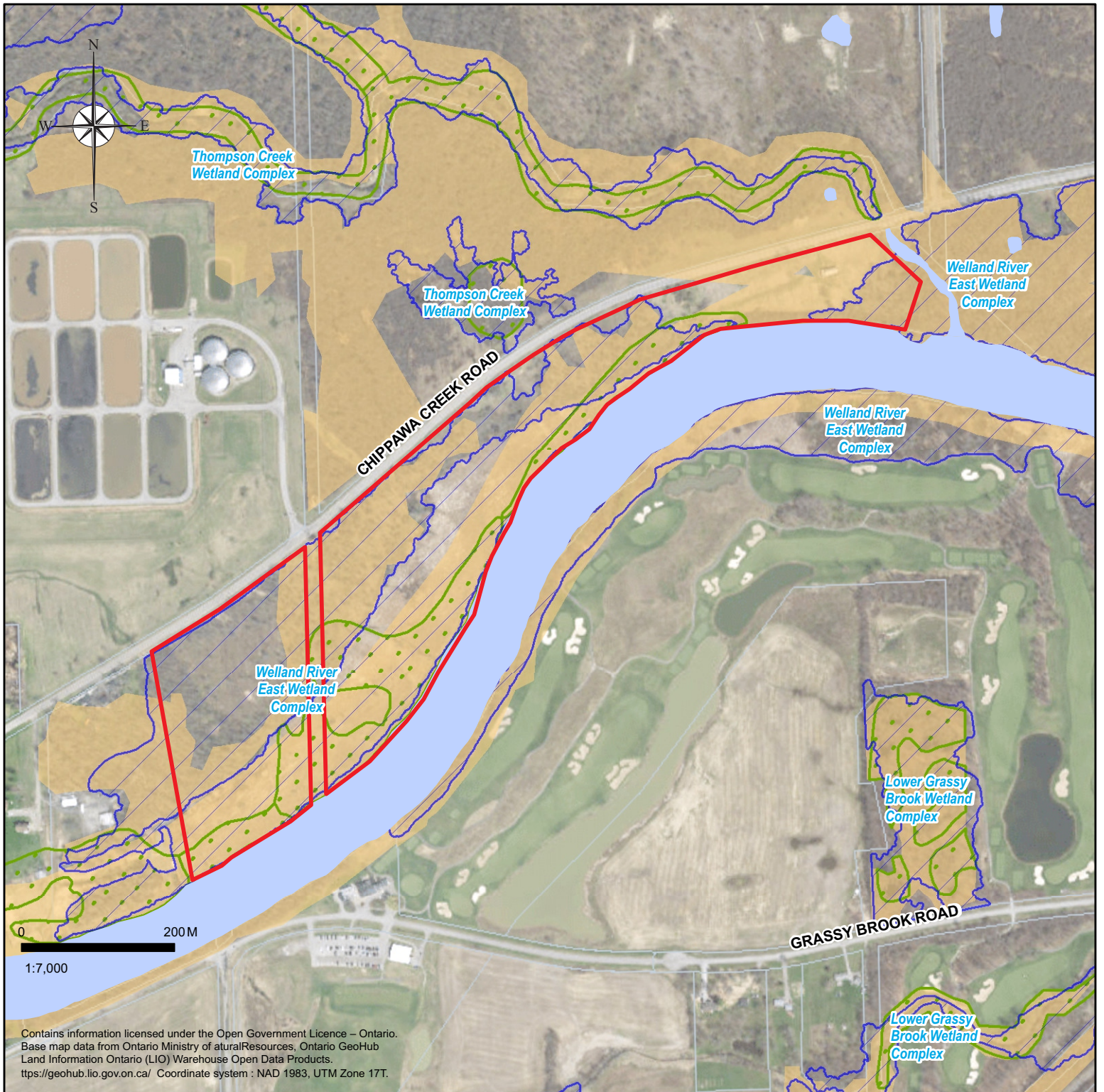
Prepared for: **Rob Atalick - Niagara Kung Fu Academy**

Prepared by: **COLVILLE CONSULTING INC.**

DATE: June 2022

FILE: C21059





**Legend**

-  Subject Lands
-  Environmental Conservation Area
-  Environmental Protection Area
-  Provincially Significant Wetland (MNRF)
-  Welland River (MNRF)

**Figure 2**  
**Extent of Mapped Natural Heritage Features on the Subject Property**

Scoped Environmental Impact Study for Chippawa Creek Road Property

Prepared for: **Rob Atalick - Niagara Kung Fu Academy**

Prepared by: **COLVILLE CONSULTING INC.**

DATE: November 2022

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## 1.2 Description of Proposed Development

The proposed development for this project consists of the construction of a multi-use facility, as well as associated parking areas with 135 parking spaces, a meditation walkway and amenity areas. Access and egress to and from the property will be provided by a two-lane driveway from Chippawa Creek Road. The proposed development plan is provided in Appendix A.

## 2.0 ENVIRONMENTAL POLICY

### 2.1 Provincial Policy Statement

The Provincial Policy Statement (PPS) was issued under Section 3 of the Planning Act and came into effect on May 22, 1996. The PPS was updated in 1997, 2005, 2014, and most recently in 2020. It applies to all applications submitted after May 1, 2020, and states that decisions affecting planning matters “shall be consistent with” policy statements issued under the Act. This EIS has been prepared in compliance with Part V, Policy 2.1 of the PPS, which deals specifically with the long-term protection and management of natural heritage features and areas.

The PPS intends to ensure that natural features and areas be protected for the long term. The PPS indicates that the diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and groundwater features.

Natural heritage features and areas are defined in the PPS as those which are important for their environmental and social values as a legacy of the natural landscapes of an area and include: significant wetlands, significant coastal wetlands, fish habitat, significant woodlands south and east of the Canadian Shield, significant valleylands south and east of the Canadian Shield, significant habitat of endangered species and threatened species, significant wildlife habitat and significant areas of natural and scientific interest.

Development and site alteration is not permitted in:

- ♦ significant wetlands in Ecoregions 5E, 6E, and 7E; and
- ♦ significant coastal wetlands

Unless it can be demonstrated that there will be no negative impacts on the natural heritage features or their ecological functions, development and site alteration are not permitted in:

- ♦ significant wetlands north of Ecoregions 5E, 6E, and 7E;
- ♦ significant woodlands and valleylands south and east of the Canadian Shield;
- ♦ significant wildlife habitat;
- ♦ significant areas of natural and scientific interest; and
- ♦ coastal wetlands in Ecoregions 5E, 6E, and 7E.

In addition, development and site alteration is not permitted in fish habitat or the habitat of endangered and threatened species, except in accordance with provincial and federal requirements.

Furthermore, development and site alteration are not permitted on adjacent lands to the natural heritage features identified above, unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

## 2.2 Regional Niagara Official Plan

Section 7 of the 2014 Consolidated Regional Niagara Official Plan contains the Region's Environmental Policies. Among other important environmental considerations, the policies address the Region's natural vegetation and wildlife, water resources, landforms, geology and soils, and core natural heritage features such as woodlands, wetlands, and fish habitats. Those natural areas considered to be of provincial importance, as identified in the PPS, are identified in the Region's Core Natural Heritage System. The following components are identified in the Region's Core Natural Heritage System:

- a) Core Natural Areas which are classified as Environmental Protection Areas (EPA) and Environmental Conservation Areas (ECA);
- b) Potential Natural Heritage Corridors connecting the Core Natural Areas;
- c) Greenbelt Natural Heritage and Water Resources System; and
- d) Fish Habitat (this includes key hydrologic features).

**Environmental Protection Areas (EPA)** include provincially significant wetlands; provincially significant Life Science ANSIs; and significant habitats of endangered and threatened species.

**Environmental Conservation Areas (ECA)** include significant woodlands; significant wildlife habitat; significant habitat of species of concern; regionally significant Life Science ANSIs; other evaluated wetlands; significant valleylands; savannahs and tallgrass prairies; alvars; and publicly owned conservation lands.

The Core Natural Heritage Map which accompanies Amendment 187 illustrates the Region's Core Natural Heritage System, which includes EPA, ECA, potential corridor, fish habitat, and the Greenbelt Natural Heritage and Water Resources System. This map indicates that a portion of the Subject Property has been identified as EPA due to the presence of the Provincially Significant Wetland (PSW) and an ECA due to the Significant Woodland.

For development applications that are proposed within or adjacent to the Core Natural Heritage System, the regional policies require that an EIS be completed. Table 1, which was modified from Amendment 187, illustrates under what circumstances an EIS is required. For example, because there is a PSW, Significant Woodland, and fish habitat identified on the Subject Property, an EIS is required.

Table 1 - EIS Requirements for lands adjacent to Core Natural Areas	
Core Natural Heritage System Component	Adjacent Lands Where an EIS Shall Be Required for Development Applications
<p><b>Environmental Protection Area</b></p> <ul style="list-style-type: none"> <li>➤ Provincially Significant Wetland</li> <li>➤ Significant Habitat of Threatened and Endangered Species</li> </ul>	<p>All lands within 120 metres</p> <p>All lands within 50 metres</p>
<p><b>Environmental Conservation Area</b></p> <ul style="list-style-type: none"> <li>➤ Significant Woodlands</li> <li>➤ Significant Wildlife Habitat</li> <li>➤ Significant Habitat for Species of Concern</li> </ul>	<p>All lands within 50 metres.</p> <p>All lands within 50 metres.</p> <p>All lands within 50 metres.</p>
<ul style="list-style-type: none"> <li>➤ Fish Habitat</li> </ul>	<p>All lands within 30 metres of the top of bank.</p>

Source: Table 7-1 of the Regional Official Plan Amendment

Policies related to management of the Core Natural Heritage System are included in Section 7.B of the Official Plan. Section 7.B.1.11 states that development and site alteration may be permitted without an amendment to this Plan:

- a) In Environmental Conservation Areas; and
- b) On adjacent lands to Environmental Protection and Environmental Conservation Areas as set out in Table 7-1 except for those lands within vegetation protection zones associated with Environmental Protection Areas in the Greenbelt Natural Heritage System if it has been demonstrated that, over the long term, there will be no significant negative impact on the Core Natural Heritage System component or adjacent lands and the proposed development or site alteration is not prohibited by other Policies in this Plan. The proponent shall be required to prepare an Environmental Impact Study (EIS) in accordance with Policies 7.B.2.1 to 7.B.2.5.

Policy 7.B.1.15 states that within Fish Habitat as identified on the Core Natural Heritage Map, or adjacent lands as specified in Table 7-1, development and site alteration may be permitted if it will result in no net loss of the productive capacity of fish habitat as determined by the Department of Fisheries and Oceans or its designate. The proponent shall be required to prepare an Environmental Impact Study (EIS) to the satisfaction of the Department of Fisheries and Oceans, or its designate, in accordance with Policies 7.B.2.1 to 7.B.2.5.

First priority will be given to avoiding harmful alteration or destruction of fish habitat by redesigning or relocating the proposal or mitigating its impacts. A naturally vegetated buffer zone, a minimum 30 metres in width as measured from the stable top of bank, generally shall be required



adjacent to Critical (Type 1) Fish Habitat as defined by Ministry of Natural Resources. A minimum 15 metre buffer from the stable top of bank shall be required adjacent to Important or Marginal Fish Habitat as defined by that Ministry. A narrower buffer may be considered where the EIS has demonstrated that it will not harm fish or fish habitat, but in no case shall the buffer adjacent to Critical Fish Habitat be less than 15 metres.

### **2.3 City of Niagara Falls Official Plan**

The City of Niagara Falls Official Plan has been drafted to complement the Regional Official Plan and contains policies specific to the management of natural heritage systems. The Official Plan intends to designate lands that contribute to the natural environment of the city, either due to their ecological significance, the areas being significant due to the natural heritage features present, and/or having inherent physical hazards. The purpose of identifying these lands is not only to acknowledge the need to maintain and protect these areas but also to control development in and around these areas due to their susceptibility.

Schedule A-1 of the City of Niagara Falls Official Plan illustrates that portions of the property have been designated Environmental Protection Area (EPA) and Environmental Conservation Area (ECA).

Environmental Protection Areas (EPA) include Provincially Significant Wetlands, NPCA regulated wetlands greater than 2ha in size, Provincially Significant Life Science ANSIs, significant habitat of threatened and endangered species, floodways and erosion hazard areas and environmentally sensitive areas.

Environmental Conservation Areas (ECA) include significant woodlands, significant valley lands, significant wildlife habitat, fish habitat, significant Life and Earth Science ANSIs, sensitive groundwater areas, and locally significant wetlands or NPCA wetlands less than 2ha in size.

Section 11.1.17 of the Official Plan states that an EIS shall be required as part of a complete application under the Planning Act for site alteration or development on lands:

- a) within or adjacent to an Environment Protection Area or Environmental Conservation Area as shown on Schedule A or A- 1; or
- b) that contain or are adjacent to a natural heritage feature.

No development is permitted within any Provincially Significant Wetland.

Section 11.2.16 of the Official Plan states that a minimum vegetated buffer established by an Environmental Impact Study (EIS) shall be maintained around Provincially Significant Wetlands and Niagara Peninsula Conservation Area Wetlands greater than 2 ha in size. A 30m buffer is illustrated on Schedule A-1 for reference purposes. The precise extent of the vegetated buffer will be determined through an approved EIS and may be reduced or expanded. New development or site alteration within the vegetated buffer is not be permitted.

## **2.4 Niagara Peninsula Conservation Authority**

The Niagara Peninsula Conservation Authority (NPCA) is responsible for the administration of Ontario Regulation 155/06, which provides the NPCA jurisdiction to regulate development activities within and adjacent to flood and erosion hazards, valleys, watercourses and wetlands. The guiding principle of this regulation is to ensure any development work proposed within regulated areas will have no adverse impact on flooding, erosion, pollution, dynamic beaches and the conservation of land.

In order to administer Ontario Regulation 155/06, the Niagara Peninsula Conservation Authority (NPCA) has created a document titled Policies for the Administration of Ontario Regulation 155/06 and the Planning Act (NPCA, 2018). The purpose of the document is to provide guidance for development applications that are located in and adjacent to regulated areas.

Regulated features in the vicinity of the proposed development include a portion of the Welland River East Provincially Significant Wetland Complex (hereafter referred to as the PSW) as well as the Welland River to the south.

Policies related to the management of wetlands are contained in Section 8 of the NPCA policy document. Section 8.2.3.5 contains policies related to proposed new development within 30 metres of a wetland, with Section 8.2.3.5c outlining considerations to be used when evaluating a proposal.

Niagara Peninsula Conservation Authority policies related to the management of watercourses are contained in Section 9 of the policy document.

## **3.0 STUDY APPROACH**

### **3.1 Background Review**

Before the commencement of primary field inventories, a site visit and the review of background material available for the Subject Property and the surrounding area were conducted. Some of the background information reviewed included:

- ◆ Consolidated Regional Niagara Official Plan (RMON 2014);
- ◆ City of Niagara Falls Official Plan (City of Niagara Falls 1993);
- ◆ NPCA Policy Document: Policies of the Administration of Ontario Regulation 155/06 and Planning Act (NPCA 2018);
- ◆ Data available from the Natural Heritage Information Center (NHIC);
- ◆ Background data available from the NPCA and Ministry of Natural Resources and Forestry (MNRF);
- ◆ Niagara Natural Areas Inventory (NPCA 2010); and
- ◆ Recent and historical aerial photographic imagery.



### **3.2 Field Inventories**

To assess potential impacts associated with this project, the following inventories and assessments were conducted on the Subject Property:

- 1) Summer and fall botanical inventories of the property;
- 2) An assessment of the vegetation communities using the Ecological Land Classification System for Southern Ontario (ELC);
- 3) Breeding bird surveys on both the Subject Property and adjacent lands;
- 4) Incidental observations of wildlife, including active hand searches for reptiles and amphibians;
- 5) Assessment of the watercourse feature;
- 6) Amphibian call surveys; and,
- 7) An assessment of potential bat maternal roosts and habitat on the property using methods outlined by MNRF (2017).

The methods employed for each of the above components are provided in the appropriate sections below.

## **4.0 STUDY FINDINGS**

### **4.1 Botanical Inventories and Vegetation Mapping**

Botanical inventories of the Subject Property were completed on July 8<sup>th</sup>, October 3<sup>rd</sup> and 8<sup>th</sup>, 2021. Vegetation communities (ELC units – following Lee et al. 1998) were mapped and described, and a vascular plant checklist was compiled. Species status was assessed for Ontario (Oldham and Brinker 2009) and the Niagara Region (Oldham 2010).

Vegetation communities are described below and illustrated in Figure 3. A vascular plant checklist is provided in Appendix B and ELC data cards are provided in Appendix C. Photos illustrating the vegetation conditions on the Subject Property are provided in Appendix D.

#### **4.1.1 Botanical Inventories**

A total of 150 plant species were documented on the Subject Property during our inventories. None are considered to be species at risk provincially or federally.

Three provincially rare plants were noted. One Honey Locust (S2?) is represented on-site by a sapling that escaped from a roadside planting into the floodplain woodland. Provincially rare species observed in the floodplain marsh include Smartweed Dodder (S1) and Green Arrow-arum (S2).

Eight locally rare species (Sweetflag, Common Coontail, Smartweed Dodder, Swamp Loosestrife, Honey Locust, Great Blue Lobelia, Green Arrow-arum, Mild Water Pepper) were also documented. All of these species occurred within the floodplain marsh, except for the Honey Locust sapling (as mentioned above) and Great Blue Lobelia, which was observed in the wet meadow along swales and at the floodplain edge.

Additionally, five locally uncommon species (Groundnut, Fragrant White Water-Lily, Water Smartweed, Bur Oak, and Common Bladderwort) were observed. All of these species are located within the floodplain marsh, with the exception of Bur Oak which occurs in the floodplain woodland.

#### 4.1.2 Vegetation Communities

The Subject Property supports several vegetation communities which are generally reflective of the former agricultural land use. Vegetation communities described on the property include a complex of Fresh Moist (Pear) Elm Deciduous Woodland Type (WODM5-2) / Fresh - Moist Deciduous Savanna Ecosite (SVDM4) / Dry - Moist Old Field Meadow (CUM1-1) / Dry - Fresh Black Walnut Deciduous Woodland (WODM4-4), as well as marsh and forest. Vegetation communities are described below and are illustrated in Figure 3.

##### Fresh - Moist Elm Deciduous Woodland Type complex (WODM5-2)

The largest vegetation community on the property supports an old Pear orchard and White Elm woodland, which follows along the valley slope, south of Chippawa Creek Road. Within this vegetation community very tall (10-15m) and large diameter (30-60cm + dbh) Pear trees persist in the greater than 10m height layer, with an abundance of White Elm trees, dead snags of Green Ash and occasionally, open-grown Black Walnut trees. The number of dead ash trees has reduced the woodland canopy cover to 10% in places. In the central portion of the Subject Property, there is an extremely large and open-grown Swamp White Oak tree 100cm+ in diameter. Young trees and saplings in the regeneration layer (2-10m) are most often Black Walnut and Green Ash, with an abundance of Riverbank Grapevine, young Pear, White Elm and Hawthorns forming a sub-canopy layer with 10 – 60% cover.

Grey Dogwood dominates (25 – 60% cover) in the 1-2m height layer, with saplings of Black Walnut and Green Ash, vines of Riverbank Grape and occasionally Silky Dogwood and Raspberry shrubs.

In the 0.5 – 2m height layer, Tall Goldenrod dominates (up to 100% vegetation cover), with Panicked Aster, Kentucky Blue Grass, Canada Blue Grass, Orchard Grass, and Grass-leaved Goldenrod.

Within the ground layer is an abundance (> 60% cover) of *Agrostis* and *Avens* species, along with Common Strawberry.

##### Fresh - Moist Deciduous Savanna Ecosite complex (SVDM4)

The successional edges of the old orchard woodland support a young and more open Fresh–Moist Deciduous Savanna. This savanna ecosite typically occurs along the woodland edges that follow the roadside and floodplain marsh or surrounding meadow openings. The species composition is very similar to the woodland, but lacks the large and mature old orchard trees and forms between 35 - 60% tree cover.

##### Dry - Moist Old Field Meadow complex (CUM1-1)

The savanna described above grades into several old field meadow openings which were complexed as a Dry-Moist Old Field Meadow. Dry meadow clearings mix with a number of wet meadow openings supported by swales which outlet into the floodplain marsh and enter this polygon via

culverts below Chippawa Creek Road. Along the road these wet meadow openings are dominated by a monoculture of Narrow-leaved Cattails or Common Reed. They then grade into meadow marshes of Creeping Bent Grass, Spotted Touch-me-not and Panicked Aster towards the floodplain.

Dry – Fresh Black Walnut Deciduous Woodland complex (WODM4-4)

Along the western edge of the Subject Property is a young and regenerating Dry – Fresh Black Walnut Deciduous Woodland, which grades into the adjacent Black Walnut Deciduous Lowland Forest.

Dry - Moist Old Field Meadow (CUM1-1)

Located on the northeast portion of the property is a large old field meadow. Within this polygon is a former horse paddock with large piles of recently placed fill surrounding a barn building. Within the 0.5 – 2m height class, Tall Goldenrod, Panicked Aster, young low shrubs of Grey Dogwood, and Green Ash saplings form 60 - 100% vegetation cover. The ground layer consists of Avens species, Common Strawberry and Canada Blue Grass, with an abundance of Kentucky Blue Grass or Orchard Grass forming greater than 60% cover.

Fresh - Moist Black Walnut Lowland Deciduous Forest (FOD7-4)

Along the floodplain valley slope at the western edge of the Subject Property, a mature Black Walnut Lowland Deciduous Forest occurs and extends onto the adjacent lands. Large (1m + dbh) trees form part of the forest canopy in this area. Black Walnut is the dominant canopy species (in the 25 – 50cm dbh size class), forming approximately 60% vegetation cover. Occasionally, a few Bitternut Hickory, Bur Oak and Swamp White Oak also reach the tall (10 – 25m + in HT) canopy layer along with some vines of Riverbank Grape.

Black Walnut is also abundant in the sub-canopy layer (2-10m in HT) with Green Ash, Riverbank Grape and occasionally Dotted Hawthorn forming an additional 10 – 25% forest cover.

The dense (+\ - 60% cover) shrub layer (1-2m + in HT) is formed by Grey Dogwood, Riverbank Grape and to a lesser extent, Black Raspberry.

Panicked Aster dominates (>> 60% cover) the ground layer with an abundance of Spotted Touch-me-not, Tall Goldenrod, Jumpseed and Enchanter’s Nightshade. A lower and equally abundant layer of Creeping Bent Grass, White Avens, Fowl Mana Grass and Clearweed was also noted.



**Legend**

- Subject Property
- \*CUM1-1 Dry-Moist Old Field Meadow Type
- FOD7-4 Fresh - Moist Black Walnut Lowland Deciduous Fores Type
- MAS2-1 Cattail Mineral Shallow Marsh Type
- MAS2-4 Broad-leaved Sedge Mineral Shallow Marsh Type
- SAM1 Mixed Shallow Aquatic Ecosite
- \*SVDM4 Fresh Moist Deciduous Savanna Ecosite
- THDM2-11 Hawthorn Deciduous Shrub Thicket Type
- \*WODM4-4 Dry-Fresh Black Walnut Deciduous Woodland
- WODM5-2 Fresh Moist (Pear) Elm Deciduous Woodland Complex
- Location of calling Wood Thrush (First Visit)
- Location of calling Wood Thrush (Second Visit)
- Location of Barn Swallows (Both Visits)
- Amphibian Vocalization Survey Location
- Watercourses

\*Denotes Inclusion in WODM5-2 Complex

**Figure 3**  
**Vegetation Communities**  
**on the Subject Property**

**Scoped Environmental Impact Statement**  
**Chippawa Creek Road Property**

Prepared for: Rob Atalick - Niagara Kung Fu Academy

Prepared by:



DATE: November 2022

FILE: 21059

## 4.2 Wildlife and Wildlife Habitat

### 4.2.1 Breeding Bird Survey

Breeding bird surveys were conducted on June 16 and July 3, 2021 to inventory breeding birds on the Subject Property. Surveys were completed at least 15 days apart, under suitable weather conditions with little to no wind or precipitation. A thorough search of the subject property was completed during both surveys between dawn and no later than 10:00 am. All birds seen or heard calling were recorded and the highest breeding evidence per species was determined in accordance with the criteria of the Atlas of the Breeding Birds of Ontario (Cadman et al. 2007).

A total of 40 species of birds were observed or heard on or above the Subject Property and two additional species on adjacent lands. According to Ontario conservation status ranks (S-rank) designations, with the exception of two non-native species (SNA) and 1 “imperilled” species (S2B), all other recorded species are considered to be “secure” (S5 - common, widespread and abundant) or “apparently secure” (S4 - uncommon but not rare) in the province of Ontario. The recorded species are also considered to be very common to common permanent or summer residents in the Niagara Region with the exception of the uncommon summer resident; Belted Kingfisher, Eastern Bluebird, Field Sparrow, Great Blue Heron, Green Heron, Marsh Wren, Northern Rough-wing Swallow, Swamp Sparrow, Turkey Vulture, Willow Flycatcher, Wood Thrush uncommon permanent resident; Hairy Woodpecker, Red-bellied Woodpecker, and rare summer resident; Bald Eagle, Great Egret (Niagara Natural Areas Inventory, 2010). All species found on the site are listed in Table 2.

Barn Swallows were observed flying and calling over the Subject Property on both site visits and are listed as Threatened in Ontario and Special Concern in Canada. Nests with young were observed in the barn present on the Subject Property.

A Wood Thrush was heard calling on the first site visit on adjacent lands and the second site visit on the Subject Property and adjacent lands. Wood Thrush is listed as Special Concern in Ontario and has also been designated as Threatened federally.



Table 2 - Results of breeding bird surveys at Chippawa Creek Road Property

Species	S Rank	Niagara Status*	Woodland/ Thicket	Meadow	Adjacent Lands	Highest Breeding Evidence**	Breeding Code***
American Crow	S5B	C R			X	PO	H
American Goldfinch	S5B	C R	X	X		PO	S
American Robin	S5B	VC R	X	X		PR	A
Bald Eagle	S4	R R	X			PO	H
Baltimore Oriole	S4B	C R	X			CO	FY
Barn Swallow	S4B	VC R	X	X		CO	NY
Belted Kingfisher	S4B	U R	X			PO	S
Black-capped Chickadee	S5	C P	X			PO	S
Blue Jay	S5	VC P	X			CO	NY
Brown-headed Cowbird	S4B	VC R	X			PO	S
Cedar Waxwing	S5B	C R	X			PO	H
Common Grackle	S5B	VC R	X			CO	FY
Common Raven	S5	DD			X	PO	H
Common Yellowthroat	S5B	C R	X			PO	S
Double-crested Cormorant	S5B	VC R	X			OBS	X
Downy Woodpecker	S5	C P	X			PO	S
Eastern Bluebird	S5B	U R	X			PO	S
Eastern Phoebe	S5B	C R	X			CO	CF
European Starling	SNA	VC P	X	X		CO	FY
Field Sparrow	S4B	U R	X	X		PO	S
Gray Catbird	S4B	C R	X			PO	S
Great Blue Heron	S4	U R	X		X	OBS	X
Great Crested Flycatcher	S4B	C R	X			PO	S
Great Egret	S2B	R R	X		X	OBS	X
Green Heron	S4B	U R	X			PO	H
Hairy Woodpecker	S5	U P	X		X	PO	S
House Sparrow	SNA	VC P	X			PO	H
Killdeer	S5B	C R		X		PO	S
Marsh Wren	S4B	U R	X		X	PO	S
Mourning Dove	S5	VC R	X			PR	P
Northern Cardinal	S5	C P	X			PO	S
Northern Rough-wing Swallow	S4B	U R	X			PO	H
Red-bellied Woodpecker	S4	U P	X			PO	S
Red-winged Blackbird	S4	VC R	X	X		PR	A
Ring-billed Gull	S5	VC R	X			OBS	X
Rose-breasted Grosbeak	S4B	C R	X		X	PR	A
Song Sparrow	S5B	VC R	X			PR	A
Swamp Sparrow	S5B	U R	X		X	PR	A
Turkey Vulture	S5B	U R	X			PO	H
Willow Flycatcher	S5B	U R	X			PO	S
Wood Thrush	S4B	U R	X		X	PO	S
Yellow Warbler	S5B	C R	X			CO	FY

\* VC – very common; C – common; U – uncommon; UR – Uncommon to rare; O – Occasional; R – Rare

P – permanent resident; R – summer resident; S – Straggler; DD-Data Deficient (Niagara Natural Areas Inventory, 2010)

\*\* OBS – observed, no evidence of breeding; PO – possible breeding; PR – probable breeding; CO - confirmed breeding

\*\*\* X – observed in its breeding season, no evidence of breeding

H – species observed in its breeding season in suitable nesting habitat

S – singing male present in its breeding season in suitable nesting habitat

P – pair observed in their breeding season in suitable nesting habitat  
A – agitated behaviour or anxiety calls of an adult  
D – courting or display between a male and female or two males  
N – nest building or excavation of nest hole  
T – permanent territory presumed through registration of territorial song or presence of an adult bird in breeding habitat on at least 2 days, one week or more apart at the same place  
DD- distraction display or feigning injury  
AE – Adults leaving or entering nest site in circumstances indicating an occupied nest  
FS – adult carrying fecal sac  
FY – recently fledged young  
CF – adult carrying food for young  
NE – nest containing eggs  
NY – nest with young

#### **4.2.2 Assessment of Potential Bat Roosting Habitat**

During the summer, the Little Brown Myotis, Northern Myotis, Eastern Small-footed Myotis and Tri-coloured Bats are found in a variety of forested habitats, as well as abandoned buildings, barns and attics. In forested habitats, cavities in trees, loose bark, foliage and other cover objects are used for roosting. These species forage in a variety of habitats where flying insects and spiders are present, often in association with wetlands, ponds and streams. Overwintering typically occurs in caves.

An assessment of potential bat roosting habitat was conducted on November 3, 2021 following MNRF survey methods (2017). Due to the relatively young nature of most trees on the property, no cavity trees were observed on the property that would provide significant roosting habitat. A barn is currently present on the property; however, no evidence of bat use was detected.

Although not located in proximity to the proposed development, scattered large diameter oak trees in association with Thompson Creek east of the property, as well as large diameter oak trees on the west side of the property in the FOD7-4 community may provide potential roost trees.

#### **4.2.3 Amphibian Call Surveys**

Amphibian call surveys were conducted on April 13, May 17, and June 14, 2022. One survey location was established to assess amphibian use of wetland and riparian vegetation associated with the Welland River. The station was surveyed for a period of three minutes, between one half-hour after sunset, and midnight. All species of calling amphibians were recorded along with a calling code (0 – no calling; 1- calls not overlapping, can be discretely counted; 2 – calls overlapping, but numbers of individuals can still be estimated; 3 – full chorus, numbers of individuals cannot be estimated), along with an estimate of the number of individual amphibians where possible.

The amphibian survey conducted on April 13, 2022 commenced at approximately 21:30. Air temperature during the April 13, 2022 survey was 14°C, with partly cloudy conditions and light winds. The May 17, 2022 visit began at approximately 22:20, while the air temperature was 12°C, winds light and skies were clear. The final amphibian survey was completed on June 14, 2022, beginning at approximately 22:45. The air temperature was 19°C, with little wind and partly cloudy skies during the survey. The results of the amphibian surveys are presented in Table 2.

**Table 3 - Results of amphibian call surveys.**

	Western Chorus Frog	Northern Leopard Frog	Green Frog
April 13, 2022	1-3	-	-
May 17, 2022	-	1-1	-
June 14, 2022	-	-	1-2

\*Numbers in cells represent (calling code – estimated numbers).

#### 4.2.4 Incidental Wildlife Observations

Wildlife observations and signs were recorded during site visits conducted on June 14, June 16, July 3, July 22, September 15, September 29, October 3, October 8, and November 3, 2021. Observations include Eastern Chipmunk, Coyote, White-tailed Deer, Eastern Gartersnake, Green Frog, Bull Frogs, Spring Peeper. Additionally, it is assumed that this property is being utilized by other wildlife species that are typical of the urban area of Niagara Falls.

Incidental insect observations include Crane fly (Tipulidae), Damselfly (Zygoptera), Emerald Ash Borer (*Agrilus planipennis*), Little Wood-Satyr (*Megisto cymela*), Mosquito (Culicidae), Moth (Lepidoptera), and Spittlebug (Cercopidae).

#### 4.3 Aquatic Habitat Assessment

As illustrated in Figure 3, a small watercourse is located at the west end of the property. This watercourse originates south of Chippawa Creek Road, as the outlet of the roadside ditch. This watercourse conveys flow from roadside ditches down the slope on the property to the open floodplain marsh. Flow in this watercourse is intermittent and dependant on precipitation events.

The channel of this watercourse measures approximately 0.6-0.7m in width and is generally well defined along the slope. The substrate in the channel consists of native silty clay material, which is well vegetated with a mix of herbaceous and shrub species described above.

As described above, the Welland River generally forms the southern boundary of the Subject Property and is managed as a Type 1 Fish Habitat. Fish community information for the Welland River was provided by MNRF and are listed in Table 3. The species listed are primarily warm to coolwater, and most have an intermediate tolerance to disturbance. Species of conservation concern are limited to Grass Pickerel (Special Concern) and Greater Redhorse (S3).



Table 4 - Welland River Fish Species List.

Scientific Name	Common Name	Thermal Regime Preference	Tolerance to Disturbance	SRank	Nat. Status (SARA)	Prov. Status (ESA)
<i>Ambloplites rupestris</i>	Rock Bass	Coolwater	Intermediate	S5		
<i>Ameiurus nebulosus</i>	Brown Bullhead	Warmwater	Intermediate	S5		
<i>Ameiurus melas</i>	Black Bullhead	Warmwater	Intermediate	S4		
<i>Ameiurus natalis</i>	Yellow Bullhead	Warmwater	Tolerant	S4		
<i>Amia calva</i>	Bowfin	Warmwater	Intermediate	S4		
<i>Alosa pseudoharengus</i>	Alewife	Coolwater	Intermediate	SNA		
<i>Catostomus commersonii</i>	White Sucker	Coolwater	Tolerant	S5		
<i>Cottus bairdii</i>	Mottled Sculpin	Coolwater	Intermediate	S5		
<i>Culaea inconstans</i>	Brook Stickleback	Coolwater	Intermediate	S5		
<i>Cyprinella spiloptera</i>	Spotfin Shiner	Warmwater	Intermediate	S4		
<i>Cyprinus carpio</i>	Common Carp	Warmwater	Tolerant	SNA		
<i>Dorosoma cepedianum</i>	Gizzard Shad	Coolwater	Tolerant	S4		
<i>Esox americanus vermiculatus</i>	Grass Pickerel	Warmwater	Intermediate	S3	SC	SC
<i>Esox lucius</i>	Northern Pike	Coolwater	Intermediate	S5		
<i>Esox masquinongy</i>	Muskellunge	Warmwater	Intermediate	S4		
<i>Etheostoma caeruleum</i>	Rainbow Darter	Coolwater	Intolerant	S4		
<i>Etheostoma nigrum</i>	Johnny Darter	Coolwater	Tolerant	S5		
<i>Fundulus diaphanus</i>	Banded Killifish	Coolwater	Tolerant	S5		
<i>Ictalurus punctatus</i>	Channel catfish	Warmwater	Tolerant	S4		
<i>Labidesthes sicculus</i>	Brook Silverside	Warmwater	Intermediate	S4		
<i>Lepomis cyanellus</i>	Green Sunfish	Warmwater	Tolerant	S4		
<i>Lepomis gibbosus</i>	Pumpkinseed	Warmwater	Intermediate	S5		
<i>Lepomis macrochirus</i>	Bluegill	Warmwater	Intermediate	S5		
<i>Luxilus chrysocephalus</i>	Striped Shiner	Coolwater	Intermediate	S4		
<i>Luxilus cornutus</i>	Common Shiner	Coolwater	Intermediate	S5		
<i>Micropterus dolomieu</i>	Smallmouth Bass	Coolwater	Intermediate	S5		
<i>Micropterus salmoides</i>	Largemouth Bass	Warmwater	Tolerant	S5		
<i>Morone americana</i>	White Perch	Warmwater	Intermediate	SNA		
<i>Moxostoma macrolepidotum</i>	Shorthead Redhorse	Warmwater	Intermediate	S5		
<i>Moxostoma valenciennesi</i>	Greater Redhorse	Warmwater	Intolerant	S3		
<i>Neogobius melanostomus</i>	Round Goby	Coolwater	Intermediate	SNA		
<i>Notemigonus crysoleucas</i>	Golden Shiner	Coolwater	Intermediate	S5		
<i>Notropis atherinoides</i>	Emerald Shiner	Coolwater	Intermediate	S5		
<i>Notropis hudsonius</i>	Spottail shiner	Coolwater	Intermediate	S5		
<i>Noturus gyrinus</i>	Tadpole Madtom	Warmwater	Intermediate	S4		
<i>Osmerus mordax</i>	Rainbow Smelt	Coolwater	Intermediate	S5		
<i>Perca flavescens</i>	Yellow Perch	Coolwater	Intermediate	S5		
<i>Percina caprodes</i>	Logperch	Warmwater	Intolerant	S5		
<i>Percopsis omiscomaycus</i>	Trout-perch	Coolwater	Intermediate	S5		
<i>Pomoxis nigromaculatus</i>	Black Crappie	Coolwater	Tolerant	S4		
<i>Pimephales notatus</i>	Bluntnose Minnow	Warmwater	Intermediate	S5		
<i>Pimephales promelas</i>	Fathead Minnow	Warmwater	Tolerant	S5		
<i>Pomoxis annularis</i>	White Crappie	Warmwater	Tolerant	S4		
<i>Scardinius erythrophthalmus</i>	Rudd	Coolwater	Tolerant	SNA		
<i>Semotilus atromaculatus</i>	Creek Chub	Coolwater	Intermediate	S5		
<i>Umbra limi</i>	Central Mudminnow	Coolwater	Tolerant	S5		

## **5.0 ASSESSMENT OF SIGNIFICANT NATURAL HERITAGE FEATURES**

### **5.1 Species at Risk**

#### **5.1.1 Significant Habitat of Endangered and Threatened Species**

No Endangered species were documented on the property during our assessments and observations of Threatened species was limited to Barn Swallows. The Subject Property and adjacent lands provide foraging opportunities for Barn Swallows and the barn on the property was observed to be providing nesting habitat for this species. Nests with young Barn Swallows were observed to be present in the barn.

Data available from the Natural Heritage Information Center (NHIC) indicated that Endangered and Threatened species known to occur historically in the vicinity of the property include Eastern Pondmussel (Endangered), Round Hickorynut (Endangered), Northern Bobwhite (Endangered), Bobolink (Threatened), and Round-leaved Greenbrier (Threatened) (Appendix E). It is possible that Eastern Pondmussel and Round Hickorynut are present in the Welland River, however since no impact to the Welland River will occur as a result of this project, no assessments for mussels were completed as part of this project.

Although potential habitat for Bobolink and Round-leaved Greenbrier is present on the property, these species were not detected during breeding bird surveys or botanical inventories. Therefore, it is our conclusion that the Subject Property is not providing habitat for these species.

Based on this assessment, potential habitat for Endangered and Threatened species on this property is limited to the barn on the Subject Property, which is providing potential habitat for Barn Swallows. The property is also providing foraging areas for Barn Swallows, however this function is not considered significant as foraging was observed on and adjacent to the property. Further discussion related to this species is provided below.

#### **5.1.2 Other Potential Species of Conservation Concern**

Species of Special Concern observed during field inventories was limited to Wood Thrush, which was heard calling from lands east of the property during both breeding bird surveys, as well as from the property during the second breeding bird survey. Based on our assessments, it is assumed that Wood Thrush is breeding in the woodland east of the Subject Property. Potential impacts of the development on this species are discussed in Section 6.2

Data available from the NHIC indicates that Species of Special Concern known to occur in the area include Grass Pickerel, Northern Map Turtle and Snapping Turtle. Potential habitat for all of these species is available in the Welland River and no portion of the development will impact habitat of these species.

As indicated above, three provincially rare plants (Honey Locust, Smartweed Dodder and Green Arrow-arum) were documented on the property during botanical inventories. None of these species are located in close proximity to the proposed development on the property, and therefore no impact to this species will occur as a result of this project.

## 5.2 Significant Wildlife Habitat

The SWH Criteria Schedule for Ecoregion 7E (OMNRF 2015) identifies four main types of significant wildlife habitat (SWH): seasonal concentrations areas, rare vegetation communities, specialized wildlife habitats, and habitats of Species of Conservation Concern. These are discussed below in relation to the natural features on and adjacent to the site and a summary is provided in Appendix F.

### 5.2.1 Seasonal Concentration Areas

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E identifies 14 types of seasonal concentrations of animals that may be considered significant wildlife habitats. These include, but are not limited to:

- Waterfowl Stopover and Staging Areas (Aquatic and Terrestrial);
- Shorebird Migratory Stopover Area;
- Raptor Wintering Area;
- Bat Hibernacula;
- Bat Maternity Colonies;
- Turtle Wintering Areas;
- Reptile Hibernaculum;
- Colonially -Nesting Bird Breeding Habitat (Bank and Cliff);
- Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs);
- Colonially -Nesting Bird Breeding Habitat (Ground);
- Migratory Butterfly Stopover Areas;
- Landbird Migratory Stopover Areas; and
- Deer Winter Congregation Areas.

Seasonal concentration areas are typically designated as significant wildlife habitat if an area supports a species at risk or a large population may be lost if the habitat is destroyed. No seasonal concentration areas were identified on the Subject Property.

Although no evidence of seasonal concentration areas were observed on the Subject Property, the Welland River may be providing opportunities for turtle overwintering. The proposed project will not impact the potential for future overwintering in the Welland River.

### 5.2.2 Rare Vegetation Communities

Rare vegetation communities often contain rare species, which depend on such habitats for their survival and cannot readily move to or find alternative habitats. Those areas that qualify as rare habitats are assigned an SRank of S1, S2 or S3 by the Natural Heritage Information Center (NHIC).

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E identifies seven specialized habitats that may be considered significant wildlife habitats. They are:

- Cliffs and Talus Slopes;
- Sand Barren;

- Alvar;
- Old Growth Forest;
- Savannah;
- Tallgrass Prairie; and
- Other Rare Vegetation Communities.

No rare vegetation communities are located on or adjacent to the Subject Property.

### **5.2.3 Specialized Habitats of Wildlife considered SWH**

Some wildlife species require specialized habitat types for their long-term survival and many wildlife species require substantial areas of suitable habitat for successful breeding. Their populations are at risk of decline when their habitat becomes fragmented or reduced in size.

Specialized habitats for wildlife include:

- Waterfowl Nesting Area;
- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
- Woodland Raptor Nesting Habitat;
- Turtle Nesting Areas;
- Seeps and Springs;
- Amphibian Breeding Habitat (Woodland);
- Amphibian Breeding Habitat (Wetlands); and
- Woodland Area-Sensitive Bird Breeding Habitat.

No specialized habitats for wildlife are present on the Subject Property.

### **5.2.4 Habitats of Species of Conservation Concern considered SWH**

Habitat of Species of Conservation Concern includes wildlife species that are listed as Special Concern or rare, that are declining or are featured species. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened species as identified by the Endangered Species Act. The following habitats are considered candidate SWH:

- Marsh Breeding Bird Habitat;
- Open Country Bird Breeding Habitat;
- Shrub/Early Successional Bird Breeding Habitat;
- Terrestrial Crayfish; and
- Special Concern and Rare Wildlife Species.

One Species of Conservation Concern (Wood Thrush) was observed on and adjacent to the Subject Property within the WODM5-2 community. Wood Thrush typically breed in larger forested areas, as well as 1 ha fragments and semi-wooded residential areas and parks, where this species will defend a breeding territory of between 0.08-4.0 ha in size (COSEWIC, 2012). Because this species typically breeds in woodlands larger than 1ha in size, it is anticipated that the documented individuals are part of a breeding pair that has established a nest in the woodland east of

Thompson's Creek. The breeding territory of this pair is expected to include a portion of the woodland on the east side of the property.

### **5.2.5 Animal Movement Corridors**

The SWHTG defines animal movement corridors as elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another. To qualify as significant wildlife habitats, these corridors should be a critical link between habitats that are regularly used by wildlife.

Based on our review of the background mapping and air photos, as well as our assessment, a portion of this property likely forms part of an animal movement corridor. The use of this property is assumed to be associated with the proximity to the Welland River, which is also known to function as a wildlife corridor in the Region. Further discussion related to wildlife movement is provided below.

## **5.3 Provincially Significant Wetlands**

Background mapping indicates that a portion of the Welland River East Wetland Complex occurs on a significant portion of the Subject Property. A wetland boundary refinement based on the Ontario Wetland Evaluation System (OWES) was conducted as part of our assessment, with the refined extent of the wetland on this property illustrated in Figure 4. The wetland on this property is primarily limited to lands at or below the toe of slope, as well as the marsh area associated with the Welland River.

## **5.4 Significant Woodlands**

A review of the background mapping available for this property noted that portions of the Subject Property have been designated a Significant Woodland by the Niagara Region and City of Niagara Falls. Our assessment verified that portions of the property contain treed vegetation communities, with the largest of these communities being described as an WODM5-2, complexed with a mix of cultural savannah and meadow communities. The refined extents of significant woodland on this property are located primarily to the western and central portions of the property, with a woodland also located on the eastern end of the property.

To be identified as significant, Policy 7.B.1.5 of the Niagara Region Official Plan states that a woodland must meet one or more of the following criteria:

- a) Contain threatened or endangered species or species of concern;
- b) In size, is equal to or greater than 2 hectares, if located inside Urban Areas;
- c) Contains interior woodland habitat at least 100 meters from the woodland boundaries;
- d) Contains older growth forest and be 2 hectares or greater in area;
- e) Overlap or contain one or more of the other significant natural heritage features listed in policies 7.B.1.3 or 7.B.1.4; or
- f) Abut or be crossed by a watercourse or water body and be 2 or more hectares in area.

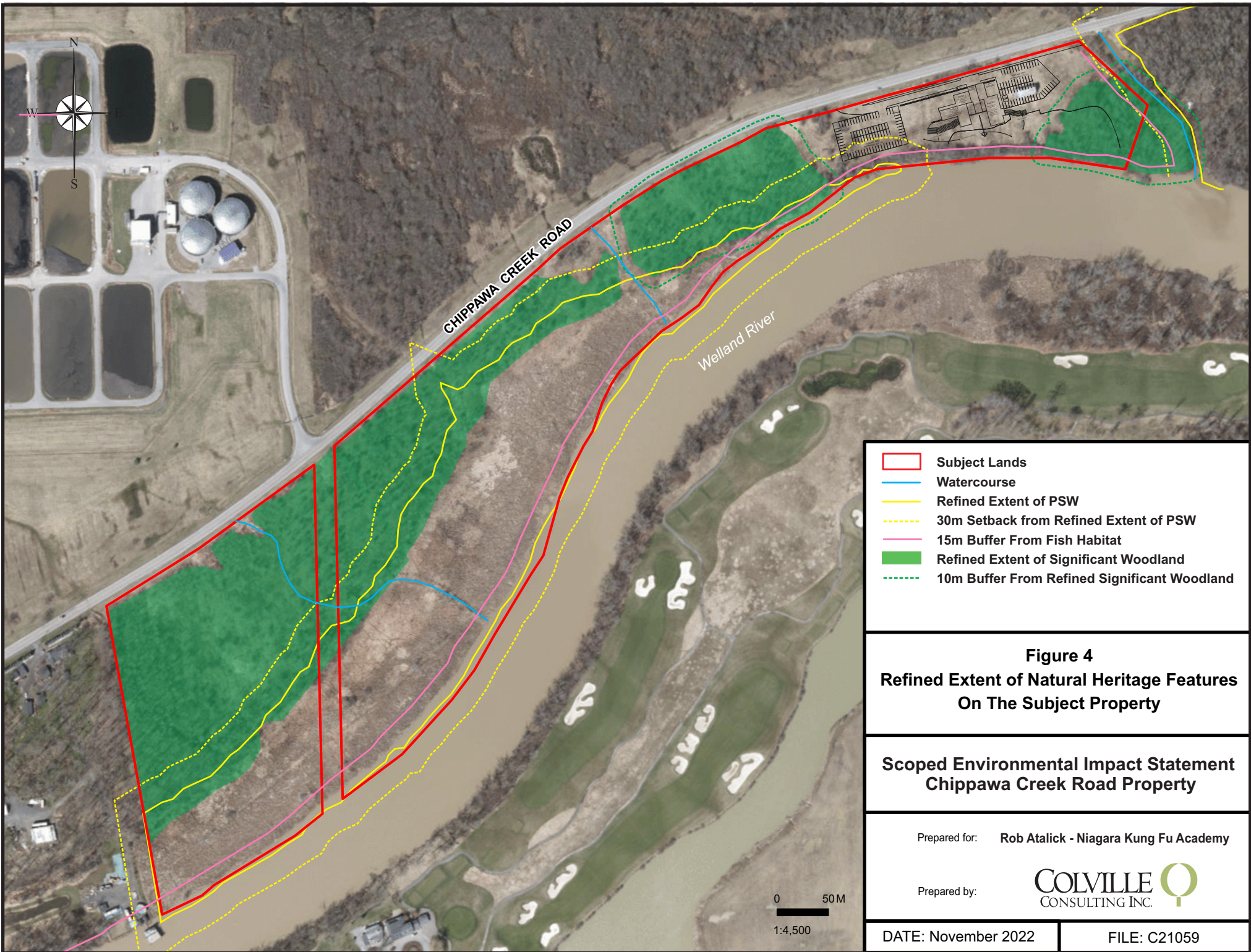
From our surveys and assessment, the woodland communities on the east and central portion of the property satisfies the special concern, size, other features and proximity to water criteria listed above

(See Table 4 below). The west woodland satisfies the size, proximity to water and other features criteria. The refined extent of the Significant Woodland on and adjacent to the property is illustrated in Figure 4.

**Table 5 - Assessment of Significant Woodland Criteria**

Criteria	Representation on Property	East Woodland	Central Woodland	West Woodland
Endangered or Threatened species or Species of Concern	Wood Thrush was heard calling in east woodland. Honey Locust observed in the woodland near the toe of slope.	Criteria Satisfied	Criteria Satisfied	Criteria Not Satisfied
Size	East woodland forms part a larger woodland that measures over 10ha in size. Central Woodland measures approximately 1.2ha in size. West woodland measures more than 2ha in size.	Criteria Satisfied	Criteria Not Satisfied	Criteria Satisfied
Interior Habitat	No portion of the woodlands on the property is more than 100m from a woodland edge.	Criteria Not Satisfied	Criteria Not Satisfied	Criteria Not Satisfied
Older Growth	Early successional woodland is present on property, which was generally formerly in agricultural production.	Criteria Not Satisfied	Criteria Not Satisfied	Criteria Not Satisfied
Other Natural Heritage Features	A portion of the PSW is located adjacent to the woodland.	Criteria Satisfied	Criteria Satisfied	Criteria Satisfied
Watercourses or Waterbodies	East woodland located adjacent to Welland River and Thompson's Creek. Central woodland located near Welland River. Small watercourse in west woodland.	Criteria Satisfied	Criteria Satisfied	Criteria Satisfied





- Subject Lands
- Watercourse
- Refined Extent of PSW
- 30m Setback from Refined Extent of PSW
- 15m Buffer From Fish Habitat
- Refined Extent of Significant Woodland
- 10m Buffer From Refined Significant Woodland

**Figure 4**  
**Refined Extent of Natural Heritage Features**  
**On The Subject Property**

**Scoped Environmental Impact Statement**  
**Chippawa Creek Road Property**

Prepared for: **Rob Atalick - Niagara Kung Fu Academy**

Prepared by: **COLVILLE CONSULTING INC.**

DATE: November 2022

FILE: C21059

## **5.5 Watercourses**

The Welland River forms the southern boundary of the Subject Property and is managed as Type 1 fish habitat. No direct impact to the Welland River will occur as a result of this project and appropriate buffers are described below.

As illustrated in background mapping and described above, a small watercourse traverses the western portion of the property. Due to the minor nature of this watercourse, this watercourse is not considered to be providing any significant contribution to fish habitat in the Welland River, however no impact or alteration to this watercourse is proposed as part of this project.

Thompson Creek is located adjacent the Subject Property to the east and outlets into the Welland River to the south. No direct impact to Thompson Creek will occur as a result of this project and appropriate buffers are described below.

## **6.0 POTENTIAL ECOLOGICAL IMPACTS**

The proposed development on this project consists of the construction of a multi-use facility, as well as associated parking areas, a meditation walkway, and amenity areas. Access and egress to and from the property will be provided by a two-lane driveway from Chippawa Creek Road. The proposed development plan is provided in Appendix A.

### **6.1 Significant Habitat of Endangered and Threatened Species**

No Endangered species were documented on the property during our assessments. Threatened species were limited to Barn Swallows that were documented flying over the property. This species was observed to be using the barn on the property as nesting habitat. Nests containing young were observed in the barn on the property.

Because the barn will be removed to accommodate the proposed development, the Ministry of Environment, Conservation and Parks (MECP) will be consulted to determine appropriate mitigation measures prior to removal of the structure.

### **6.2 Species of Special Concern**

From our assessment, one Species of Special Concern (Wood Thrush) was documented on and adjacent to the property during our survey work (See Figure 3). Wood Thrush will typically nest in the interior of deciduous and mixed forests, particularly woodlands containing attributes that include trees >16 m in height, a variety of deciduous tree species, moderate sub-canopy and shrub density, shade, fairly open forest floor, moist soil, and decaying leaf litter (Evans et al. 2011). During the breeding season, this species has been documented to establish and defend territories ranging between 0.08-4.0 ha in size, depending on the quality of habitat (Evans et al. 2011).

The Wood Thrush was heard calling on the first site visit on adjacent lands and on the second site visit on the Subject Property and adjacent lands. This species typically arrives on breeding grounds in Ontario by mid-May, however, arrivals can occur in late April to late-May (Evans et al. 2011). Once on breeding grounds, this species will defend a breeding territory.



Although no nests were observed, this species was likely breeding in the woodland east of the property. The woodland on the east side of the property forms part of a larger woodland that measures more than 10ha in size and primarily located east of the property. Since the woodland on the property is not likely providing direct breeding habitat for this species and only forms part of the breeding territory, the proposed development will not impact Wood Thrush habitat or alter breeding behaviours of this species.

It is our assessment that the proposed development will not impact habitat of Species of Special Concern.

### **6.3 Locally Rare and Uncommon Species**

Eight locally rare species (Sweetflag, Common Coontail, Smartweed Dodder, Swamp Loosestrife, Honey Locust, Great Blue Lobelia, Green Arrow-arum, and Mild Water Pepper) were observed on the property during inventories. Additionally, five locally uncommon species (Groundnut, Fragrant White Water-Lily, Water Smartweed, Bur Oak, and Common Bladderwort) were also observed all within the floodplain marsh with the only exception being the Bur Oak that was found in the floodplain forest.

Since the proposed project will be located on the eastern portion of the Subject Property and not within the floodplain marsh and adjacent lands where a majority of these species were observed, no direct impact to these species will occur as a result of this project. Additionally, the proposed development is not anticipated to result in a change in hydrologic conditions in the vicinity of these plants, further minimizing any potential risk to the maintenance of these species on the property.

In addition to the locally rare and uncommon plant species above, several locally rare and uncommon bird species were documented on the property during breeding bird surveys. Aside from Field Sparrow, these species were all documented using lands other than the meadow on the property, with the Field Sparrow occurring in both the meadow and thicket. Sufficient habitat for this species will persist on the property post development, and therefore the proposed development will not impact this species.

It is our assessment that the proposed development will not impact any locally rare or uncommon species present on or adjacent to this property.

### **6.4 Provincially Significant Wetlands**

As discussed in Section 5.3, a portion of the Welland River East Wetland Complex is located on the Subject Property. A refinement of the wetland boundary was completed using OWES as part of our assessment and the refined extent of the wetland is illustrated in Figure 4.

Based on our assessment, the wetland in the vicinity of the proposed development consists of a narrow band of Cattail Marsh, which is part of larger floodplain marsh feature on the central and western portion of the Subject Property. As illustrated in Figure 4, a small portion of the southwestern edge of the western parking lot is proposed to be situated approximately 17m from

the wetland. All other development proposed, including the multi-use facility and associated amenity areas will be located more than 30m from the wetland.

For the purposes of this assessment, a buffer of 30m from the wetland has been included in Figure 4. It should be noted that the wetland in close proximity to the parking area consists of a narrow band of emergent vegetation (primarily cattails) associated with the riparian area of the Welland River. This portion of the wetland provides minimal ecological function and does not significantly contribute to the remainder of the wetland feature on the Subject Property. The proximity of the parking area to this wetland will not have an impact on the overall function of the wetland feature.

## **6.5 Significant Woodlands**

As discussed above in section 5.4, the woodlands on and adjacent to the property satisfy the size, rare species, other features and proximity to the water criteria and are considered to be Significant Woodland. Our assessments indicate that the east woodland is providing habitat for Wood Thrush and a variety of other bird and wildlife species, while the central woodland is also providing habitat for wildlife.

It is our assessment that no portion of the development will directly impact the woodlands on the Subject Property. For the purposes of this assessment, a 10m buffer from woodlands east and west of the development footprint has been provided on Figure 4. It is our assessment that the provided buffer is more than sufficient to maintain potential habitat for the species documented in the woodland. Implementation of the mitigation measures described below will further assist with avoiding any potential impacts associated with the development.

## **6.6 Watercourses**

As illustrated in Figure 4, a small watercourse bisects the vegetation on the west end of the property. This watercourse serves to drain Chippawa Creek Road is providing limited fish habitat and ecological functions. No impact to this watercourse will occur as a result of this project.

The Welland River borders the southern end of the property and is managed as Type 1 Fish Habitat. No portion of the proposed development is located within or immediately adjacent to the Welland River, and therefore no direct impact to the Welland River or fish habitat will occur as a result of this project.

As illustrated in Figure 4, all development on this property has been situated to maintain a minimum buffer of 15m from fish habitat and the Welland River. The proposed development on the property has been set back sufficiently from the Welland River to avoid any visual impacts to fish and organisms using the Welland River, and stormwater management proposed for the property will avoid any potential water quality impairments. Based on our assessment, the proposed development will not impact fish habitat in the Welland River.

To assist with avoiding potential impacts to fish habitat and the Welland River, it is recommended that lands adjacent to the Welland River be vegetated with native tree and shrub species, and this area be maintained in a natural state.

No portion of the development is located within 30m of Thompson Creek, and no impact to this watercourse will occur as a result of this project.

## **6.7 Wildlife Movement Corridors**

As discussed above, it is suspected that lands adjacent to the Welland River are serving as a wildlife movement corridor in the area, although the function of this corridor is likely impaired due to bisections associated with the hydro canal and restrictions associated with transportation routes and existing residential uses. Based on our assessment of air photos, the riparian area associated with the Welland River east of the property is restricted to approximately 20m in width under the QEW overpass and within the campground east of the QEW. Similarly, the riparian area west of the property is restricted to less than 10m in width near a meander in the Welland River.

Since this development will maintain a natural area adjacent to the Welland River similar in width to lands east and west of the property, the proposed development is not anticipated to affect wildlife movement in the area of the property.

## **7.0 MITIGATION MEASURES**

During the preparation of final designs for the Subject Property, it is recommended that the following mitigation measures be considered:

- The removal of trees and vegetation should be timed to minimize impacts on any wildlife species. It is recommended that tree removal be completed before March 15 or after October 31 to minimize impacts to bird and bat species that may be utilizing the woodland on the property.
- All trees not required to be removed for construction or safety should be maintained on-site.
- Tree hoarding should be installed from any trees to be retained to ensure critical roots are not compacted or injured.
- Adequate sediment and erosion controls should be installed prior to any construction or site alteration work on the Subject Property to prevent sediment from being mobilized and leaving the work area.
- To help maintain tree cover in the area, it is recommended that a landscape plan be created to incorporate additional trees into the final site design.
- Any exterior lighting should be directed away from the woodland on the property to minimize impacts on wildlife.
- Shades should be installed on exterior lighting to prevent light from being directed upward.
- Snow storage should be directed to parking areas to allow meltwater to be directed to the stormwater management system.
- Consider the inclusion of grass swales along the perimeter of impervious surfaces where feasible to collect sediments and pollutants from surface runoffs.
- It is recommended that replacement nesting structures for Barn Swallows be installed as required by MECP to replace nesting habitat lost after barn removal.

- It is proposed that any trees that will be planted on the property are native and non-invasive trees and shrub species.
- Any areas disturbed by development or construction should be reseeded or sodded to prevent or reduce erosion.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

Colville Consulting Inc. was retained to prepare an Environmental Impact Study (EIS) for, the construction of a multi-use facility as well as associated parking areas, a meditation walkway, and amenity areas to be located south of Chippawa Creek Road, west of Heartland Forest Road, in the City of Niagara Fall. To construct the proposed development, an area of less than 1ha of cultural meadow will be removed. No significant woodland features, watercourses, or wetlands will be impacted and suitable buffers have been prescribed to maintain the ecological function and form of these features. Consultation with MECP will be undertaken to address impacts on Species at Risk (Barn Swallows) identified on the property and the development of appropriate mitigation measures as required.

Therefore from our observations of the Subject Property, we conclude that the proposed development will not impact the habitat of Special Concern Species and the woodland to be retained will continue to provide habitat for all wildlife species documented on the property. To assist with avoiding impacts on the ecological function of the woodland, wetland, and watercourse features, it is recommended that the above-noted mitigation measures and recommendations be implemented during the final design and construction of the property.

Based on this assessment, we conclude that the proposed development is consistent with the applicable policies of the Niagara Region Official Plan and the City of Niagara Falls Official Plan. The proposed development also satisfies the intent of NPCA regulatory policies.

Respectfully submitted by:



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Ian Barrett, M.Sc.  
Colville Consulting Inc.

## 9.0 LITERATURE CITED

- City of Niagara Falls. 1993. Official Plan for the City of Niagara Falls. Planning & Development Office Consolidation Amended to April 2019.
- COSEWIC. 2012. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.
- Evans, M., E. Gow, R. R. Roth, M. S. Johnson, and T. J. Underwood (2011). Wood Thrush (*Hylocichla mustelina*), version 2.0. In The Birds of North America (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.246>
- Lee, H.T., W.D. Bakowsky, J.L. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Community Classification for Southern Ontario: First Approximation and Its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.
- Miller, K. E., D. L. Leonard Jr., C. E. Shackelford, R. E. Brown, and R. N. Conner (2019). Red-bellied Woodpecker (*Melanerpes carolinus*), version 2.0. In The Birds of North America (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.rebwoo.02>
- Ministry of Municipal Affairs and Housing. 2014. Provincial Policy Statement. Queen's Printer for Ontario, Ontario, Canada.
- Niagara Peninsula Conservation Authority. 2018. NPCA Policy Document: Policies of the Administration of Ontario Regulation 155/06 and Planning Act 2018.
- Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Ontario Ministry of Natural Resources, Peterborough, Ontario. 188 pp.
- Oldham, M.J. 2010. Checklist of the Vascular Plants of Niagara Regional Municipality Ontario. Section 9.0 in Niagara Region Natural Areas Inventory, Volume 2. Niagara Peninsula Conservation Authority. 428pp.
- Ontario Ministry of Natural Resources. 2000. Significant Wildlife Habitat Technical Guide. Toronto, ON: Queen's Printer for Ontario. 384 pp.
- Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for natural heritage policies of the Provincial Policy Statement, 2005. Second Edition. Toronto, ON: Queen's Printer for Ontario. 248 pp.
- Ontario Ministry of Natural Resources and Forestry. 2017. Survey Protocol for Species at Risk Bats within Treed Habitats - Little Brown Myotis, Northern Myotis & Tri-Colored Bat. Ontario Ministry of Natural Resources and Forestry Guelph District. 13pp.
- Ontario Ministry of Natural Resources and Forestry. 2018. City of Niagara Falls SAR. Guelph, ON: Ontario Ministry of Natural Resources, Guelph District. 3 pp.

Regional Municipality of Niagara. 2008. Amendment 187 to the Official Plan for the Niagara Planning Area as Approved by the Ontario Municipal Board. Section Seven – Environmental Policies.

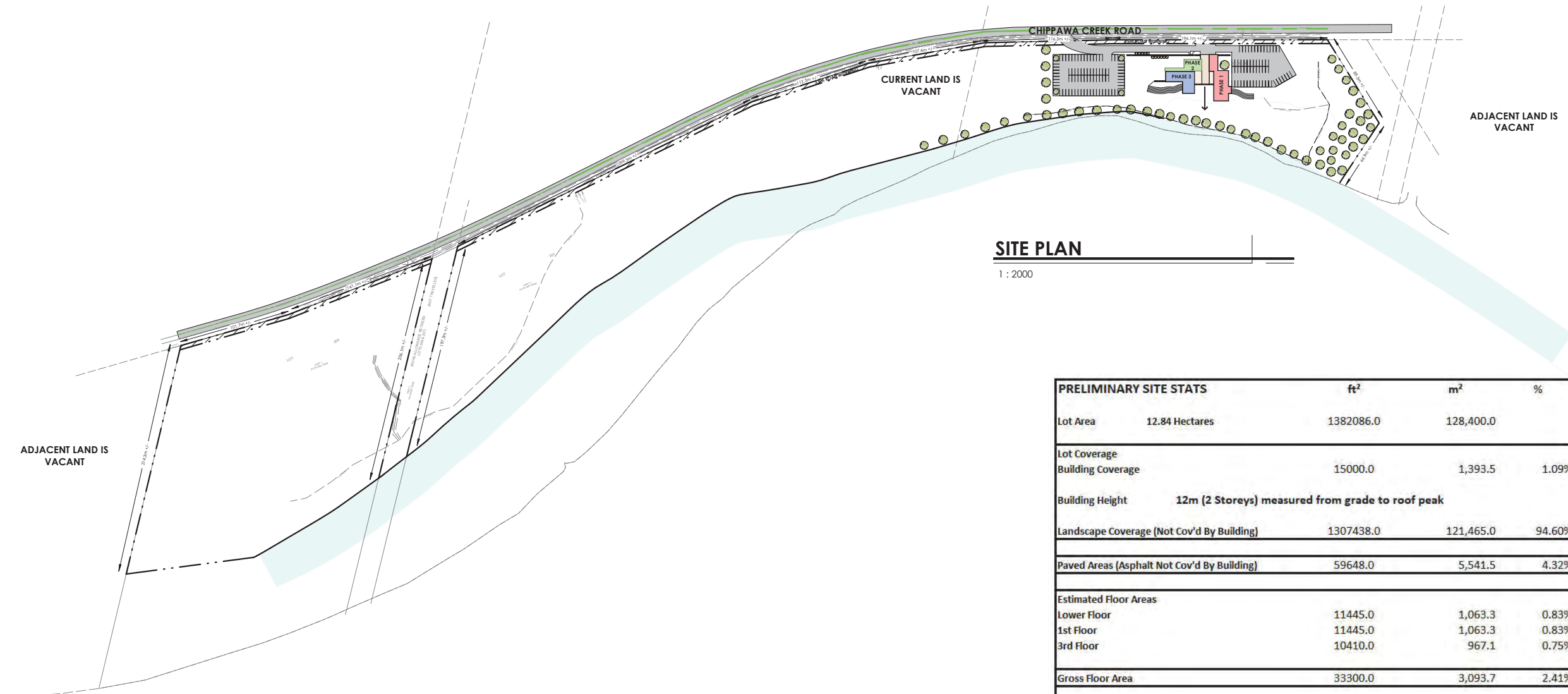
Regional Municipality of Niagara. 2013. Core Natural Heritage Map.

**Appendix A**  
Development Plans

# NEW SERENITY TEMPLE CONCEPT

CHIPPAWA CREEK ROAD, NIAGARA FALLS, ON

SITE LOCATION



## SITE PLAN

1 : 2000

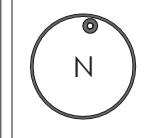
PRELIMINARY SITE STATS		ft <sup>2</sup>	m <sup>2</sup>	%
Lot Area	12.84 Hectares	1382086.0	128,400.0	
Lot Coverage				
Building Coverage		15000.0	1,393.5	1.09%
Building Height	12m (2 Storeys) measured from grade to roof peak			
Landscape Coverage (Not Cov'd By Building)		1307438.0	121,465.0	94.60%
Paved Areas (Asphalt Not Cov'd By Building)		59648.0	5,541.5	4.32%
Estimated Floor Areas				
Lower Floor		11445.0	1,063.3	0.83%
1st Floor		11445.0	1,063.3	0.83%
3rd Floor		10410.0	967.1	0.75%
Gross Floor Area		33300.0	3,093.7	2.41%
Parking				
Restaurant 1 space / 5 seats	70 seats		14 spaces required	
Public Hall/Assembly Hall 1 Space/ 5 person	635 persons		127 spaces required	
Health and Wellness 1 space/40m <sup>2</sup>	2,444.7m <sup>2</sup> /40m <sup>2</sup>		62 spaces required	
<b>Parking Spaces Provided</b>	135 spaces provided		203 spaces required	

### GENERAL NOTES

All contractors and/or trades shall verify all dimensions, notes, site and report any discrepancies prior to commencement of the work. This drawing not to be scaled, all drawings, prints and related documents are the property of the architect and must be returned upon request. Reproduction of drawings and related documents in part or in whole is strictly forbidden without written consent. Drawings to be for the purpose for which they are issued.

NO.	DATE	REVISION	BY:

COMMISSION:  
**PROPOSED NEW SERENITY TEMPLE CONCEPT**



SHEET TITLE:  
**SITE PLAN**

Issued for Re-Zoning  
Issued for Site Plan Agreement  
Issued for Permit  
Issued for Tender  
Issued for Construction

DRAWN BY: \_\_\_\_\_ DWG. No.  
CHECKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
SCALE: AS SHOWN  
PROJECT No.: 2020-139

SP1



## **Appendix B**

### Vascular Plant Checklist

Plant List for the Chippawa Creek Road Property SW of Chippawa Creek Road and Heartland Forest Road, Niagara Falls, ON. Conducted on July 8, October 3 and October 8, 2021.

ScientificName	CommonNames	Coeff.Cons.	Coeff.Wet.	Grank	COSEWIC	COSSARO	SRank	Lrare	WODM5-2/SVDM4/CUM1-1	FOD7-4	MAS2-4	MAS2-1	SAM1	Notes
<i>Acalypha virginica</i> var. <i>rhomboides</i>	Three-seeded Mercury	0	3	G5			S5			x				
<i>Acer negundo</i>	Manitoba Maple	0	-2	G5			S5		x	x				
<i>Acer saccharum</i> ssp. <i>saccharum</i>	Sugar Maple	4	3	G5			S5			x				
<i>Achillea millefolium</i> ssp. <i>millefolium</i>	Common Yarrow	0	3	G5			SE		x					
<i>Acorus americanus</i>	Sweetflag	8	-5	G5			S4	R			x			Rare in floodplain marsh
<i>Agrimonia gryposepala</i>	Tall Agrimony	2	2	G5			S5			x				
<i>Agrostis stolonifera</i>	Creeping Bent Grass	0	-3	G5			S5		x	x				
<i>Agrostis</i> sp	Bent Grass Species								x					
<i>Alisma plantago-aquatica</i>	Common Water-plantain	3	-5	G5			S5		x					
<i>Alliaria petiolata</i>	Garlic Mustard	0	0	G?			SE5			x				
<i>Allium schoenoprasum</i> var. <i>schoenoprasum</i>	European Chives	0	-1	G5			SE2			x				
<i>Ambrosia artemisiifolia</i>	Common Ragweed	0	3	G5			S5		x					
<i>Ambrosia trifida</i>	Giant Ragweed	0	-1	G5			S5		x					
<i>Apios americana</i>	Groundnut	6	-3	G5			S5	U					x	Rare along upland/wetland edge in shrub swamp ecotone
<i>Apocynum androsaemifolium</i> ssp. <i>androsaemifolium</i>	Spreading Dogbane	3	5	G5			S5		x					
<i>Arctium minus</i> ssp. <i>minus</i>	Common Burdock	0	5	G?			SE5		x					
<i>Asclepias incarnata</i> ssp. <i>incarnata</i>	Swamp Milkweed	6	-5	G5			S5				x			
<i>Asclepias syriaca</i>	Common Milkweed	0	5	G5			S5		x					
<i>Aster lanceolatus</i> ssp. <i>lanceolatus</i>	Panicked Aster	3	-3	G5			S5		x	x				
<i>Aster novae-angliae</i>	New England Aster	2	-3	G5			S5		x					
<i>Aster pilosus</i> var. <i>pilosus</i>	Hairy Aster	4	2	G5			S5		x					
<i>Aster puniceus</i> var. <i>puniceus</i>	Purple-stem Aster	6	-5	G5			S5		x		x	x		
<i>Bidens frondosa</i>	Devil's Beggar-ticks	3	-3	G5			S5			x		x		
<i>Bidens vulgata</i>	Tall Beggar-ticks	5	-3	G5			S5		x					
<i>Boehmeria cylindrica</i>	False Nettle	4	-5	G5			S5				x	x		
<i>Calamagrostis canadensis</i>	Canada Blue-joint	4	-5	G5			S5				x	x		
<i>Calystegia sepium</i> ssp. <i>angulata</i>	Hedge Bindweed	2	0	G5			S5		x		x	x		
<i>Carex granularis</i>	Meadow Sedge	3	-4	G5			S5			x				
<i>Carex lacustris</i>	Lakebank Sedge	5	-5	G5			S5				x			
<i>Carex vulpinoidea</i>	Fox Sedge	3	-5	G5			S5			x				
<i>Carex</i> spp	Sedge Species									x				
<i>Carya cordiformis</i>	Bitternut Hickory	6	0	G5			S5			x				
<i>Centaurea jacea</i>	Brown Knapweed	0	5	G?			SE5		x					
<i>Cephalanthus occidentalis</i>	Buttonbush	7	-5	G5			S5		x	x				
<i>Ceratophyllum demersum</i>	Common Coontail	4	-5	G5			S5	R					x	Abundant in the open water channel of Chippawa Creek
<i>Chrysanthemum leucanthemum</i>	Ox-eye Daisy	0	5	G?			SE5		x					
<i>Cichorium intybus</i>	Chicory	0	5	G?			SE5		x					
<i>Cicuta bulbifera</i>	Bulb-bearing Water-hemlock	5	-5	G5			S5					x		
<i>Circaea lutetiana</i> ssp. <i>canadensis</i>	Canada Enchanter's Nightshade	3	3	G5			S5			x				
<i>Cirsium arvense</i>	Canada Thistle	0	3	G?			SE5		x					
<i>Cirsium vulgare</i>	Bull Thistle	0	4	G5			SE5		x	x				
<i>Conyza canadensis</i>	Horseweed	0	1	G5			S5			x				
<i>Cornus amomum</i> ssp. <i>obliqua</i>	Silky Dogwood	5	-4	G5			S5		x	x				
<i>Cornus foemina</i> ssp. <i>racemosa</i>	Grey Dogwood	2	-2	G5			S5		x	x				
<i>Crataegus mollis</i>	Downy Hawthorn	4	-2	G5			S5		x	x				
<i>Crataegus punctata</i>	Dotted Hawthorn	4	5	G5			S5		x	x				
<i>Crataegus</i> sp	Hawthorn Species								x					
<i>Cuscuta polygonorum</i>	Smartweed Dodder			G?			S1	R				x	x	Rare parasitic vine growing in floodplain marsh
<i>Cyperus</i> spp	Flat Sedge Species									x				
<i>Dactylis glomerata</i>	Orchard Grass	0	3	G?			SE5		x	x				
<i>Daucus carota</i>	Wild Carrot	0	5	G?			SE5		x					
<i>Decodon verticillatus</i>	Swamp Loosestrife	7	-5	G5			S5	R					x	Co-dominant with Bluejoint along the edge of shallow marsh and open water channel
<i>Dipsacus fullonum</i> ssp. <i>sylvestris</i>	Common Teaset	0	5	G?			SE5		x	x				
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	5	-2	G5			S5			x				
<i>Echinochloa</i> sp	Barryard Grass Species									x				
<i>Elymus repens</i>	Quack Grass	0	3	G5			SE5		x					
<i>Elymus virginicus</i> var. <i>virginicus</i>	Virginia Wild Rye	5	-2	G5			S5		x	x				
<i>Epilobium</i> sp	Willow-herb Species								x	x	x			
<i>Erechtites hieracifolia</i>	Pilewort	2	3	G5			S5		x	x				
<i>Erigeron annuus</i>	Daisy Fleabane	0	1	G5			S5			x				
<i>Eupatorium maculatum</i> ssp. <i>maculatum</i>	Spotted Joe-pye-weed	3	-5	G5			S5		x		x	x		
<i>Eupatorium perfoliatum</i>	Common Boneset	2	-4	G5			S5				x			
<i>Eupatorium rugosum</i>	White Snakeroot	5	3	G5			S5			x				
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	2	-2	G5			S5		x	x				
<i>Fragaria virginiana</i> ssp. <i>virginiana</i>	Common Strawberry	2	1	G5			S5		x					
<i>Fraxinus pennsylvanica</i>	Red Ash	3	-3	G5			S5		x	x		x		
<i>Geum canadense</i>	White Avens	3	0	G5			S5			x				
<i>Geum</i> sp	Avens species													
<i>Glechoma hederacea</i>	Ground Ivy	0	3	G?			SE5		x					
<i>Gleditsia triacanthos</i>	Honey Locust	3	0	G5			S2	R		x				Escaped sapling from roadside plantings, not a native location
<i>Glyceria striata</i>	Fowl Manna Grass	3	-5	G5			S5			x				
<i>Hesperis matronalis</i>	Dame's Rocket	0	5	G4G5			SE5			x				
<i>Hypericum perforatum</i>	Common St. John's-wort	0	5	G?			SE5			x				
<i>Hypericum punctatum</i>	Spotted St. John's-wort	5	-1	G5			S5			x				
<i>Impatiens capensis</i>	Spotted Touch-me-not	4	-3	G5			S5		x	x	x	x		
<i>Iris</i> sp	Iris Species												x	Either <i>Iris virginicus</i> or <i>I. versicolor</i>
<i>Juglans nigra</i>	Black Walnut	5	3	G5			S4		x	x				



1, 0, -1 - Found equally in upland and wetland areas

-2, -3, -4 Usually occur in wetlands

-5 Almost always occur in wetlands

Grank - Global Rank G1 — Critically Imperiled, G2 — Imperiled, G3 — Vulnerable, G4 — Apparently Secure, G5 — Secure

COSEWIC - Committee on the Status of Endangered Wildlife in Canada

COSSARO - Committee on the Status of Species at Risk in Ontario

Srank - Subnational Rank

S1 — Critically Imperiled - Critically imperiled in the province because of extreme rarity, (often 5 or fewer occurrences)

S2 — Imperiled - Imperiled in the province because of rarity due to very restricted range, very few populations (often 20 or fewer)

S3 — Vulnerable - Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer)

S4 — Apparently Secure - Uncommon but not rare

S5 — Secure - Common, widespread, and abundant in the province

SE — Exotic

Lrank - Local Rank

R - Rare

U - Uncommon

**Appendix C**  
ELC Data Cards



ELC  
PLANT  
SPECIES  
LIST

SITE: \_\_\_\_\_  
POLYGON: OLD ORCHARDS  
DATE: \_\_\_\_\_  
SURVEYOR(S): \_\_\_\_\_

LAYERS: 1=CANOPY 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER  
ABUNDANCE CODES: R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	
FRA PENN	R	O	A	O	
SUG NICK	R	A	A	O	
RHU TYPH		O	O	O	
COR FORA		O	D	D	
COR AMOB			O	O	
VIT RIPA		A	D	A	
PAR INSE			O	O	
RHU RANE			O	O	
JLM AMER	R	O	O	O	
PYR COMM	A				
IMP CAPP				O	
AMB TRIF			O		
CEN JACE				D	
LOT CORN				O	
SOL ALTI				D	
DAC CARO				O	
AST LANC				A	
POA PRAT				A	
PHR AVST			O	O	
PHA ARUN			O	O	
ELY REPE				D	
ELY VIRG				R	
CEP DELI				R	
AGR STOL				A	
EUP MACV			O	O	
ERE HIER				O	
CIR VULC				R	
SET PUM				O	
AMB ARTE				O	
PLA ROSI				R	
TAR OFFI				O	

SPECIES CODE	LAYER				COL.
	1	2	3	4	
CRAT PUNC				O	
CRAT MALL				O	
LOPS MARS				O	
LONG BL				O	
DAC GLAN				A	
BID FRAN				O	
LAP CANA				O	
ACH MIM				O	
SAL ATRD				R	
LOB SIPH				R	
CIR ARVE				O	
GEF HEE				O	
PEU VULG				O	
RUB JCCI				O	
PUR TIBY				O	
EUP GEOM				A	
VICC LAMB				O	
VER VITI				O	
VIB ACES				R	
BID VULG				O	
JUN CERS				O	
CYS IDMC				O	
VER TRAP				R	
AST PUNI				R	
AST NUVA				R	
PASTINA				O	
SORRIBS				O	
CAL SEAN				O	
CIC INTI				R	
ASC SIKI				R	
EUP AUC				O	

ELC  
PLANT  
SPECIES  
LIST

SITE: \_\_\_\_\_  
POLYGON: \_\_\_\_\_  
DATE: \_\_\_\_\_  
SURVEYOR(S): \_\_\_\_\_

LAYERS: 1=CANOPY 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER  
ABUNDANCE CODES: R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	
PHL PRAT				O	
POA COMP				O	
AST PIFI				R	
FRA VIVI				A	
ROS MULT				O	
MAIUS PUM			O	O	
PRO SETA				R	
APRUS TUN				O	
GRA CARO				R	
VIT AM				O	
LIG VULC				O	
ACE NIGR				R	
SAM CANA				R	
ALXERS				R	
IMP CAPP				O	
OND SENS				O	
LIN GENT				R	
ALI PLAN				R	
VER HAST				O	
EPILON				O	
PHA ARUN				O	
JUN ETSO				O	
BID VULG				O	
SET CYPE				O	
PHL SAGI				O	
PHL AVST				O	
TYP ANGV				O	
AGR STOL				A	

- OLD RIVER BANK ORCHARDS  
ON VALLEY SW-NE.  
Very tall 30-50ft tall Pear trees  
with huge 2ft + D diameter  
the >10m layer with white Elm,  
dead Ashlings and occasionally  
Black Walnuts. There is one  
huge Sweet white mulberry  
grove 50-100m dia.  
Sapling reg. of FRA PENN and  
or Jig nigra with many large  
Corylus shades.  
Corylus dominant dominates 25-30  
layer with tall Gothered  
Ash here.  
There are a few medium young  
throughout mixed as well.  
Numerous tracks of various  
distances visible via culverts  
from Chipman Creek Rd and one  
downed tree Typ angv or Phrag  
@ road and other tracks in  
Age stol - top cape - top level down  
slope toward Phrag.

NET SURVEY



**ELC**  
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: FRAM HORSE VALE TO 1840S BRIDGE 197  
POLYGON: Chapman Creek Loop

SURVEYOR(S): ... DATE: ... TIME: ... start finish

UTMZ: ... UTMZ: ... UTMZ: ...

**POLYGON DESCRIPTION**

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
<input type="checkbox"/> TERRESTRIAL <input type="checkbox"/> WETLAND <input type="checkbox"/> AQUATIC	<input type="checkbox"/> ORGANIC <input type="checkbox"/> MINERAL SOIL <input type="checkbox"/> PARENT MIN. <input type="checkbox"/> ACIDIC BEDRK. <input type="checkbox"/> BASIC BEDRK. <input type="checkbox"/> CARB. BEDRK.	<input type="checkbox"/> FLACUSTRINE <input type="checkbox"/> RIVERINE <input type="checkbox"/> BOTTOMLAND <input type="checkbox"/> TERRACE <input type="checkbox"/> VALLEY SLOPE <input type="checkbox"/> TABLELAND <input type="checkbox"/> ROLL UPLAND <input type="checkbox"/> CLIFF <input type="checkbox"/> TALLUS <input type="checkbox"/> CREVICE / CAVE <input type="checkbox"/> ALVAR <input type="checkbox"/> ROCKLAND <input type="checkbox"/> BEACH / BAR <input type="checkbox"/> SAND DUNE <input type="checkbox"/> SLUFF	<input type="checkbox"/> NATURAL <input type="checkbox"/> CULTURAL	<input type="checkbox"/> PLANKTON <input type="checkbox"/> SUBMERGED <input type="checkbox"/> FLOATING-LVD. <input type="checkbox"/> GRAMINOID <input type="checkbox"/> FORB <input type="checkbox"/> LOGSN <input type="checkbox"/> BRYOPHYTE <input type="checkbox"/> TROCHOCYBUS <input type="checkbox"/> CONIFEROUS <input type="checkbox"/> MIXED	<input type="checkbox"/> LAKE <input type="checkbox"/> POND <input type="checkbox"/> RIVER <input type="checkbox"/> STREAM <input type="checkbox"/> MARSH <input type="checkbox"/> SWAMP <input type="checkbox"/> FEN <input type="checkbox"/> BOG <input type="checkbox"/> BARREN <input type="checkbox"/> MEADOW <input type="checkbox"/> PRAIRIE <input type="checkbox"/> THicket <input type="checkbox"/> SAVANNAH <input type="checkbox"/> WOODLAND <input type="checkbox"/> FOREST <input type="checkbox"/> PLANTATION
SITE			<input type="checkbox"/> OPEN <input type="checkbox"/> SHRUB <input type="checkbox"/> TREED		
<input type="checkbox"/> OPEN WATER <input type="checkbox"/> SHALLOW WATER <input type="checkbox"/> SURFICIAL DEP. <input type="checkbox"/> BEDROCK					

**STAND DESCRIPTION:**

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	3	JUG NIGR > FRA PENN > ULM AMER > PYR COMM
2 SUB-CANOPY	3	2	JUG NIGR > FRA PENN > ULM AMER > PYR COMM
3 UNDERSTOREY	4.3	3.4	COR FRA > ULM AMER > PYR COMM
4 GRD. LAYER	5.6	4	AST CANE > IMP CACT > SOL ALB > PE ...

HT CODES: 1 = >25m 2 = 10-25m 3 = 2-10m 4 = 1-2m 5 = 0.5-2m 6 = 0.2-1m 7 = 0.1-0.2m 8 = 0.05-0.1m  
CVR CODES: 1 = NONE 2 = 0% - 10% 3 = 10% - 25% 4 = 25% - 50% 5 = 50% - 75% 6 = 75% - 90% 7 = 90% - 100%

**STAND COMPOSITION:**

JUG NIGR 60% FRA PENN 20% ULM AMER 10% PYR COMM 10% BA: 26

**SIZE CLASS ANALYSIS:**

SIZE CLASS	A	< 10	10-24	25-50	> 50
STANDING SHADES:	A	< 10	10-24	25-50	> 50
DEAD PALE FLGS:	A	< 10	10-24	25-50	> 50

**ABUNDANCE CODES:** N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

**COMM. AGE:** PIONEER YOUNG MID-AGE MATURE OLD GROWTH

**SOIL ANALYSIS:**

TEXTURE: SIC DEPTH TO MOTTLES / GLEY: g = ... G = ...

MOISTURE: DEPTH OF ORGANICS: (cm)

HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: (cm)

**COMMUNITY CLASSIFICATION:** ELC CODE

COMMUNITY CLASS: ...

COMMUNITY SERIES: ...

ECOSITE: ...

VEGETATION TYPE: FRESH-MOIST BLACK WALNUT LOWLAND DECIDUOUS FOREST FOD7-4

INCLUSION: ...

COMPLEX: ...

Notes:

**ELC**  
STAND CHARACTERISTICS

SITE: FRAM HORSE VALE TO 1840S BRIDGE 197  
POLYGON: Chapman Creek Loop

DATE: ...  
SURVEYOR(S): ...

**TREE TALLY BY SPECIES:**

PRISM FACTOR: 3

SPECIES	TALLY 1	TALLY 2	TALLY 3	TALLY 4	TALLY 5	TOTAL	REL AVG
JUG NIGR	20	3				23	62
FRA PENN	1	2				3	15
ULM AMER	1					1	4
PYR COMM	1					1	8
...							8
...							4
TOTAL	20	6				26	100
BASAL AREA (BA)	10	15				25	
DEAD	1	1				2	

**STAND DESCRIPTION:**

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER			

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER			

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER			









## **Appendix D**

### Site Photos





Photo 1. Example of vegetation conditions in the CUM1-1 community on the east side of the property.



Photo 2. Example of site conditions in the vicinity of the barn on property.





Photo 3. Example of Barn Swallow nest in barn on Subject Property.



Photo 4. Example of vegetation conditions in the WODM5-2 complex community on the property.





Photo 5. Example of vegetation conditions in the WODM5-2 complex community on the property.



Photo 6. Example of vegetation conditions in the WODM5-2 complex community on the property.





Photo 7. Example of vegetation conditions in the THDM2-11 community on the property.



Photo 8. Example of vegetation conditions in the SVDM4 community on the property.





Photo 9. Example of vegetation conditions in the MAS2-4 and MAS8-1 communities on the property.



Photo 10. Example of vegetation conditions in the MAS2-4 and MAS8-1 communities on the property.





Photo 11. Example of vegetation conditions in the vicinity of the watercourse on the property.  
Photo from Chippawa Creek Road facing south.



Photo 12. Example of vegetation conditions within and adjacent to the watercourse on the property.



## **Appendix E**

NHIC Data

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1037462	SPECIES	Timber Rattlesnake	<i>Crotalus horridus</i>		EXP	EXP	17PH5268	
1037462	SPECIES	Northern Bobwhite	<i>Colinus virginianus</i>		END	END	17PH5268	
1037462	SPECIES	Eastern Pondmussel	<i>Ligumia nasuta</i>		END	SC	17PH5268	
1037462	SPECIES	Midland Painted Turtle	<i>Chrysemys picta marginata</i>			SC	17PH5268	
1037462	SPECIES	Biennial Gaura	<i>Oenothera gaura</i>				17PH5268	
1037462	SPECIES	Grass Pickerel	<i>Esox americanus</i>		SC	SC	17PH5268	
1037462	SPECIES	Black Gum	<i>Nyssa sylvatica</i>				17PH5268	
1037462	SPECIES	Northern Map Turtle	<i>Graptemys geographica</i>		SC	SC	17PH5268	
1037451	NATURAL AREA	Welland River East Wetland Complex					17PH5167	
1037451	NATURAL AREA	Thompson Creek Wetland Complex					17PH5167	
1037451	SPECIES	Round Hickorynut	<i>Obovaria subrotunda</i>		END	END	17PH5167	
1037451	SPECIES	Timber Rattlesnake	<i>Crotalus horridus</i>		EXP	EXP	17PH5167	
1037451	SPECIES	Northern Bobwhite	<i>Colinus virginianus</i>		END	END	17PH5167	
1037451	SPECIES	Eastern Pondmussel	<i>Ligumia nasuta</i>		END	SC	17PH5167	
1037451	SPECIES	Grass Pickerel	<i>Esox americanus</i>		SC	SC	17PH5167	
1037451	SPECIES	Bobolink	<i>Dolichonyx oryzivorus</i>		THR	THR	17PH5167	
1037451	SPECIES	Snapping Turtle	<i>Chelydra serpentina</i>		SC	SC	17PH5167	
1037461	NATURAL AREA	Lower Grassy Brook Wetland Complex					17PH5267	
1037461	NATURAL AREA	Welland River East Wetland Complex					17PH5267	
1037461	SPECIES	Round Hickorynut	<i>Obovaria subrotunda</i>		END	END	17PH5267	
1037461	SPECIES	Timber Rattlesnake	<i>Crotalus horridus</i>		EXP	EXP	17PH5267	
1037461	SPECIES	Northern Bobwhite	<i>Colinus virginianus</i>		END	END	17PH5267	

<b>OGF ID</b>	<b>Element Type</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>SRank</b>	<b>SARO Status</b>	<b>COSEWIC Status</b>	<b>ATLAS NAD83 IDENT</b>	<b>COMMENTS</b>
1037461	SPECIES	Eastern Pondmussel	Ligumia nasuta		END	SC	17PH5267	
1037461	SPECIES	Biennial Gaura	Oenothera gaura				17PH5267	
1037461	SPECIES	Grass Pickerel	Esox americanus		SC	SC	17PH5267	
1037461	SPECIES	Bobolink	Dolichonyx oryzivorus		THR	THR	17PH5267	
1037461	SPECIES	Snapping Turtle	Chelydra serpentina		SC	SC	17PH5267	

**NHIC Data**

To work further with this data select the content and copy it into your own word or excel documents.

<b>OGF ID</b>	<b>Element Type</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>SRank</b>	<b>SARO Status</b>	<b>COSEWIC Status</b>	<b>ATLAS NAD83 IDENT</b>	<b>COMMENTS</b>
1037452	NATURAL AREA	CYANAMID CORNERS					17PH5168	
1037452	NATURAL AREA	NIAGARA FALLS WOODLOT #2					17PH5168	
1037452	NATURAL AREA	CYANIMID WINDFALL SLOUGH FOREST					17PH5168	
1037452	NATURAL AREA	Thompson Creek Wetland Complex					17PH5168	
1037452	SPECIES	Round Hickorynut	Obovaria subrotunda		END	END	17PH5168	
1037452	SPECIES	Timber Rattlesnake	Crotalus horridus		EXP	EXP	17PH5168	
1037452	SPECIES	Northern Bobwhite	Colinus virginianus		END	END	17PH5168	
1037452	SPECIES	Eastern Pondmussel	Ligumia nasuta		END	SC	17PH5168	
1037452	SPECIES	Weak Stellate Sedge	Carex seorsa				17PH5168	
1037452	SPECIES	Midland Painted Turtle	Chrysemys picta marginata			SC	17PH5168	
1037452	SPECIES	Round-leaved Greenbrier	Smilax rotundifolia		THR	THR	17PH5168	
1037452	SPECIES	Grass Pickerel	Esox americanus		SC	SC	17PH5168	
1037452	SPECIES	Black Gum	Nyssa sylvatica				17PH5168	
1037452	SPECIES	Northern Map Turtle	Graptemys geographica		SC	SC	17PH5168	
1037452	SPECIES	Virginia Water-horehound	Lycopus virginicus				17PH5168	
1037462	NATURAL AREA	Warren Creek Wetland Complex					17PH5268	
1037462	NATURAL AREA	Welland River East Wetland Complex					17PH5268	
1037462	NATURAL AREA	Thompson Creek Wetland Complex					17PH5268	
1037462	SPECIES	Round Hickorynut	Obovaria subrotunda		END	END	17PH5268	

## **Appendix F**

### Significant Wildlife Habitat Assessment

Table 1. Significant Wildlife Habitat Assessment – Chippawa Creek Road

Significant Wildlife Habitat (SWH) Type	Known or Candidate SWH present/absent	Rationale
<b>SEASONAL CONCENTRATION AREAS OF ANIMALS</b>		
Waterfowl Stopover and Staging Areas	Absent	Suitable habitat not present on Subject Lands
Shorebird Migratory Stopover Area	Absent	Suitable habitat not present on Subject Lands
Raptor Wintering Area	Absent	Suitable habitat not present on Subject Lands
Bat Hibernacula	Absent	Suitable overwintering habitat not present on Subject Lands
Bat Maternity Colonies	Potentially Present	Suitable habitat present on west side of Subject Lands in FOD7-4 community. No portion of the proposed project will impact trees in this area.
Turtle Wintering Areas	Absent	Suitable overwintering habitat not present on Subject Lands
Reptile Hibernaculum	Absent	No potential hibernacula observed on Subject Lands
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff)	Absent	Suitable habitat not present on Subject Lands
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs)	Absent	Suitable habitat not present on Subject Lands
Colonially -Nesting Bird Breeding Habitat (Ground)	Absent	Suitable habitat not present on Subject Lands
Migratory Butterfly Stopover Areas	Absent	Suitable habitat not observed on Subject Lands
Landbird Migratory Stopover Areas	Absent	Suitable habitat not observed on Subject Lands
Deer Winter Congregation Areas	Absent	Suitable winter concentration habitat not present on Subject Lands
<b>RARE VEGETATION COMMUNITIES</b>		
Cliffs and Talus Slopes	Absent	Habitat type not present on Subject Lands
Sand Barren	Absent	Habitat type not present on Subject Lands
Alvar	Absent	Habitat type not present on Subject Lands
Old Growth Forest	Absent	Habitat type not present on Subject Lands
Savannah	Absent	Habitat type not present on Subject Lands



Tallgrass Prairie	Absent	Habitat type not present on Subject Lands
Other Rare Vegetation Communities	Absent	No rare vegetation communities present on Subject Lands
<b>SPECIALIZED HABITATS OF WILDLIFE CONSIDERED SWH</b>		
Waterfowl Nesting Area	Absent	Suitable habitat not present on Subject Lands
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Absent	Suitable habitat not present on Subject Lands
Woodland Raptor Nesting Habitat	Absent	Suitable habitat not present on Subject Lands
Turtle Nesting Areas	Absent	Suitable habitat not present on Subject Lands
Seeps and Springs	Absent	Suitable habitat not present on Subject Lands
Amphibian Breeding Habitat (Woodland)	Absent	Suitable habitat not present on Subject Lands
Amphibian Breeding Habitat (Wetlands)	Absent	Potential breeding habitat available in Welland River on edge of MAS8-1 community.
Woodland Area-Sensitive Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands
<b>HABITATS OF SPECIES OF CONSERVATION CONCERN CONSIDERED SWH</b>		
Marsh Breeding Bird Habitat	Absent	Suitable habitat not present on Subject Lands
Open Country Bird Breeding Habitat	Absent	Candidate habitat not present on Subject Lands
Shrub/Early Successional Bird Breeding Habitat	Absent	Candidate habitat not present on Subject Lands
Terrestrial Crayfish	Absent	Suitable habitat not present on Subject Lands
Special Concern and Rare Wildlife Species	Present	Wood Thrush suspected to be nesting east of property. A portion of the woodland on the east side of the property forms part of the breeding territory of these individuals.
<b>ANIMAL MOVEMENT CORRIDORS</b>		
Amphibian Movement Corridors	Absent	Suitable habitat not present on Subject Lands
Bat Migratory Stopover Area	Absent	Suitable habitat not present on Subject Lands

Please note the above SWH criteria are based on guidance provided by the Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E and modified to be specific for the Subject Property.