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

PREPARED FOR:

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C21059 November 2022

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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.



Document Path: H:\COLVILLE\9500 - Colville C21059\gis\mxd\C21059 Figure 1 Location of Subject Lands.mxd Date Saved: June 3, 2022



Document Path: H:\COLVILLE\9500 - Colville C21059\gis\mxd\C21059 Figure 2 Mapped Natural Heritage Features.mxd Date Saved: October 14, 2022

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 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.

EIS for Chippawa Creek Road Property November 2022 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.

1 ,	
Core Natural Heritage System Component	Adjacent Lands Where an EIS Shall Be Required for Development Applications
Environmental Protection Area	
Provincially Significant Wetland	All lands within 120 metres
Significant Habitat of Threatened and Endangered Species	All lands within 50 metres
Environmental Conservation Area	
 Significant Woodlands 	All lands within 50 metres.
 Significant Wildlife Habitat 	All lands within 50 metres.
 Significant Habitat for Species of Concern 	All lands within 50 metres.
≻ Fish Habitat	All lands within 30 metres of the top of bank.

Table 1 - EIS Requirements for lands adjacent to Core Natural Areas

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 8th, October 3rd and 8th, 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 Panicled 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

EIS for Chippawa Creek Road Property

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 Panicled 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, Panicled 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.

Panicled Aster dominates (>> 60% cover) the ground layer with an abundance of Spotted Touch-menot, 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

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:



*Denotes Inclusion in WODM5-2 Complex

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 Chipr	awa Creek Road Property	C 7
Table 2 - Results of breeding	, biru surveys at Chipp	awa Cleek Koau Property	y

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

EIS for Chippawa Creek Road Property

- 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.

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

Table 3 - Results of amphibian call surveys.

*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 Garternsnake, 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 Cranefly (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).

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

Table 4 - Welland River Fish Species List.

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 in 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.

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

Table 5 - Assessment of	Significant	Woodland	Criteria
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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 onsite.
- 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:

Un

Ian Barrett, M.Sc. Colville Consulting Inc.

9.0 LITERATURE CITED

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EIS for Chippawa Creek Road Property November 2022 30

Appendix A

Development Plans

NEW SERENITY TEMPLE CONCEPT

CHIPPAWA CREEK ROAD, NIAGARA FALLS, ON



			GENERAL NOTES	
/				
\ i	/			
\sim /			All contractors and/or trades shall	verify all dimensions, notes, site
	/		and report any discrepancies prior This drawing not to be scaled, all d	to commencement of the work. Irawings, prints and related
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rovided	203 spaces requ	uired	CHECKED BY:	
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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
Acalypha virginica var. rhomboidea	Three-seeded Mercury	0	3	G5			S5			х				
Acer negundo	Manitoba Maple	0	-2	G5			S5		x	х				
Acer saccharum ssp. saccharum	Sugar Maple	4	3	G5			S5			х				
Achillea millefolium ssp. millefolium	Common Yarrow	0	3	G5			SE		x					
Acorus americanus	Sweetflag	8	-5	G5			S4	R			х			Rare in floodplain marsh
Agrimonia gryposepala	Tall Agrimony	2	2	G5			S5			х				
Agrostis stolonifera	Creeping Bent Grass	0	-3	G5			S5		x	х				
Agrostis sp	Bent Grass Species								x					
Alisma plantago-aquatica	Common Water-plantain	3	-5	G5			S5		x					
Alliaria petiolata	Garlic Mustard	0	0	G?			SE5			х				
Allium schoenoprasum var. schoenoprasum	European Chives	0	-1	G5			SE2			х				
Ambrosia artemisiifolia	Common Ragweed	0	3	G5			55		x					
Ambrosia tritida	Giant Ragweed	0	-1	G5			55		x					
Apios americana	Groundnut	6	-3	G5			55	U					х	Rare along upland/wetland edge in shrub swamp ecotone
Apocynum androsaemitolium ssp. androsaem	Spreading Dogbane	3	5	G5			55		x	-				
Arctium minus ssp. minus	Common Burdock	0	5	G?			SE5		x					
Asciepias incarnata ssp. incarnata	Swamp Milkweed	6	-5	G5			55				x			
Asciepias syriaca	Common Milkweed	0	5	G5			55		x					
Aster lanceolatus ssp. lanceolatus	Panicied Aster	3	-3	G5			55		x	x				
Aster novae-angliae	New England Aster	2	-3	G5			55		x					
Aster pilosus var. pilosus	Hairy Aster	4	2	G5			55		x					
Aster puniceus var. puniceus	Purple-stem Aster	6	-5	G5			55		x		x	X		
Bidens frondosa	Devil's Beggar-ticks	3	-3	G5			55		x	x		x		
Bidens vulgata	Tali Beggar-ticks	5	-3	G5			55		x					
Boenmena cylindrica	False Nettle	4	-5	G5			55				X	X		
Calamagrostis canadensis	Canada Blue-joint	4	-5	G5			55				х	х		
Calystegia sepium ssp. angulata	Hedge Bindweed	2	0	G5			55		x		х	х		
Carex granularis	Meadow Sedge	3	-4	G5			55			х				
Carex lacustris	Lakebank Sedge	5	-5	G5			55				X			
Carex vulpinoidea	Fox Sedge	3	-5	G5			\$5			х				
Carex spp	Sedge Species									х				
Carya corditormis	Bitternut Hickory	6	0	G5			\$5			х				
Centaurea jacea	Brown Knapweed	0	5	G?			SE5		x					
Cephalanthus occidentalis	Buttonbush	/	-5	G5			55		x	х				
Ceratophyllum demersum	Common Coontail	4	-5	G5			\$5	R					х	Abundant in the open water channel of Chippawa Creek
Chrysanthemum leucanthemum	Ox-eye Daisy	0	5	G?			SE5			х				
Cichorium intybus	Chicory	0	5	G?			SE5		x					
Cicuta buibirera	Buib-bearing water-nemiock	5	-5	G5			55					x		
Circaea lutetiana ssp. canadensis	Canada Enchanter's Nightshade	3	3	G5			\$5			х				
Cirsium arvense	Canada Thistle	0	3	G?			SE5		x					
Cirsium vuigare	Bull I histie	0	4	G5			SE5		x	X				
Conyza canadensis	Horseweed	0	1	G5			55			X				
Cornus amomum ssp. obliqua	Silky Dogwood	5	-4	G5			55		x	X				
Crotogue mellie	Downy Howthorn	4	-2	G5 CF			- 35 SE		*	~				
Crataegus montata	Downy nawthorn	4	-2	G5 CF			- 35 SE		*	~				
Crataegus punciala	Howthern Species	4	5	65			35		*	^				
Curauta polygoporum	Smortwood Doddor			62			C1	Р	*			v	~	Para parasitia vina growing in floodolain march
Cuporus app	Elat Sadao Species			Gr			31	ĸ		~		^	^	
Dectulis alomerate	Orchard Grass	0	3	62			SE5		×	×				
Daucus carota	Wild Carrot	0	5	62			SE5		~	^				
Decodon verticillatus	Swamp Loosestrife	7	-5	65			S5	P	^				×	Co-dominant with Blueigint along the edge of shallow marsh and open water chan
Discould fullerum con autoestric	Germon Topsel	0	-5	63			SEE	ĸ	,	~			^	co-dominant with bidejoint along the edge of shallow marsh and open water chain
Dryonteris carthusiana	Spinulose Wood Fern	5	-2	65			S5		^	×				
Echinochioa so	Barnyard Grass Species	ÿ	-2	00			00			×				
Elvmus repens	Quack Grass	0	3	G5	+	1	SE5		×	^				
Elymus virginicus var virginicus	Virginia Wild Rve	5	-2	65			\$5		×	×				
Enjiohium sp	Willow-berb Species	ÿ	-2	00			00		~	×	×			
Erechtites bieracifolia	Pilewort	2	3	G5			\$5		×	Y	~			
Erigeron annuus	Daisy Eleabane	0	1	G5			S5		~	Y				
Eugerorium maculatum sen, maculatum	Spotted loe-pye-weed	3	-5	65			\$5		×	^	×	×		
Eupatorium nerfoliatum	Common Boneset	2	-4	G5			S5		~		Y	~		
Eupatorium rugosum	White Snakeroot	5	3	G5			S5			×	^			
Euthamia graminifolia	Grass-leaved Goldenrod	2	-2	G5			S5		×	×				
Fragaria virginiana ssp. virginiana	Common Strawberry	2	1	G5	1	1	55	1	Ŷ	Ê				
Fraxinus pennsylvanica	Red Ash	3	-3	G5	1	1	55	1	Ŷ	¥		¥		
Geum canadense	White Avens	3	n -5	G5	1	1	55	1	<u>^</u>	Ŷ		Ê		
Geum sp	Avens species			05	1	1		1		Â				
Glechoma hederacea	Ground law	0	3	G?	1	1	SE5	1	×	1				
Gleditsia triacanthos	Honey Locust	3	0	G5	1	1	S2	P	^					Escaped sanling from roadside plantings, not a native location
Glyceria striata	Fowl Manna Grass	3	-5	G5	1	1		n.		÷				couped suppling in onit roduside plantings, hot a flative location
Hesperis matronalis	Dame's Rocket	0	5	GAGE	1	1	SE5	1		÷				
Hypericum perforatum	Common St. John's-wort	0	5	62	1	1	SES	1		÷				
Hypericum punctatum	Spotted St. John's-wort	5	-1	G5	1	1	S5	1		Ŷ				
Impatiens capensis	Spotted Touch-me-not	4	-3	G5	1	1	S5	1	×	Ŷ	x	x		
Iris sp	Iris Species	1	-5		1	1		1	<u>^</u>	Ê	Ê	Ê	¥	Fither Iris virginicus or I. versicolor
Juglans nigra	Black Walnut	5	3	G5	1	1	S4	1	×	×	1	1	Â	

1	0-4 D		-	05			05	r			1	r		
Juncus ettusus ssp. solutus	Soft Rush	4	-5	65			55		X	X				
Juncus tenuis	Path Rush	0	0	G5			S5			х				
Lapsana communis	Nipplewort	0	5	G?			SE5		x					
Lemna minor	Lesser Duckweed	2	-5	G5			S5						х	
Liquistrum vulgare	Common Privet	0	1	G?			SE5		x					
Ligdora honzoin	Coinchuch	6	2	0.			020							
Lindera benzoin	Spicebush	0	-2	65			35	-	X	x				
Lobelia siphilitica	Great Blue Lobelia	6	-4	G5			S5	R	x	х				Growing in wet meadow along swales and at floodplain edge
Lonicera morrowii	Morrow's Honeysuckle	0	5	G?			SE3		x					
Lonicera X bella	Showy Fly Honeysuckle	0	5	G?			SE2		x					
Lotus comiculatus	Bird's-foot Trefoil	0	1	G?					¥					
	Water barehound Cossies			0.					~					
Lycopus sp	Water-HoreHound Species						055					^		
Lythrum saiicana	Purpie Loosestrire	0	-5	G5			SE5			x	x	x		
Malus pumila	Common Apple	0	5	G5			SE5		x	х				
Mimulus ringens	Square-stemmed Monkey-flower	6	-5	G5			S5						х	
Nymphaea odorata ssp. tuberosa	Fragrant White Water-lily	5	-5	G5			SU	U					х	Occassional, floating on the open water channel of Chippawa Creek
Onoclea sensibilis	Sensitive Fern	4	-3	G5			S5		¥	¥	¥			
Baniauman	Bania Grace Species		-							~				
Panicumsp	Fallic Glass Species		_							^				
Parthenocissus inserta	Thicket Creeper	3	3	G5			55		x					
Pastinaca sativa	Wild Parsnip	0	5	G?			SE5		x					
Peltandra virginica ssp. virginica	Green Arrow-arum	9	-5	G5			S2	R					x	Rare, along the edge of shallow marsh and open water channel
Phalaris arundinacea	Reed Canary Grass	0	-4	G5			S5		x	х	х	x		
Phleum pratense	Timothy	0	3	G?			SE5	1	¥			1		
Phrogmitos quetralis	Common Bood	0	4	0:			010		^		<u> </u>			
r nayilles australis		U	-4	65	├		35		x	×				
Picris hieracioides ssp. hieracioides	Hawkweed Oxtongue	0	5	G5			SE5	L		х	l	L		
Pilea pumila	Common Clearweed	5	-3	G5			S5			х	х	х		
Plantago rugelii	Pale Plantain	1	0	G5			S5		x					
Poa compressa	Canada Blue Grass	0	2	G?			S5	I	x			I		
Pos pratensis son pratensis	Kentucky Blue Grass	0	1	62			S5		×	×				
Poa pratensis ssp. pratensis	Relitucky Blue Glass	0	5	01			35		^	^				All and an to floor delate accession
Polygonum ampnibium	Water Smartweed	5	-5	65			55	U			x			Abundant in fioodplain marsh
Polygonum hydropiperoides	Mild Water Pepper	4	-5	G5			S5	R			х			Rare in floodplain marsh
Polygonum punctatum	Dotted Smartweed	4	-5	G5			S5			х	х			
Polygonum sagittatum	Arrow-leaved Tearthumb	5	-5	G5			S4		x		x	x		
Polvgonum virginianum	Jumpseed	6	0	G5			S4			х				
Polygonum sp	Smartweed Species									×				
Principality and the second se	Lisel ell	F	5	C.F.			05							
Prunella vulgans ssp. lanceolata	near-all	5	5	65			35		X					
Prunus serotina	Black Cherry	3	3	G5			55		X	х				
Pyrus communis	Common Pear	0	5	G5			SE4		x	х				
Quercus bicolor	Swamp White Oak	8	-4	G5			S4		x	х				
Quercus macrocarpa	Bur Oak	5	1	G5			S5	U		х				Rare in floodplain forest
Rhamnus cathartica	Common Buckthorn	0	3	G?			SE5		¥	×				
Rhue redicere con requirde	Climbing Deigen in:	Ē	4	0.			020							
Rifus radicalis ssp. negundo	Cillibility Polson-ivy		- 1	05			35		^	^				
Rnus typnina	Stagnorn Sumac	1	5	65			55		X					
Rosa multiflora	Multiflora Rose	0	3	G?			SE4		x	х				
Rubus allegheniensis	Common Blackberry	2	2	G5			S5		x	х				
Rubus idaeus ssp. melanolasius	Wild Red Raspberry	0	-2	G5			S5		x	×				
Rubus occidentalis	Black Raspherry	2	5	G5			S5		x	×				
Rumey on	Deals Creation	-	Ű	00			00		~	~				
Runlex sp	Dock Species		-				0.7				x			
Sagittaria latifolia	Common Arrowhead	4	-5	G5			55					x		
Salix cinerea	Ashy Willow	0	5	G5			SE2		x	х				
Salix X rubens	Hybrid White Willow	0	-4	G?			SE4		x	x				
Sambucus canadensis	Common Elderberry	5	-2	G5			S5		x					
Scirnus cyperinus	Wool Grass	4	-5	65			S5		¥		¥			
Scutellaria lateriflora	Blue Skullcop	5	-5	65		-	95		~	1			×	
	Dige Skulcap	5	-5	00			35						^	
Setaria faberi	Glant Foxtall	0	2	6?			SE4			x				
Setaria pumila	Yellow Foxtail	0	0	G?			SE5		x					
Solidago altissima var. altissima	Tall Goldenrod	1	3	G?			S5		x	х				
Sonchus sp	Sow-thistle Species								x					
Sparganium eurycarpum	Giant Bur-reed	3	-5	G5			S5					х		
Taraxacum officinale	Common Dandelion	0	3	G5			SE5		¥					
Typha anguatifalia	Norrow loaved Cattail	2	5	CF.			25			×	×	v		
Typna angusulolla	White Fire	3	-0	05	<u> </u>	-	00		<u>^</u>		^	^		
Ulmus americana	white Eim	3	-2	G5?			55		x	x		x		
Urtica dioica ssp. gracilis	Slender Stinging Nettle	2	-1	G5T?			S5				х			
Utricularia vulgaris	Common Bladderwort	4	-5	G5			S5	U					х	Abundant in the open water channel of Chippawa Creek
Vallianaria amarianna	Tape-grass	6	-5	G5			S5						x	
vallistieria americaria			-				SE5		x					
Verbascum blattaria	Moth Mullein	0	4	G?										
Valiishena americana Verbascum blattaria Verbascum thansus	Moth Mullein	0	4	G? G?			SE5		Y					
Verinsherra americana Verbascum thapsus Verbascum thapsus	Moth Mullein Common Mullein Blue Vencein	0	4 5	G? G?			SE5		x					
Verbascum blattaria Verbascum blattaria Verbascum thapsus Verbena hastata	Moth Mullein Common Mullein Blue Vervain	0 0 4	4 5 -4	G? G? G5			SE5 S5		x		x			
Verbascum blattaria Verbascum blattaria Verbascum thapsus Verbena hastata Verbena urticifolia	Moth Mullein Common Mullein Blue Vervain White Vervain	0 0 4 4	4 5 -4 -1	G? G? G5 G5			SE5 S5 S5		x x x	x	x			
Vainsnena anterkanna Verbascum Ibaltaria Verbasum Ibaltaria Verbena hastata Verbena urticilolia Viburnum recognitum	Moth Mullein Common Mullein Blue Vervain White Vervain Southern Arrow-wood	0 0 4 4 7	4 5 -4 -1 -2	G? G5 G5 G5 G5			SE5 S5 S5 S4		x x x x x	x	x			
Valissiena altericana Verbascum blataria Verbascum thapsus Verbena hastata Verbena urticifolia Viburnum recognitum Vicia cracca	Moth Mullein Common Mullein Blue Vervain White Vervain Southern Arrow-wood Cow Vetch	0 4 4 7 0	4 5 -4 -1 -2 5	G? G? G5 G5 G5 G5 G5			SE5 S5 S5 S4 SE5		x x x x x	x	x			
Valissiena arhericana Verbascum blataria Verbascum blataria Verbena hastata Verbena uricifolia Viburnum recognitum Vicia racca Viola sp	Moth Mullein Common Mullein Blue Vervain White Vervain Southern Arrow-wood Cow Vetch Violet Species	0 0 4 4 7 0	4 5 -4 -1 -2 5	G? G5 G5 G5 G5 G7			SE5 S5 S5 S4 SE5		x x x x x x	x	x			

Legend CoeCons. - Coefficient of Conservatism. Scores for each species range from 0 (low conservatism) to 10 (high conservatism).

A conservatism value of 0 indicates species is widespread. A value of 8, 9 or 10 indicates that a species is a habitat specialist. CoeWet. - Coefficient of Wetness

5 - Almost always occur in upland areas 4, 3, 2 - Usually occur in upland areas

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

LLL		In friend	A CISIC	the second	POLYGON:	Addie Fall		EI	C		SITE					
COMMUNITY	SUHVEYO	DA(S):	CG-	DATE:	THE	- In 1	1				POLYGON:					
LASSIFICATION	UTMT-	1077	1.07-	OEV.	S/S II finis	sh		STA	ND		DATE					
		10,			UTAMN:			CHARACT	ERISTICS	5	SURVEYOR	[\$]:			_	
JLIGON DE	SCRIPT	DON					3	REE TALLY BY	SPECIES	:						
STSTEM	SUBST	BATE	FEATURE	אטזעאא	PLANT FORM	COMMUNITY	1 -	PRISM F	ROTOR							•
TEARESTRIAL	D DROAND	IC	BLACUSTRINE	MATURAL	D PLANKTON	TILLARE		SPECIES	TA	LLT 1	TALLT 2	THITT	THINK	1		DEI
WEILAND	D MINERA	LSOIL	BOTTOLLINO	CLATURAL	EUSMERGED	POND	t t			_			TALLY 4	TALLYS	TOTAL	AVI
ADUATIC	D PARENT	אוע ד	VALLEY SLOPE		GRALINGID	STREAM	-		-							
		BEDRK,	BOLL UPLAND		DUCHEN	SWAMP	-		-				1000		1	
	D BASIC B	EDAX			DEDOUOUS	D FEN					C					-
SITE	L CARE B	EEDAK,	CREVICE / CAVE	COVER	L CONDERROUS	MEADOW	-				1.1.1.1.1.1	1		-		
OPEN WATER			D ROCKLING	D OPEN	-	THICKET										
SURFICIAL DEP.		1	SANO DUNE	D SHRUE		O WOODLAND	E		1					-		
BEDROCK		1		TREED		FOREST								1.1.1.1		1.1
AND DESCR	IPTION-				1	Dibilianda		_		-				1		Y
LAVER			IPECTER HOS	DER OF DECREA	ADING DOMUHUNCE	(we te d ap)	, E									
LAIER	BILC	VH (>> HUCHGREACE	SA THAR; > CREA	TER THUN; - ABO	OUT EQUAL TO)					-					
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PEAR - WHITE ELM WOODLAND IS DETTED CIDE BUT NOT IN ELC.

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LIST		SURVEYOR(8):							
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SITE: ELC POLTOON: PLANT DATE SPECIES - UNDERSTORET 4 - GROUND (GRD.) LAVER

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ELC	BILE	C.T.	I LAD PROP	POLYGON:		
COMMUNITY DESCRIPTION L	SURVEYO	R(S):	DATE:	TILLE		
CLASSIFICATION	UTMZ	UTHO:	Land Ser	unan		

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	FEATURE	HISTORY	PLANT FORM	COMMUNITY
D TEARESTRIAL D WETLAND D ADUATIC	CREDANIC HINERAL SOIL PARENT MIN, ACIDIC BEDRK, BASIC BEDRK	TERLACUSTRINE MOVERUNE TERRACE VALLEY SLOPE TABLELAND ROLL UPLAND CUFF	I MATURAL D CULTURAL	CANACTON SUMMERGED PEDICTORICUTO GRAVANOTO FORS LICHEN SATYOPHITE	LUXE PONO ATREAU DIARSH SWALP FEN
SITE	CARE, BEDAK	CREVICE / CAVE	COVER	CONIFEROUS	MEADOW
DPEN WATER SHALLOW WATER SURFICIAL DEP. BEDROCK		BROCKLAND BEACHTEAR SLAND DUNE	D OPEN D SHALLE		THOCKET SAVANNAH WOODLANG FOREST

STAND DESCRIPTION

LAYER	HT	CVB	(>> HI	CHORES NO	CEDER C	A DECREA	TER TH	MUMANCE	(wy is 4	ap)
T CANOPT	1	3	JUG	13/67	36.1	21 5 1				
2 SUB-CANOPY	20	1.2.1	Talla	ducar y	1016	Transo	15 0	121.5.0	0.4.0	20
3 UNDERSTORET	9.5	300	Cor	F-DA-	>10.1+	Rent		10.25	SRI 1	99076
4 GRD. LATER	5.4	4	AST .	10000	ONP	CALE	> 501	A	-	-
T CODES:		1 2 = 104)	CVR . 10	2 - 2 - 10 - 10	m 1-1-0	-25 - CVR	54HT 11	- CVA - 62	65m 7	- HT+0 2 m
JUG NIGL 60	FRA	PENN	8 00	M. Ami	E.C.E	PYR I	Do Ma	Ma	BA:	26
SIZE CLASS ANA	LYSIS:	-	TAL	< 10	1A	10-24	0	25 - 50	10	> 50
STANDING SHAG	S:		1.61	< 10	1.6	10-24	101	25-50	Lo	- 50
DEADPAEL FLOG	S:	_	1.15	< 10	10	10-24	10	25-50	N	> 50
ABUNDANCE CODE	\$: N	- NONE	R = R	ARE O	= OCCA	SIONAL	A= A8	UNDANT	1.05	250
COMML AGE:	1	PIONEE	al h	OUNG	1	in inc	1	Larring	-	-
SOIL AMALYSI	s-				-	MUL VAL		MIGHE	-	GROWTH
TEXTURE . S	C		DEPT	TH TED MIC	TIFS	IGLEY .	0=		10-	
MOISTURE	-		DEP	HOF OF	ORNIC	Ś:	19	2	104	lem
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COMMENTTY C	LASS	FICAT	ION:					FI	c co	DE
COMMUNITY	LASS	:					1		000	UL
COMMUNITY S	ERIES	-								
EC	OSITE	-					-		_	
	TYPE	FAC	SH-Ma	DEC.	LACK.	WALN FOR	WT.	Fo	D7	-4
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COMPLE	x	1					-			
lotes:	-	1							_	

	FLC	SITE FRAM WORK	Vola to Italos Sauteia 127
	LLU	POLYGON: CLANS	+ Charle Louis
	STAND	DATE:	
_	CHARACTERISTICS	SURVEYOR(S):	

TREE TALLY BY SPECIES:

PRISH FACTOR

SPECIES	TALLY 1	TALLT 2	TALLTS	TALLY 4	TALLY 5	TOTAL	REL
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CRAT AWAR .	1.0	4. 2		-	- 54	1.20	62
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TOTAL							
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DEAD	10.00					-78-11	

STAND DESCRIPTION

	LAYER	нт	CVR	SPECIES NOBDER OF DECREASING DOUGHNICE (UP to 4 and
T	CANOPY			THE ALEN THAN; > GREATER THAN; - ABOUT EQUAL TO)
2	SUB-CANOFY			
з	UNDERSTORET	1.00	1.1	- 1 (1)
4	GRD. LATER			

L	LAYER	нт	CVR	IPECTS N OBDER OF DECREASING DOLLARANCE (UT IN 4 ap)
1	CANOPY	1		STATE THAT S GREATER THAT, - ABOUT EDUAL TO)
2	SUB-CANOPY	131		
3	UNDERSTOREY			
4	GRD. LAYER			

L	LAYER	нт	CVR	SPECIES IN OBDER OF DECREASING DOMINANCE (UP to 4 so)
1	CANOPY			GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LATER		1	

FIC	SITE	1
PLANT	FOLYGON:	
SPECIES	DATE	
LIST	SURVEYOR(S):	
LATERS: I-C	Alexand a set	

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- CLIER CODE	1	1 2	3	1	COL
JUG MIGR .	D	A	0		
FRA PENN	R	0	D	0	
CAR CORD	R	0	Q		
CHAT BINC	PA	ò	0		
PAU SEVRA		R			
CRAT MOLL		R			1
VIT RIPA	0	A	A	A	1.2
COL FORA		37	D	B	1.1
INAS CAPE				4	
AST LANC .				D	
AGR STUL				D	
SOL MM				A	1.5
Pol VIRM				A	
GEV (CANN)				A	
RHU PONE			Ø	D	
BID FRIN			0		
PIL flimi				A	
FUE DECT			į	19.	
RUB FLOS	1			8	
CIL WELL			1	Ă.	
AG1 52-11				0	
WIDLA .				Ð.	
Rul Brie				a	
BLY CARTE				18-1	
ICH PUNE				R	
CEP 0121				R	
EPILING			1	0	
GLY STRI				A	
VER JAT			0	3	
HE'S MATE			-3		
LOSE MULTI			1	9	

IFECKI CONT	1				
DUE BICH	10	2	3	1	COL.
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	ABUNDANCE CODES: R.=!	LURE	0-	0000	LUCA	LL A.
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SPECIES	DATE								
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ELC	SILE CW	Menna Cree	I feal Prop.	POLYGON: NIAAATA Falls	
COMMUNITY DESCRIPTION &	SURVEYORISI: ACG		DATE:	TIME:	
CLASSIFICATION	UTMZ:	UTMZ:	u lu	THIN:	

POLYGON DESCRIPTION

STSTEM	SUBSTRATE	TEPOGRAPHIC FEATURE	אטזיצוא	PLANT FORM	COMMUNITY
TEARESTAIL TEARESTAIL TWEILAND ADUATIC SITE OPEN WATER SKILDW WATER SKILDW WATER SKILDW WATER SKIRPICLL DEP. BEDROCK	ORDANIC SUME MINERAL SOIL PARENT MIN. AGDIC BEDRK. BASIC BEDRK. CARB. BEDRK.	TALLESTRINE NALEY SLOPE TABLELANO ROLL UPLAND TABLELANO ROLL UPLAND CLIFF TALLS CREVICE / CAVE ALVAR ROCKLAND BEACHIBAR SANO DUNE DUFF	COVER COVER BOPEN SHAUG TREED	Conferous	LUXE POMO RIVER STREAM CULARSH SYAHIP FEN BOC BAREH HELOOW PRAINE SYANING CHRCET SWANING CHRCET SWANING DEREST PLANTATION

STAND DESCEIPTION DOWNHILL OF DOGWOOD BAND TO CATTAILS

_		LAYER	HT	CVB	(>> HUCHEREAT	en tro	W: > CREAT	ING D	ON ANCE	UT FOR	(sp)
ŀ	T	CANOPY									57210)
0	2	SUB-CANOFY	3	1 -	TYPHA ANOUP						
	3	UNDERSTOREY	45	4 10	CAR LACUSE	AL	CANA >	th,	P MAR	18-1	UT CA.
-	4	GRD. LAYER	5-7	3 1	IMP CAPE>Po	LSA	GLSPDL	AA	NP14		-71 34
×. c	17	CODES: R CODES	א לביל א ארא שיין ארטא שיין	I = 104H 1= 0% 4	T-25 m 7 = Z + HT .10 m CVR . 10% 2= 10 < Ch	4 - 1d 78 - 25%	17-2 m = 0.8 3-25 < CVR	HT 1	m = 0.2 <ht< th=""><th>05m 7</th><th>f = HT∡0 2 m</th></ht<>	05m 7	f = HT∡0 2 m
	>.1	AND COMPOSITX	אכ:							BA:	
-	si	te class ana	LYSIS:		0 < 10	I R	10-24	N	25 - 50	IN	°> 50
-	57	ANDING SHAG	S:		R <10	R	10-24	N	75-50	L A/	- 50
Ð	DEADPART FLORES: R <10 N 10-24 N							25-50	N	>50	
2	AB	UNDANCE CODE	\$: N	- NONE	R = RARE 0.	OCCA	SIONAL	A = A	UNDANT	1	
	C	DMML ACE:		PIONEEP	TOUNG	1	MD-IGE	17	MUTURE	T	010
4	50	DII ANAI YSI	c.								GROWTH
F	TE	DETURE . 61	+		DEPTH TO MO	TIER	IGLEY .	a =		la_	
1	MF	OISTURE:			DEPTH OF OR	TANIC	S: IDOM	1		0-	(cm)
1	H	DMOGENEOUS	/ YAR	ENBLE	DEPTH TO BE	ROCK	6				(cm)
(20	OMMENTTY C	LASS	FICAT	ION:				FI	C CO	DE
	it.	COMMUNITY	CLASS	-			£				
		COMMUNITY S	ERIES	-							
		EC	OSITE	=							-
	٦,	VEGETATION	1 TYPE	BROA	10-LEAVED !	SEDC	E MINER	AL.	MAS	52-1	4

SHALLOW MARSH TYPE

CATTAIL MINERAL SHALLOW MARSH TYPE

MIXED SHALLOW AQUATIC ELOSITE

				POLYDON:							
	STA	ND		DATE							
	CHARACT	ERIST	ICS	SURVEYOR(S):							
, I	REE TALLY BY	SPEC	ES:								
	PRISH F	3	٦								
Γ											
	SPECIES		TALLY 1	TALLT 2	TALLYS	TALLY 4	TALLY 5	TOTAL	REL		
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	TOTAL										
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		EAD									
S	TAND DESC	FIPTI	QN-MAI	N POLYGO	NTOW	TTOLLA	e .				
1	LA-YER	HT	CVB	IPECT	S NORDER	OF DECREA	TING DOUN	NOT I			
T	CANOPY				UREATER TH	IAN; > GREA	TER THAN,	= ABOUT ED	UALTO;		
12	SUB-CANORY										
-	UNDERGTORES	0									
F	DADERSIGHET	3,4	4	TYP AN	GU >>L	YT SAI	1				
4	GAD. LAYER	5-7	3	CAL CAL	NA=IM	PCAPE	- AST A		0.1.1		
1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1			WIN C	EMDI P	UNI PEU	PMACU		
1	LAYER	HT	CVR	(>> NUCH O	REATERTH	OF.DECREAS	ING DOLLHU	HCE (up to 4	=p)		
1	and the second design of the s			and the second se		, > GHERT	ERTHUN, -	AROUT FOU	111		
1	CANOPY								AL 10)		
1	CANOPY SUB-CANOPY								AL 10)		
		TREE TALLY BY PRISM F. SPECIES SPECIES SPECIES SPECIES STAND DESC LAYER 1 CANOPY 2 SUB-CANOPY 3 UNDERSTOREY 4 GRD. LAYER LAYER	STAND CHARACTERIST TREE TALLY BY SPECT PRISM FACTOR SPECTES SPECTES TOTAL BASAL AREA (BA) DEAD STAND DESCRIPTI LAYER HT 1 CANOPY 2 SUB-CANOFY 3 UNDERSTOREY 4 GRD. LAYER 5-7	STAND CHARACTERISTICS TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 SPECIES TALLY	STAND CHARACTERISTICS DATE: SURVEYOF TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 SPECIES TALLY 1 SPECIES TALLY 1 TOTAL Image: Stand 1 BASAL AREA (BA); Image: Stand 1 Image: Stand 1 CVR STAND DESCRIPTION MAIN P2L462 Image: Stand 1 Stand 2 Image: Stand 1 CVR STAND DESCRIPTION MAIN P2L462 Image: Stand 2 Stand 2 Image: Sta	STAND CHARACTERISTICS DATE: SURVEYOR(S): TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 TALLY 2 SPECIES TALLY 1 TALLY 2 SPECIES TALLY 1 TALLY 2 SPECIES TALLY 1 TALLY 3 TOTAL SPECIES SPECIES STAND DESCRIPTION SPECIES STAND DESCRIPTION SPECIES STAND DESCRIPTION SPECIES 1 CANOPY SUBCANOPY 2	STAND DATE CHARACTERISTICS SURVEYOR(S): TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 TOTAL SECONDANCE DEAD STAND DESCRIPTION-MAIN PRLYGON TO WATCR LIMM STAND DESCRIPTION-MAIN PRLYGON TO WATCR LIMM STAND DESCRIPTION-MAIN PRLYGON TO WATCR LIMM STAND DESCRIPTION LAYER HT CVR (>> MUCH GREATER THAN; > GREAD 1 CANOPY 3 UNDERSTOREY 3 U	STAND DATE: CHARACTERISTICS SURVEYOR(S): TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 SPECIES TALLY 1 TALLY 2 TALLY 4 TALLY 5 SPECIES TALLY 1 TALLY 1 TALLY 2 TALLY 4 TALLY 5 SPECIES TALLY 1 TALLY 2 TALLY 4 TALLY 5 SPECIES TALLY 1 TALLY 1 TALLY 2 TALLY 4 TALLY 5 SPECIES TALLY 1 TALLY 2 TALLY 4 TALLY 5 SPECIES TALLY 1 TALLY 1 TALLY 1 TALLY 1 TALLY 2 TALLY 3 TALY 4 TALY 5 SPECIES TALY 5 STAND DESCRIPTION: MAIN PHYSON TO WATCHING LAYER HT CANOPY SUBDER OF CHEARAND DOWN TALY 5 SUBDER OF DECHEARAND DOWN TALY 5 TALY 5 TALY 7 <td>STAND DATE: CHARACTERISTICS SURVEYON(S): TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SUBSCIES SUBSCIES</td>	STAND DATE: CHARACTERISTICS SURVEYON(S): TREE TALLY BY SPECIES: PRISM FACTOR SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SPECIES TALLY 1 TALLY 2 TALLY 3 TALLY 4 TALLY 5 TOTAL SUBSCIES SUBSCIES		

LEM MIND >NYM ODOR >ALGERE SUBMERGER 4 WEMERCO 4 UTR VULG = CER DEME >VAL AMER GRD. LAYER

ELC

SITE

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		LAYER	нт	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 ap)
	T	CANOPY			SERVICE, SCREATER THAN, = ABOUT EQUAL TO)
LIPLAND EDGE	2	SUB-CANOPY			
	З	UNDERSTOREY		18	
	4	GRD. LATER			
OPEN WATER					

Notes:

INCLUSION

COMPLEX

C top of Valley slope is a band of Dogwood shoulds, then a Calamagrostis MAM. then CARER LACUSTRIS-CALAMARCHOSTIS DAMA MAS, THEN TIPAPIT-LYTRUM SAMARA-AST PUNI then open water edge is SAMI, HINT OF A CAL CAMA - DECODON VERT - PETERMORA VIRG SAM but TWO THEAL

MA52-1

SAMI

FIC	SITE:	
PLANT	POLYGON:	
SPECIES	DATE	
LIST	SURVEYOR(S):	

1

A WILLIAM CALLER COMPANY		and a station	1 JO DHOERT	DRET	4 - GROUNO (GRD.) LAYER
AND ANCE CODES:	A. BURE	0 - DECENSIONLL	A - ATUNOANT	D - 0	OWNANT

1	MAS2-4	710	2 45	TER		
	UPLAND EDGE	T	2	3	1 4	COL
	CAR LACU .			D	1	
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	VER HAST			Ŕ		
	CAL CANA				A	
	CAL SEAN				0	
	LYT SALL				A	
	PIL PUML				0	
	BOE CYLI				R	
	AST PUNI			P		
	EUP PERF.			R		
	POL PUNC				0	SPICY S
L	EPILOBIUM		. 1		0	3 4 M
	ACURUS CALAMU	5			R	
	SCI CYPE			R		
	PHA ARUM				0	
	ASC INCA				0	
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PIL PUM				0	
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PHA ARUN				R	
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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

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

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OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
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.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
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

Significant Wildlife Habitat (SWH) Type	Known or Candidate SWH present/absent	Rationale			
SEASONAL CONCENTRATION AREAS OF ANIMALS					
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	Absent	Suitable habitat not present on Subject Lands			
(Bank and Cliff)					
Colonially -Nesting Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands			
(Tree/Shrubs)					
Colonially -Nesting Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands			
(Ground)					
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			
RARE VEGETATION COMMUNITIES					
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			

Table 1. Significant Wildlife Habitat Assessment – Chippawa Creek Road

Tallgrass Prairie	Absent	Habitat type not present on Subject Lands			
Other Rare Vegetation Communities	Absent	No rare vegetation communities present on Subject			
		Lands			
SPECIALIZED HABITATS OF WILDLIFE CONSIDERED SWH					
Waterfowl Nesting Area	Absent	Suitable habitat not present on Subject Lands			
Bald Eagle and Osprey Nesting, Foraging	Absent	Suitable habitat not present on Subject Lands			
and Perching Habitat					
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	Absent	Suitable habitat not present on Subject Lands			
Habitat					
HABITATS OF SPECIES OF CONSERVATION CON	CERN CONSIDERED SWH				
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	Absent	Candidate habitat not present on Subject Lands			
Habitat					
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.			
ANIMAL MOVEMENT CORRIDORS					
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.