

**NATURAL HERITAGE CONSTRAINTS ASSESSMENT  
CHIPPAWA PROPERTIES, CITY OF NIAGARA FALLS**

Prepared for:

Laurence Avenue Group Limited

Prepared by:

Colville Consulting Inc.

C18033  
May 2024

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## **1.0 INTRODUCTION**

Colville Consulting Inc. was retained by Laurence Avenue Group Limited to prepare a natural heritage constraints assessment for multiple properties located east of Willoughby Drive, between Cattell Drive and Weinbrenner Road, in the City of Niagara Falls (see Figure 1). This report is intended to describe the extent of currently mapped natural heritage features on the properties, as well as characterize potential natural heritage constraints, to provide guidance on the extent of potential developable areas of the Subject Lands.

### **1.1 Background**

The Subject Lands for this assessment consist of fourteen property parcels that collectively measure approximately 11.01ha (27.21 acres) in size and are irregularly shaped. The Subject Lands are bisected by a drainage feature that conveys stormwater from urbanized lands west of these properties, northeast to the Niagara River. Surrounding land uses are predominantly residential and commercial, with a golf course to the east and residential development to the north and south.

There are currently no structures on the Subject Lands, with the majority of the properties consisting primarily of periodically mowed meadow. Hedgerows occur on both sides of the drainage feature that bisects the lands, as well as on the eastern and southern edges of the Subject Lands. A review of historical air photos indicates that the entirety of these lands were under agricultural production until at least 1971, and that the drainage feature was not built until the 1980s.

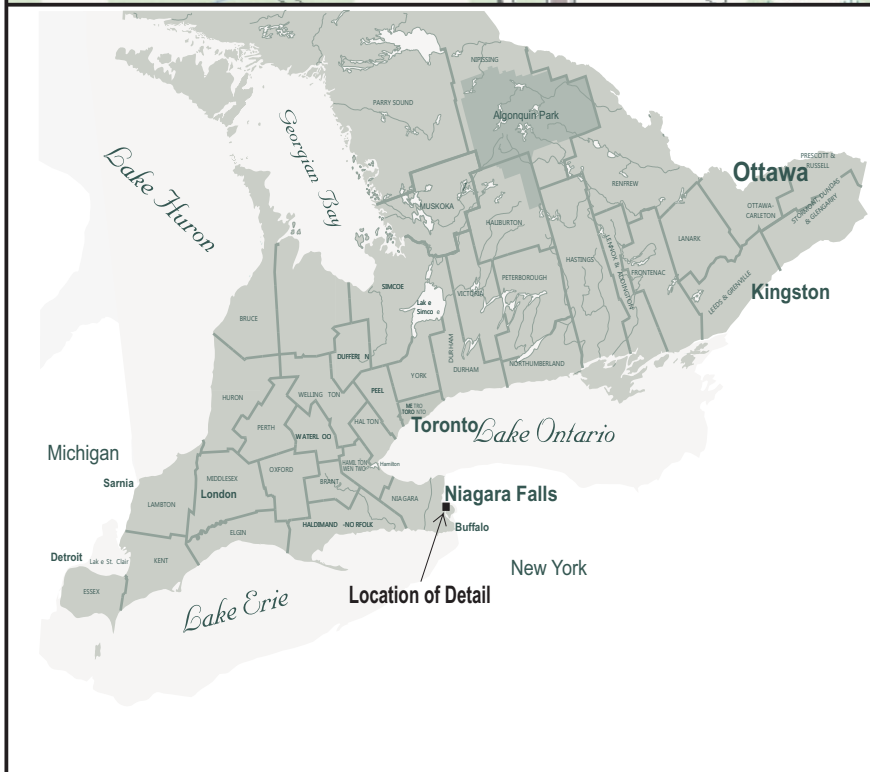
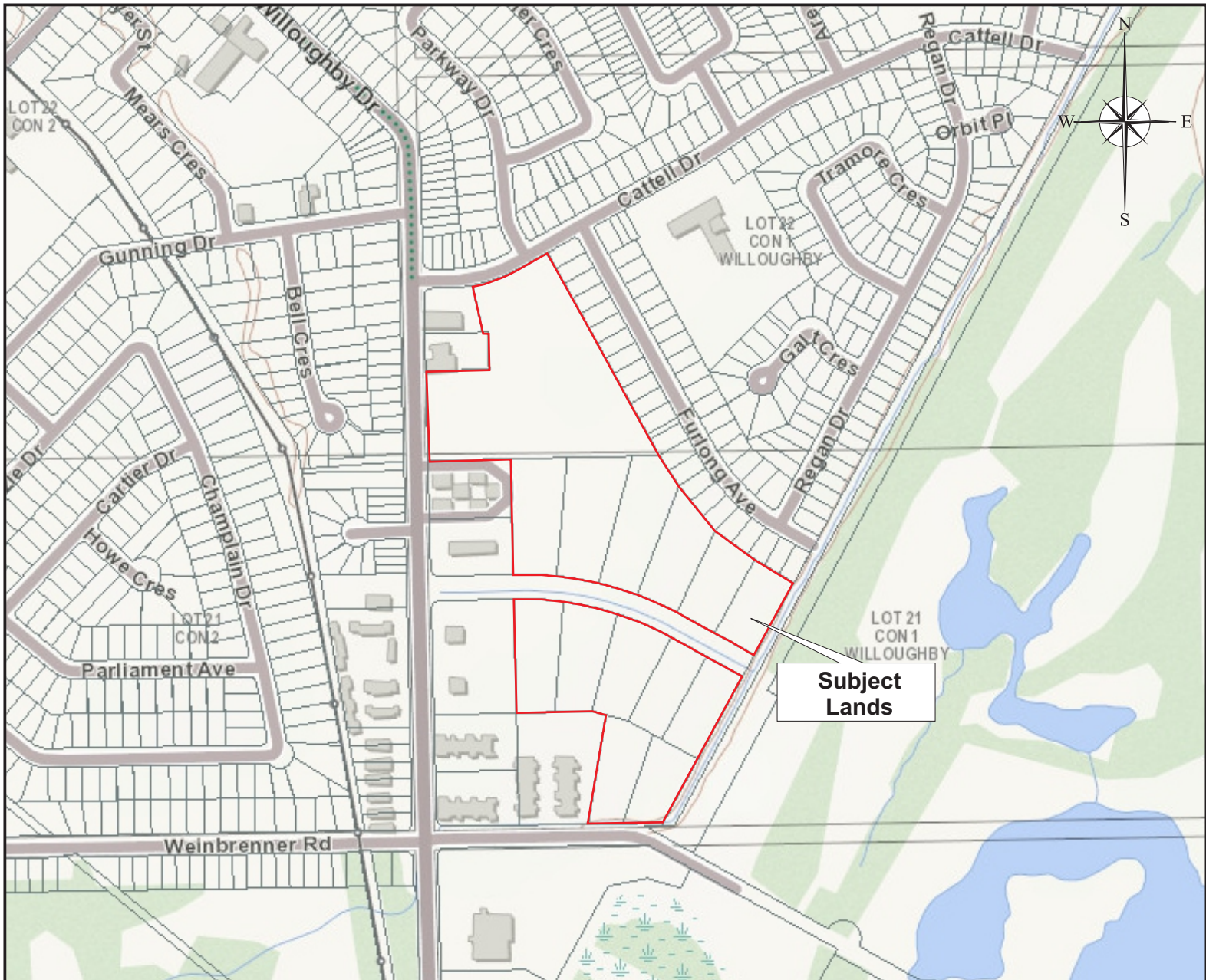
Based on our review of background information, it is our understanding that there are no mapped natural heritage features on the Subject Lands (see Figure 2). Although not located on the Subject Lands, a portion of the Usshers Creek Provincially Significant Wetland Complex is located south of Weinbrenner Road, however no portion of this wetland is located within 30m of the properties. Niagara Region mapping also indicates that there is a portion of Significant Woodland to the east of the Subject Lands. No features regulated by the Niagara Peninsula Conservation Authority (NPCA) are located on the property, however the drainage channel that bisects the lands, as well as the watercourse to the east of the property are regulated by the NPCA.

## **2.0 STUDY APPROACH**

### **2.1 Background Review**

As part of our assessment, a review of background material available for the Subject Property and surrounding area was conducted. Some of the background information reviewed included:

- City of Niagara Falls Official Plan (1993);
- Niagara Region Official Plan (2022);
- NPCA Policy Document: Policies for Planning and Development in the Watersheds of the Niagara Peninsula Conservation Authority (NPCA 2024);
- Data available from the Natural Heritage Information Center (NHIC);
- Background data available from the NPCA and Ministry of Natural Resources and Forestry (MNRF); and
- Niagara Natural Areas Inventory 2006-2009 (NPCA 2010).



**FIGURE 1**  
Location Map

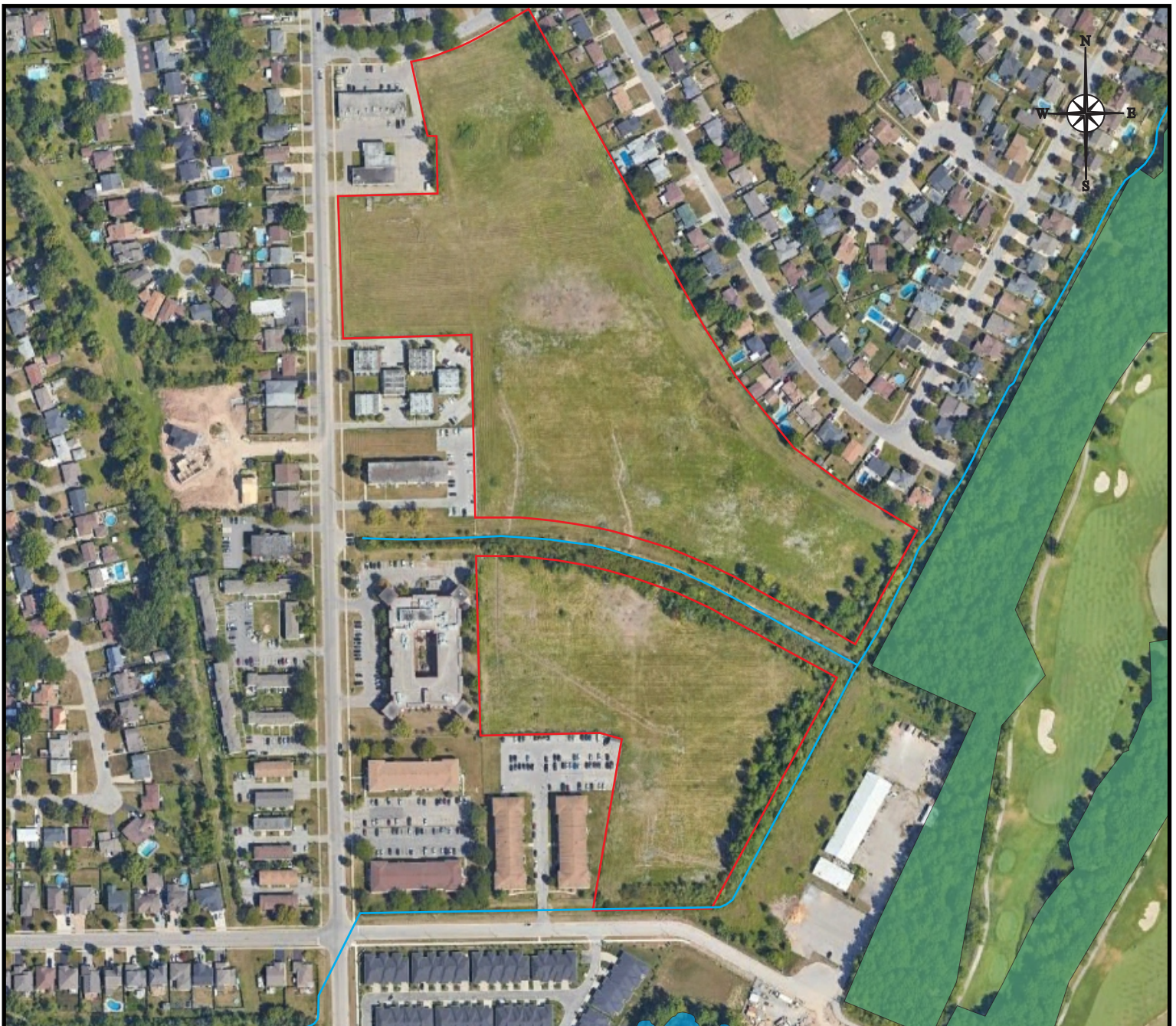
**Natural Heritage Constraints Assessment  
Chippawa Properties, City of Niagara Falls**

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DATE: May 2024

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**Legend**

- Property Boundary
- Watercourses
- Provincially Significant Wetland
- Provincially Significant Woodland

**Figure 2**  
**Mapped Natural Heritage Features**

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## **2.2 Field Inventories and Methodology**

To identify potential natural heritage constraints on the property, Colville Consulting Inc. conducted the following inventories and assessments:

- 1) Summer and fall botanical inventories of the Subject Lands;
- 2) Assessment and description of vegetation communities on the property using the Ecological Land Classification System for Southern Ontario (ELC);
- 3) A tree inventory documenting size, species, and health of each tree on the properties;
- 4) Breeding bird surveys;
- 5) Amphibian call surveys;
- 6) Assessment of potential bat roosting habitat;
- 7) Assessment of drainage features, and
- 8) Document incidental wildlife observations during site visits.

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

## **3.0 STUDY FINDINGS**

### **3.1 Botanical Inventories and Vegetation Mapping**

Botanical inventories of the Subject Lands were conducted on August 12, 2018, as well as July 12 and September 22, 2023. Vegetation communities (ELC units – following Lee et al. 1998) were mapped and described and a list of botanical species was compiled (see Appendix A). Species status was assessed for Ontario (using NHIC data) and the Niagara Region (Oldham 2010). Vegetation communities are described below and illustrated on Figure 3. Photos of the property are provided in Appendix B.

#### **3.1.1 Botanical Inventories**

One hundred-forty species or taxa were observed and noted during this assessment (see Appendix A). No species at risk or provincially rare species were observed during the field visits. A planted Honey Locust tree was documented adjacent to a roadway, however since this species is of horticultural origin, it is not considered to be a provincially rare specimen. No species considered to be rare in the Region were documented and locally uncommon species were limited to isolated stems of Foxglove Beard-tongue, which were growing adjacent to the drainage ditch.

#### **3.1.2 Vegetation Communities**

Vegetation over most of the property consists of fresh-moist old field meadow (CUM1-1), which has been regularly mowed for the past several seasons. Native grasses, sedges and forbs dominate the community. Scattered throughout this community are also several small pockets of mineral meadow marsh, which are dominated by Reed Canarygrass and sedge species, and generally too small to map. The largest of these areas occurs on the northern portion of the Subject Lands and was delineated as a Graminoid Mineral Meadow Marsh Ecosite (MAMM1) inclusion. This vegetation community appears to occur as a result of runoff from the parking area associated with the commercial plaza west of the Subject Lands. This area generally contains water in the early spring, but was dry by late-May. Trees scattered along the northeastern property boundary and road allowance consist of Eastern Cottonwood, Silver Maple, White Elm, Willows, Spruce species and Oak species.



**Legend**

- Property Boundary
- Watercourses
- CUM1-1** Fresh - Moist Old Field Meadow Type
- CUT1-4** Gray Dogwood Cultural Thicket Type
- FODM11** Naturalized Deciduous Hedgerow Ecosite
- MAMM1-2** Cattail Graminoid Mineral Meadow Marsh Type
- MAMM1** Graminoid Mineral Meadow Marsh Ecosite
- WODM5** Fresh - Moist Deciduous Woodland Ecosite
- Amphibian Call Survey Station

0 75 M 150 M  
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**Figure 3**  
**Extent of Vegetation Communities**  
**on the Subject Lands**

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Located along the drainage feature in the central portion of the property, are narrow shrub hedgerows that were described as Grey Dogwood Cultural Thicket Type (CUT1-4) and Fresh – Moist Deciduous Woodland Ecosite (WODM5). Canopy trees in this community consist primarily of young to mid-aged White Elm and Pin Oak, providing a variable cover from 0-50%. The variable sub-canopy is dominated by Red/Green Ash, Elms and Oaks, with pockets of the Common Buckthorn and Hawthorns. The shrub layer is dominated by Grey Dogwood and Common Buckthorn. The ground layer contains grasses, Tall Goldenrod, Panicked Aster, Canada Avens, Rough Goldenrod, Graceful Sedge and Poison Ivy with an abundance of Common Buckthorn seedlings.

Vegetation along the east property boundary also consists of a mix of Grey Dogwood Cultural Thicket Type (CUT1-4) and Fresh – Moist Deciduous Woodland (WODM5), with a portion of this area also described as Naturalized Deciduous Hedgerow Ecosite (FODM11). The young to mid-aged canopy, which varies from 0-60+% cover, is dominated by White Elm and Pin Oak, with scattered Swamp White Oak and Eastern Cottonwood trees. The sub-canopy is dominated by Red/Green Ash, as well as young Elms and Oaks, with pockets of the Common Buckthorn and Hawthorns. The often-dense shrub layer is dominated by Grey Dogwood and Common Buckthorn, with occasional Meadowsweet and Silky Dogwood. The ground layer ranges from open patches of grasses and Tall Goldenrod to more shaded, closed canopy areas dominated by Panicked Aster, Canada Avens, Rough Goldenrod, Jumpseed, Common Strawberry, Graceful Sedge and Poison Ivy with an abundance of Common Buckthorn seedlings.

Bisecting the Subject Lands running east to west is an open drain which supports a linear community of Cattail Graminoid Mineral Meadow Marsh Type (MAMM1-2). Cattails and Common Reed co-dominated in this community. This drain corridor is periodically mowed and the rim and steep banks of the ditch support dry meadow or Grey Dogwood thicket with the occasional Willow species.

## **3.2 Wildlife and Wildlife Habitat**

### **3.2.1 Breeding Bird Survey**

Breeding bird surveys were conducted on June 8 and June 24, 2023, to inventory breeding birds on and adjacent to the Subject Lands. 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 38 species of birds were observed or heard on, above or adjacent to the Subject Property. According to Ontario conservation status ranks (S-rank) designations, with the exception of 4 non-native species (SNA) and 2 “vulnerable” species (S3), 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; American Redstart, Chimney Swift, Great Blue Heron, uncommon to rare summer resident Orchard Oriole, occasional summer resident Purple Finch and rare permanent resident Tufted Titmouse (Niagara Natural Areas Inventory, 2010).

The Barn Swallow observed flying and calling over the Subject Lands on the second site visit are listed as Special Concern in Ontario and are also designated as Special Concern in Canada. Suitable nesting structures for this species is not present on the property.

Table 1: List of bird species documented on and adjacent to the Subject Lands.

Species	S Rank	Niagara Status*	Hedgerow/Woodland	Meadow	Adjacent Lands	Highest Breeding Evidence**	Breeding Code***
American Crow	S5	C R	X			PO	H
American Goldfinch	S5	C R	X	X		PO	S
American Redstart	S5B	U R	X			PO	S
American Robin	S5	VC R	X	X		CO	FY
Baltimore Oriole	S4B	C R	X			PO	S
Barn Swallow	S4B	VC R	X	X		OBS	X
Black-capped Chickadee	S5	C P	X			PO	S
Blue Jay	S5	VC P	X			PO	H
Brown-headed Cowbird	S5	VC R	X			PR	D
Canada Goose	S5	VC P		X		PO	H
Cedar Waxwing	S5	C R	X			PO	H
Chimney Swift	S3B	U R	X			PO	H
Chipping Sparrow	S5B	C R	X	X	X	PO	S
Common Grackle	S5	VC R	X		X	CO	FY
Double-crested Cormorant	S5B, S4N	VC R		X		OBS	X
Downy Woodpecker	S5	C P	X			PO	S
European Starling	SNA	VC P	X			CO	FY
Gray Catbird	S5B	C R	X			PR	A
Great Blue Heron	S4	U R		X		OBS	X
Great Crested Flycatcher	S5B	C R	X			PO	S
House Finch	SNA	C P	X			PO	S
House Sparrow	SNA	VC P	X		X	PO	S
House Wren	S5B	C R	X			PO	S
Killdeer	S5B	C R		X		PO	H
Mourning Dove	S5	VC R	X		X	PO	S
Northern Cardinal	S5	C P	X		X	CO	FY
Orchard Oriole	S4B	U R R	X			PO	S
Purple Finch	S5	O R	X			PO	S
Purple Martin	S4B	VC R	X			OBS	X
Red-winged Blackbird	S5	VC R	X	X		PR	A
Ring-billed Gull	S5	VC R		X		OBS	X
Rock Dove	SNA	VC P		X	X	OBS	X
Rose-breasted Grosbeak	S5B	C R	X			PO	H
Savannah Sparrow	S4B	VC R		X		PO	S
Song Sparrow	S5	VC R	X	X		CO	FY
Tufted Titmouse	S3	R P	X			PO	S
Warbling Vireo	S5B	C R	X			PO	S
Yellow Warbler	S5B	C R	X			PO	S

Codes included in Table 1.

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

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

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

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

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

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

P – pair observed in their breeding season in suitable nesting habitat

A – agitated behavior 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 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 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

The Chimney Swift observed flying and calling over the Subject Lands on the first site visit are listed as Threatened in provincially and federally. Nesting habitat for this species is not present on the property.

Below is a table summarizing the bird species heard and/or seen on or adjacent to the Subject Property during both site visits.

### 3.2.2 Amphibian Call Surveys

Amphibian call surveys were conducted on April 5, May 14 and June 18, 2023. Two survey locations were established on the Subject Properties to assess amphibian use of potential habitats. The locations of survey stations are illustrated on Figure 3. Station 1 was intended primarily to assess us of a small meadow marsh inclusion at the north end of the Subject Lands. Station 2 was established to assess use of the watercourses adjacent to the properties.

Each 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 5, 2023 commenced at approximately 22:20. Air temperature during the April 5, 2023 survey was 8°C, with partly cloudy conditions, nearly full moon and light winds. The May 16, 2023 visit began at approximately 22:55, while the air temperature was 12°C, winds were light and it was partly cloudy. The final amphibian survey was completed on June 22, 2023, beginning at approximately 23:15. Skys were overcast and air temperature was 19°C with little wind during the survey. The results of the amphibian surveys are presented in Table 2.

Table 2. Results of amphibian call surveys.

		Spring Peeper	Western Chorus Frog	American Toad
Station 1	April 5, 2023	-	1-2	-
	May 16, 2023	-	-	-
	June 22, 2023	-	-	-
Station 2	April 5, 2023	1-1	1-2	-
	May 16, 2023	-	1-1	1-2
	June 22, 2023	-	-	-

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

### 3.2.3 Bat Roosting Habitat Survey

An assessment of potential bat roosting and maternal habitat on the property was conducted on April 20, 2023 utilizing methods described in Bat and Bat habitat Surveys of Treed Habitats (MNRF 2017). No significant snags or cavity trees that may provide potential maternal or roost habitat were observed on the Subject Lands during these assessments.

### 3.2.4 Incidental Wildlife Observations

Incidental wildlife observations, including signs were recorded during visits to the Subject Lands conducted on April 23, May 15, June 6, June 8, June 24, July 5, July 12, August 12 and September 22, 2023. Species confirmed using the property were Grey Squirrel, Eastern Cottontail, White-tailed Deer, and Raccoon. Incidental insect observations including signs were recorded including Cricket, Emerald Ash Borer, Mosquito, Moth and Spittlebug.

## 3.3 Watercourses and Drainage Features

As illustrated in Figure 3, two drainage features occur adjacent to the Subject Lands. For the purpose of this assessment, the drainage feature that separates the north and south portions of the Subject Lands has been assigned the identifier of Watercourse 1 and the drainage feature east of the property has been assigned the identifier of Watercourse 2.

An assessment of Watercourses 1 and 2 was conducted on July 5, 2023 using the Evaluation, Classification and Management of Headwater Drainage Features Guidelines (TRCA 2014). Descriptions of these drainage features are provided below.

#### Watercourse 1

The drainage feature described as Watercourse 1 occurs within the road allowance associated with Caronpost Road. Our review of historical air photos indicates that this drainage feature was constructed in the 1980's, and was constructed to act as a stormwater outlet for lands west of Willoughby Drive. Mapping indicates that this watercourse originates at the storm sewer outlet east of Willoughby Drive and conveys water approximately 360m east to Watercourse 2.

The channel of Watercourse 1 is well defined and generally trapezoidal in shape. The low flow channel of this watercourse varies from approximately 2.5-3.0m in width, with the channel eventually extending to approximately 10m wide at the top of bank. Channel substrates consist primarily of silt and clay. Vegetation within the watercourse consists primarily of Common Reed and Cattails, with Gray Dogwood and a mix of meadow species lining the channel banks. The channel shape and characteristics are generally consistent throughout the length of the channel.

Because this watercourse primarily conveys stormwater, flow in the channel is considered to be intermittent with scattered potential refuge pools.

#### Watercourse 2

The drainage feature described as Watercourse 2 occurs east of the Subject Lands. This drainage appears to have been partially constructed between 1954 and 1965, with the channel appearing to be extended south and deepened more recently than is evident in the 1965 air photo. This channel appears to have been constructed to act as a stormwater outlet for the residential development north of the Subject Lands, but has been modified historically to also function as an outlet for lands south and southwest of these properties. Mapping indicates that this watercourse originates approximately 900m southwest of the Subject Lands and conveys water to the Niagara River, approximately 1200m northeast of these lands.

The channel of Watercourse 2 is also well defined and generally trapezoidal in shape. The low flow channel of this watercourse varies from approximately 2.0-3.0m in width, with the channel eventually extending to approximately 8m wide at the top of bank. Channel substrates consist primarily of silt and clay. Vegetation within the watercourse is variable, consisting of Common Reed and Cattails where vegetation is present. Common Buckthorn, Gray Dogwood and a mix of deciduous trees occur on the watercourse banks and adjacent to the channel.

Flow in Watercourse 2 is also considered to be intermittent with scattered potential refuge pools.

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

### **4.1 Species at Risk Habitat**

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

No Endangered species were observed on the property during our observations and Threatened were limited to Chimney Swift, which were observed calling and foraging over the Subject Lands. Since suitable nest locations for this species do not occur on the property, any use of this property is suspected to be associated with incidental foraging.

As part of this assessment, we conducted a review of Natural Heritage Information Center (NHIC) data available for lands in the vicinity of the property. Endangered species known to occur in the vicinity of the property are limited to Red-headed Woodpecker. Red-headed Woodpeckers are a cavity nester that prefers open oak and beech forests, grassland and forest edges. Habitat available on the property is not consistent with typical breeding habitat of Red-headed Woodpecker and this species was not documented during breeding bird surveys. A Species at Risk Screening is provided in Appendix C.

Threatened species known to occur in the vicinity of the property include Bobolink, Eastern Meadowlark, and Cerulean Warbler. None of these species were detected on or adjacent to the Subject Properties during surveys and therefore these lands are not providing habitat for these species.

#### **4.1.2 Species of Conservation Concern**

Species of Conservation Concern documented on the property during our assessments were limited to Barn Swallows, which were observed flying and calling over the Subject Properties. Suitable nesting structures for Barn Swallows are not present on the property and it is assumed the property is providing incidental foraging opportunities for this species.

Species of Conservation Concern previously documented in the vicinity of the property are limited to Eastern Wood-pewee, Wood Thrush, Grass Pickerel and Snapping Turtle. Although Eastern Wood-

pewee and Wood Thrush will use a variety of treed habitats during the breeding season, these species were not observed to be present on or adjacent to the properties during surveys. Therefore, the Subject Lands do not appear to be providing habitat for these species. Potential habitat for Grass Pickerel and Snapping Turtle is not present on the Subject Lands.

## **4.2 Significant Wildlife Habitat**

### **4.2.1 Seasonal Concentration Areas of Animals**

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E identifies 14 types of seasonal concentrations of animals that may be considered significant wildlife habitat. 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. A significant wildlife habitat screening was completed as part of this project and can be seen in Appendix D.

Based on our assessments, the Subject Lands do not appear to be providing significant potential habitat for seasonal concentrations of wildlife.

### **4.2.2 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.

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E identifies 7 specialized habitats that may be considered significant wildlife habitat. 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 present on or adjacent to the Subject Properties.

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

Some wildlife species require large areas of suitable habitat 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 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 were noted on the property during our observations.

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

Habitats of Species of Conservation Concern include wildlife species that are listed as Special Concern or those that are provincially rare (S1-S3). 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.

Special concern species documented during our surveys were limited to Barn Swallows, that were observed foraging over the Subject Lands. Because this species is known to forage opportunistically over a variety of habitat types and land uses, foraging habitat for this species is not considered to be significant wildlife habitat.

Based on our inventories, habitats available on these properties are not functioning as significant wildlife habitat.

### **4.2.5 Migration 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 habitat, these corridors should be a critical link between habitats that are regularly used by wildlife.

The Subject Lands are bound to the north, south and west by existing residential and urban land uses. Natural areas associated with a golf use exist to the east of the property, however the vegetation communities on these properties do not provide any linkage or migration functions to connect natural areas.

### 4.3 Significant and Other Wetlands

During our review of background mapping, it was noted that a portion of the Usshers Creek Provincially Wetland Complex (PSW) is located south of Weinbrenner Road, approximately 70m south of the Subject Lands. Wetland vegetation communities on the Subject Lands are limited to small inclusions of meadow marsh within the cultural meadow areas, as well as vegetation associated with the watercourse. None of these vegetation communities are considered to be Significant Wetlands.

It is understood that the Niagara Region Official Plan defines Other Wetlands to include:

- all wetlands that meet an Ecological Land Classification (ELC) wetland system classification and have not been evaluated as a provincially significant wetland. Vegetation communities that would be considered other wetlands are identified in Table 5-1;
- both evaluated non-provincially significant wetlands and wetlands that have not been evaluated. These include wetlands that are regulated, and wetlands that are not regulated by the Conservation Authority; and
- wetlands with ecological and hydrological functions and wetlands that only have a hydrological function.

Two wetland vegetation communities have been identified on the Subject Lands using ELC. The meadow marsh associated with Watercourse 1 occurs in the low flow channel of this watercourse and is sustained by stormwater conveyed in the channel. Because this vegetation community is associated with the watercourse, it is not considered to provide any significant wetland functions and not be considered an Other Wetland as described in the Niagara Region Official Plan.

The Graminoid Mineral Meadow Marsh Ecosite (MAMM1) inclusion at the north end of the property measures approximately 300m<sup>2</sup> in size and occurs as a result of runoff from the adjacent commercial use. Water draining from the adjacent buildings and parking area accumulates in this area, resulting in the Reed Canary Grass community observed in this location. Because water in this feature does not directly contribute flow to a surface watercourse, the accumulated water appears to be retained as surface water until the area dries through evapotranspiration. Our observations indicate that Western Chorus Frogs were calling from this community, however the hydroperiod does not appear to be sufficient to support successful recruitment.

Because this vegetation community is artificially supported by uncontrolled stormwater runoff and is not a naturally occurring feature, this vegetation community is not considered to meet the criteria to be considered an Other Wetland.

### 4.4 Significant and Other Woodlands

Our review of background mapping available from the City of Niagara Falls and Niagara Region indicates that no Significant Woodlands have been identified on the Subject Lands and our inventory confirms the accuracy of this mapping.

During our assessment it was noted that hedgerows occur along the watercourse and east property boundaries. These hedgerows were described as a complex of cultural thicket and deciduous woodland, as well as Naturalized Deciduous Hedgerow. No portion of these hedgerows exceed 40m in width and are not considered to meet or function as woodlands.

Based on our assessment, no Significant or Other Woodlands occur on the Subject Lands.



## 4.5 Watercourses

As described above, two watercourses occur adjacent to the Subject Lands. These watercourses were constructed with the intent of functioning as drainage outlets to lands in the vicinity of the Subject Properties. Because these watercourses convey stormwater to the Niagara River, these watercourses are considered to have intermittent flow regimes, and for the purposes of this assessment, are considered to potentially provide seasonal fish habitat.

## 5.0 ENVIRONMENTAL POLICY

The intent of this assessment is to identify and delineate the extent of potential natural heritage features on the property and define the extent of potential natural heritage constraints. To assist with providing context to the extent of natural heritage features on site, the following relevant policies have been considered.

### 5.1 Niagara Region Official Plan

The Niagara Region Official Plan was updated in 2022 and is intended to provide a strategic planning framework to assist with managing growth in the Region. Chapter 3 of the Official Plan outlines the objectives and policies for a Regional Natural Heritage System and Water Resource System. The natural heritage system is comprised of features such as wetlands, woodlands, valleylands, and wildlife habitat, as well as components such as linkages, buffers, supporting features and areas, and enhancement areas. The intent of the natural heritage system is to preserve and enhance the biodiversity, connectivity, and long-term ecological function of natural systems in the Region.

The water resource system is made up of both groundwater features and surface water features and areas. The intent of the water resource system is to protect the ecological and hydrological integrity of water resources and the various watersheds in the Region. The natural heritage and water resource systems are ecologically linked, rely on and support each other, and have many overlapping components.

The features and components of the natural environment system are listed in Schedule L and include significant woodlands, other woodlands, provincially significant wetlands, other wetlands and non-provincially significant wetlands, earth and life science areas of natural and scientific interest, permanent and intermittent streams, buffers, linkages and supporting areas. Schedule L includes the definitions and criteria for each of the features and components.

While there are no mapped features on the Subject Property, mapped natural heritage features adjacent to the Subject Property include significant woodland, provincially significant wetland and intermittent watercourses. Not all of the features and components that make up the natural environment system can or have been mapped as part of the schedules to the Official Plan. Where features or components of the natural environment system listed in Schedule L are not mapped, detailed area-specific or site-specific studies such as an environmental impact study, hydrological evaluation, or sub-watershed study are required for their identification.

Where through the review of an application for development or site alteration it is found that there are features or components of the natural environment system or related ecological and/or hydrological functions that have not been adequately mapped, evaluated, or protected, the applicant shall have an evaluation prepared by a qualified professional in consultation with the Region, the Local Area Municipality and, where appropriate, the Conservation Authority. If the evaluation finds one or more natural heritage features and areas, key natural heritage features, or key hydrologic features, the policies of this Plan will be applied to the lands under application as appropriate.

Section 3.1.9.6 of the OP includes policies related to development and site alteration in Natural Heritage Features and Areas outside of the Provincial Natural Heritage System. Section 3.1.9.6.1 states that development and site alteration shall not be permitted in the following natural heritage features and areas:

- a) provincially significant wetlands
- b) significant coastal wetlands; and
- c) significant woodlands.

Section 3.1.9.6.2 states that development and site alteration shall not be permitted in the following natural heritage features and areas unless it has been demonstrated through the preparation of an environmental impact study that there will be no negative impacts on the natural features or their ecological functions:

- a) other woodlands;
- b) significant valleylands;
- c) significant wildlife habitat; and
- d) areas of natural and scientific interest.

Policies related to buffers in settlement areas are included in section 3.1.9.10. Section 3.1.9.10.1 states that within settlement areas, mandatory buffers from natural heritage features and areas are required. The width of an ecologically appropriate buffer would be determined through an environmental impact study and/or hydrological evaluation at the time an application for development or site alteration is made, or through the completion of a sub-watershed study in support of a secondary plan or other large-scale development. The width of the buffer would be based on the sensitivity of the ecological functions from the proposed development or site alteration, and the potential for impacts to the feature and ecological functions as a result of the proposed change in land use.

Section 3.1.9.10.2 states that development or site alteration shall not be permitted in the mandatory buffer, with the exception of that described in Policy 3.1.9.6.3 or infrastructure serving the agricultural sector unless it has been demonstrated through the preparation of an environmental impact study that there will be no negative impacts and the buffer will continue to provide the ecological function for which it was intended.

## **5.2 City of Niagara Falls**

The City of Niagara Falls' environmental policies are contained within the City of Niagara Falls Official Plan (OP) and are intended to be complimentary to Provincial and Regional policies. Through the implementation of policies within the OP, the City of Niagara Falls intends to participate in the protection and conservation of natural heritage features.

The City of Niagara Falls Natural Heritage Policies are contained within Section 11 of Part 2 of the Official Plan and includes policies specific to Environmental Protection Areas (EPA's) and Environmental Conservation Areas (ECA's). Environmental Protection Areas include features such as Significant Habitat of Threatened and Endangered Species and Provincially Significant Wetlands. Environmental Conservation Areas include Locally Significant Wetlands, Woodlands, and in some cases Valleylands, Meadows, corridors, linkages and buffers associated with natural heritage features. Policies specific to ECA's are included in Section 11.2 and are intended to protect the integrity of natural heritage features, while providing some flexibility for development opportunities where possible.

Mapping Schedule A-1 within the OP indicates that a portion of eastern edge of the Subject Lands has been designated as ECA, primarily related to a buffer associated with the watercourse east of the lands.

Section 11.1.17 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.

### **5.3 Niagara Peninsula Conservation Authority**

To administer Ontario Regulation 41/24, the Niagara Peninsula Conservation Authority (NPCA) has created a document titled NPCA Policy Document: Policies for Planning and Development in the Watersheds of the Niagara Peninsula Conservation Authority (NPCA 2024). The purpose of the document is to provide guidance for development applications affecting natural hazards and associated lands.

NPCA policies related to the management of watercourses are included in Section 9.0 of the NPCA Policy Document (NPCA 2024). Policies related to watercourse buffers are included in Section 9.2.5.1, with section 9.2.5.1b stating that a 15 metre buffer shall be provided for watercourses containing intermittent flow. Notwithstanding this requirement, the buffer may be reduced where supported by technical study in accordance with the NPCA Procedural Manual.

## **6.0 CONSTRAINTS ANALYSIS**

To assist with defining the developable portions of the Subject Lands, natural heritage constraints to development on and adjacent to the properties have been assigned a constraint designation, generally following policy considerations outline above. A description of the various constraint designations is provided below. The extent of natural heritage constraints mapped on the Subject Property are illustrated on Figure 4.

### **6.1 Areas of High Constraint**

For the purposes of this assessment, Areas of High Constraint are considered to include Significant Wetlands, Significant Woodlands and significant habitat of Endangered and Threatened species, as well as critical buffers associated with these features and areas. As discussed above, none of these potential features or areas have been documented or observed on the Subject Lands. Based on this assessment, no portion of the Subject Lands has been identified as an Area of High Constraint.





### **6.2 Areas of Low/Medium Constraint**

For the purposes of this assessment, Areas of Medium Constraint are considered to be Other Woodlands, Other Wetlands, significant wildlife habitat and areas of natural and scientific interest. Required buffers associated with these features are also considered to be medium constraints. None of these features or areas occur on or adjacent to the Subject Lands.

Watercourses and critical buffer areas associated with watercourses are also considered to be Areas of Medium Constraint. For the purposes of this assessment, Watercourses 1 and 2 are considered to be an Area of Medium Constraint. Future development is recommended to avoid directly impacting these



**Legend**

-  Property Boundary
-  Watercourses
-  Low/Medium Constraint
-  No/Low Constraint

**Figure 4**  
**Extent of Natural Heritage**  
**Constraints on the Subject Lands**

**Natural Heritage Constraints Assessment**  
**Chippawa Properties, City of Niagara Falls**

Prepared for: **Laurence Avenue Group Limited**

Prepared by: **COLVILLE**   
 CONSULTING INC.

DATE: May 2024

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watercourses where possible, however any required transportation related crossings can be assessed for potential impacts to functions of these watercourses where necessary.

For the purposes of this assessment, a 30m wide area associated with Watercourses 1 and 2 has also been established and identified as an Area of Low - Medium Constraint. The intention of this constraint level is to recognize that lands immediately adjacent to the watercourses will be considered Medium Constraint, with the level of constraint diminishing with distance from the watercourse.

It is understood that a final development plan for these lands has yet to be prepared, however it is recommended that any development adjacent to the east property line and Watercourse 2 be assessed as part of a future EIS to ensure proposed development will not impact functions of this watercourse. Similarly, any development adjacent to the road allowance associated with Caronpost Road should also be assessed for potential impacts to Watercourse 1 and appropriate mitigation measures recommended.

### **6.3 Areas of No/Low Constraint**

For the purposes of this assessment the cultural meadow, hedgerows and MAMM1 community at the north end of the Subject Lands are considered to be Areas of Low – No Constraint. Our assessment indicates that these portions of the property are not providing significant ecological or hydrological functions, and future development of these lands will not impact natural heritage features adjacent to the Subject Lands.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

Colville Consulting Inc. was retained by Laurence Avenue Group Limited to prepare a natural heritage constraints assessment for multiple properties located between Cattell Drive and Weinbrenner Road, in the City of Niagara Falls. Based on our assessment, there are no significant natural heritage features located on the Subject Lands and natural heritage features adjacent to the properties are generally limited to Watercourses 1 and 2. From our assessment, a majority of the Subject Lands is considered to be free of natural heritage constraints to development.

Please do not hesitate to contact the undersigned should be require further clarification regarding this report.

Respectfully submitted by:



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Ian Barrett, M.Sc.  
Colville Consulting Inc.



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Nash Colville, B.A., CERP-IT  
Colville Consulting Inc.

## 8.0 LITERATURE CITED

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## **Appendix A**

### List of Botanical Species

Plant List for the Chippawa Property, Niagara Falls, ON. Conduct on August 12, 2018, July 12 and September 22, 2023.

ScientificName	CommonNames	Coe. Cons.	Coe. Wet.	GRank	COSEWIC	COSSARO	SRank	Lrare	CUM1-1	CUT/WODM5/FODM11	MAMM	Notes
<i>Acalypha virginica</i> var. <i>rhomboidea</i>	Three-seeded Mercury	0	3	G5			S5			x	x	
<i>Acer ginnala</i>	Amur Maple	0	5	G?			SE1		x	x		
<i>Acer negundo</i>	Manitoba Maple	0	-2	G5			S5			x		
<i>Acer platanoides</i>	Norway Maple	0	5	G?			SE5	x		x		
<i>Acer saccharinum</i>	Silver Maple	5	-3	G5			S5	x		x		
<i>Agrostis gigantea</i>	Redtop Grass	0	0	G4G5			SE5	x			x	
<i>Agrostis stolonifera</i>	Creeping Bent Grass	0	-3	G5			S5	x		x	x	
<i>Alliaria petiolata</i>	Garlic Mustard	0	0	G?			SE5	x		x		
<i>Allium</i> sp	Onion Species							x				
<i>Ambrosia artemisiifolia</i>	Common Ragweed	0	3	G5			S5	x				
<i>Apocynum cannabinum</i>	Indian Hemp	3	0	G5			S5	x		x		
<i>Apocynum</i> sp	Dogbane Species									x		
<i>Arctium minus</i> ssp. <i>minus</i>	Common Burdock	0	5	G?			SE5	x		x		
<i>Asclepias incarnata</i> ssp. <i>incarnata</i>	Swamp Milkweed	6	-5	G5			S5			x	x	
<i>Asclepias syriaca</i>	Common Milkweed	0	5	G5			S5	x				
<i>Aster lanceolatus</i> ssp. <i>lanceolatus</i>	Panicled Aster	3	-3	G5			S5	x		x		
<i>Aster pilosus</i> var. <i>pilosus</i>	Hairy Aster	4	2	G5			S5	x				
<i>Atriplex patula</i>	Spearscale	0	-2	G5			S5	x				
<i>Betula</i> sp	Birch Species									x		Escaped or planted non-native Birch
<i>Bidens frondosa</i>	Devil's Beggar-ticks	3	-3	G5			S5	x		x	x	
<i>Bromus inermis</i> ssp. <i>inermis</i>	Smooth Brome	0	5	G4G5			SE5	x				
<i>Calystegia sepium</i> ssp. <i>angulata</i>	Hedge Bindweed	2	0	G5			S5			x	x	
<i>Carex bebbii</i>	Bebb's Sedge	3	-5	G5			S5			x	x	
<i>Carex crinita</i>	Fringed Sedge	6	-4	G5			S5			x	x	
<i>Carex gracillima</i>	Graceful Sedge	4	3	G5			S5			x		
<i>Carex granularis</i>	Meadow Sedge	3	-4	G5			S5	x		x		
<i>Carex tenera</i>	Slender Straw Sedge	4	-1	G5			S5	x		x	x	
<i>Carex vulpinoidea</i>	Fox Sedge	3	-5	G5			S5	x		x	x	
<i>Centaurea jacea</i>	Brown Knapweed	0	5	G?			SE5	x		x		
<i>Chenopodium album</i> var. <i>album</i>	Lamb's Quarters	0	1	G5			SE5	x				
<i>Cichorium intybus</i>	Chicory	0	5	G?			SE5	x		x		
<i>Cirsium arvense</i>	Canada Thistle	0	3	G?			SE5	x		x		
<i>Cirsium vulgare</i>	Bull Thistle	0	4	G5			SE5	x				
<i>Clinopodium vulgare</i>	Wild Basil	4	5	G?			S5	x		x		
<i>Convolvulus arvensis</i>	Field Bindweed	0	5	G?			SE5	x				
<i>Convallaria majalis</i>	Lily-of-the-valley			G?			SE?			x		
<i>Cornus amomum</i> ssp. <i>obliqua</i>	Silky Dogwood	5	-4	G5			S5	x		x		
<i>Cornus foemina</i> ssp. <i>racemosa</i>	Grey Dogwood	2	-2	G5			S5	x		x		
<i>Cornus stolonifera</i>	Red-osier Dogwood	2	-3	G5			S5			x		
<i>Corylus avellana</i>	European Filbert			G?			SE?	x				
<i>Crataegus mollis</i>	Downy Hawthorn	4	-2	G5			S5			x		
<i>Crataegus punctata</i>	Dotted Hawthorn	4	5	G5			S5			x		
<i>Dactylis glomerata</i>	Orchard Grass	0	3	G?			SE5	x		x		
<i>Daucus carota</i>	Wild Carrot	0	5	G?			SE5	x		x		
<i>Dipsacus fullonum</i> ssp. <i>sylvestris</i>	Common Teasel	0	5	G?			SE5	x		x		
<i>Echinochloa</i> sp	Barnyard Grass Species							x			x	
<i>Elymus repens</i>	Quack Grass	0	3	G5			SE5	x		x		
<i>Epilobium</i> sp	Willow-herb Species										x	
<i>Erechtites hieracifolia</i>	Pilewort	2	3	G5			S5	x		x		
<i>Eupatorium perfoliatum</i>	Common Boneset	2	-4	G5			S5			x	x	
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	2	-2	G5			S5	x		x	x	In wet areas of Woodland or along the drain
<i>Festuca rubra</i>	Red Fescue		1	G5			S5	x				
<i>Fragaria virginiana</i> ssp. <i>virginiana</i>	Common Strawberry	2	1	G5			S5	x		x		
<i>Fraxinus pennsylvanica</i>	Red Ash	3	-3	G5			S5			x		
<i>Geum canadense</i>	White Avens	3	0	G5			S5			x		
<i>Glechoma hederacea</i>	Ground Ivy	0	3	G?			SE5	x		x		
<i>Gleditsia triacanthos</i>	Honey Locust	3	0	G5			S2	x				Root suckers growing from planted trees along roadside
<i>Glyceria striata</i>	Fowl Manna Grass	3	-5	G5			S5			x	x	
<i>Helianthus annuus</i> ssp. <i>annuus</i>	Common Sunflower	0	1	G5			SE4	x				Escaped or planted
<i>Hemerocallis fulva</i>	Tawny Day-lily	0	5	G?			SE5	x				
<i>Hibiscus syriacus</i>	Rose of Sharon			G?			SE?	x				
<i>Hypericum perforatum</i>	Common St. John's-wort	0	5	G?			SE5	x		x		
<i>Juglans nigra</i>	JUGLANDACEAE	5	3	G5			S4			x		
<i>Juglans</i> sp	Walnut Species							x				A planted English or Japanese Walnut
<i>Juncus effusus</i> ssp. <i>solutus</i>	Soft Rush	4	-5	G5			S5	x		x	x	
<i>Juncus tenuis</i>	Path Rush	0	0	G5			S5	x		x	x	
<i>Juniperus virginiana</i>	Eastern Red Cedar	4	3	G5			S5	x				
<i>Lactuca</i> sp	Lettuce Species							x				



ScientificName	CommonNames	Coe. Cons.	Coe. Wet.	GRank	COSEWIC	COSSARO	SRank	Lrare	CUM1-1	CUT/WODM5/FODM11	MAMM	Notes
<i>Leontodon autumnalis</i> ssp. <i>autumnalis</i>	Fall Hawkbit	0	5	G?			SE5		x			
<i>Leonurus cardiaca</i> ssp. <i>cardiaca</i>	Motherwort	0	5	G?			SE5		x	x		
<i>Ligustrum ovalifolium</i>	Oval-leaved Privet	0	5	G?			SE1		x	x		
<i>Ligustrum vulgare</i>	Common Privet	0	1	G?			SE5			x		
<i>Linaria vulgaris</i>	Butter-and-eggs	0	5	G?			SE5		x			
<i>Lolium perenne</i>	Perennial Rye Grass	0	3	G?			SE4		x			
<i>Lonicera morrowii</i>	Morrow's Honeysuckle	0	5	G?			SE3			x		
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	0	1	G?					x			
<i>Ludwigia palustris</i>	Marsh Purslane	5	-5	G5			S5				x	
<i>Lycopus americanus</i>	Cut-leaved Water-horehound	4	-5	G5			S5			x		
<i>Lysimachia nummularia</i>	Moneywort	0	-4	G?			SE5		x	x		
<i>Lythrum salicaria</i>	Purple Loosestrife	0	-5	G5			SE5		x	x	x	
<i>Malus pumila</i>	Common Apple	0	5	G5			SE5		x	x		
<i>Melilotus alba</i>	White Sweet-clover	0	3	G5			SE5		x	x		
<i>Melilotus officinalis</i>	Yellow Sweet-clover	0	3	G?			SE5		x			
<i>Oxalis</i> sp	Wood-sorrel Species								x	x		
<i>Parthenocissus inserta</i>	Thicket Creeper	3	3	G5			S5			x	x	
<i>Penstemon digitalis</i>	Foxglove Beard-tongue	6	1	G5			S4S5	U	x	x		Along drain corridor
<i>Phalaris arundinacea</i>	Reed Canary Grass	0	-4	G5			S5		x	x	x	
<i>Phleum pratense</i>	Timothy	0	3	G?			SE5		x			
<i>Phragmites australis</i>	Common Reed	0	-4	G5			S5				x	
<i>Picea glauca</i>	White Spruce	6	3	G5			S5		x	x		
<i>Pinus strobus</i>	Eastern White Pine	4	3	G5			S5		x	x		
<i>Plantago lanceolata</i>	Ribgrass	0	0	G5			SE5		x			
<i>Plantago major</i>	Common Plantain	0	-1	G5			SE5		x			
<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky Blue Grass	0	1	G?			S5		x	x		
<i>Polygonum aviculare</i>	Common Knotweed	0	1	G?			SE5		x			
<i>Polygonum hydropiper</i>	Common Smartweed	0	-5	G5			SE5		x	x		
<i>Polygonum pensylvanicum</i>	Pink Knotweed	3	-4	G5			S5		x	x		
<i>Polygonum persicaria</i>	Lady's Thumb	0	-3	G?			SE5		x	x		
<i>Polygonum virginianum</i>	Jumpseed	6	0	G5			S4			x		
<i>Populus deltoides</i> ssp. <i>deltoides</i>	Eastern Cottonwood	4	-1	G5			S5			x		
<i>Potentilla simplex</i>	Common Cinquefoil	3	4	G5			S5			x		
<i>Prunella vulgaris</i> ssp. <i>lanceolata</i>	Heal-all	5	5	G5			S5			x		
<i>Pyrus communis</i>	Common Pear	0	5	G5			SE4			x		
<i>Quercus bicolor</i>	Swamp White Oak	8	-4	G5			S4			x		
<i>Quercus palustris</i>	Pin Oak	9	-3	G5			S3			x		
<i>Rhamnus cathartica</i>	Common Buckthorn	0	3	G?			SE5			x		
<i>Rhamnus frangula</i>	Glossy Buckthorn	0	-1	G?			SE5			x		
<i>Rhus radicans</i> ssp. <i>negundo</i>	Climbing Poison-ivy	5	-1	G5			S5			x		
<i>Rosa</i> sp	Rose Species								x	x		
<i>Rudbeckia hirta</i>	Black-eyed Susan	0	3	G5			S5		x			
<i>Rumex crispus</i>	Curly Dock	0	-1	G?			SE5		x			
<i>Salix alba</i>	White Willow	0	-3	G5			SE4			x		
<i>Salix alba</i> var. <i>tristis</i>	Weeping White Willow	0	-3	G5?			SE4?			x		
<i>Salix amygdaloides</i>	Peach-leaved Willow	6	-3	G5			S5			x	x	
<i>Salix cinerea</i>	Ashy Willow	0	5	G5			SE2			x		
<i>Salix eriocephala</i>	Woolly-headed Willow	4	-3	G5			S5			x	x	
<i>Salix exigua</i>	Sandbar Willow	3	-5	G5			S5			x	x	
<i>Salix X rubens</i>	Hybrid White Willow	0	-4	G?			SE4			x		
<i>Scirpus atrovirens</i>	Black Bulrush	3	-5	G5?			S5		x		x	
<i>Scirpus cyperinus</i>	Wool Grass	4	-5	G5			S5		x	x		
<i>Scirpus validus</i>	Softstem Bulrush	5	-5	G?			S5				x	
<i>Solanum dulcamara</i>	Bittersweet Nightshade	0	0	G?			SE5		x	x		
<i>Solanum nigrum</i>	Black Nightshade	0	0	G?			SE1		x		x	
<i>Solidago altissima</i> var. <i>altissima</i>	Tall Goldenrod	1	3	G?			S5		x	x		
<i>Solidago juncea</i>	Early Goldenrod	3	5	G5			S5		x	x		
<i>Solidago nemoralis</i> ssp. <i>nemoralis</i>	Gray Goldenrod	2	5	G5			S5		x			
<i>Solidago rugosa</i> ssp. <i>rugosa</i>	Rough Goldenrod	4	-1	G5			S5			x		
<i>Sonchus</i> sp	Sow-thistle Species								x			
<i>Spiraea alba</i>	Narrow-leaved Meadowsweet	3	-4	G5			S5			x	x	
<i>Taraxacum officinale</i>	Common Dandelion	0	3	G5			SE5		x	x		
<i>Tragopogon</i> sp	Goat's-beard Species								x			
<i>Trifolium dubium</i>	Suckling Clover	0	3	G?			SE4		x			
<i>Trifolium hybridum</i> ssp. <i>elegans</i>	Alsike Clover	0	1	G?			SE5		x			
<i>Trifolium pratense</i>	Red Clover	0	2	G?			SE5		x			
<i>Trifolium repens</i>	White Clover	0	2	G?			SE5		x			
<i>Typha angustifolia</i>	Narrow-leaved Cattail	3	-5	G5			S5				x	
<i>Ulmus americana</i>	White Elm	3	-2	G5?			S5			x		

ScientificName	CommonNames	Coe. Cons.	Coe. Wet.	GRank	COSEWIC	COSSARO	SRank	Lrare	CUM1-1	CUT/WODM5/FODM11	MAMM	Notes
<i>Verbena hastata</i>	Blue Vervain	4	-4	G5			S5			x	x	
<i>Vicia cracca</i>	Cow Vetch	0	5	G?			SE5		x			
<i>Vitis riparia</i>	Riverbank Grape	0	-2	G5			S5		x	x		

#### Legend

Coe. Cons. - 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.

Coe. Wet. - 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 B**

Site Photos



Photo 1. Example of vegetation conditions in the CUM1-1 community at the north end of the Subject Lands.



Photo 2. Example of vegetation conditions in the CUM1-1 community in the middle portion of the Subject Lands.



Photo 3. Example of vegetation conditions in the CUM1-1 community in the middle portion of the Subject Lands.



Photo 4. Example of vegetation conditions in the CUT1-4/WODM5 community adjacent to the drainage channel.



Photo 5. Example of vegetation conditions in the CUT1-4/WODM5 community in the northeast corner of the Subject Lands.



Photo 6. Example of vegetation conditions in the FODM11 community along the east property boundary.



Photo 7. Example of vegetation conditions within and adjacent to the central drainage channel.



Photo 8. Example of vegetation conditions within and adjacent to the drainage channel east of the Subject Lands.

**Appendix C**  
Species at Risk Screening



# Niagara Falls

## Species At Risk Designations

ENDANGERED

THREATENED

SPECIAL CONCERN

EXTIRPATED

AMPHIBIANS		ESA Protection	Key Habitats Used By Species	Subject Lands
<b>Allegheny Mountain Dusky Salamander</b> ( <i>Desmognathus ochrophaeus</i> )	Known to Occur	Species Protection and Habitat Regulation	generally found near forested brooks, mountain cascades, springs, or seeps. It uses this habitat to forage, as well as for overwintering and brooding. It nests in springs and seeps. Shelter is provided in wet cavities along stream edges or seeps, or under stones, leaf litter, or logs.	Suitable habitat not present on subject lands. Not observed during surveys.
<b>Northern Dusky Salamander</b> ( <i>Desmognathus fuscus</i> )	Known to Occur	Species Protection and Habitat Regulation	Generally prefer rocky woodland streams, seepages, and springs where water is running or trickling	Suitable habitat not present on subject lands. Not observed during surveys.
BIRDS		ESA Protection	Key Habitats Used By Species	Subject Lands
<b>Acadian Flycatcher</b> ( <i>Empidonax virescens</i> )	Known to Occur	Species and General Habitat Protection	Generally requires large areas of mature, undisturbed forest; avoids the forest edge; often found in well wooded swamps and ravines	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Bank Swallow</b> ( <i>Riparia riparia</i> )	Known to Occur	Species and General Habitat Protection	It nests in a wide variety of naturally and anthropogenically created vertical banks, which often erode and change over time including aggregate pits and the shores of large lakes and rivers.	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Barn Swallow</b> ( <i>Hirundo rustica</i> )	Known to Occur	Species and General Habitat Protection	Prefers farmland; lake/river shorelines; wooded clearings; urban populated areas; rocky cliffs; and wetlands. They nest inside or outside buildings; under bridges and in road culverts; on rock faces and in caves etc.	Suitable nesting habitat not present on subject lands. Species observed foraging over lands during breeding bird surveys.
<b>Bobolink</b> ( <i>Dolichonyx oryzivorus</i> )	Known to Occur	Species and General Habitat Protection	Generally prefers open grasslands and hay fields. In migration and in winter uses freshwater marshes and grasslands	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Chimney Swift</b> ( <i>Chaetura pelagica</i> )	Known to Occur	Species and General Habitat Protection	Historically found in deciduous and coniferous, usually wet forest types, all with a welldeveloped, dense shrub layer; now most are found in urban areas in large uncapped chimneys	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Common Nighthawk</b> ( <i>Chordeiles minor</i> )	Known to Occur	N/A	Generally prefer open, vegetation-free habitats, including dunes, beaches, recently harvested forests, burnt-over areas, logged areas, rocky outcrops, rocky barrens, grasslands, pastures, peat bogs, marshes, lakeshores, and river banks. This species also inhabits mixed and coniferous forests. Can also be found in urban areas (nest on flat roof-tops)	Typical habitat not present on subject lands.
<b>Eastern Meadowlark</b> ( <i>Sturnella Magna</i> )	Known to Occur	Species and General Habitat Protection	Generally prefers grassy pastures, meadows and hay fields. Nests are always on the ground and usually hidden in or under grass clumps.	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Eastern Whip-poor-will</b> ( <i>Caprimulgus vociferus</i> )	Known to Occur	Species and General Habitat Protection	Generally prefer semi-open deciduous forests or patchy forests with clearings; areas with little ground cover are also preferred; In winter they occupy primarily mixed woods near open areas.	Typical habitat not present on subject lands.
<b>Eastern Wood-Pewee</b> ( <i>Contopus virens</i> )	Known to Occur	N/A	Associated with deciduous and mixed forests. Within mature and intermediate age stands it prefers areas with little understory vegetation as well as forest clearings and edges.	Potential breeding habitat present on subject lands. Species not observed on or adjacent to lands during breeding bird surveys.
<b>Golden-winged Warbler</b> ( <i>Vermivora chrysoptera</i> )	Known to Occur	N/A	Generally prefer areas of early successional vegetation, found primarily on field edges, hydro or utility right-of-ways, or recently logged areas.	Potential breeding habitat present on subject lands. Species not observed on or adjacent to lands during breeding bird surveys.
<b>Henslow's Sparrow</b> ( <i>Ammodramus henslowii</i> )	Historically Known to Occur	Species and General Habitat Protection	Generally found in old fields, pastures and wet meadows. They prefer areas with dense, tall grasses, and thatch, or decaying plant material	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Northern Bobwhite</b> ( <i>Colinus virginianus</i> )	Historically Known to Occur	Species and General Habitat Protection	Generally inhabits a variety of edge and grassland type - habitats including nonintensively farmed agricultural lands.	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Peregrine Falcon</b> ( <i>Falco peregrinus</i> )	Known to Occur	N/A	Generally nest on tall, steep cliff ledges adjacent to large waterbodies; some birds adapt to urban environments and nest on ledges of tall buildings, even in densely populated downtown areas.	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.
<b>Red-Headed Woodpecker</b> ( <i>Melanerpes erythrocephalus</i> )	Known to Occur	N/A	Generally prefer open oak and beech forests, grasslands, forest edges, orchards, pastures, riparian forests, roadsides, urban parks, golf courses, cemeteries, as well as along beaver ponds and brooks	Typical breeding habitat not present on subject lands. Species not observed during breeding bird surveys.

<b>Wood Thrush</b> ( <i>Hylocichla mustelina</i> )	<b>Known to Occur</b>	N/A	Nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understory layers. Prefers large forest mosaics, but may also nest in small forest fragments.	Potential breeding habitat present on subject lands. Species not observed on or adjacent to lands during breeding bird surveys.
<b>Yellow-breasted Chat</b> ( <i>Icteria virens</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally prefer dense thickets around wood edges, riparian areas, and in overgrown clearings	Suitable habitat not present on subject lands. Species not observed during breeding bird surveys.

<b>FISH</b>		ESA Protection	<b>Key Habitats Used By Species</b>	<b>Subject Lands</b>
<b>American Eel</b> ( <i>Anguilla rostrata</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	All fresh water, estuaries and coastal marine waters that are accessible to the Atlantic Ocean; 12-mile creek watershed and Lake Ontario	Potential habitat not present on subject lands.
<b>Grass Pickerel</b> ( <i>Esox americanus vermiculatus</i> )	<b>Known to Occur</b>	N/A	Generally occur in wetlands with warm, shallow water and an abundance of aquatic plants; occur in the St. Lawrence River, Lake Ontario, Lake Erie, and Lake Huron	Potential habitat not present on subject lands.
<b>Lake Chubsucker</b> ( <i>Erimyzon sucetta</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally prefer marshes, wetlands and lakes with clear, still waters and abundant aquatic plants	Potential habitat not present on subject lands.
<b>Lake Sturgeon</b> ( <i>Acipenser fulvescens</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally inhabits the bottoms of shallow areas of large freshwater lakes and rivers	Potential habitat not present on subject lands.

<b>INSECTS</b>		ESA Protection	<b>Key Habitats Used By Species</b>	<b>Subject Lands</b>
<b>Monarch Butterfly</b> ( <i>Danaus plexippus</i> )	<b>Known to Occur</b>	N/A	Exist primarily wherever milkweed and wildflowers exist; abandoned farmland, along roadsides, and other open spaces	Scattered stems of swamp and common milkweed present on lands. No use by Monarchs documented.
<b>Rusty-patched Bumble Bee</b> ( <i>Bombus affinis</i> )	<b>Formerly Occurred and May Still Occur</b>	Species and General Habitat Protection June 27, 2014	Generally inhabits a range of diverse habitats including mixed farmland, sand dunes, marshes, urban and wooded areas. It usually nests underground in abandoned rodent burrows	Typical habitat not present on subject lands.
<b>West Virginia White</b> ( <i>Pieris virginienensis</i> )	<b>Known to Occur</b>	N/A	Generally prefer moist, deciduous woodlands. The larvae feed only on the leaves of the two-leaved toothwort ( <i>Cardamine diphylla</i> ), which is a small, spring-blooming plant of the forest floor.	Potential habitat not present on subject lands.

<b>MAMMALS</b>		ESA Protection	<b>Key Habitats Used By Species</b>	<b>Subject Lands</b>
<b>Grey Fox</b> ( <i>Urocyon cinereoargenteus</i> )	<b>May Occur</b>	Species and General Habitat Protection	Generally prefers deciduous forests, marshes, swampy areas, and urban areas	Potential habitat not present on subject lands.
<b>Eastern Small-footed Myotis</b> ( <i>Myotis leibii</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: primarily under loose rocks on exposed rock outcrops, crevices and cliffs, and occasionally in buildings, under bridges and highway overpasses and under tree bark.	Typical roosting habitat not present on subject lands.
<b>Little Brown Myotis</b> ( <i>Myotis lucifugus</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: Often associated with buildings (attics, barns etc.). Occasionally found in trees (25-44 cm dbh).	Significant potential roosting habitat not present on subject lands.
<b>Northern Myotis</b> ( <i>Myotis septentrionalis</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: Often associated with cavities of large diameter trees (25-44 cm dbh). Occasionally found in structures (attics, barns etc.)	Significant potential roosting habitat not present on subject lands.
<b>Tri-colored Bat</b> ( <i>Perimyotis subflavus</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: Can be in trees or dead clusters of leaves or arboreal lichens on trees. May also use barns or similar structures.	Significant potential roosting habitat not present on subject lands.

<b>PLANTS</b>		ESA Protection	<b>Key Habitats Used By Species</b>	<b>Subject Lands</b>
<b>American Chestnut</b> ( <i>Castanea dentata</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Found in deciduous forest communities; this tree prefers arid forests with acid and sandy soils.	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>American Ginseng</b> ( <i>Panax quinquefolius</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Grows in rich, moist, undisturbed and relatively mature deciduous woods in areas of neutral soil (such as over limestone or marble bedrock).	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>American Water-willow</b> ( <i>Justicia americana</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows along shorelines and sometimes in nearby wetlands, as well as along streams where the bottom is composed of gravel, sand or organic matter	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Black Ash</b> ( <i>Fraxinus nigra</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows in open moist to wet woodlands and wetlands, often growing on poorly drained soils.	Typical habitat not present on subject lands. Species not observed during botanical inventories.

<b>Butternut</b> ( <i>Juglans cinerea</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows in rich, moist, and well-drained soils often found along streams. It may also be found on well-drained gravel sites, especially those made up of limestone. It is also found, though seldomly, on dry, rocky and sterile soils. In Ontario, the Butternut generally grows alone or in small groups in deciduous forests as well as in hedgerows	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Common Hoptree</b> ( <i>Ptelea trifoliata</i> )	<b>Known to Occur</b>	N/A	Generally grows in sandy soils in areas with a lot of natural disturbance - such as the outer edge of shoreline vegetation, sand spits, and sand points.	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Deerberry</b> ( <i>Vaccinium stamineum</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally occurs on sandy and well-drained soil, often in dry open woodlands (Niagara Gorge)	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Drooping Trillium</b> ( <i>Trillium flexipes</i> )	<b>Historically Known to Occur</b>	Species and General Habitat Protection	Generally grows in dry, sandy loam, nonacidic soils of mature, deciduous woodlands that are usually associated with watercourses.	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Eastern Flowering Dogwood</b> ( <i>Cornus florida</i> )	<b>Known to Occur</b>	Species Protection and Habitat Regulation	Generally grows in deciduous and mixed forests, in the drier areas of its habitat, although it is occasionally found in slightly moist environments; Also grows around edges and hedgerows	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Red Mulberry</b> ( <i>Morus rubra</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows in moist forest habitats. In Ontario, these include slopes and ravines of the Niagara Escarpment, and sand spits and bottom lands; Can grow in open areas such as hydro corridors	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Round-leaved Greenbrier</b> ( <i>Smilax rotundifolia</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows in open moist to wet woodlands, often growing on sandy soils. Habitat is variable.	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Shumard Oak</b> ( <i>Quercus shumardii</i> )	<b>Known to Occur</b>	N/A	Generally grows in deciduous forests, where the soils are poorly drained clay and clay loam. Requires full sunlight.	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Spotted Wintergreen</b> ( <i>Chimaphila maculata</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grow in sandy habitats in dry-mesic oak-pine woods.	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>Swamp Rose-mallow</b> ( <i>Hibiscus moscheutos</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows in open, coastal marshes, but it is also sometimes found in open wet woods, thickets and drainage ditches	Typical habitat not present on subject lands. Species not observed during botanical inventories.
<b>White Wood Aster</b> ( <i>Eurybia divaricata</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally grows in open, dry, deciduous forests. It has been suggested that it may benefit from some disturbance, as it often grows along trails.	Typical habitat not present on subject lands. Species not observed during botanical inventories.

REPTILES		ESA Protection	Key Habitats Used By Species	Subject Lands
<b>Blanding's Turtle</b> ( <i>Emydonidea blandingii</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally occur in freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes and swamps. They prefer shallow water that is rich in nutrients, organic soil and dense vegetation. Adults are generally found in open or partially vegetated sites, and juveniles prefer areas that contain thick aquatic vegetation including sphagnum, water lilies and algae. They dig their nest in a variety of loose substrates, including sand, organic soil, gravel and cobblestone. Overwintering occurs in permanent pools that average about one metre in depth, or in slow-flowing streams.	Typical habitat not present on subject lands. Species not observed during visits.
<b>Eastern Musk Turtle</b> ( <i>Sternotherus odoratus</i> )	<b>Known to Occur</b>	Species and General Habitat Protection	Generally prefers shallow, slowmoving water where it typically walks along the bottom rather than swimming	Typical habitat not present on subject lands. Species not observed during visits.
<b>Eastern Ribbonsnake</b> ( <i>Thamnophis sauritus</i> )	<b>Known to Occur</b>	N/A	Generally occur along the edges of shallow ponds, streams, marshes, swamps, or bogs bordered by dense vegetation that provides cover. Abundant exposure to sunlight is also required, and adjacent upland areas may be used for nesting.	Typical habitat not present on subject lands. Species not observed during visits.
<b>Snapping Turtle</b> ( <i>Chelydra serpentina</i> )	<b>Known to Occur</b>	N/A	Generally inhabit shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	Typical habitat not present on subject lands. Species not observed during visits.

## **Appendix D**

### Significant Wildlife Habitat Screening

Assessment of potential Significant Wildlife Habitat – Chippawa Property

Significant Wildlife Habitat (SWH) Type	Known or Candidate SWH present/absent	Rationale
<b>SEASONAL CONCENTRATION AREAS OF ANIMALS</b>		
Waterfowl Stopover and Staging Areas	Absent	Suitable habitat not present on Subject Lands
Shorebird Migratory Stopover Area	Absent	Suitable habitat not present on Subject Lands
Raptor Wintering Area	Absent	Suitable habitat not present on Subject Lands
Bat Hibernacula	Absent	Suitable overwintering habitat not present on Subject Lands.
Bat Maternity Colonies	Absent	Significant Potential roost habitat not present on the Subject Lands.
Turtle Wintering Areas	Absent	Suitable overwintering habitat not present on Subject Lands
Reptile Hibernaculum	Absent	No obvious hibernacula present on properties.
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff)	Absent	Potential habitat not present on Subject Lands
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs)	Absent	No colonial nesting species present on Subject Lands.
Colonially -Nesting Bird Breeding Habitat (Ground)	Absent	No colonial nesting species present on Subject Lands.
Migratory Butterfly Stopover Areas	Absent	Suitable habitat not present on Subject Lands
Landbird Migratory Stopover Areas	Absent	Significant potential habitat no present on Subject Lands.
Deer Winter Congregation Areas	Absent	Suitable habitat not present on Subject Lands
<b>RARE VEGETATION COMMUNITIES</b>		
Cliffs and Talus Slopes	Absent	Habitat type not present on Subject Lands
Sand Barren	Absent	Habitat type not present on Subject Lands
Alvar	Absent	Habitat type not present on Subject Lands
Old Growth Forest	Absent	Habitat type not present on Subject Lands
Savannah	Absent	Habitat type not present on Subject Lands

Tallgrass Prairie	Absent	Habitat type not present on Subject Lands
Other Rare Vegetation Communities	Absent	No rare vegetation communities present on Subject Lands
<b>SPECIALIZED HABITATS OF WILDLIFE CONSIDERED SWH</b>		
Waterfowl Nesting Area	Absent	Suitable habitat not present on Subject Lands
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Absent	Suitable habitat not present on Subject Lands
Woodland Raptor Nesting Habitat	Absent	Suitable habitat not present on Subject Lands
Turtle Nesting Areas	Absent	Suitable habitat not present on Subject Lands
Seeps and Springs	Absent	Suitable habitat not present on Subject Lands
Amphibian Breeding Habitat (Woodland)	Absent	Suitable habitat not present on Subject Lands
Amphibian Breeding Habitat (Wetlands)	Absent	Suitable habitat not present on Subject Lands
Woodland Area-Sensitive Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands
<b>HABITATS OF SPECIES OF CONSERVATION CONCERN CONSIDERED SWH</b>		
Marsh Breeding Bird Habitat	Absent	Suitable habitat not present on Subject Lands
Open Country Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands
Shrub/Early Successional Bird Breeding Habitat	Absent	Suitable habitat not present on Subject Lands
Terrestrial Crayfish	Absent	Suitable habitat not present on Subject Lands
Special Concern and Rare Wildlife Species	Absent	Subject Lands providing incidental foraging opportunities for Barn Swallows. Use on considered a significant wildlife habitat function.
<b>ANIMAL MOVEMENT CORRIDORS</b>		
Amphibian Movement Corridors	Absent	Suitable habitat not present on Subject Lands
Bat Migratory Stopover Area	Absent	Suitable habitat not present on Subject Lands

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