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Appendix D

Review of Existing Natural Heritage Conditions and Environmental Review Memo

***If technical reports are required in an alternative format for accessibility needs, please contact:**

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Memo: Review of Existing Natural Heritage Existing Conditions and Environmental Review

Date: November 23, 2022 **Project No.:** 300051307.0000

Project Name: Municipal Class EA - Regional Road 43 (Bridge Street) and Adjacent Roads

Client Name: Niagara Region

Submitted To: Maged Elmadhoon and Carolyn Ryall

Submitted By: Sarah Yoshida and Kevin Butt

Reviewed By: Ray Bacquie, Project Manager / Senior Vice President

1.0 Introduction

The Regional Municipality of Niagara (Region) has initiated a Municipal Class Environmental Assessment (MCEA) to consider improvements to Regional Road 43 (Bridge Street) and Adjacent Municipal Roadways in City of Niagara Falls. In consultation with the City of Niagara Falls the Region will assess the following: Regional Road 43 (Bridge Street) from Victoria Avenue to River Road, Erie Avenue from Regional Road 43 (Bridge Street) to Queen Street, Park Street from Ontario Avenue to Zimmerman Avenue, and Zimmerman Avenue from Regional Road 43 (Bridge Street) to Park Street.

2.0 Background

In support of the MCEA, R.J. Burnside & Associates Limited (Burnside) has undertaken a review of the existing natural heritage conditions in Study Area to identify potential natural heritage constraints that will need to be taken into consideration relating to the proposed improvements in the Study Area. The analysis includes a review of background data and aerial imagery as well as field studies for Regional Road 43 (Bridge Street) and adjacent municipal roadways in the City of Niagara Falls, Ontario.

The Region has identified the following problem and opportunity statement.

> *As identified within Niagara Region's Transportation Master Plan (TMP), transportation infrastructure improvements are required to adequately support the increase in travel demand created by planned population and employment growth as well as the introduction or improvement of major transportation/transit*

hubs. The Niagara Falls GO Transit Station which was approved in 2011 through the Niagara Rail Service Expansions - Environmental Review Study is one of the major transit hubs contributing to the need.

Niagara Region, in collaboration with the City of Niagara Falls, has initiated the undertaking of a Schedule C Municipal Class Environmental Assessment (MCEA) to identify alternative solutions and designs to address the need for transportation infrastructure improvements within the area surrounding the Niagara Falls GO Transit Station.

Through the planned improvements, the opportunity arises to:

- *Facilitate the movement of people to, from, and around the Niagara Falls GO Transit Station via all travel modes (i.e. automobile, transit, cycling, and walking) including the potential to connect and integrate the transportation network with existing and future City of Niagara Falls' transportation network improvements/facilities and the downtown core.*
- *Implement the vision and objectives contained within Niagara Region's TMP to create a diverse, safe, and sustainable transportation network built upon the principles of Complete Streets and Active Transportation.*
- *Implement the vision and objectives of the City of Niagara Falls' guiding planning documents such as the City of Niagara Falls' Official Plan, the Niagara Falls GO Transit Station Secondary Plan, and the GO Transit Station Precinct Plan.*
- *Harmonize the urban design and public realm to create a sense of place within the Niagara Falls GO Transit Station Precinct focusing on Regional Road 43 (Bridge Street), Erie Avenue, Park Street, and Zimmerman Avenue.*

3.0 Study Area

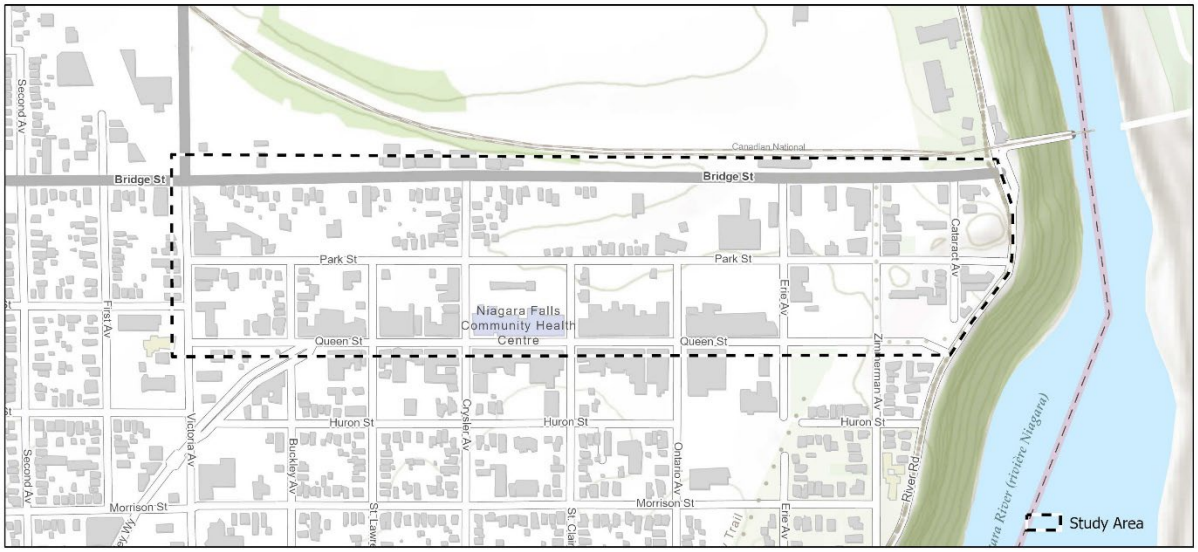
The Study Area is bounded by Regional Road 43 (Bridge Street) in the north, River Road in the east, Queen Street on the south, and Victoria Avenue in the west.

The analysis focuses on the transportation needs and preliminary design of improvements for the following road segments:

- Regional Road 43 (Bridge Street) between Victoria Avenue and River Road.
- Erie Avenue between Regional Road 43 (Bridge Street) and Queen Street.
- Park Street between Ontario Avenue and Zimmerman Avenue.
- Zimmerman Avenue between Regional Road 43 (Bridge Street) and Park Street.

The Study Area and project limits are shown in Figure 1.

Figure 1. Study Area



It is noted that the Victoria Avenue and Bridge Street intersection has been planned and designed through another MCEA for the extension of Regional Road 57 (Thorold Stone Road). The design of the Victoria Avenue and Bridge Street intersection as a roundabout is underway, hence analysis of the intersection is beyond the scope of this study.

4.0 Site Context

Land use within the study area consists primarily of residential with some commercial and parking uses. The analysis assesses the transportation demand implications of the future redevelopment of the area based on the Official Plan Amendment No.125 (OPA 125) Niagara Falls Transit Station Secondary Plan.

The study area is also adjacent to the International Crossing to the U.S.A., situated just east of Bridge Street and Niagara Road. As a result, the broader study area experiences considerable tourist traffic. Tourist traffic has been incorporated as part of the traffic growth incorporated in the Niagara Region transportation forecasting model.

Transit facilities in the area include VIA Rail Station and Niagara Falls Transit Terminal and bus service provided by GO Transit, Niagara Falls Transit and WEGO. The analysis also includes the travel demand and operational needs of the planned Niagara Falls GO Transit Station.

5.0 Alternative Solutions

5.1 Bridge Street

For Bridge Street, there were 4 alternative solutions that were short-listed for consideration and evaluation. Each alternative solution involved modifications to the existing road right of way in the interim, including streetscaping, cycling facilities and enhanced pedestrian space.

In an ultimate configuration, when the study area has undergone redevelopment, an additional of 5 metres of road right of way (2.5 metres per side) is proposed to enhance boulevard features and opportunities for streetscape elements.

5.2 Municipal Roads

In addition to the Do Nothing Alternative, there were 4 short listed alternatives considered for the municipal (City of Niagara Falls) roads. None of the alternatives considered involved the expansion of the roadways. The improvement options involved introduction of streetscaping and providing active transportation connections:

- Alternative A includes removal of on-street parking and introduction of bike lanes with boulevard plantings.
- Alternative B includes a narrowing of Erie Avenue and introduction of a multiuse path on the west side of Erie Avenue within the road right of way.
- Alternative C includes a narrowing of Erie Avenue and introduction of a market zone on the east side of Erie Avenue and a multi-use path on the west side outside the right of way.
- Alternative D includes a Woonerf multi-use street accommodating all modes of travel within the roadway and introduction of market zones on both sides of the street.

5.3 Preferred Solutions

The preferred solutions and designs for Bridge Street included maintaining the existing roadway pavement width and retrofitting bicycle lanes in the western portion of the corridor (West of Erie Avenue) and cycle tracks on the eastern portion of the corridor. A boulevard strip will be introduced to accommodate plantings and other streetscape elements; the sidewalk will be improved within the existing road right of way. In the long term, as development proceeds replacing existing buildings west of Erie Avenue, an additional 2.5 metres on each side of the road (from Erie Avenue to east of Victoria Avenue) will be required and dedicated to improving streetscape elements and off-road cycle tracks.

For the municipal roads, all modifications will be accommodated without changes to the existing road rights of way. Park Street and Zimmerman Avenue will be narrowed to accommodate streetscaping including plantings on the north side and west side of the streets. Erie Avenue will be narrowed to provide a market area on the east side of the street.

Table 1. Designs of the Preferred Interim Solution and Preferred Ultimate Solution

Preferred Interim Solution	Preferred Ultimate Solution
Alternative 1: Bike Lanes / Cycle-Track • 1 EB and WB 3.5 m through lane • 2 bike lanes 1.5 m + 0.5 m buffer • Planting areas, sidewalk south side	Alternative 3B: Cycle Tracks and Left Turn Lane • 1 EB and WB through lane • Remove bike lanes and replace with WB left-turn lanes where required • Planting areas, cycle track both sides

Table 2 summarizes the preferred solutions for the municipal roads.

Table 2: Preferred Solutions for Municipal Roads

Road	Preferred Solution
Erie Avenue (Bridge Street to Park Street)	Alternative C: East site Market Zone • 1 EB and WB 3.5 m through lane • Planting zone both sides • An expanded east side market zone • A MUP on City lands west of the ROW
Erie Avenue (Park Street to Queen Street)	Alternative B: West side MUP • 1 EB and WB through lane • Planting zone both sides • MUP west side within ROW
Park Street (Ontario Avenue to Zimmerman Avenue)	Alternative O: Do Nothing • Add continuous sidewalk both sides • Add streetscape elements adjacent to curb consistent with urban typology • Reduce road width for streetscaping
Zimmerman Avenue (Bridge Street to Park Street)	Alternative 0: Do Nothing • Maintain 10-11m pavement width • Maintain boulevard of 3.5m • Add streetscape elements adjacent to curb consistent with urban typology

5.4 Existing Natural Heritage Conditions

5.4.1 Methodology

The following records and databases were reviewed to document existing ecological conditions:

- Aerial imagery (2019).
- Natural Heritage Information Centre (NHIC) mapping (2021).
- NDMNRF Land Information Ontario (LIO) database.
- Atlas of Breeding Birds of Ontario (2001-2005).
- Ontario Reptile and Amphibian Atlas.
- NPCA's Regulation 155/06 Mapping.
- The Regional Municipality of Niagara Official Plan (2014 Consolidation), Schedule C.
- Regional Municipality of Niagara Official Plan (2014 Consolidation).
- Official Plan for the City of Niagara Falls (April 2019), Schedules A and A1.

Field investigations were conducted on September 14, 2020, to assess the conditions with respect to terrestrial habitat. Fieldwork completed included:

- Modified Ecological Land Classification (ELC) in accordance with the *Ecosites of Ontario Operational Draft* (Banton et al. 2009).
- Visual searches for potential Species at Risk (SAR) habitats.
- Incidental observations of flora and fauna.

It should be noted that the focus of the ecological investigations was targeted towards any potential natural heritage features located west of the Niagara Parkway. Ecological investigations did not include the Niagara Gorge or Niagara River.

A list of additional potential SAR that are known to occur within the vicinity if the Study Area was provided by the MECP on November 21, 2022.

5.4.2 Municipal and Regional Natural Heritage Policy Areas

Based on Schedule C of the Niagara Region Official Plan (OP) and Schedule A1 of the City of Niagara Falls OP, the wooded feature located outside of the project area just east of Victoria Avenue and north of Bridge Street is designated as a significant woodland (Figure 1 Enclosed). Significant woodlands are classified as an Environmental Conservation Area (ECA). Although the ECA falls within the Study Area, the project will not impact this feature.

An Environmental Protection Area (EPA), a provincial Life Science Area of Natural Scientific Interest (ANSI) found in association with the Niagara River east of the Niagara Parkway is also present in the Study Area. Although the EPA is located within 50 meters of the project limits, the feature will not be impacted by construction activities.

5.4.3 Vegetation Communities

A summary of ecosites present is found in Table 3. A map illustrating the locations of all vegetation communities is included within the enclosed Figure 1.

Table 3: ELC Communities

ELC Community	Community Description
CVC_1 - Business Sector	This ecosite represents the area north of Bridge Street and east of Erie Avenue and Zimmerman Avenue.
Inclusions: TG-B (Treed Group)	Boulevard plantings are present throughout this site. Species present include Thornless honey-locust (*Gledistia triacanthos 'inermis'*) and White Cedar (*Thuja occidentalis*). Manitoba Maples (*Acer negundo*) have also become established within the boulevard plantings. Treed areas are also present within unmaintained parking lots. Species present in these areas include Black Walnut (*Juglans nigra*), Norway Maple (*Acer platanoides*), Manitoba Maple, Virginia Creeper

ELC Community	Community Description
	(*Parthenocissus quinquefolia*), Goldenrod (*Solidago sp*.), and Wild Carrot (*Daucus carota*). A tree group inclusion (TG-B) is associated with the commercial space adjacent to a former rail corridor located between Cataract Avenue and the Niagara Parkway. Norway Maple and Black Walnut are codominant canopy species in this area. Green Ash regeneration and Manitoba Maple are also present within the understory with Red Raspberry (*Rubus idaeus*). Goldenrod and Reed Canary Grass (*Phalaris arundinacea*) are the dominant groundcover species. The trees within this inclusion have declining health, with some trees having cavities that may provide habitat to wildlife species.
CVR_1 Low Density Residential Inclusion: TG-C (Treed Group)	This ecosite represents the area south of Bridge Street. A small green space with a gravel path bisects the residential area at the corner of Bridge Street and Victoria Avenue. This green space consists of Littleleaf Linden (*Tilia cordata;* dominant), Norway Maple, Black Walnut, and Manitoba Maple. Ornamental shrubs, Virginia Creeper, Wild Grape (*Vitis riparia*), and European Buckthorn (*Rhamnus cathartica*) are present in the understory and manicured turfgrass is the primary groundcover species. A tree group inclusion (TG-C) is associated with the residential area east of Zimmerman Avenue and south of Park Street. Species in this area include Manitoba Maple, Littleleaf Linden (*Tilia cordata*), Norway Maple, Horse-Chestnut (*Aesculus hippocastanum*), and Wild Grape.
CVI_1 – Transportation Inclusions: TAGM5 - Fencerow	This ecosite represents the roads and GO Transit stations and the rail corridors. A fencerow consisting of various native species including Sugar Maple (*Acer saccharum*), White Spruce (*Picea glauca*), Eastern White Cedar, White Oak (*Quercus alba*), and non-native Norway Maple is present east of the station. All trees within this area are widely spaced with manicured turfgrass beneath. Shrubs or native understory species are not present. Street trees are also present along the roadways of the Study Area including Thornless honey-locust and Tree-of-Heaven (*Ailanthus altissima*).
TG – A – Tree Group	This ecosite represents the Woodland located south of the CN / GO Transit rail corridor immediately east of Victoria Avenue and north of Bridge Street. This area consists of early successional tree species such as Black Walnut (dominant) and Manitoba Maple (subdominant) within the canopy and Green Ash (*Fraxinus pennsylvanica*) within the shrub layer.

ELC Community	Community Description
	Non-native species including Common Apple (*Malus domestica*) and European Buckthorn are present within the understory with native Staghorn Sumac (*Rhus typhinia*).
FODM4-5 - Dry - Fresh Manitoba Maple Deciduous Forest Type	This ecosite represents the wooded area associated with the residential / commercial areas between Chrysler Avenue and Erie Avenue. This canopy is moderately dense (>60% cover) and consists of Manitoba Maple (dominant), Black Walnut (subdominant), White Willow (*Salix alba*), and Norway Maple. Shrub / vine species consists of common tolerant species such as Wild Grape and Virginia Creeper. The understory consists of native and non-native species commonly associated with disturbed areas including turfgrass, Goldenrod (*Solidago sp.*), Burdock (*Arctium sp.*), and Garlic Mustard (*Alliaria petiolata*). Portions of this ecosite are subject to mowing. Residential waste occurs throughout this ecosite.
MEMM3 - Fresh - Moist Mixed Meadow Ecosite	This ecosite represents the grass area located south of the TG-A ecosite. This area consists of mixed grass species and broadleaf forb species. This ecosite is managed by mowing.
FOD – Deciduous Forest	This ecosite is located outside of the Study Area and is associated with the Niagara Gorge. The ELC classification for this ecosite was provided by the NPCA's Watershed Explorer.

5.4.4 Incidental Wildlife

No incidental wildlife observations were made during field studies. Several trees within the old parking lot at the corner of Zimmerman Avenue and Park Street possess cavities that could be utilized by wildlife species including SAR bats. These cavity-bearing trees will not be impacted by the proposed road improvements.

It is anticipated that urban tolerant mammals such as Raccoon (*Procyon lotor*), Grey Squirrel (*Sciurus carolinensis*) and Virginia opossum (*Didelphis virginiana*) use the site for foraging and habitat.

5.4.5 Migratory Birds

A review of the Ontario Breeding Bird Atlas (OBBA) identified records of 91 bird species in the vicinity of the study area (OBBA, 2005). Most of the birds listed are classified as migratory birds

under the *Migratory Birds act Convention* (MBCA). A full list of species recorded in the area is provided in Attachment A.

5.4.6 Provincial Endangered and Threatened Species

Several databases, species range maps, and background documents were reviewed to determine if any Species at Risk (SAR) have been recorded or are likely to be present in the Study Area.

Species-specific searches were not conducted. Instead, confirmation of ELC communities within the Study Area during site investigations assisted in screening for the potential habitat of SAR.

A full list of rare species documented in the desktop review in the Study Area and its vicinity is provided in Attachment B. No endangered or threatened species were observed. All areas that may contain habitat of Threatened or Endangered species are assumed to be located within the Niagara Gorge and Niagara River due to the highly impacted and long urbanized nature of the natural heritage features located within the study area. Direct impacts to SAR habitat within the Niagara Gorge and Niagara River are not anticipated.

One Red Mulberry (*Morus rubra*) tree was reported during the 2016 City of Niagara Falls tree inventory. Since the tree is a landscape tree associated with a residential area, this classification is likely an error. Red Mulberry are found in moist, forested habitats such as the ravines of the Niagara Escarpment and bottomlands. It is more likely that this tree is a White Mulberry (*Morus alba*) or a Red Mulberry hybrid. White Mulberry are often used as ornamental trees.

5.4.7 Areas of Natural Scientific Interest (ANSI)

Two (2) ANSIs occur within the vicinity of the project limits, specifically a Life Sciences Provincially Significant ANSI, the Niagara Gorge, and an Earth Sciences Provincially Significant ANSI, the Niagara River Bedrock Gorge. Both are found in association with the Niagara River located east of the Niagara Parkway and will not be impacted by the proposed project.

5.4.8 Significant Wildlife Habitat

A desktop analysis was conducted to identify significant wildlife habitat (SWH) features within the project limits. A table summarizing the location of SWH features is provided in Attachment C. No confirmed SWH features occur within the project limits. All candidate SWH features are assumed to occur within the ECA or EPA features outside of the project limits and will not be impacted directly by the proposed project.

5.4.9 Summary of Key Protected Features

The following features are present which require consideration in the design and construction process:

- Significant Woodlands.

- Habitat of Endangered and Threatened Species.
- Provincial Life Science ANSI.
- Migratory birds and their associated nesting habitat.

6.0 Anticipated Impacts of Preferred Ultimate Solution

The preliminary design has been overlaid on the existing conditions to anticipate impacts that may occur as a result of the preferred Interim and Ultimate Solutions. Impacts to natural heritage features and functions are expected to be minimal due to the limited representation of naturalized vegetation features. The anticipated impacts include:

- Encroachment within TAGM5 ecosite to accommodate a CN Rail parking area west of the GO Station on the north side of the Bridge Street.
- Encroachment along the eastern margins of ecosite TG-A to accommodate the construction of a Metrolinx access road and bus loop.
- Street tree removals on the south side of Bridge Street to accommodate sidewalks.

Overall, the greatest impacts to treed areas will occur during the Interim phase. In total, 42 trees will require removal throughout the Interim Solution phase including, 30 trees on the north side of Bridge Street and 12 trees on the south side. Tree removals on the north side are all associated with impacts peripheral to the road improvements (i.e. parking and access) and no tree removals are associated with the road and sidewalk improvements on the north side.

Tree removals will not occur along Erie Avenue, Cataract Avenue, or Zimmerman Avenue. All tree clearing activities will occur outside of the ECA and EPA boundaries identified within the City of Niagara Falls OP.

An additional 4 ornamental landscape trees will require removal along the south side of Bridge Street during the Ultimate Solution phase of the project. No additional encroachment into natural areas will occur during the implementation of the ultimate solution.

All the trees requiring removal on the south side of Bridge Street during the Interim and Ultimate Solution phases of the project are previously planted non-native species.

Direct Impacts & Mitigation Measures

Overall, encroachment into treed areas and street tree removals will result in a reduction of the overall urban tree canopy along Bridge Street, which already has limited tree cover. Tree loss will be offset through the provision of landscaped boulevards and new street trees and enhancement plantings within existing treed features.

Land Clearing within project limits may also result in a minor loss of or disturbance to migratory birds or their nests. Although bird habitat within the project limits is minimal, treed areas and individual landscape trees may provide suitable nesting habitat for birds. Additionally, disturbing migratory species, their nests, or eggs is a contravention of the MBCA. To mitigate any deleterious impacts to nesting birds and avoid being in contravention of the MBCA, all tree removals should be conducted outside of the core breeding bird window (April 1 – August 31).

If clearing must occur within this window, a qualified Ecologist / Avian Biologist will first search the affected area. Any active nests will be flagged, and the surrounding area will be left undisturbed until the Ecologist / Avian Biologist confirms that the birds have fledged, and the nest is no longer active.

Indirect Impacts & Mitigation Measures

Impacts of development may extend beyond the proposed work zone and may indirectly impact natural heritage areas. Potential impacts include:

- Erosion / sedimentation beyond the development envelope due to grading and works within areas of exposed soil.
- Dust.
- Impacts of construction on wildlife.

Sedimentation of watercourses and storm drains can deteriorate water quality. Construction noise can dissuade wildlife from using the area or disrupt their life cycles (e.g., prevent nesting).

It is anticipated that all potential indirect impacts to areas outside of the project limits can be mitigated using standard construction practices such as erosion and sediment control measures, abiding by noise by-laws, and environmental monitoring.

Provincially regulated features including SWH, habitat of endangered and threatened species, or ANSIs will not be directly impacted by the proposed works. It is anticipated that any potential indirect impacts such as dust and noise can be mitigated using standard construction practices.

7.0 Future Commitments

There are a number of natural heritage protection and enhancement opportunities that can be carried out at the detail design stages. These include:

- A detailed tree inventory including street tree assessment to assist with the preserving existing trees. Mitigation measures such as tree protection fence and root pruning may promote tree retention. The inventory will also assist with determining the extent of tree loss and where it will occur to inform the landscape plan. Tree removal compensation associated with the road works (anticipated at this time to be 12 trees on the south side) should strive to provide street trees within the boulevard.
- Impacts to vegetation communities should be reviewed to determine if impacts such as new edge creation or changes to growing conditions (e.g., increased light exposure) will result.
- Prepare a landscape plan that improves tree canopy cover and complements natural heritage features in the immediate area. Factors to ensure the establishment and long-term success of trees that must be considered include using appropriate soil volumes, selecting native or non-invasive, urban tolerant species and considering long-term care requirements (i.e., watering, mulching).

R.J. Burnside & Associates Limited

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Ecologist
SY:lam/js

Kevin Butt
ISA Certified Arborist and Terrestrial Ecologist

Enclosure(s): Figure 1: Ecological Land Classification and Natural Heritage Features
Figure 2a: Ecological Land Classification and Natural Heritage Features – Interim Development
Figure 2b: Ecological Land Classification and Natural Heritage Features – Ultimate Development
Attachment A: OBBA, ORAA, and NHIC Records within the Study Area
Attachment B: Species at Risk Table
Attachment C: Significant Wildlife Habitat Table

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Figures

NPCA Environmentally Sensitive Area
Study Area
Life Science ANSI
Earth Science ANSI
Wooded Area
ELC

City of Niagara Schedule A-1

Environmental Conservation Area
Environmental Protection Area

ELC Code	Description
CVC_1	Business Sector
CVI_1	Transportation
CVR_1	Low Density Residential
FOD	Deciduous Forest
FODM4-5	Dry-Fresh Manitoba Maple Deciduous Forest
MEMM3	Dry-Fresh Mixed Meadow Ecosite
RBO	Open Rock Barren
TAGM5	Fencerow
TG	Tree Group

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.

Disclaimer:

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This map is the product of a Geographic Information System (GIS). As such, the data represented on this map may be subject to updates and future reproductions may not be identical.

Datum: North American 1983 CSRS	
Coord. System: NAD 1983 CSRS MTM 17	
Projection: Transverse Mercator	
Central Meridian: 96°0'0.00"W	
False Easting: 304,800m	False Northing: 0m
Page Orientation: 12°	Scale Factor: 0.99990

N
Grid North

0 100 200 300
Metres

BURNSIDE

Client

NIAGARA REGION

Figure Title

MUNICIPAL CLASS EA

REGIONAL ROAD 43 (BRIDGE STREET)

ECOLOGICAL LAND CLASSIFICATION AND NATURAL HERITAGE FEATURES

Drawn	Checked	Date	Figure No.
SV	KB	2022/01/21	1
Scale		Project No.	
1:4,000		300051307	

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Attachment A

Attachment A

Project Name: Bridge Street EA
Project Number: 300051307.0000

NHIC Data								
OGF ID	**Element Type**	**Common Name**	**Scientific Name**	**SRank**	**SARO Status**	**COSEWIC Status**	**ATLAS NAD83 IDENT**	**COMMENTS**
1037608	NATURAL AREA	Niagara Gorge					17PH5774	
1037608	NATURAL AREA	Niagara River Bedrock Gorge					17PH5774	
1037608	SPECIES	Fish Crow	Corvus ossifragus				17PH5774	
1037608	SPECIES	Kidneyshell	Ptychobranchus fasciolaris		END	END	17PH5774	
1037608	SPECIES	Fawnsfoot	Truncilla donaciformis		END	END	17PH5774	
1037608	SPECIES	Round Pigtoe	Pleurobema sintoxia		END	END	17PH5774	
1037608	SPECIES	Timber Rattlesnake	Crotalus horridus		EXP	EXP	17PH5774	
1037608	SPECIES	Northern Bobwhite	Colinus virginianus		END	END	17PH5774	
1037608	SPECIES	American Water-willow	Justicia americana		THR	THR	17PH5774	
1037608	SPECIES	Northern Hawthorn	Crataegus pruinosa var. dissona				17PH5774	

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1037608	SPECIES	Deerberry	Vaccinium stamineum		THR	THR	17PH5774	
1037608	SPECIES	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	Acipenser fulvescens pop. 3		THR	THR	17PH5774	
1037608	SPECIES	Violet Bush-clover	Lespedeza frutescens				17PH5774	
1037608	SPECIES	Pink Milkwort	Polygala incarnata		END	END	17PH5774	
1037608	SPECIES	Slim-flowered Muhly	Muhlenbergia tenuiflora				17PH5774	
1037608	SPECIES	Appalachian Sedge	Carex appalachica				17PH5774	
1037608	SPECIES	Mapleleaf Mussel	Quadrula quadrula		THR	SC	17PH5774	
1037608	SPECIES	American Chestnut	Castanea dentata		END	END	17PH5774	
1037608	SPECIES	Wood Thrush	Hylocichla mustelina		SC	THR	17PH5774	

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1037608	SPECIES	Butternut	Juglans cinerea		END	END	17PH5774	
1037608	SPECIES	White Wood Aster	Eurybia divaricata		THR	THR	17PH5774	
1037608	RESTRICTED SPECIES	Restricted Species	Restricted Species				17PH5774	
1037608	NATURAL AREA	Niagara River Corridor					17PH5774	
1037608	SPECIES	Hickorynut	Obovaria olivaria		END	END	17PH5774	
1037608	RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES		END	END	17PH5774	
1037598	NATURAL AREA	Niagara River Corridor					17PH5674	
1037598	SPECIES	Timber Rattlesnake	Crotalus horridus		EXP	EXP	17PH5674	
1037598	SPECIES	Northern Bobwhite	Colinus virginianus		END	END	17PH5674	
1037598	SPECIES	American Water-willow	Justicia americana		THR	THR	17PH5674	
1037598	SPECIES	Deerberry	Vaccinium stamineum		THR	THR	17PH5674	
1037598	SPECIES	Violet Bush-clover	Lespedeza frutescens				17PH5674	

Project Name: Bridge Street EA
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1037598	SPECIES	Pink Milkwort	Polygala incarnata		END	END	17PH5674	
1037598	SPECIES	Slim-flowered Muhly	Muhlenbergia tenuiflora				17PH5674	
1037598	SPECIES	Appalachian Sedge	Carex appalachica				17PH5674	
1037598	SPECIES	American Chestnut	Castanea dentata		END	END	17PH5674	
1037598	SPECIES	Wood Thrush	Hylocichla mustelina		SC	THR	17PH5674	
1037598	SPECIES	White Wood Aster	Eurybia divaricata		THR	THR	17PH5674	
1037598	RESTRICTED SPECIES	Restricted Species	Restricted Species				17PH5674	
1037598	RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES		END	END	17PH5674	

Project Name: Bridge Street EA
Project Number: 300051307.0000

Region	Square	Species	Breeding Evidence		
			Max BE	Categ	#Sq
11	17PH57	Canada Goose	FY	CONF	1
11	17PH57	Wood Duck	P	PROB	1
11	17PH57	Mallard	FY	CONF	1
11	17PH57	Ring-necked Pheasant	FY	CONF	1
11	17PH57	Wild Turkey	FY	CONF	1
11	17PH57	Pied-billed Grebe	P	PROB	1
11	17PH57	Green Heron	H	POSS	1
11	17PH57	Black-crowned Night-Heron	NY	CONF	1
11	17PH57	Turkey Vulture	FY	CONF	1
11	17PH57	Northern Harrier	P	PROB	1
11	17PH57	Cooper's Hawk	FY	CONF	1
11	17PH57	Red-tailed Hawk	NY	CONF	1
11	17PH57	American Kestrel	P	PROB	1
11	17PH57	Peregrine Falcon	NY	CONF	1
11	17PH57	Killdeer	FY	CONF	1

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11	17PH57	Rock Pigeon	FY	CONF	1
11	17PH57	Spotted Sandpiper	NY	CONF	1
11	17PH57	American Woodcock	FY	CONF	1
11	17PH57	Ring-billed Gull	NY	CONF	1
11	17PH57	Herring Gull	NY	CONF	1
11	17PH57	Common Tern	NY	CONF	1
11	17PH57	Mourning Dove	AE	CONF	1
11	17PH57	Black-billed Cuckoo	S	POSS	1
11	17PH57	Eastern Screech-Owl	T	PROB	1
11	17PH57	Great Horned Owl	AE	CONF	1
11	17PH57	Common Nighthawk	T	PROB	1
11	17PH57	Chimney Swift	AE	CONF	1
11	17PH57	Ruby-throated Hummingbird	P	PROB	1
11	17PH57	Belted Kingfisher	H	POSS	1
11	17PH57	Red-bellied Woodpecker	CF	CONF	1
11	17PH57	Downy Woodpecker	FY	CONF	1
11	17PH57	Hairy Woodpecker	NY	CONF	1
11	17PH57	Northern Flicker	FY	CONF	1
11	17PH57	Eastern Wood-Pewee	FY	CONF	1

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11	17PH57	Acadian Flycatcher	S	POSS	1
11	17PH57	Alder Flycatcher	T	PROB	1
11	17PH57	Willow Flycatcher	T	PROB	1
11	17PH57	Least Flycatcher	T	PROB	1
11	17PH57	Eastern Phoebe	P	PROB	1
11	17PH57	Great Crested Flycatcher	T	PROB	1
11	17PH57	Eastern Kingbird	NY	CONF	1
11	17PH57	Warbling Vireo	T	PROB	1
11	17PH57	Red-eyed Vireo	NY	CONF	1
11	17PH57	Blue Jay	CF	CONF	1
11	17PH57	American Crow	CF	CONF	1
11	17PH57	Horned Lark	FY	CONF	1
11	17PH57	Purple Martin	AE	CONF	1
11	17PH57	Tree Swallow	FY	CONF	1
11	17PH57	Northern Rough-winged Swallow	P	PROB	1
11	17PH57	Bank Swallow	AE	CONF	1
11	17PH57	Cliff Swallow	FY	CONF	1

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11	17PH57	Barn Swallow	NY	CONF	1
11	17PH57	Black-capped Chickadee	FY	CONF	1
11	17PH57	Red-breasted Nuthatch	FY	CONF	1
11	17PH57	White-breasted Nuthatch	P	PROB	1
11	17PH57	Carolina Wren	N	PROB	1
11	17PH57	House Wren	AE	CONF	1
11	17PH57	Winter Wren	N	PROB	1
11	17PH57	Eastern Bluebird	NY	CONF	1
11	17PH57	Veery	S	POSS	1
11	17PH57	Wood Thrush	FY	CONF	1
11	17PH57	American Robin	AE	CONF	1
11	17PH57	Gray Catbird	FY	CONF	1
11	17PH57	Northern Mockingbird	NY	CONF	1
11	17PH57	Brown Thrasher	FY	CONF	1
11	17PH57	European Starling	AE	CONF	1
11	17PH57	Cedar Waxwing	FY	CONF	1
11	17PH57	Yellow Warbler	CF	CONF	1
11	17PH57	American Redstart	CF	CONF	1

11	17PH57	Common Yellowthroat	V	PROB	1
11	17PH57	Hooded Warbler	S	POSS	1
11	17PH57	Chipping Sparrow	FY	CONF	1
11	17PH57	Field Sparrow	FY	CONF	1
11	17PH57	Vesper Sparrow	T	PROB	1
11	17PH57	Savannah Sparrow	FY	CONF	1
11	17PH57	Grasshopper Sparrow	FY	CONF	1
11	17PH57	Song Sparrow	AE	CONF	1
11	17PH57	Scarlet Tanager	CF	CONF	1
11	17PH57	Northern Cardinal	FY	CONF	1
11	17PH57	Rose-breasted Grosbeak	NY	CONF	1
11	17PH57	Indigo Bunting	NY	CONF	1
11	17PH57	Bobolink	NE	CONF	1
11	17PH57	Red-winged Blackbird	NY	CONF	1
11	17PH57	Eastern Meadowlark	NE	CONF	1
11	17PH57	Common Grackle	NY	CONF	1

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11	17PH57	Brown-headed Cowbird	P	PROB	1
11	17PH57	Baltimore Oriole	AE	CONF	1
11	17PH57	House Finch	NY	CONF	1
11	17PH57	Pine Siskin	H	POSS	1
11	17PH57	American Goldfinch	NY	CONF	1
11	17PH57	House Sparrow	NY	CONF	1

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Species #	Common Name	# of Records			Earliest Yr_____	Latest Yr
3	Midland Painted Turtle	5	1934			2019
5	Red-eared Slider	1	2017			2017
6	Snapping Turtle	2	1967			2015
10	Dekay's Brownsnake	6	1993			2018
12	Eastern Gartersnake	46	1905			2019
18	Milksnake	18	1934			2019
19	Northern Watersnake	9	1989			2018
21	Red-bellied Snake	3	1990			2018
25	American Bullfrog	2	2007			2014
27	Gray Treefrog	1	2017			2017
28	Green Frog	33	1967			2019
30	Northern Leopard Frog	18	1967			2015
32	Spring Peeper	6	1967			2010
33	Western Chorus Frog	65	2004			2019
34	Wood Frog	6	1967			2017
35	American Toad	31	1967			2018
37	Allegheny Mountain Dusky Salamander	27	1989			2018
38	Blue-spotted Salamander	2	2010			2010
40	Red-spotted Newt	4	1967			2015
41	Eastern Red-backed Salamander	126	1968			2019
44	Mudpuppy	3	1967			2017
45	Northern Dusky Salamander	72	1989			2018
48	Spotted Salamander	2	1999			2018

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17PH57

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Attachment B

Attachment B

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?
Amphibians									
Allegheny Mountain Dusky Salamander	*Desmognathus ochrophaeus*	S1	END	END	END	1	Generally found near forested brooks, springs or seeps. It uses this habitat to forage, as well as for overwintering and brooding. It nests in spring and seeps. Shelter is provided in wet cavities along stream edges or seeps, or under stones, leaf litter or logs.[20]	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	Not observed. Targeted studies were not carried out to determine presence/absence. Suitable habitat is not present within the project limits.
Northern Dusky Salamander	Desmognathus fuscus	S1	END	END	END	1	Generally prefer rocky woodland streams, seepages, and springs where water is running or trickling.20	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	Not observed. Targeted studies were not carried out to determine presence/absence. Suitable habitat is not present within the project limits.
Birds									
Acadian Flycatcher	Empidonax virescens	S2S3B	END	END	END	1	Generally requires large areas of mature, undisturbed forest; avoids the forest edge; often found in well wooded swamps and ravines.7	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	Not observed. Targeted studies were not carried out to determine presence/absence.
Bank Swallow	Riparia riparia	S4B	THR	THR	THR	1	Prefers open habitats including, farmland, lake/river shorelines, grasslands, and wetlands. Nests in exposed earthen banks along shorelines and in artificial sites such as gravel pits.7	**Low Potential.** Suitable habitat may be present within the Niagara Gorge.	Not observed. Targeted studies were not carried out to determine presence/absence.
Barn Owl	Tyto alba	S1	END	END	THR	1	Generally prefer low-elevation, open country; often associated with agricultural lands, especially pasture. Nests are located in buildings, hollow trees and cavities in cliffs.7	**No potential.** Open upland habitats are not present within th eStudy Area limits.	Not observed. Targeted studies were not carried out to determine presence/absence.
Barn Swallow	Hirundo rustica	S4B	THR	THR	THR	1	Prefers farmland, lake/river shorelines, wooded clearings, urban populated areas, rocky cliffs, and wetlands. Nests inside or on exterior of buildings; under bridges and in road culverts; on rock faces, and in caves, etc.8	**Low potential.** Existing buildings within study area ocould be used as nesting habitat. Suitable foraging habitat is present.	Not observed. Targeted studies were not carried out to determine presence/absence.
Bobolink	Dolichonyx oryzivorus	S4B	THR	THR	THR	1	Generally prefers open grasslands and hay fields for nesting, typically featuring relatively tall vegetation. Sometimes uses large fields of winter wheat and rye in southwestern Ontario. Sensitive to vegetation structure and composition. Positively associated with high grass-to-forb ratios; moderate litter depth; tolerate wetter portions of fields compared to Eastern Meadowlark (EAME) and more likely to nest closer to field centres rather than field margins. Lower tolerance to presence of patches of bare ground. Appear to prefer larger fields than EAME.9	**No potential.** Suitable habitat is not present within the Study Area, MEGM3 ecosite is actively maintained and is not sufficiently large to support Bobolink.	Not observed. Targeted studies were not carried out to determine presence/absence.
Chimney Swift	Chaetura pelagica	S4B,S4N	THR	THR	THR	1	Historically nested in large hollow trees, other tree cavities and cracks in cliffs. Currently, most are found in developed areas in large, uncapped chimneys. Proximity to lakes is also a preferred habitat feature as they will forage for flying insects close to water.7	**Low potential.** Existing buildings within study area ocould be used as nesting habitat. Suitable foraging habitat is present.	Not observed. Targeted studies were not carried out to determine presence/absence.
Common Nighthawk	Chordeiles minor	S4B	SC	SC	THR	1	Nests in open habitats, in forests and in urban areas. It prefers rock outcrops, alvars, sand barrens, bogs, fens, and in forests, openings created by clearcuts and burns. In southern Ontario, grasslands, agricultural fields, gravel pits, prairies, and alvars and at airports. In cities, it nests mostly on flat, graveled roofs but occasionally on railways and footpaths.7	**Very low potential.** Abandoned Rail Corridor and gravel footpaths may provide suitable nesting habitat.	Not observed. Targeted studies were not carried out to determine presence/absence.
Eastern Wood-Pewee	Contopus virens	S4B	SC	SC	SC	1	Prefers open space near the nest in the form of forest edges, clearings, roadways, and water. Does not require large areas of woods but occurs less frequently in woodlots surrounded by development than in those without.7	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	Not observed. Targeted studies were not carried out to determine presence/absence.

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?
Eastern Meadowlark	Sturnella magna	S4B	THR	THR	THR	1	Generally prefers grassy pastures, meadows and hay fields. Prefers moderately tall grass with abundant litter cover, a high proportion of grass cover, moderate forb density, low proportions of shrub and woody vegetation cover, and low percent of bare ground. Prefers to nest in drier sites and frequently nests around field margins.9	**No potential.** Suitable habitat is not present within the Study Area, MEGM3 ecosite is actively maintained and is not sufficiently large to support Eastern Meadowlark.	Not observed. Targeted studies were not carried out to determine presence/absence.
Grasshopper Sparrow	Ammodramus savannarum	S4B	SC	SC	SC	1	Prefers drier, sparsely vegetated grasslands, particularly rough or unimproved pastures with scattered forb and shrub growth, at least 30 ha in size. It will occasionally also use cultivated hayfields and cereal crops.7	**No potential.** Suitable habitat is not present within the Study Area, MEGM3 ecosite is actively maintained and is not sufficiently large to support Grasshopper Sparrow.	Not observed. Targeted studies were not carried out to determine presence/absence.
Northern Bobwhite	Colinus virginianus	S1	END	END	END	1	Generally inhabits a variety of edge and grassland type - habitats including non-intensively farmed agricultural lands.7	**No potential.** Suitable habitat is not present within the Study Area, MEGM3 ecosite is actively maintained and is not sufficiently large to support Northern Bobwhite.	Not observed. Targeted studies were not carried out to determine presence/absence.
Peregrine Falcon	Falco peregrinus	S3B	SC	NAR	SC	1	Nests on cliffs near water bodies, or at urban sites such as tall buildings, bridges, and smokestacks.7	**No potential.** Suitable nesting habitat is not present within the Study Area.	Not observed. Targeted studies were not carried out to determine presence/absence.
Wood Thrush	Hylocichla mustelina	S4B	SC	THR	THR	1	Inhabits and breeds in woodlands ranging from small (3 ha) and isolated to large and contiguous. The presence of tall trees and a thick understorey are usually prerequisites for site occupancy.7	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	Not observed. Targeted studies were not carried out to determine presence/absence.

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?
Fish									
American Eel	Anguilla rostrata	S1?	END	THR	No status	No schedule	All fresh water, estuaries and coastal marine waters that are accessible to the Atlantic Ocean; 12-mile Creek watershed and Lake Ontario.20	**High potential.** Known to occur within the Niagara River.	No. Aquatic habitat is not present within the project limits.
Lake Sturgeon (Great Lakes - Upper St.	Acipenser fulvescens pop. 3	S2	END	THR	No status	No schedule	Lives in freshwater lakes and rivers with soft bottoms of mud, sand or gravel. Usually found at depths of 5 to 20 m. Spawn in relatively shallow, fast-flowing water (usually below waterfalls, rapids or dams) with gravel and boulders at the bottom. Will spawn in deeper water where habitat is available. Also known to spawn on open shoals in large rivers with strong currents.10	**High potential.** Known to inhabit the Niagara River.	No. Aquatic habitat is not present within the project limits.
Mammals									
Eastern Small-footed Myotis	Myotis leibii	S2S3	END	END	No status	No schedule	Overwintering habitat: Caves and abandoned mines. According to the Recovery Strategy for the Eastern Small-footed Myotis in Ontario, summer / roosting habitats used by the species in Ontario are poorly understood, but elsewhere in its range it primarily roosts in open, sunny rocky habitats, and, occasionally, in buildings. Summer roosts for this species are believed to be located in close proximity to their hibernacula (i.e., less than 100 m). The species' preference for rocky habitats in summer may limit an individual's home range to those rocky areas which also contain hibernacula (i.e., karst areas and Canadian Shield areas containing abandoned mines with adits).16	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	No. Targeted studies for SAR bats were not included in in the scope of the project.
Little brown Myotis	Myotis lucifugus	S4	END	END	END	1	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).15	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	No. Targeted studies for SAR bats were not included in in the scope of the project.
Northern Myotis	Myotis septentrionalis	S3	END	END	END	1	Overwintering habitat: Caves and mines that remain above 0 Maternal Roosts: Often associated with cavities of large diameter trees (25-44 cm dbh). Occasionally found in structures (attics, barns etc.)15	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	No. Targeted studies for SAR bats were not included in in the scope of the project.
Tri-colored Bat	Perimyotis subflavus	S3?	END	END	END	1	Overwintering habitat: Deepest parts of caves and mines where temperature is the least variable. Maternal Roosts: Less is known about roosts of Tri-colored Bats. Most roost sites found within forested habitats. May roost in clumps of dead foliage and lichens. In more anthropogenically modified landscapes, maternity roosts may be barns or similar human-made structures.15	**Moderate Potential.** Suitable habitat is likely present within the Niagara Gorge.	No. Targeted studies for SAR bats were not included in in the scope of the project.
Molluscs									
Fawnsfoot	Truncilla donaciformis	S2	END	END	END	1	Occurs in medium to large rivers with moderate to slow flowing water with gravel, sand, or mud substrates.10	**Unlikely.** Previously known to to inhabit the Niagara River but as per the COSEWIC reports, is thought to be extirpated.	No. Aquatic habitat is not present within the project limits.

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?
Hickorynut	Obovaria olivaria	S1?	END	END	END	1	Occurs on sandy beds of large, wide, deep rivers with moderate to strong current.10	**Unlikely.** Previously known to to inhabit the Niagara River but as per the COSEWIC report, specimes have not bene documented in the Niagara River since the 1970s.	No. Aquatic habitat is not present within the project limits.
Kidneyshell	Ptychobranchus fasciolaris	S1	END	END	END	1	Generally found in small to medium sized rivers, where it prefers shallow areas with clear, swift-flowing water and substrates of firmly packed coarse gravel and sand.8	**High potential.** Known to inhabit the Niagara River.	No. Aquatic habitat is not present within the project limits.
Mapleleaf	Quadrula quadrula	S2	SC	SC	THR	1	Generally found in medium to large rivers in firmly packed substrate.10	**Unlikely.** Previously known to to inhabit the Niagara River but is thought to be extirpated.	No. Aquatic habitat is not present within the project limits.
Round Pigtoe	Pleurobema sintoxia	S1	END	END	END	1	Generally occur in small rivers in areas of moderate flow on substrates of gravel, cobble and boulder. In larger rivers, they are found in mud, sand and gravel at varying depths.8	**High potential.** Known to inhabit the Niagara River.	No. Aquatic habitat is not present within the project limits.
Reptiles									
Gray Ratsnake (Carolinian population)	Pantherophis spiloides pop. 2	S1	END	END	END	1	Requires a mosaic of open and wooded habitats. Prefers forest edge habitats , particularly areas with high edge to forest ratios and an abundance of logs. 14	**Unlikely.** Niagara occurrence records are restricted to the Towns of Fonthill and Ridgeway. Uncomfirmed sigtings of this species have also been documented near the Welland Canal and Short Hills Provincial Park**.** There are no known records for the Niagara Gorge area.	No
Snapping Turtle	Chelydra serpentina	S3	SC	SC	SC	1	Generally inhabit shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravely 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.10	**No potential.** Suitable habitat is not present within the Study Area/	No
Timber Rattlesnake	Crotalus horridus	SX	EXP	EXP	0	0	N/A	**Extirpated**	N/A
Vegetation									
American Chestnut	Castanea dentata	S1S2	END	END	END	1	Found in deciduous forest communities; this tree prefers arid forests with acid and sandy soils.20	**High Potential.** Most likely present within the Niagara Gorge. NHIC records within the project vicinity.	No
American Columbo	Frasera caroliniensis	S2	END	END	END	1	Occurs on dry mesic to mesic clay and clay-loam as well as mesic silty clay soils in open deciduous woodlands, forests, dense thickets, and meadows.25	**Moderate Potential.** Most likely present within the Niagara Gorge adjacent to the Niagara River.	No
American Ginseng	Panax quinquefolius	S2	END	END	END	1	Grows in rich, moist, undisturbed and relatively mature deciduous woods in areas of neutral soil (such as over limestone or marble bedrock).20	**Moderate Potential.** Most likely present within the Niagara Gorge adjacent to the Niagara River.	No
American Water-willow	Justicia americana	S2	THR	THR	THR	1	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.20	**High Potential.** Most likely present within the Niagara Gorge adjacent to the Niagara River. NHIC records within the project vicinity.	No

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?
Butternut	Juglans cinerea	S1	END	END	END	1	Butternut grows best in rich, moist and well-drained soils or limestone gravel sites. They are less commonly found in dry, rocky and sterile soils. They generally grow alone or in small groups in deciduous forests that are commonly comprised of Basswood, Black Cherry, Beed, Black Walnut, Elm, Hemlock, Hickory, Oak, Red Maple, Sugar Maple, Poplar, White Ash and Yellow Birch.6 In Ontario, they can be found throughout the southern Ontario, south of the Canadian Shield.10	**High Potential.** Most likely present within the Niagara Gorge. NHIC records within the project vicinity.	No
Cherry Birch	Betula lenta	S1	END	END	END	1	Restricted to a selct number of locations within Niagara Region. Occurs on moist, well drained soils but is also found on coarse textured or rocky shallow soils within deciduous or mixed wood communities. This species is shade intolerant. 25	**Unlikely.** Inventories conducted since the 1950s have not documented any populations along the Niagara River. Suitable habitat for this species may be present within the Niagara Glen but specimens have not been documented.	No
Cucumber Tree	Magnolia acuminata	S2	END	END	END	1	Generally grows in rich, well-drained, medium to coarse-textured soils, often near standing water or on slopes or rises above saturated soils. 25	**Unlikely.** As per the COSEWIC assessment speciemens have not been documented within the the Niagara Gorge.	No
Deerberry	Vaccinium stamineum	S1	THR	THR	THR	1	Generally occurs on sandy and well-drained soil, often in dry open woodlands (Niagara Gorge).20	**High Potential.** Most likely present within the Niagara Gorge. NHIC records within the project vicinity.	No
Downy Yellow False Foxglove	Aureolaria virginica	S1	END	END	0	0	Well drained soils in dry, open to semi-open, upland oak forests, woodlands and savanna. Known to grow on sand dunes, sand plains, clay ridges, slopes, stony loams on moraines, and shallow soils over carbonate bedrock. This species is shade intolerant and will normally occur in areas adjacent to open water, south- or west-facing slopes, on ridge backs, valley rims, or escarpment rims. 25	**No potential.** Suitable habitat is not present. Niagara populations are thought to be extirpated.	No
Drooping Trillium	Trillium flexipes	S1	END	END	END	1	Generally grows in dry, sandy loam, non-acidic soils of mature, deciduous woodlands that are usually associated with watercourses.20	**Unlikely**. Species was documented within the Nuagara Glen in the 1950s but it s thought that the Niagara populations are thought to be	No
Eastern Flowering Dogwood	Cornus florida	S2?	END	END	END	1	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 forest edges and hedgerows.20	**Moderate Potential.** Most likely present within the Niagara Gorge.	No
Four-leaved Milkweed	Asclepias quadrifolia	S1	END	END	0	0	Occurs within open, dry to slightly moist woodlands or treed alvars. Typically found on shallower soils along the plateau, rim, or slopes of steep limestone escarpments.25	**Unlikely**. Species was last documented within the Niagara Glen in the 1950s. Despite significant survey, this species effort has not been documented	No
Golden-eye Lichen (Great Lakes populat	Teloschistes chrysophthalmus	S1	END	END	END	1	Well-lit, humid environmental typically near shorelines and coastal areas. Extant populations are present within Niagara Region within remnant old-growth coastal deciduousforest of Sugar Maple, Eastern Hop-hornbeam and Red Oak along Lake Ontario growing over limestone bedrock. Only one population is known in Sothern Ontario at	**Unlikely.** Historical records for this species within Niagara Region but no recent records have been reported.	No.

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?
Pink Milkwort	Polygala incarnata	S1	END	END	0	0	Open wet-mesic to mesic prairies with soils that are sandy loams with moderate to imperfect drainage.10	**No potential.** Suitale habitat is not present within the Study Area.	No
Red Mulberry	Morus rubra	S2	END	END	END	1	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.20	**Moderate potential.** Known to occur in the Niagara Glen.	No
Smooth Yellow False Foxglove	Aureolaria flava	S2?	THR	THR	0	0	Occurs in dry, sandy, open woodlands and savannas with well-drained soils. Typically associated with White Oak. Also found in association with Hickory and Pine. 25	**No potential.** Suitable habitat is not present.	No.
Spotted Wintergreen	Chimaphila maculata	S2	END	THR	END	1	Generally grow in sandy habitats in dry-mesic oak-pine woods.20	**No potential.** Suitable habitat not present. Only extant populations in Niagara are located in Welland.	No.
White Wood Aster	Eurybia divaricata	S2S3	THR	THR	THR	1	Generally grows in open, dry, deciduous forests. It has been suggested that it may benefit from some disturbance, as it often grows along trails.20	**High Potential.** Most likely present within the Niagara Gorge. NHIC records within the project vicinity.	No

[1]S-Ranks (provincial)

Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario.

(Provinical Status from MNR Biodiversity Explorer September 2012)

S1 Critically Imperiled - Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

S2 Imperiled - Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

S3 Vulnerable - Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Project Name: Bridge Street EA
Project Number: 300051307.0000

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?

[2]SARO *Endangered Species Act, 2007*
(provincial status from MNR December 2014)
The provincial review process is implemented by the MNR's Committee on the Status of Species at Risk in Ontario (COSSARO).

EXT Extinct - A species that no longer exists anywhere.
EXP Extirpated - A species that no longer exists in the wild in Ontario but still occurs elsewhere.
END Endangered - A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's Endangered Species Act (ESA) (END-R designations are no longer relevant as species are covered under new ESA April 2009)
THR Threatened - A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
SC Special Concern (formerly Vulnerable) - A species with characteristics that make it sensitive to human activities or natural events.
NAR Not at Risk - A species that has been evaluated and found to be not at risk.
DD Data Deficient (formerly Indeterminate) - A species for which there is insufficient information for a provincial status recommendation.

[3]SARA (Federal *Species at Risk Act*) Status and Schedule (includes COSEWIC Status)
The Act establishes Schedule 1, as the official list of wildlife species at risk. It classifies those species as being either Extirpated, Endangered, Threatened, or a Special Concern. Once listed, the measures to protect and recover a listed wildlife species are implemented.
EXT Extinct - A wildlife species that no longer exists.
EXP Extirpated - A wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.
END Endangered - A wildlife species that is facing imminent extirpation or extinction.
THR Threatened - A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
SC Special Concern - A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

[4]SARA Schedule
Schedule 1: is the official list of species that are classified as extirpated, endangered, threatened, and of special concern.
Schedule 2: species listed in Schedule 2 are species that had been designated as endangered or threatened, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.
Schedule 3: species listed in Schedule 3 are species that had been designated as special concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

The Act establishes Schedule 1 as the official list of wildlife species at risk. However, please note that while Schedule 1 lists species that are extirpated, endangered, threatened and of special concern, the prohibitions do not apply to species of special concern.

Species that were designated at risk by COSEWIC prior to October 1999 (Schedule 2 & 3) must be reassessed using revised criteria before they can be considered for addition to Schedule 1 of SARA. After they have been assessed, the Governor in Council may on the recommendation of the Minister, decide on whether or not they should be added to the List of Wildlife Species at Risk.

[5]Habitat Present on Site
Determination of suitability of the site to be support each species based on 'Key Habitats Used By Species'.
Yes - Specific habitat present and species and / or evidence observed;
Likely – The whole study area or portions of it contain conditions that could support the species;
Unlikely – Few similarities between study area conditions and preferred habitat exist;
No - Specific habitat not present and species and / or evidence not observed

[6]Species Observed
Reported sighting of species during fall field investigations by RJB biologists

Additional Sources:

Sources:

[7] Cadman, M.D., et al. (eds). 2007. *Atlas of the Breeding Birds of Ontario, 2001-2005*. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto, xxii + 706 pp
[8] Species at Risk Public Registry http://www.sararegistry.gc.ca
[9] McCracken, J.D. et al. 2013. Recovery Strategy for the Bobolink (Dolichonyx oryzivorus) and Eastern Meadowlark (Sturnella magna) in Ontario .Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario, viii + 88 pp.
[10] MNR SARO List Species Descriptions (http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_CSSR_SARO_LST_EN.html)
[11] COSEWIC Species Assessment Report
[12] Naughton, Donna. 2012. *The Natural History of Canadian Mammals*. Canadian Museum of Nature and University of Toronto Press, Toronto, + 784 pp
[13]Farrar, John Laird, 2017, *Trees in Canada*, Natural Resources Canada | Canada Forest Services, and, Fitchenry &Whiteside Limited, pp.238 - 239
[14]Ontario Nature Reptile and Amphibian Atlas (https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/species/)
[15]Environment Canada. 2015.Recovery Strategy for Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis) and Tri-colored Bat (Perimyotis subflavus) in Canada [Proposed]. Species at Risk Act Recovery Strategy Series. Environment Canada, Ottawa. Ix + 110 pp.
[16]Humphrey, C. 2017. Recovery Strategy for the Eastern Small-footed Myotis (Myotis leibii) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. vii + 76 pp.
[17]Department of Fisheries and Oceans (DFO) Aquatic Species at Risk found online at: http://www.dfo-mpo.gc.ca/species-especes/sara-lep/identify-eng.html.
[18]Paulson, D. 2011. Dragonflies and Damselflies of the East. Princeton University Press, Princeton, NJ.
[19]Harding, J.H., 1997. Amphibians and Reptiles of the Great Lakes Region. The University of Michigan Press. Ann Arbor, Michigan
[20]MNRF. 2018. City of Niagara Falls Species at Risk Table. Guelph District.
[21]Michigan Flora found online at https://michiganflora.net/search.aspx

SAR Screening Table (Revision 1)
Bridge Street Niagara

COMMON NAME	SCIENTIFIC NAME	Provincial S-RANK[1]	Provincial SARO Status[2]	COSEWIC[3]	Federal SARA Status[3]	Federal SARA Schedule[4]	Habitat Description	Habitat Present in Study Area?	Species Observed?

[22]Natural Heritage Information Centre (https://www.ontario.ca/page/get-natural-heritage-information)

[23]McKnight, K.B. et al. 2013. Common Mosses of the Northeast and Appalachians. Princeton University Press. Princeton, New Jersey.

[24]Oldham, M.J., and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. 188 pp.

[25]Leslie, J. 2018. Vascular Plants at Risk in Ontario. https://static1.squarespace.com/static/5a6531d312abd9ae318d7cbf/t/5bfd60278985836d7a274a9d/1543331903837/2018.11.22_Vascular+Plants+At+Risk+In+Ontario_Low+Resolution.pdf

[26]Knight, T. 2019. Recovery Strategy for the Golden-eye Lichen (Teloschistes chrysophthalmus) – Great Lakes population in Ontario. Ontario Recovery Strategy Series. Prepared for the Ministry of the Environment, Conservation and Parks, Peterborough, Ontario. v + 40 pp.

BURNSIDE

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Appendix C

Project Name: 300051307

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Project Number: Bridge Street EA

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
Table 1.1: Seasonal Concentration Areas of Animals						
Waterfowl Stopover & Staging Areas (Terrestrial) **<u>Rationale</u>**: Habitat important to migrating waterfowl.	CUM1 CUT1 - Plus evidence of annual spring flooding from melt water or run-off within these ecosites. Fields with seasonal flooding and waste grains in the Long Point, Rondeau, Lake St. Clair, Grand Bend and Point Pelee areas may be important to Tundra Swans.	Fields with sheet water during Spring (mid-March to May). • Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. • Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available.	Not present • Suitable ecosites are not present.	American Black Duck Northern Pintail Gadwall Blue-winged Teal Green-winged Teal American Wigeon Northern Shoveler Tundra Swan	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects. • Any mixed species aggregations of 100 or more individuals required. • The flooded field ecosite habitat plus a 100-300 m radius area, dependent on local site conditions and adjacent land use is the SWH. • Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). • **SWHMiST Index #7** provides development effects and mitigation measures.	N/A
Waterfowl Stopover & Staging Areas (Aquatic) **<u>Rationale:</u>**	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	• Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and SWM ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. • These habitats have an abundant food supply (mostly aquatic invertebrates and	Confirned present. • The Niagara River is a well document stopover point for migratory bird specie. However, the Niagara River will not be impacted by the proposed developments.	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter	**Studies carried out & verified presence of:** • Aggregations of 100 or more of listed species for 7 days, results in >700 waterfowl use days. • Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH. • The combined area of the Ecological Land Classification (ELC) ecosites and a 100 m radius area is the SWH. • Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are SWH.	Confirned present. • The Niagara River is a well document stopover point for migratory bird specie. However, the Niagara River will not be impacted by the proposed developments.

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.		vegetation in shallow water).		White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	• Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). • **SWHMiST Index #7** provides development effects and mitigation measures.	
Shorebird Migratory Stopover Area **<u>Rationale</u>**: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	• Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. • Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. • Sewage treatment ponds and storm water ponds do not qualify as a SWH.	Not present: • Suitable ecosites are not present	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird’s Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel RuddyTurnstone Sanderling Dunlin	**Studies confirming:** • Presence of 3 or more of listed species and >1000 shorebird use days during spring or fall migration period (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period). • Whimbrel stop briefly (<24 hrs.) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. • The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100 m radius area. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #8** provides development effects and mitigation measures.	N/A
Raptor Wintering Area **<u>Rationale</u>**: Sites used by multiple species, a high number of individuals and used	<u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class; <u>Forest:</u> FOD,	• The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Raptor wintering sites (hawk/owl) need to be **>**	Not present • Suitable combination of ecosites are not present.	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl **<u>Special Concern:</u>** Short-eared Owl Bald Eagle	**Studies confirm the use of these habitats by:** • One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
annually are most significant.	FOM, FOC. <u>Upland</u>: CUM; CUT; CUS; CUW. <u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	20 ha, with a combination of forest and upland. • Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands. • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water, large trees and snags available for roosting.			• To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. • The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects.” • **SWHMiST Index #10 and #11** provides development effects and mitigation measures.	
Bat Hibernacula **<u>Rationale</u>:** Bat hibernacula are rare habitats in all Ontario landscapes.	**Bat Hibernacula may be found in these ecosites:** CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)	• Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. • Active mine sites should not be considered as SWH. • The locations of bat hibernacula are relatively poorly known.	Not present: • Suitable ecosites are not present	Big Brown Bat Tri-coloured Bat	• All sites with confirmed hibernating bats are SWH. • The habitat area includes a 200 m radius around the entrance of the hibernaculum for most development types and 1000 m for wind farms. • Studies are to be conducted during the peak swarming period (August to September). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #1** provides development effects and mitigation measures.	N/A
Bat Maternity Colonies **<u>Rationale:</u>** Known locations of forested bat	Maternity colonies considered SWH are found in forested ecosites.	• Maternity colonies can be found in tree cavities, vegetation and often in buildings are not considered to be SWH).	High potential within study area • Suitably large ecosites are not available within project area, but are likely present within the Niagara Gorge east of Bridge St.	Big Brown Bat Silver-haired Bat	• Maternity Colonies with confirmed use by: – >10 Big Brown Bats – >5 Adult Female Silver- haired Bats	High potential.

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
maternity colonies are extremely rare in all Ontario landscapes.	**All ELC ecosites in ELC Community Series:** FOD FOM SWD SWM	• Maternity roosts are not found in caves and mines in Ontario. • Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25 cm dbh) wildlife trees. • Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. • Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.	• Individual trees may provide suitable habitat for roosting bats		• The area of the habitat includes the entire woodland, or a forest stand ELC ecosite or an ecoelement containing the maternity colonies. • Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #12** provides development effects and mitigation measures.	
Turtle Wintering Areas **<u>Rationale:</u>** Generally, sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Snapping and Midland Painted Turtles. **ELC Community Classes:** SW, MA, OA and SA **ELC Community Series:** FEO and BOO For Northern Map Turtle: Open Water areas such as deeper rivers or streams and	• For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. • Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. • Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	Not present. • Suitable ecosite not present within the study area.	Midland Painted Turtle **<u>Special Concern:</u>** Northern Map Turtle Snapping Turtle	• Presence of 5 over-wintering Midland Painted Turtles is significant. • One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. • The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH. • Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (September–October) or spring (March–May). • Congregation of turtles is more common where wintering areas are limited and therefore significant.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
	lakes with current can also be used as over-wintering habitat.				• **SWHMiST Index #28** provides development effects and mitigation measures for turtle wintering habitat.	
Reptile Hibernaculum **<u>Rationale</u>:** Generally, sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.	• For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock groundcover.	Not present. • Suitable ecosite not present within the study area.	**<u>Snakes</u>:** Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake **<u>Special Concern</u>:** Milksnake Eastern Ribbonsnake	**Studies confirming:** • Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. • Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (e.g., foundation or rocky slope) on sunny warm days in Spring (April/May) and Fall (September/October). • **Note**: If there are Special Concern Species present, then site is SWH. • **Note:** Sites for hibernation possess specific habitat parameters (e.g., temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e., strong hibernation site fidelity). Other critical life processes (e.g., mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH. • **SWHMiST Index #13** provides development effects and mitigation measures for snake hibernacula.	N/A
Colonially - Nesting Bird Breeding Habitat (Bank & Cliff) **<u>Rationale</u>:**	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns.	• Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.	Not present • Areas of exposed soil banks are not present within the study area	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	**Studies confirming:** • Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	**Habitat found in the following ecosites:** CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	• Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. • Does not include a licensed/permitted Mineral Aggregate Operation.			• A colony identified as SWH will include a 50 m radius habitat area from the peripheral nests. • Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #4** provides development effects and mitigation measures.	
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs) **<u>Rationale:</u>** Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	• Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. • Most nests in trees are 11 to 15 m from ground, near the top of the tree.	Not present • Suitable ecosites are not present within the study area	Great Blue Heron Black-crowned Nigh-Heron Great Egret Green Heron	**Studies confirming:** • Presence of 2 or more active nests of Great Blue Heron or other listed species. • The habitat extends from the edge of the colony and a minimum 300 m radius or extent of the Forest ecosite containing the colony or any island <15.0 ha with a colony is the SWH. • Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells. • **SWHMiST Index #5** provides development effects and mitigation measures.	N/A
Colonially - Nesting Bird Breeding Habitat (Ground) **<u>Rationale;</u>** Colonies are important to local bird population, typically sites are only known colony	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer’s Blackbird).	• Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. • Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams	Not present • Suitable ecosites are not present	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer’s Blackbird	**Studies confirming:** • Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. • Presence of 5 or more pairs for Brewer’s Blackbird. • Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
in area and are used annually.	MAM1 – 6 MAS1 – 3 CUM CUT CUS	and irrigation ditches within farmlands.			• The edge of the colony and a minimum 150 m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0 ha with a colony is the SWH. • Studies would be done during May/June when actively nesting. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #6** provides development effects and mitigation measures.	
Migratory Butterfly Stopover Areas **<u>Rationale:</u>** Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Combination of ELC Community Series; need to have present one Community Series from each land class. <u>Field</u>: CUM CUT CUS <u>Forest</u>: FOC FOD FOM CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	• A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present and will be located within 5 km of Lake Erie or Ontario. • The habitat is typically a combination of field and forest and provides the butterflies with a location to rest prior to their long migration south. • The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. • Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest	Not present • Study area is not present within 5km of Lake Ontario or Erie	Painted Lady Red Admiral <u>Special Concern</u> Monarch	S**tudies confirm:** • The presence of Monarch Use Days (MUD) during fall migration (August/October). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur. • Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. • MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral’s is to be considered significant. • **SWHMiST Index #16** provides development effects and mitigation measures.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
		distance to cross the Great Lakes.				
Landbird Migratory Stopover Areas **<u>Rationale:</u>** Sites with a high diversity of species as well as high numbers are most significant.	**All ecosites associated with these ELC Community Series:** FOC FOM FOD SWC SWM SWD	• Woodlots >5 ha in size and within 5 km of Lake Erie and Ontario. • If woodlands are rare in an area of shoreline, woodland fragments 2-5 ha can be considered for this habitat. • If multiple woodlands are located along the shoreline those Woodlands <2 km from Lake Ontario are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes. • The largest sites are more significant. • Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5 km of Lake Erie and Ontario are Candidate SWH.	No potential • Site is not located within 5 km of Lake Erie or Ontario	All migratory songbirds. Canadian Wildlife Service Ontario website: http://www.ec.gc.ca/nature/default.asp?lang=En&n=421B7A9D-1 All migrant raptors species: *Ontario Ministry of Natural Resources: Fish and Wildlife Conservation Act, 1997.* Schedule 7: Specially Protected Birds (Raptors)	**Studies confirm:** • Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant. • Studies should be completed during spring (April/May) and fall (August/October) migration using standardized assessment techniques. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #9** provides development effects and mitigation measures.	N/A
Deer Winter Congregation Areas **<u>Rationale:</u>** Deer movement during winter in the southern areas of Ecoregion 7E are not constrained by snow depth, however deer will annually congregate	**All Forested ecosites with these ELC Community Series:** FOC FOM FOD SWC SWM SWD	• Woodlots >100 ha in size or if large woodlots are rare in planning area woodlots >50 ha. • Deer movement during winter in the southern areas of Ecoregion 7E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands.	Not present. • Site has not been identified by the MNRF as a deer winter congregation area	White-tailed Deer	**Studies confirm:** • Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF. • Use of the woodlot by white- tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF. • Studies should be completed during winter (January/February) when >20 cm	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.	Conifer plantations much smaller than 50 ha may also be used.	• Large woodlots > 100 ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. • Woodlots with high densities of deer due to artificial feeding are not significant.			of snow is on the ground using aerial survey techniques, ground or road surveys. or a pellet count deer density survey. • **SWHMiST Index #2** provides development effects and mitigation measures.	
Table 1.2.1: Rare Vegetation Communities						
Cliffs and Talus Slopes **Rationale:** Cliffs and Talus Slopes are extremely rare habitats in Ontario.	**Any ELC ecosite within Community Series:** TAO CLO TAS CLS TAT CLT	• Most cliff and talus slopes occur along the Niagara Escarpment. • A Cliff is vertical to near vertical bedrock >3 m in height. • A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris.	Not present. • Suitable ecosites are not present in the study area		• Confirm any ELC Vegetation Type for Cliffs or Talus Slopes. • **SWHMiST Index #21** provides development effects and mitigation measures.	N/A
Sand Barren **Rationale;** Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry.	**ELC ecosites:** SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always ≤ 60%.	A sand barren area >0.5 ha in size. • Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered, but less than 60%.	Not present. • Suitable ecosites are not present in the study area		• Confirm any ELC Vegetation Type for Sand Barrens • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • **SWHMiST Index #20** provides development effects and mitigation measures.	N/A
Alvar	ALO1 ALS1	• An alvar is typically a level, mostly unfractured	Not present.		**Field studies that identify:**	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
<u>Rationale;</u> Alvars are extremely rare habitats in Ecoregion 7E.	ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 **Five Alvar Indicator Species:** *Carex crawei* *Panicum philadelphicum* *Eleocharis compressa* *Scutellaria parvula* *Trichostema brachiatum* These indicator species are very specific to Alvars within Ecoregion 7E.	calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species. Vegetation cover varies from patchy to barren with a less than 60% tree cover. • An Alvar site > 0.5 ha in size. • Alvar is particularly rare in Ecoregion 7E where the only known sites are found in the western islands of Lake Erie.	• Suitable ecosites are not present in the study area		• Four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses. • **SWHMiST Index #17** provides development effects and mitigation measures.	
Old Growth Forest **<u>Rationale;</u>** Due to historic logging practices and land clearance for agriculture, old	**Forest Community Series:** FOD FOC FOM SWD SWC	• Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an	Not present. • Suitable ecosites are not present in the study area		**Field Studies will determine:** • If dominant trees species of the are >140 years old, then the area containing these trees is SWH. • The forested area containing the old growth characteristics will have experienced no recognizable forestry	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
growth forest is rare in the Ecoregion 7E.	SWM	abundance of snags and downed woody debris.			activities (cut stumps will not be present). • The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest forest area containing the old growth characteristics. • **SWHMiST Index #23** provides development effects and mitigation measures.	
Savannah **<u>Rationale:</u>** Savannahs are extremely rare habitats in Ontario.	TPS1 TPS2 TPW1 TPW2 CUS2	• No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. • A Savannah is a tallgrass prairie habitat that has tree cover between 25–60%. • In Ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in Toronto area (north of Lake Ontario).	Not present. • Suitable ecosites are not present in the study area		**Field studies confirm:** • one or more of the Savannah indicator species listed in Appendix N should be present. **Note**: Savannah plant spp. list from Ecoregion 7E should be used. • Area of the ELC ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover is exotic sp.). • **SWHMiST Index #18** provides development effects and mitigation measures.	N/A
Tallgrass Prairie **<u>Rationale:</u>** Tallgrass Prairies are extremely rare habitats in Ontario.	TPO1 TPO2	• No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway Right of Ways (ROW) are not considered to be SWH. • A Tallgrass Prairie has ground cover dominated	Not present. • Suitable ecosites are not present in the study area		**Field studies confirm:** • One or more of the Prairie indicator species listed in Appendix N should be present. **Note:** Prairie plant spp. list from Ecoregion 7E should be used. • Area of the ELC ecosite is the SWH.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
		by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover. • In Ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in Toronto area (north of Lake Ontario).			• Site must not be dominated by exotic or introduced species (<50% vegetative cover is exotic sp.). • **SWHMiST Index #19** provides development effects and mitigation measures.	
Other Rare Vegetation Communities **Rationale:** Plant communities that often contain rare species which depend on the habitat for survival.	• Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. • Any ELC ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	• ELC ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in Appendix M. • The MNRF/Natural Heritage Information Centre (NHIC) will have up to date listing for rare vegetation communities. • Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	Not present. • Suitable ecosites are not present in the study area		**Field studies should confirm:** • If an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG. • Area of the ELC Vegetation Type polygon is the SWH. • **SWHMiST Index #37** provides development effects and mitigation measures.	N/A
Table 1.2.2: Specialized Habitat for Wildlife considered Significant Wildlife Habitat						
Waterfowl Nesting Area **Rationale;** Important to local waterfowl populations, sites with greatest number of species and highest number	**All upland habitats located adjacent to these wetland ELC ecosites are Candidate SWH:** MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4	• A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120 m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where	Not present. • Suitable ecosites are not present in the study area	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	**Studies confirmed:** • Presence of 3 or more nesting pairs for listed species excluding Mallards, or; • Presence of 10 or more nesting pairs for listed species including Mallards. • Any active nesting site of an American Black Duck is considered significant. • Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
of individuals are significant.	MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 Note: includes adjacency to Provincially Significant Wetlands (PSW).	waterfowl nesting is known to occur. • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. • Wood Ducks and Hooded Mergansers utilize large diameter trees (>40 cm dbh) in woodlands for cavity nest sites.			"Bird and Bird Habitats: Guidelines for Wind Power Projects". • A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest. • **SWHMiST Index #25** provides development effects and mitigation measures.	
Bald Eagle & Osprey Nesting, Foraging & Perching Habitat **<u>Rationale;</u>** Nest sites are fairly uncommon in Eco-region 7E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	**ELC Forest Community Series:** FOD FOM FOC SWD SWM and SWC (directly adjacent to riparian areas – rivers, lakes, ponds and wetlands.	• Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. • Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. • Nests located on man-made objects are not to be included as SWH (e.g., telephone poles and constructed nesting platforms).	Moderate potential. • No nests were observed within the projet limits however suitable nest habitat is located within the forested area adjacent to the Niagara River	Osprey **Special Concern** Bald Eagle	**Studies confirm the use of these nests by**: • One or more active Osprey or Bald Eagle nests in an area. • Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. • For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH, maintaining undisturbed shorelines with large trees within this area is important. • For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800 m is dependent on-site lines from the nest to the development and inclusion of perching and foraging habitat. • To be significant a site must be used annually. When found inactive, the site must be known to be inactive for >3 years or suspected of not being used for >5 years before being considered not significant. • Observational studies to determine nest site use, perching sites and foraging	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
					areas need to be done from mid-March to mid-August. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • **SWHMiST Index #26** provides development effects and mitigation measures.	
Woodland Raptor Nesting Habitat **<u>Rationale:</u>** Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.	May be found in all forested ELC ecosites. **May also be found in:** SWC SWM SWD and CUP3	• All natural or conifer plantation woodland/forest stands >30 ha with >4ha of interior habitat. Interior habitat determined with a 200 m buffer. • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.	No potential • Forested areas lack interior forest habitat	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	**Studies confirm:** • Presence of 1 or more active nests from species list is considered significant. • Red-shouldered Hawk and Northern Goshawk – A 400 m radius around the nest or 28 ha area of habitat is the SWH (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest). • Barred Owl – A 200 m radius around the nest is the SWH. • Broad-winged Hawk and Coopers Hawk– A 100 m radius around the nest is the SWH. • Sharp-Shinned Hawk – A 50 m radius around the nest is the SWH. • Conduct field investigations from early March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. • **SWHMiST Index #27** provides development effects and mitigation measures.	N/A
Turtle Nesting Areas **<u>Rationale;</u>** These habitats are rare and when identified will often be the only breeding site for local	**Exposed mineral soil (sand or gravel) areas adjacent (<100 m) or within the following ELC ecosites:** MAS1 MAS2 MAS3	• Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals.	Not present • Suitable nesting habitat is not present within the study area	Midland Painted Turtle <u>Special Concern Species:</u> Northern Map Turtle Snapping Turtle	**Studies confirm:** • Presence of 5 or more nesting Midland Painted Turtles. • One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. • The area or collection of sites within an area of exposed mineral soils where the	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
populations of turtles.	SAS1 SAM1 SAF1 BOO1 FEO1	• For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.			turtles nest, plus a radius of 30-100 m around the nesting area dependent on slope, riparian vegetation and adjacent land use is the SWH. • Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100 m area of habitat. • Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. • **SWHMiST Index #28** provides development effects and mitigation measures for turtle nesting habitat.	
Seeps and Springs **<u>Rationale</u>:** Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Seeps/Springs are areas where ground water comes to the surface. Often, they are found within headwater areas within forested habitats. Any forested ecosite within the headwater areas of a stream could have seeps/springs.	• Any forested area (with <25% meadow/field/ pasture) within the headwaters of a stream or river system. • Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species.	Not present	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	**Field Studies confirm:** • Presence of a site with 2 or more seeps/springs should be considered SWH. • The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat. • **SWHMiST Index #30** provides development effects and mitigation measures.	N/A
Amphibian Breeding Habitat (Woodland) **<u>Rationale:</u>** These habitats are extremely important to amphibian biodiversity within a	All ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM	• Presence of a wetland, pond or woodland pool (including vernal pools) >500 m^2 (about 25 m diameter) within or adjacent (within 120 m) to a woodland (no minimum size). Some small wetlands may not	Low potential • Adjacent woodlands may contain ampbhibian breeding habitat but it is not present within the project limits	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	**Studies confirm:** • Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
landscape and often represent the only breeding habitat for local amphibian populations.	SWD Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	be mapped and may be important breeding pools for amphibians. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.			• A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. • The habitat is the wetland area plus a 230 m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. • **SWHMiST Index #14** provides development effects and mitigation measures.	
Amphibian Breeding Habitat (Wetlands) **<u>Rationale;</u>** Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	**ELC Community Classes:** SW MA FE BO OA and SA. Typically, these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g., Bull Frog) may be adjacent to woodlands.	• Wetlands >500 m2 (about 25 m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. • Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation.	Not present • Suitable ecosites are not present within the study area	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	**Studies confirm:** • Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3 or; Wetland with confirmed breeding Bullfrogs are significant. • The ELC ecosite wetland area and the shoreline are the SWH. • A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. • If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. • **SWHMiST Index #15** provides development effects and mitigation measures.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
Woodland Area-Sensitive Bird Breeding Habitat **<u>Rationale</u>:** Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.	**All ecosites associated with these ELC Community Series:** FOC FOM FOD SWC SWM SWD	• Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs. old) forest stands or woodlots >30 ha. • Interior forest habitat is at least 200 m from forest edge habitat.	Not present • Forested areas lack interior habitat	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren Pileated Woodpecker **Special Concern:** Cerulean Warbler Canada Warbler	**Studies confirm:** • Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. • **Note**: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. • Conduct field investigations in spring and early summer when birds are singing and defending their territories. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #34** provides development effects and mitigation measures.	N/A
Table 1.3: Habitat for Species of Conservation Concern considered Significant Wildlife Habitat						
Marsh Breeding Bird Habitat **<u>Rationale:</u>** Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 **For Green Heron:** All SW, MA and CUM1 sites	• Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. • For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.	Not present • Suitable ecosites are not present within the study area	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Green Heron Trumpeter Swan **Special Concern:** Black Tern Yellow Rail	**Studies confirm:** • Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or breeding by any combination of 4 or more of the listed species. • **Note**: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. • Area of the ELC ecosite is the SWH. • Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #35** provides development effects and mitigation measures.	N/A
O**p**en **Country Bird Breedi**ng Ha**b**itat **<u>Rationale:</u>**	CUM1 CUM2	• Large grassland areas (includes natural and cultural fields and meadows) >30 ha.	No potential • Suitably large ecosites are not present within the study area.	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier	**Field Studies confirm:** • Presence of nesting or breeding of 2 or more of the listed species.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.		• Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e., no row cropping or intensive hay or livestock pasturing in the last 5 years). • Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. • The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.		Savannah Sparrow **Special Concern** Short-eared Owl	• A field with 1 or more breeding Short-eared Owls is to be considered SWH. • The area of SWH is the contiguous ELC ecosite field areas. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST Index #32** provides development effects and mitigation measures.	
Shrub/Early Successional Bird Breeding Ha**b**itat **<u>Rationale;</u>** This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	• Large field areas succeeding to shrub and thicket habitats >10 ha in size. • Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e., no row-cropping, haying or live-stock pasturing in the last 5 years). • Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. • Shrub and thicket habitat sites considered significant should have a history of longevity,	Not present • Suitable ecosites are not present within the study area	**Indicator Spp:** Brown Thrasher Clay-coloured Sparrow **Common Spp.** Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher **Special Concern:** Yellow-breasted Chat Golden-winged Warbler	**Field Studies confirm:** • Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. • A habitat with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as SWH. • The area of the SWH is the contiguous ELC ecosite field/thicket area. • Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • **SWHMiST cxlix Index #33** provides development effects and mitigation measures.	N/A

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
		either abandoned fields or pasturelands.				
Terrestrial Crayfish **<u>Rationale:</u>** Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.	• Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for Terrestrial Crayfish. • Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. • Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed.	Not present • Suitable ecosites are not present within the Study Area	Chimney or Digger Crayfish (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish (*Cambarus Diogenes*)	**Studies Confirm:** • Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites. • Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. • Surveys should be done April to August in temporary or permanent water. **Note** the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult. • **SWHMiST Index #36** provides development effects and mitigation measures.	N/A
Special Concern and Rare Wildlife Species **<u>Rationale:</u>** These species are quite rare or have experienced significant population declines in Ontario.	All plant and animal Element Occurrences (EO) within a 1 or 10 km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy.	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC ecosites.	The following species of special concern • Eastern Wood-pewee • Wood Thrush	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the NHIC.	**Studies Confirm:** • Assessment/inventory of the site for the identified Special Concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. • The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g., specific nesting habitat or foraging habitat. • **SWHMiST Index #37** provides development effects and mitigation measures.	Moderate potential
Table 1.4.1: Animal Movement Corridors						

Significant Wildlife Habitat Screening in the Study Area– Ecoregion 7E Criteria (2015)

Habitat	CANDIDATE - Significant Wildlife Habitat			CONFIRMED - Significant Wildlife Habitat		
	Ecological Land Classification Ecosite Codes	**Habitat Criteria**	**Presence of Candidate Habitat in the Study Area (within 120 m of the Project)**	**Wildlife Species**	**Defining Criteria**	**Presence of Confirmed Significant Wildlife Habitat in the Study Area (within 120 m of the Project)**
Amphibian Movement Corridors **<u>Rationale:</u>** Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Corridors may be found in all ecosites associated with water. Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1.	• Movement corridors between breeding habitat and summer habitat. • Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat– Wetland) of this Schedule.	No potential. • No amphibian breeding habitat.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	• Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. • Corridors should consist of native vegetation, with several layers of vegetation. • Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant. • Corridors should have at least 15 m of vegetation on both sides of waterway or be up to 200 m wide of woodland habitat and with gaps <20 m. • Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat. • **SWHMiST Index #40** provides development effects and mitigation measures.	N/A
Table 1.5.1: Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 7E						
7E-2 - Bat Migratory Stopover Area **Rationale:** Stopover areas for long distance migrant bats are important during fall migration.	No specific ELC types	• Long distance migratory bags typically migrate during late summer and early fall from summer breeding habitats throughout Ontario to southern wintering areas. Their annual fall migration may concentrate these species of bats at stopover areas. • This is the only known bat migratory stopover habitats based on current information.	Not present • Study Area is not located at Long Point	Hoary Bat Eastern Red Bat Silver-haird Bat	• Long Point ($42^0$35'N, 80^0 30'E, to $42^0$33'N, $80^0$03'E) has been identified as a significant stop-over habitat for fall migrating Silver-haired Bats, due to significant increases in abundance, activity and feeding that was documented during fall migration. • The confirmantion criteria and habitat areas for this SWH are still being determined. • **SWH MIST Index #38** provides development effects and mitigation measures.	N/A •