

**Species at Risk Assessment Report  
North Street Residential Development  
Mohawks of the Bay of Quinte**

Prepared for:

Mohawks of the Bay of Quinte  
24 Meadow Drive  
Tyendinaga Mohawk Territory, Ontario  
K0K 1X0

Submitted by:

The Greer Galloway Group Inc.  
Consulting Engineers  
1620 Wallbridge Loyalist Road R.R. #5  
Belleville, ON K8N 4Z5

T: (613) 966-3068  
[www.greergalloway.com](http://www.greergalloway.com)

Project: 2135511

June 29, 2022

---

## Contents

1. Introduction.....	1
2. Species at Risk Assessment – Scope of Work .....	1
3. Planning Context .....	1
4. Species at Risk Records Review .....	2
5. Existing Conditions and Proposed Project .....	4
5.1 Vegetation.....	5
5.2 Terrestrial Wildlife .....	6
5.3 Aquatic Habitat and Fish.....	7
5.4 Species at Risk Assessment .....	7
6. Recommended Mitigation Measures.....	15
7. Conclusions .....	17
8. References .....	18

### Figures

- Figure 1: Site Location Map
- Figure 2: Proposed Development
- Figure 3: Vegetation Communities

### Appendices

- Appendix A: Photo Log

## 1. Introduction

The Greer Galloway Group was retained by the Mohawks of the Bay of Quinte (MBQ) to undertake a Species at Risk (SAR) assessment to address the potential impacts associated with the planned Residential Development located on North Street, Tyendinaga Mohawk Territory. The property is relatively rectangular in shape and approximately 3.8 ha in size (see Figure 1: Site location Map).

## 2. Species at Risk Assessment – Scope of Work

The initial step in the assessment was a review of available information for the property and surrounding landscape. The list of SAR potentially occurring within the area was developed using multiple background resources including:

- Ontario Breeding Bird Atlas Website (Bird Studies Canada, *et al.* 2006);
- Reptiles and Amphibians of Ontario Range Maps – Online Tool (Ontario Nature 2021);
- Species at Risk in Ontario List – Online Tool (OMNDMNR 2021 and 2022);
- Natural Heritage Information Centre (NHIC online web tool) (OMNDMNR 2021 and 2022);
- Atlas of the Mammals of Ontario (Dobbyn 1994);
- DFO SAR Mapping (DFO 2021);
- Species at Risk Canada – Online Tool (Public Registry 2021 and 2022).

Once the list was compiled, a screening exercise was completed to determine the presence of suitable habitat conditions based on known preferred habitat characteristics for each SAR potentially occurring within the study area. This assessment was completed through site visits (see Table 1) during which suitable habitat for SAR was searched for and signs of species presence were documented. Identification of birds by sight and sound, wildlife, wildlife habitat and identification of representative species of flora was also documented.

**Table 1: Summary of Natural Environment Site Investigations in the Study Areas**

Date	Inspection staff	Information obtained from Surveys
June 23, 2021	Y. Ramirez	SAR, Breeding Birds; Ecological Land Classification; SAR Habitat Assessments
July 15, 2021	Y. Ramirez, Rhys Bauer	SAR, Breeding Birds; Ecological Land Classification; SAR Habitat Assessments

## 3. Planning Context

This Species at Risk report was carried out with reference to the legislation and policies described in the following subsections. While the subject lands do not fall under Provincial jurisdiction, the provincial relevant provincial policies provide a useful technical guidance:

### Species at Risk Act

The purpose of the Species at Risk Act (SARA) is to prevent wildlife species in Canada from disappearing; to provide for the recovery of wildlife species that are extirpated (no longer exist in the wild in Canada), endangered, or threatened as a result of human activity; and to manage species of special concern to prevent

them from becoming endangered or threatened. A series of measures applicable across Canada provides the means to accomplish these goals. Some of these measures establish how governments, organizations, and individuals in Canada work together, while others implement a species assessment process to ensure the protection and recovery of species.

### Endangered Species Act

Species listed on the Species at Risk in Ontario (SARO) list as endangered or threatened are protected under the *Endangered Species Act, 2007* (ESA). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing, or taking a member of a species listed as endangered, threatened or extirpated on the SARO list. Section 10(1) of the ESA prohibits the damage or destruction of habitat of a species listed as endangered or threatened on the SARO list. The Ministry of the Environment, Conservation and Parks is the authority that administrate the *Endangered Species Act*.

### Provincial Policy Statement

The Ontario Planning Act (1990) requires that planning decisions be consistent with the Provincial Policy Statement, 2020 (PPS). Section 2.1 of the PPS specifies policy related to protection of natural heritage features and functions.

Section 2.1.4 of the PPS, development and site alteration shall not be permitted in:

- a. *Significant wetlands in Ecoregions 5E, 6E and 7E, and Significant coastal wetlands*

*Section 2.1.6, development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*

*Section 2.1.7 states that development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.*

*Section 2.1.8 states that development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.*

### Fisheries Act

In accordance with the Federal *Fisheries Act*, any in-water works that may cause “harmful, alteration, disturbance and destruction (HADD) of fish habitat”, requires review by the Department of Fisheries and Oceans (DFO). Sections 34.4(1) and 35(1) of the Act outlines that “No person shall carry on any work, undertaking or activity that it is considered to result in the death of fish or the harmful alteration, disruption or destruction of fish habitat.

## 4. Species at Risk Records Review

Species at Risk (SAR) included those species listed in the ESA and the SARA. An assessment was conducted to determine presence and potential habitat for SAR in the subject property and adjacent lands potentially to be affected by the proposed development. An initial desktop review was conducted to identify SAR likely to be present within 2 km of the study area using the NHIC database, OBBA, and ORAA.

A summary of potential SAR to be found in the area is provided on the following table:

**Table 2: Summary of Natural Environment Site Investigations in the Study Area**

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
<b>Birds</b>					
Barn Swallow	<i>Hirundo rustica</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Least Bittern	<i>Ixobrychus exilis</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Special Concern	Special Concern	Low	Suitable habitat is not found on the property.
Eastern Wood-pewee	<i>Contopus virens</i>	No status	Special Concern	Low	Suitable habitat is not found on the property.
Common Nighthawk	<i>Chordeiles minor</i>	Threatened	Special Concern	Low	Suitable habitat is not found on the property.
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Endangered	Endangered	Medium-High	Suitable habitat is found on the property.
Wood Thrush	<i>Hylocichla mustelina</i>	Threatened	Special Concern	Low	Suitable habitat is not found on the property.
Henslow's Sparrow	<i>Ammodramus henslowii</i>	Endangered	Endangered	Low	Suitable habitat is not found on the property.
King Rail	<i>Rallus elegans</i>	Endangered	Endangered	Low	Suitable habitat is not found on the property.
Louisiana Waterthrush	<i>Parkesia motacilla</i>	Special Concern	Threatened	Low	Suitable habitat is not found on the property.
Yellow-breasted Chat virens subspecies	<i>Icteria virens virens</i>	Endangered	Endangered	Medium-High	Suitable habitat is found on the property.
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Threatened	Endangered	Low	Suitable habitat is not found on the property.
Short-eared owl	<i>Asio flammeus</i>	Special Concern	Special Concern	Low	Suitable habitat is not found on the property.
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Threatened	Special Concern	Medium	Suitable habitat is found on the property.
Chimney Swift	<i>Chaetura pelagica</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Peregrine Falcon	<i>Falco peregrinus anatum</i>	Special Concern	Special Concern	Low	Suitable habitat is not found on the property.
<b>Herpetofauna</b>					
Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern	Special Concern	Low	Suitable habitat is not found on the property.
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	Special Concern	Special Concern	Low	Suitable habitat is not found on the property.
Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Threatened	Low	Suitable habitat is not found on the property.
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern	Low	Suitable habitat is not found on the property.
Eastern Ribbonsnake (Great Lakes Population)	<i>Thamnophis sauritus</i>	Special Concern	Special Concern	Low	Suitable habitat nesting habitat is not found on the property, but the species can be found foraging.
Eastern Milksnake	<i>Lampropeltis triangulum</i>	Special Concern	No Status	Low	Suitable habitat is not found on the property.

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
<b>Amphibians</b>					
Western Chorus Frog	<i>Pseudacris triseriata</i>	Not at Risk	Threatened	Low	Suitable habitat is not found on the property.
<b>Mammals</b>					
Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Low	Suitable habitat is not found on the property.
Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Low	Suitable habitat is not found on the property.
Tri-coloured Bat	<i>Perimyotis subflavus</i>	Not Status	Endangered	Low	Suitable habitat is not found on the property.
<b>Insects</b>					
Monarch	<i>Danaus plexippus</i>	Special Concern	Special Concern	High	Suitable feeding plants on the property. The species was observed on the property.
<b>Plants</b>					
Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Low	Individuals were not observed on the property.
Black Ash	<i>Fraxinus nigra</i>	Not Listed	Endangered	High	Individuals are present in the property.
American Ginseng	<i>Panax quinquefolius</i>	Endangered	Endangered	Low	Suitable habitat is not found on the property.
Juniper Sedge	<i>Carex juniperorum</i>	Endangered	Endangered	Low	Suitable habitat is not found on the property.

## 5. Existing Conditions and Proposed Project

The proposed development is located within the territory of the Mohawks of the Bay of Quinte. The area is part of the Mixed Wood Plains ecozone and Lake Simcoe- Rideau Ecoregion (6E). This ecoregion extends from Lake Huron in the west to the Ottawa River in the east and includes most of the Lake Ontario shore and the Ontario portion of the St. Lawrence River Valley (Crins *et al*, 2009).

The bedrock consists of limestones and shales laid down over older Precambrian-age rock of the Grenville Province beginning in the middle Ordovician (approximately 460 million years ago) as part of a continent-wide marine transgression. This transgression (a period of increasing sea levels) deposited, in order, the Shadow Lake, Gull River, Bobcaygeon, Verulam and Lindsay Formations (Armstrong and Carter, 2006). The Verulam Formation is the uppermost bedrock unit beneath the property. The formation consists of dolomite and limestone, medium brown and grey, finely crystalline, uniformly bedded with subequal thickness of pale to medium brown and grey bioclastic limestone, and grey and brown shale. The formation occurs in beds 3 to 5 cm in thickness. The thickness of the formation has been estimated to be 90 m (Carson, 1981).

Soils on the property are of the Sidney Clay Series with a small portion on the central-west part of the property reporting Otonabee loam soils. The Sidney soils are poorly drained clay soils and the Otonabee soils are loam soils with good drainage. The topography is nearly level and, in some areas slightly depressional. The parental material is a grey calcareous stone-free clay (Gillespie *et. al.*, 1962). The soil investigation performed in September 2021 on the property is described as being composed of organic topsoil, silt clay sand with gravel with bedrock encountered at depths between 1.2 -3.3 m north of the property and 4-4.7 m south of the property.

The study area is located within the Napanee Plains physiographic region, a flat to undulating limestone plain from the Middle Ordovician that was stripped of most of the overburden by glaciation. The gently undulating topography of the area gradually slopes towards Lake Ontario. The soils in the area are less than 30 cm in

depth but in some areas deeper glacial till can be found. Well records from the MNMNR database indicate that the area is characterized by a thin layer of clay over limestone bedrock.

The highest elevation is reported as 94 metres above sea level (mASL) north of the property and sloping down to the south to a lowest elevation of 90 mASL.

Ministry of Northern Development, Mines, Natural Resources and Forestry (MNMNR) online mapping shows a creek along the south property boundary and wetland south-west and south-east of the property in adjacent lands.

The subject property is located north side of North Street, at the edge of Deseronto Urban area. The property is surrounded to the north by forest and wetland, to the south by North Street and residential properties, to the east by agricultural fields and wetland and to the west by agricultural fields. No structures are found on the property but a lot of litter, leaf and brush waste was observed around the property. It seems that the property was and is used to dump garbage and organic material. Aerial imagery from 1954 shows the property as an agricultural field with vegetation confined to the edges of the field. Currently, a trail bisects the property in two parts crossing in a south to north direction towards the forested area located north of the property. The trail is used for walking and Off-Highway Motor Vehicle (OHV) activities. During the site investigations, a defined channel of the creek was not observed, creek was covered with vegetation. There is a culvert that crosses the trail on the south part of the property where the creek flows. The creek is seasonal as it receives surface water from the ditches located along North Street.

Precipitation falling on the property and surrounding area contributes to recharge of the bedrock aquifer. There is evidence of surface water runoff over much of the property reflecting the presence of clay as part of the overburden that retains the water resulting in ponded water across the property. Surface water was observed flowing overland along the west property boundary and the trail in a south direction. In addition to the soil composition, the property shows irregular terrain as a result of agricultural practices that created long trenches and depressions made by plowing, resulting in the property being periodically “soaked” or “wet” due to precipitation events.

The overall topography of the area suggests groundwater flow to the south towards the Mohawk Bay. Well records indicate groundwater in the area is found in the limestone bedrock in the shallow and deep limestone between 3.7 m to 24 m. Based on the soil investigation completed in September 2021, groundwater was found south of the property at a depth between 3.7-4.3 m.

The Mohawk of the Bay of Quinte is proposing a Residential Development on the property. The Concept Plan included in Figure 2, describes 14 residential lots, 2 Triplex and one apartment building. The development will be accessed from an internal road and turnaround running through the middle of the property. The lots will have a size of 0.5 acre with a lot frontage of 35 m. The proposed development will have access from North Street. The development will be serviced by municipal water and private waste disposal systems.

## 5.1 Vegetation

Vegetation composition is affected by changes in topography and stage of succession with the land mainly covered with shrubs and herbs. Trees are confined to the edges of the property. The vegetation observed on the property is in a successional stage as the original natural vegetation was removed to allow agricultural use. Clay soils and irregular terrain as a result of past agricultural practices result in soak or wet conditions. During the site investigation, moist/wet conditions prevailed in most of the property with some depressional areas where wetland species are established; however, due to the size of the depressions, they are not considered wetlands. A small patch dominated with cattails was observed south of the property adjacent to the creek.

The vegetation in the property is classified as cultural thicket (Gray Dogwood Cultural Ticket CUT1-4) with dominance of gray dogwood and other shrub and herbaceous species (See Figure 3). All of the property is covered with vegetation with exception of the trail. Vegetation is composed with native and non-native species. Ash species are observed to be important component of the community in the three strata (herbaceous, shrub and tree) but the trees observed along the property boundary are dying due to the emerald ash borer. Some saplings within the property are also sick.

The vegetation community in the property is very diverse due to the successional stage. Tree species found include green ash (*Fraxinus pennsylvanica*), black ash (*Fraxinus nigra*), eastern red cedar (*Juniperus virginiana*), American elm (*Ulmus americana*), trembling aspen (*Populus tremuloides*), eastern cottonwood (*Populus deltoides*), white oak (*Quercus alba*), eastern black walnut (*Juglans nigra*). Shrub species identified include gray dogwood (*Cornus racemose*), common buckthorn (*Rhamnus cathartica*), eastern red cedar (*Thuja occidentalis*), staghorn sumac (*Rhus typhina*), nannyberry (*Viburnum lentago*), and American elm, white oak (*Quercus alba*), slender willow (*Salix petiolaris*), and green ash saplings. Herbaceous species associated include common dandelion (*Taraxacum officinale*), wild parsnip (*Pastinaca sativa*), field mustard (*Brassica rapa*), early goldenrod (*Solidago juncea*), Canada goldenrod (*Solidago canadensis*), tall goldenrod (*Solidago gigantea*), tufted vetch (*Vicia cracca*), Canada thistle (*Cirsium arvense*), common burdock (*Arctium minus*), wild red raspberry (*Rubus idaeus*), dam's rocket (*Hesperis matronalis*), bird's-foot trefoil (*Lotus corniculatus*), viper's-bugloss (*Echium vulgare*), great mullein (*Verbascum thapsus*), chicory (*Cichorium intybus*), red clover (*Trifolium pratense*), common milkweed (*Asclepias syriaca*), Deptford pink (*Dianthus armeria*), white sweet clover (*Melilotus albus*), wild carrot (*Daucus carota*), yellow evening-primrose (*Oenothera biennis*), common ragweed (*Ambrosia artemisiifolia*), bladder campion (*Silene vulgaris*), staghorn suman seedings (*Rhus typhina*), wild strawberry (*Fragaria virginiana*), heal-all (*Prunella vulgaris*), riverbank grape (*Vitis riparia*), Indian hemp (*Apocynum cannabinum*), oxeye daisy (*Leucanthemum vulgare*), spreading dogbane (*Apocynum androsaemifolium*), black medic (*Medicago lupulina*), elecampane (*Inula helenium*), yellow avens (*Geum aleppicum*), poison ivy (*Toxicodendron radicans*), ground juniper (*Juniperus communis*), bristly crowfoot (*Ranunculus pensylvanicus*), fox sedge (*Carex vulpinoidea*), softstem bulrush (*Scirpus Validus*), red top grass (*Agrostis gigantea*), timothy grass (*Phelum pratense*), smooth brome grass (*Bromus inermis*), ribbed bog moss (*Aulacomnium palustre*), and other grasses, sedges and rushes.

Wetland species observed around the creek include narrow-leave cattail (*Typha angustifolia*), black ash, spotted touch-me-not (*Impatiens capensis*), red-osier dogwood (*Cornus sericea*), and reed canary grass (*Phalaris arundinacea*).

A photographic log showing existing conditions on the property is included in Appendix A.

## 5.2 Terrestrial Wildlife

During the field investigation, bird species observed include song sparrow (*Melospiza melodia*), American yellow warbler (*Setophaga petechia*), common yellowthroat warbler (*Geothlypis trichas*), red-winged blackbird (*Agelaius phoeniceus*), red-eye vireo (*Vireo olivaceus*), alder flycatcher (*Empidonax alnorum*), brown-headed cowbird (*Molothrus ater*), northern cardinal (*Cardinalis cardinalis*), blue jay (*Cyanocitta cristata*), American crow (*Corvus brachyrhynchos*), northern flicker (*Colaptes auratus*), eastern phoebe (*Sayornis phoebe*), downy woodpecker (*Picoides pubescens*), American robin (*Turdus migratorius*), common grackle (*Quiscalus quiscula*), cedar waxwing (*Bombycilla cedrorum*), chipping sparrow (*Spizella passerina*), wild turkey (*Meleagris gallopavo*), and gray catbird (*Dumetella carolinensis*). Mammals include prints of white-tailed deer (*Odocoileus virginianus*), eastern chipmunk (*Tamias striatus*), striped skunk (*Mephitis mephitis*), raccoons (*Procyon lotor*), coyote scats (*Canis latrans*), and eastern cottontail (*Sylvilagus floridanus*). Amphibians observed and heard include northern leopard frogs (*Lithobates pipiens*) and green frog (*Rana clamitans*). Reptiles include common garter snake (*Thamnophis sirtalis*). Insects include Monarch butterflies (*Danus plexippus*).

### 5.3 Aquatic Habitat and Fish

There is a watercourse that crosses the property in the south boundary. The watercourse receives flow from the ditch that runs parallel to North Street and the flows to the west toward a wetland located southwest in adjacent lands. During the site investigations, water in the creek was not observed. A define channel was not observed which indicate water in this watercourse is found during precipitation events only.

### 5.4 Species at Risk Assessment

A description of the identified Species-at-Risk is provided in the following paragraphs.

#### Barn Swallow



The natural habitat of Barn Swallow includes caves, holes, crevices and ledges in cliff faces but anthropogenic features are often used in farmlands, rural, suburban areas, and villages where they build the nest around many kinds of structures, especially barns and other farm outbuildings, under bridges, wharves, boat-houses, and culverts (COSEWIC, 2011a).

Barn Swallows were not observed foraging over the property. Suitable habitat is not present on the property. It is possible that Barn Swallows nest in structures or buildings located on residential properties adjacent to the property. No potential impacts to Barn Swallow are expected.

#### Eastern Meadowlark



Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are they are also found in alfalfa fields, weedy borders of croplands, roadsides, young orchards, golf courses, restored surface mines, grain fields, airports, shrubby overgrown fields, or other open areas Small trees, shrubs or fence posts are used as elevated song perches (COSEWIC, 2011b).

Eastern Meadowlarks were not observed on the property. Suitable habitat for Eastern Meadowlark is not present, due to presence of shrubs within the meadow vegetation. Therefore, impacts to this species are not expected.

#### Bobolink



Habitat for the bobolink includes hayfields, pastures, fallow or abandoned fields, meadows, and tall grass prairie remnants. Typically, these habitat features require moderate to dense grass with some forbs and a moderate amount of vegetative litter (COSEWIC, 2010). The MNRF also reports that the Bobolink prefer large fields (>10 hectares) over smaller fields, and avoid grassland located near forested edge. Desirable habitat features occur within

actively managed hayfields and lightly used pastures.

Bobolink was not observed on the property. Suitable habitat for Bobolink is not present. Presence of shrubs within the meadow species decrease the suitable habitat for Bobolink. Therefore, impacts to this species are not expected.

### Eastern Whip-poor-will



The whip-poor-will uses dry forested areas for roosting and nesting. Nesting areas include most types of forest at early stages of succession or forest edges and openings with a dense tree cover but showing similar structure at the ground level, rock or sand barrens with scattered trees, savannahs, old burns, as well as sparse conifer plantations (COSEWIC, 2009a).

Eastern Whip-poor-will was not observed on the property. Suitable habitat for this species is not present. Impacts to Whip-poor-will or its habitat are not expected.

### Least Bittern



Least Bitterns are found in a variety of wetland habitats, but their preferred habitat is cattail marshes with a mix of open pools and channels. Preferred habitat consists of robust-emergent-dominated but interspersed wetlands free of purple Loosestrife and European Common Red, with limited urban land use and high proportion of wetlands in the surrounding landscape. The presence of stands of dense vegetation is essential for nesting because the nests of least Bittern sit on platforms of stiff stems (COSEWIC, 2009b).

Habitat for Least Bittern is not present on the property. Therefore, impacts to Least Bittern are not expected.

### Grasshopper Sparrow



The Grasshopper Sparrow prefers grasslands with relatively sparse cover such as those in areas of poor soils, including alvars, moraines and sand plains. It generally does not favour tall grass moist meadows. The Grasshopper Sparrow also uses a variety of agricultural fields, from planted cereals to cattle pastures for breeding and feeding. Dry, close-grazed pastures on till moraines and limestone plains like the Carden and Napanee plains and those in Dufferin County, support

the highest densities of Grasshopper Sparrow (COSEWIC, 2013a).

Grasshopper Sparrow was not observed or heard in the property. Suitable habitat for Grasshopper Sparrow is not present. Therefore, impacts to this species are not expected.

### Eastern Wood-Pee wee



The Eastern Wood-Pee wee preferred breeding areas are mature and intermediate-age deciduous and mixed forest having an open understorey. Eastern Wood-Pee wee can be found in forest clearings and edges in the vicinity of its nests. It can use dead branches as hunting perches (COSEWIC, 2012a).

No birds or nests were observed within the property. Suitable habitat is not present. The species can be seen perching and singing on top of the trees. Impacts to Eastern Wood-Pee wee are not expected.

### Common Nighthawk



Common Nighthawk prefers open ground or clearings for nesting. The species breeds in a wide range of open habitats including sandy areas (dunes, eskers, and beaches), open forests, grasslands, sagebrush, wetlands, gravelly or rocky areas, and some cultivated or landscaped areas. Nighthawks mainly forage in open areas with flying insects during crepuscular periods, but sometimes during the day. A variety of habitat are used for this species for roosting such as tree

limbs, the ground, fencepost, or rooftops that have shade from overheating, camouflage from predators, and unobstructed flight paths (Environment Canada, 2016).

Common Nighthawk was not observed. Nesting habitat is not found on the property. Impacts to this species are not expected.

### Loggerhead Shrike



Habitat includes trees or shrubs for nesting, elevated perches natural for hunting, mating, and territory advertisement, and short to medium height grassy areas for foraging. In all the habitats, shrikes require scattered small trees, shrubs or hedgerows for foraging perches and nesting sites (Environment Canada, 2015).

Loggerhead Shrike was not observed in the area, but the vegetation on the property is potential habitat for this species. Mitigation measures should be applied to ensure no harm to this species.

### Wood Thrush



Wood Thrush nests mainly in second-growth and mature deciduous and mixed forests with saplings and well-developed understorey layers. The species prefers large forest mosaics and small forest fragments. Threats to breeding areas include habitat degradation and fragmentation due to development and over-browsing by white-tailed deer, nest predation and brown-headed cowbird nest parasitism associated with habitat fragmentation (COSEWIC, 2012b).

Wood Thrush was not observed or heard on the property, Suitable habitat for this species is not present on the property. Impacts to this species are not expected.

### Henslow's Sparrow



Suitable habitat is found in large abandoned fields, ungrazed and lightly grazed pasture, fallow hayfields with high clover and alfalfa content, grassy swales in open farmland, wet meadows, and infrequently mowed fields with vegetation over 30 cm tall. The meadow does not qualify as suitable habitat for this species because of the size (COSEWIC, 2011c).

Henslow's Sparrow was not heard or observed. Suitable habitat is not found on the property. Therefore, impacts to this species are not expected.

### King Rail



King Rail inhabit a wide variety of freshwater cattail marshes. Prefer habitat for this species consist of large marshes with a range of water level conditions and a mosaic of habitats. Water depth is an important factor in habitat selection. For nesting water depths range from 0 cm (moist ground) to 20-25 cm (COSEWIC, 2011d).

Habitat suitable (vegetated freshwater marshes with open shallow water) for King Rail is not found on the property. Impacts to this species are not expected.

### Louisiana Waterthrush



The Louisiana Waterthrush requires a specialized habitat, characterized by pristine headwater streams and wetlands located in large tracts of mature forest. It prefers running water and heavy wooded swamps with vernal or semi-permanent pools. Luisiana Waterthrush nests within niches in steep stream banks, in roots of uprooted trees, or in mossy logs and stumps within a few metres of water (COSEWIC, 2015).

Suitable habitat for this species is not found on the property. Therefore, impacts to this species are not expected.

### Yellow-breasted Chat



The Yellow-breasted Chat is a shrub specialist, found in riparian shrubland and early successional shrub habitats. Prefer habitat include early successional habitats such as early shrubby regrowth on abandoned fields, power-line corridors, clear-cuts, fencerows, forest edges and openings, and areas near streams, ponds and swamps (COSEWIC, 2011e).

Yellow-breasted Chat was not heard or seen on the property. It is the potential to find this species on the property; however, quality of habitat may be a factor that influence the presence of this species. Measures should be applied to ensure no harm to the species.

### Red-headed Woodpecker



Red-headed Woodpecker is found in woodlands; particularly those dominated by oak and beech, open deciduous forests or woodlots, groves of dead or dying trees, food plain forests, orchards, cemeteries, urban parks, golf courses, sparsely treed pastures, or agricultural areas, savannah-like grasslands with scattered trees, beaver ponds, and forest edges or along roadsides. Breeding habitat is composed of woodlands or areas with tall trees of large circumferences, high basal area, a low density of stems in the understory, and a high density of snags and dead limbs that area used for perching, nesting, and food caching (COSEWIC, 2018a).

Breeding habitat for this species is not found on the property. Impacts to Red-headed Woodpecker are not expected.

### Short-eared Owl



The Short-eared Owl is found in grasslands, coastal marshes and tundra where it nests on the ground near clumps of taller vegetation and hunts for small mammals. They are also found in man-made agricultural habitats (e.g. managed grasslands). Breeding typically occurs in open landscapes at least 50-100 ha in area (COSEWIC, 2008a).

Suitable habitat for this species is not found on the property. Impacts to Short-eared Owl are not expected.

### Golden-winged Warbler



This species prefers areas of early successional scrub surrounded by mature forest such as hydro/utility right-of-ways, field edges, recently logged areas, beaver marshes and areas that are burned or intermittently farmed. Territories in the earliest stages of succession, with herb cover, support larger clutches than areas with higher tree and shrub cover. On the Canadian Shield, alder bogs area often used, especially when there are some tall tree species present including Black Ash (*Fraxinus nigra*) (COSEWIC, 2006).

This species was not heard or observed in the property. No impacts to this species are expected.

### Chimney Swift



Nesting habitat includes cave walls and hollow trees or tree cavities in old growth forests, man-made structures such as chimneys, barns, silos, and abandoned buildings. Chimney swift requires a vertical cavity for nesting and roosting, with interior surface that is porous but stable, and to which swifts can cling and attach their nest (COSEWIC, 2007a).

This species was not observed. Suitable habitat for this species is not found on the property. Impacts to this species are not expected.

### Peregrine Falcon



Suitable habitat includes steep cliff edges close to Lake Ontario or crevices. In recent decades, this species has been observed using buildings, bridges and other structures used as nest sites. It breeds only in suitable habitat to sufficient prey. The most commonly occupied habitats feature cliffs for nesting, open areas for foraging and nearby water (Environment and Climate Change Canada, 2017).

Peregrine Falcon was not heard or observed. Suitable nesting habitat is not found on the property. This species can be observed foraging on adjacent lands as lands are occupied by agricultural fields where they can find prey. Impacts to Peregrine Falcon are not expected.

### Northern Map Turtle



Preferred habitat is found in rivers and lakes where it basks on emergent rocks, banks, logs, and fallen trees throughout the active season. It prefers shallow, soft-bottomed aquatic habitats with exposed objects for basking near natural shorelines. In the winter, the turtles typically hibernate on the bottom of deep, slow-moving sections of rivers or lakes (COSEWIC, 2012c).

Suitable habitat for Northern Map Turtle is not present on the property. Impacts to this species are not expected.

### Eastern Musk Turtle



The Eastern Musk Turtle is a highly aquatic species inhabiting littoral zones of waterways such as rivers, lakes, bays, streams, ponds, canals, and swamps with slow to no current and soft bottoms. During the active season, Eastern Musk Turtle prefer shallow water (approx. 2 m) with abundant floating and submergent vegetation. Individuals are most often found close to the shore and usually do not venture onto land except to nest or to access adjacent wetlands. Nest sites are generally located 3 to 11 m from shore and eggs are laid in shallow excavations in sand, at the base of dune grasses, decaying vegetable matter, rotting wood, and in the walls of Muskrat or Beaver

lodges (COSEWIC, 2012d).

Suitable nesting habitat for Eastern Musk Turtle is not found on the property. No impacts to this species are expected.

### Blanding's Turtle



Preferred habitat is found in shallow water in large clear water eutrophic wetlands and shallow lakes with lots of submergent and emergent vegetation. Females nest in a variety of substrates including sands, organic soil, gravel, cobblestone, and soil-filled crevices of rock outcrops. Adults and juveniles overwinter in a variety of water bodies that maintain pools averaging about 1 m in depth; however, hatching turtles hibernate on land during their first winter (COSEWIC, 2016a).

Blanding's Turtle was not observed, and suitable habitat is not found on the property. No impacts to this species are expected.

### Snapping Turtle



The Snapping Turtle prefers slow-moving water with soft mud bottom and dense aquatic vegetation. Snapping turtles can be found in almost every kind of freshwater habitat. Nesting takes place on sand and gravel banks along waterways, including artificial dam and railway embankments. Hibernation takes place beneath logs, sticks or overhang, banks, stumps, submerged logs, and deep anoxic mud in marshy areas, and floating mats of vegetation. The nesting season occurs through the month of June into July with hatchlings emerging in

late September–early October (COSEWIC, 2008b).

Suitable habitat for Snapping Turtles is not found on the property. No snapping turtles or signs of past nesting were observed on the property. No potential impacts to Snapping Turtles or their habitat are expected.

### Eastern Ribbonsnake



Eastern Ribbonsnake is semi-aquatic and found in a variety of wetlands with both flowing and standing water (marshes, bogs, fens, ponds, lake shorelines and wet meadows), vernal pools and moist woods. Snakes may move away from water to give birth, shed or seek cover. Ribbonsnakes appear to select microhabitats suitable for behavioural thermoregulation, foraging, and predator avoidance (COSEWIC, 2012e).

Eastern Ribbonsnakes were not observed in the property. The species can be found on the property foraging. Measures should be taken to avoid harm to this species.

### Eastern Milksnake



The milksnake is known to occur in rural areas, in and around buildings, especially old structures. However, it is found in a wide variety of habitats, from prairies, pastures, and hayfields, to rocky hillsides and a wide variety of forest types. Important features of good milksnake habitat are proximity to water, and suitable locations for basking and egg-laying. Milksnakes preferentially use open and edge habitats as these provide characteristics that aid in thermoregulation. Suitable hibernation sites include mammal burrows, old buildings foundations, crawl spaces, old wells and cisterns, stone walls, gravel and dirt banks hollow logs, rotting stumps or rock crevices (COSEWIC, 2014)

No milksnakes were observed in the property. it is the potential to found this species in the property as can be foraging. Milksnake is a difficult-to-detect species so a search for the snake should be carried out before vegetation clearing. Measures should be taken to avoid harm to this species.

### Western Chorus Frog



The Western Chorus Frog requires both terrestrial and aquatic habitats in close proximity. Terrestrial habitat consists mostly of humid prairie, moist woods, meadows, marshes, bottomland swaps, and temporary ponds in open county. For reproduction and tadpole development, this species requires seasonally dry, temporary ponds that are devoid of predators such as fish. The western chorus frog overwinters underground or under surface cover, such as fallen logs (COSEWIC, 2008c).

Western chorus frog was not observed or heard. Suitable habitat is not found in the property. Potential impacts to Western Chorus Frog are not expected.

### Northern Myotis, Little Brown Myotis, and Tri-coloured Bat



Habitat for bats consists of hibernacula and maternity roosts. Hibernation roosts for the four species are found in caves and abandoned mines though they may also overwinter in attics, barns, and large hollow trees. During the day most species choose maternity roosts in woodlands with appropriate tree cavities, caves, crevices, under loose bark, and cracks in cliffs. Little Brown Myotis roost in both

natural and man-made structures. Tri-colored Bats are not found in buildings or deep forest, seeming to prefer edge habitats near areas of mixed-agricultural use. Summer roosts have been found in anthropogenic sites such large areas of rocky rip-rap, crevices in road cuts, waste rock piles, and crevices in concrete bridges and other concrete structures. Colonies within a natural roost may number from few to hundreds of individuals. During the summer, females often roost in large maternity colonies while males tend to roost in small groups or individually. Roosts within human structures are not considered to be significant wildlife habitat (COSEWIC, 2013b, MNRF, 2017).

Old stands are not present on the forest that can be used as roosting habitat by bats. Bats can be roosting in buildings located around the property and observed foraging in spring and summer at dusk over the property. No potential impacts to bats or their maternity habitat are expected.

### Monarch Butterfly



Monarchs use three different types of habitat. Caterpillars feed on milkweed plants found in meadows and open areas. Adult butterflies are found in diverse habitat where they feed on nectar from a variety of wildflowers. Roadsides are important habitat for breeding Monarchs, as roadside verges are periodically disturbed thus allowing milkweeds to grow. Threats in roadside habitats include adult mortality from vehicle collisions, loss of food plants from excessive mowing and herbicides, and exposure to road salt (COSEWIC, 2016b).

Monarch Butterflies and milkweed plants were observed on the property. The milkweeds on the property provide a source of food for Monarch caterpillars. There is potential for adult butterflies to be disturbed/affected during the reconstruction of the proposed development. Mitigation measures should be applied to prevent damage to caterpillars and adult butterflies.

### Butternut



Butternut occurs in neutral to calcareous soils of pH 5.5 to 8, often in regions with underlying limestone. It reaches its greatest abundance in rich, neutral or calcareous, mesic loams and sandy loams in floodplains, streambanks, terraces, hardwood coves and ravine slopes. Butternut is a shade-intolerant tree conditioning its grow in stand openings, riparian zones and forest edges, and old field habitats (COSEWIC, 2017).

Butternut is known to occur in the area, but no butternuts were observed on the property. No impacts to butternuts are expected.

### Black Ash



Black ash is predominantly a wetland species of swamps, floodplains and fens. It has an intermediate light requirement and a tendency toward greater abundance in more alkaline sites. Most sites in which it is dominant are flood prone, where its high tolerance of seasonal flooding appears to offer a competitive advantage. Black ash also is present in upland forests, but it is less abundant than in wet areas. The Black ash is threatened by the introduced emerald ash borer (EAB), an Asian wood-boring beetle that reached southwestern Ontario in 1992 and has spread to Canada sites up to 1,100 km northwest and 1,300 km northeast (COSEWIC, 2018).

Black ash is found in the property. All the mature ash trees in the property were observed to be dying as they are infected with the EAB. The species is not listed in Schedule 1 (SARA). Under Ontario SAR, it is listed as Endangered; however, an authorization is not required as the species was added to the list on January 26, 2022 and the MNDMNRF suspended protection of the species for two years from the time the species was added to the list.

Ash species to be removed as a result of the proposed development should follow recommended measures for proper disposal of the infected trees to ensure the EAB is not spread to other areas.

### American Ginseng



Ginseng requires rich, moist, undisturbed and relatively mature sugar maple-dominated deciduous woods in areas of neutral soil over limestone or marble bedrock. Colonies are often found near the bottom of gentle slopes facing south-east to south-west; a warmer microhabitat that is usually well-drained and species-rich. Preferred areas for this species include forest canopy dominated by sugar maple, white ash, bitternut hickory, and basswood (COSEWIC, 2000).

Suitable habitat for this species is not found on the property. Impacts to this species are not expected.

### Juniper Sedge



Juniper sedge is found in alvar habitats that are in relatively open oak woodlands, usually dominated by Red Cedar (*Juniperus virginiana*). The species is found in areas of light shade, with 50 to 70 percent crown closure and is absent from areas of dense shade or full sun. The species is found on shallow, alkaline clay soils derived from and underlain by limestone bedrock, with soil pH ranging from 7.0 to 7.8 (Bickerton et al. 2015).

Suitable habitat for this species is not found on the property. Impacts to this species are not expected.

## 6. Recommended Mitigation Measures

The majority of the project-related wildlife habitat loss will result from vegetation clearing and construction of the proposed development. In addition to the direct physical loss of habitat, indirect habitat loss may arise during the construction phase from disturbance caused by equipment, machinery and vehicles that cause wildlife species to avoid the area and from affecting the quality of habitat in adjacent areas to the development.

Species listed as endangered or threatened on the Species at Risk in Ontario (SARO) List are protected under the Endangered Species Act, 2007 (ESA) or the Federal Species at Risk Act, 2002. It is recommended that best practice tools and techniques be implemented during the different phases of the development. These include, but are not limited to, maintaining timing windows for work with the potential to disturb habitats, spill procedures, dewatering, and construction techniques.

It is recommended that prior and during the construction of the project a qualified biologist undertake periodic inspections to ensure work is carried out in a manner that is consistent with the regulations of the ESA and the SARA and to confirm that best practices are applied to ensure species are not harmed by equipment or workers activities.

Since there is potential for Species at Risk to be present, the following recommendations should be considered to avoid adverse impacts:

### **Birds**

Vegetation clearing is recommended to take place before April 1<sup>st</sup> or after August 31<sup>st</sup> to avoid contravention of the *Migratory Bird Convention Act*, 1994 unless it can be confirmed that there are no nesting birds in the area to be cleared.

Minimize the overall disturbance footprint through the development process to avoid critical breeding habitat, nesting and denning sites, and movement corridors to the extent possible.

Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and/or young. If breeding birds and/or nests are encountered, work should not continue in the location of the nest until August 31<sup>st</sup> (or as soon as it has been determined that the young have left the nest). Breeding bird season is from April 1<sup>st</sup> to August 31<sup>st</sup>. Therefore, activities which may cause adverse impacts to a species or habitat should commence after August 31<sup>st</sup> whenever possible.

### **Turtles and Snakes**

Workers must be vigilant and check work areas for presence of turtles and snakes. If turtles or snakes are encountered, whenever possible, work should be temporarily suspended until the animal is out of harm's way. Workers should report any SAR turtle or snake observations immediately (including photographs and coordinates) to the MBQ and the Canadian Wildlife Service, Ontario Region. The peak activity period for turtles extends from May 15<sup>th</sup> to October 31<sup>st</sup>. Where work must occur during the peak period, exclusion fence shall be installed to isolate the area between the work area and the turtle corridor area. Following the installation of the fence, a qualified person shall visually inspect the area to ensure no turtles have become trapped within the working area. Construction material should be maintained covered to avoid the use of the material by turtles as nesting habitat.

### **Amphibians**

When SAR amphibians are found on a construction site, proper handling, translocation, and reporting protocols should be followed. On-site temporary measures for projects occurring within, or adjacent to amphibian and reptile habitat should be applied to avoid harming or killing individuals. Best management practice for temporary measure includes installation of exclusion fencing between the project work area and the SAR habitat. If it is determined the presence of western chorus frogs in the property, the Canadian Wildlife Service, Ontario Region should be contacted for further directions.

### **Bats**

Bats roost in trees, caves, bridges, and buildings. Bats prefer old stands for roosting habitat. Baby bats are born in May and June. If removal of trees is necessary for the construction of the proposed development, inspection of the trees should be carried out before the removal of vegetation to determine the use of the trees as roosting habitat. Disturbance of bats in their roosts should be avoided.

### **Insects**

Inspection of the area prior to removal of vegetation to ensure Monarchs are not harmed. Use of native wildflowers is recommended for landscaped areas.

Additional measures to be applied to avoid, mitigate and/or compensate impacts during construction and post-construction include:

- Application of erosion and sedimentation control measures.
- Perform searches prior removal of the vegetation to ensure fauna will not be affected by machinery.

- The use of 'Clean Equipment Protocol' during construction activities is strongly recommended to reduce the spread of exotic species of plants.
- Inspection of machinery prior to commence operation to ensure wildlife is not using it.
- Storage, handling and disposal of material used or generated (e.g. organics, soil, grass, woody debris, temporary stockpiles, etc.) during the site preparation should be carried out in a manner that prevents these materials from entering into naturalized areas in the vicinity of the excavation site.
- To the extent practical, carry out refueling of generators and construction equipment offsite. All onsite refueling to be carried out over an area provided with spill containment.
- The construction contractor should have a spills kit and an emergency plan in the case of spills.
- Removal of erosion and sediment control structures once the vegetation has stabilized.
- Use of native species in gardens and for landscaping.
- Minimize the use of outdoor lights.
- Outdoor lighting should be low wattage, energy efficient and producing minimal glare to prevent impacts on wildlife.

## 7. Conclusions

In summary, the following conclusions can be made:

- A Residential Development is proposed on the subject property.
- Potential habitat for three (3) SAR species (Monarch Butterfly, Loggerhead Shrike and Yellow-breasted Chat) is identified on the subject property. Canadian Wildlife Services, Ontario Region should be contacted to discuss the proposed project and to determine if an authorization is required.
- Removal of vegetation within the project area can occur between the months of September to March, which is outside of the typical breeding bird period (April 1<sup>st</sup> to August 31<sup>st</sup>) within southern Ontario.
- Restrict construction activities to the areas designated for the construction of the project, minimizing any disturbance to the surrounded areas.
- Potential habitat for three (3) SAR species has been identified on the property and adjacent vegetation; however, no impact to SAR species is anticipated provided that the mitigation measures recommended in this report are implemented for the project.

I trust that this brief report is complete within our terms of reference and sufficient for your present requirements. Please contact me at your convenience if you have any questions about this report or our recommendations.

**THE GREER GALLOWAY GROUP INC.**  
**CONSULTING ENGINEERS**



Yazmin Ramirez Avila, M.Sc.  
Biologist

---

## 8. References

Armstrong, D.K. and Carter, T.R. 2006. An updated guide to the subsurface Paleozoic stratigraphy of southern Ontario; Ontario Geological Survey, Open File Report 6191, 214p

Atlas of Breeding Birds of Ontario. [www.birdsontario.org/atlas/maps.jsp?lang=en](http://www.birdsontario.org/atlas/maps.jsp?lang=en). 2021 and 2022.

Bickerton, H.A., Crowder, T. Norris and H. Knack. 2015. Recovery Strategy for the Juniper Sedge (*Carex juniperorum*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of natural Resources and Forestry, Peterborough, Ontario. vi + 25 pp.

Carson, D. M. 1981. Paleozoic Geology of the Belleville-Wellington Area, Southern Ontario; Ontario Geological Survey, Map P.2412, Geological Series – Preliminary Map. Scale 1: 50 000. Geology 1980.

COSEWIC, 2000. COSEWIC Assessment and Status Report on the American Ginseng *Panax quinquefolius* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 17 pp.

COSEWIC, 2006. COSEWIC Assessment and Status Report on the Golden-winged Warbler *Vermivora chrysoptera* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 30 pp.

COSEWIC. 2007a. COSEWIC Assessment and Status Report on the Chimney Swift *Chaetura pelagica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp.

COSEWIC. 2008a. COSEWIC Assessment and update Status Report on the Short-eared Owl (*Asio flammeus*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 24 pp.

COSEWIC. 2008b. COSEWIC Assessment and Status Report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.

COSEWIC. 2008c. COSEWIC Assessment and Updated Status Report on the Western Chorus Frog *Pseudacris triseriata* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. v + 22 pp.

COSEWIC. 2009a. COSEWIC Assessment and Status Report on the Whip-poor-will *Caprimulgus vociferous* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 28 pp.

COSEWIC. 2009b. COSEWIC Assessment and Update Status Report on the Least Bittern *Ixobrychus exilis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.

COSEWIC. 2010. COSEWIC Assessment and Status Report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp.

COSEWIC. 2011a. COSEWIC Assessment and Status Report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.

COSEWIC. 2011b. COSEWIC Assessment and Status Report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.

COSEWIC. 2011c. COSEWIC Assessment and Status Report on the Henslow's Sparrow *Ammodramus henslowii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 37 pp.

COSEWIC. 2011d. COSEWIC Assessment and Status Report on the King Rail *Rallus elegans* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 32 pp.

COSEWIC. 2011e. COSEWIC Assessment and Status Report on the Yellow-breasted Chat *auricollis* subspecies *Icteria virens aurocollis* and the Yellow-breasted Chat *virens* subspecies *Icteria virens virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xvi + 51 pp.

COSEWIC. 2012a. COSEWIC Assessment and Status Report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.

COSEWIC, 2012b. COSEWIC Assessment and Status Report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.

COSEWIC. 2012c. COSEWIC Assessment and Status Report on the Northern Map Turtle *Graptemys geographica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 63 pp.

COSEWIC. 2012d. COSEWIC Assessment and Status Report on the Eastern Musk Turtle *Sternotherus odoratus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 68 pp.

COSEWIC. 2012e. COSEWIC Assessment and Status Report on the Eastern Ribbonsnake *Thamnophis sauritus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 39 pp.

COSEWIC. 2013a. COSEWIC Assessment and Status Report on the Grasshopper Sparrow *pratensis* subspecies *Ammodramus savannarum pratensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 36 pp.

COSEWIC. 2013b. COSEWIC Assessment and Status Report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis*, Tri-colored Bat *Perimotis subflavus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 93 pp.

COSEWIC. 2014. COSEWIC Assessment and Status Report on the Milksnake *Lampropeltis triangulum* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 61 pp.

COSEWIC. 2015. COSEWIC Assessment and Status Report on the Louisiana Waterthrush *Parkesia motacilla* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 41 pp.

COSEWIC, 2016a. COSEWIC Assessment and Status Report on the Blanding's Turtle *Emydoidea blandingii*, Nova Scotia population and Great Lakes/St. Lawrence population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xix + 110 pp.

COSEWIC, 2016b. COSEWIC Assessment and Status Report on the Monarch *Danaus plexippus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 59 pp.

COSEWIC, 2017. COSEWIC Assessment and Status Report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 74 pp.

COSEWIC. 2018a. COSEWIC Assessment and update on the Red-headed Woodpecker *Malanerpes erythrocephalus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.

COSEWIC. 2018b. COSEWIC Assessment and update on the Black Ash *Fraxinus nigra* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp.

---

Crins W.J., P.A. Gray, P.W.C. Uhlig, and Wester M.C. 2009. The Ecosystems of Ontario, Part 1: Ecozones and Ecoregions. Ontario Ministry of Natural Resources, Peterborough Ontario, Inventory, Monitoring and Assessment, SIB TER IMA TR-01, 71 pp.

Environment Canada. 2015. Recovery Strategy for the Loggerhead Shrike, *migrans* subspecies (*Lanius ludovicianus migrans*), in Canada. *Species at Risk Act* Recovery Strategy Series. Environment Canada, Ottawa. vii + 35 pp.

Environment Canada, 2016. Recovery Strategy for the Common Nighthawk (*Chordeiles minor*) in Canada. *Species at Risk Act* Recovery Strategy Series. Environment Canada, Ottawa. vii + 49 pp.

Environment and Climate Change Canada. 2017. Management Plan for the Peregrine Falcon *anatum/tundrius* (*Falco peregrinus anatum/tundrius*) in Canada. *Species at Risk Act* Management Plan series. Environment and Climate Change Canada, Ottawa. iv + 28pp.

Fisheries and Oceans Canada. *Aquatic Species at Risk*. <http://www.dfo-mpo.gc.ca/species-especes/list-wng.htm>. Map 9. Accessed 2021 and 2022.

Gillespie, J.E., Wicklund, R.E. and Richards, N.R.1962. The Soils Survey of Hastings County. Research Branch Canada Department of Agriculture and the Ontario Agriculture College. Report No. 27 of the Ontario Soil Survey. 73 pp.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. *Ecological Land Classification for Southern Ontario: First Approximation and Its Application*. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02 North Bay, Ontario. 225 pp.

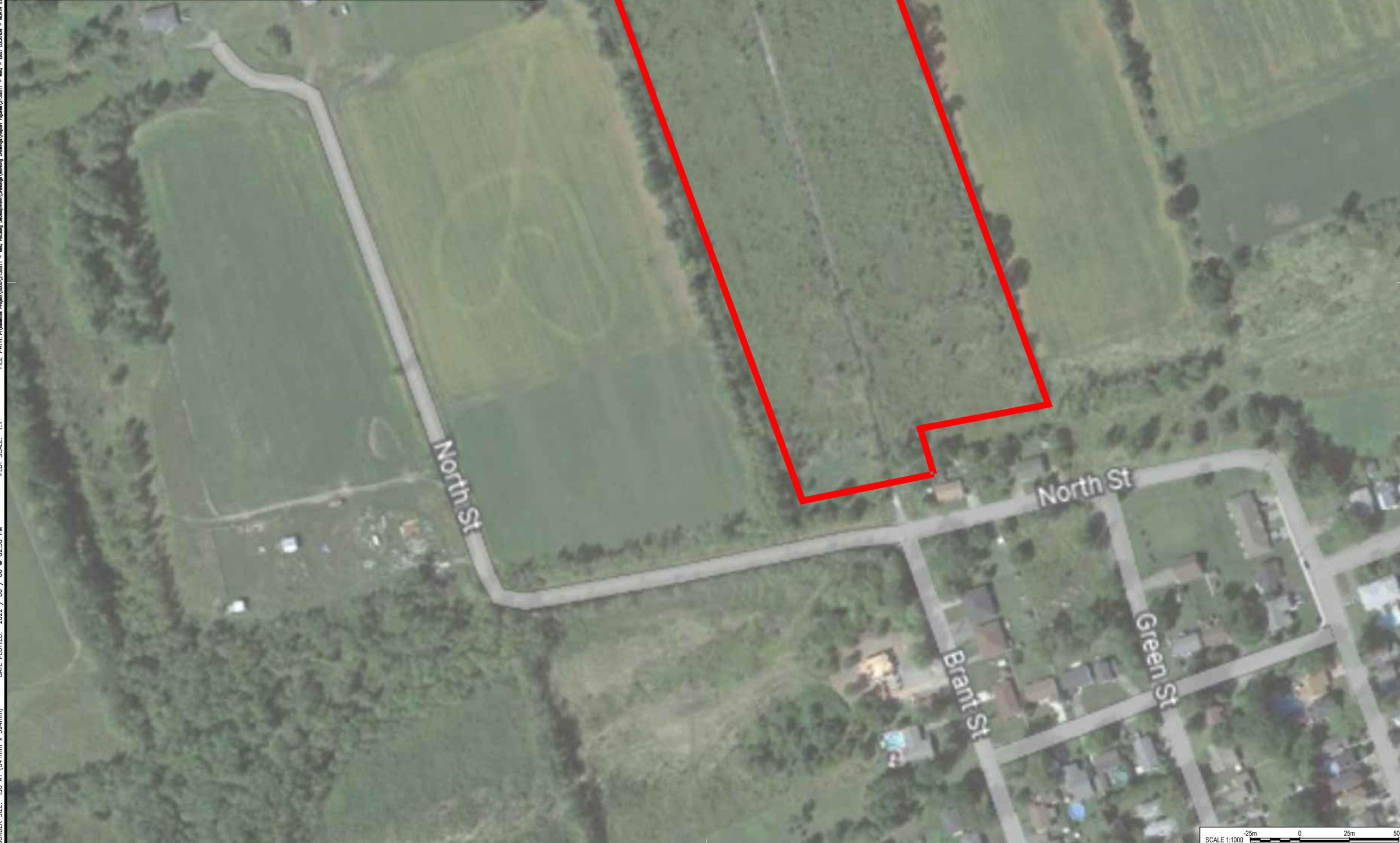
Ontario Ministry of Natural Resources and Forestry (MNRF). 2017. Eastern Small-footed Myotis (*Myotis leibii*) in Ontario. Ontario Recovery Strategy Series. Ontario. + 85 pp.

Ontario Ministry of Natural Resources and Forestry. 2022. Ministry of Natural Resources Natural Heritage Information Centre Mapping application.

Available at <https://www.gisapplication.lrc.gov.on.ca/Mamnh/Index.html/....>

# Figures

FILE PATH: P:\Belleville Project\0000\313511 - MHO - EAST LOCATION - NORTH STREET HOUSING DEVELOPMENT\Drawings\Working Drawings\Report Figures\313511 - MHO - EAST LOCATION - NORTH STREET LOCATION map.dwg  
 DATE PLOTTED: 2022 / 06 / 06 @ 02:50 PM  
 PLOT SCALE: 1:1  
 BORDER SIZE: ISO A1 (841mm x 594mm)



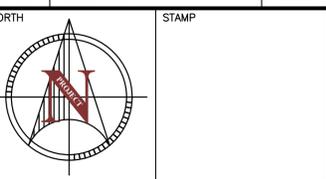
- NOTES:
1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
  2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
  3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
  4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
  5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
  6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

- A A DETAIL NO.  
 B B DRAWING NO. - WHERE DETAILED

LEGEND

PROPERTY BOUNDARY

REVISION	DESCRIPTION	DATE
01	-	YY/MM/DD



PROJECT  
**MOHAWK BAY OF QUINTE**  
**RESIDENTIAL HOUSING**  
**DEVELOPMENT**  
 EAST LOCATION: NORTH STREET AREA:  
 LOT 37D & PART OF LOT 38E-1-2, CONCESSION II  
 24 MEADOW DRIVE  
 TYENDINAGA MOHAWK TERRITORY, ON, K0K 1X0

DRAWING TITLE  
**SITE LOCATION**

DESIGNED BY: —

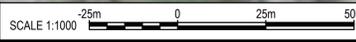
DRAWN BY: T. FUNARI

REVIEWED BY: —

APPROVED BY: —

PROJECT DATE: 2021/03/22 (YYYY/MM/DD)  
 PROJECT #: 21-3-5511

DRAWING # **FIGURE 1**  
 DRAWING SCALE (ISO A1)  
 HOR: N.T.S.  
 VER: X : XXX







# Appendix A

## Photo Log



Photo 1. View of the thicket vegetation found on the property.



Photo 2. Looking south the vegetation observed on the west side of the property.



Photo 3. View of the patch of cattail observed south of the property adjacent to the creek.

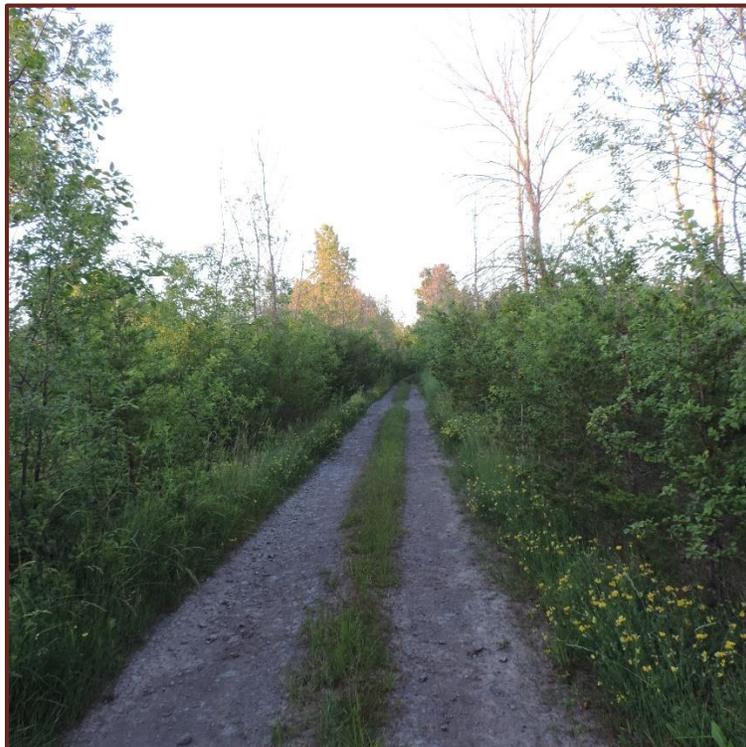


Photo 4. View of the trail bisecting the property.



Photo 5. Looking west the culvert under the trail, south of the property.



Photo 6. View of the garbage and organic material dumped on the property.