

Prepared By:



# 712457 Southgate Sideroad 71

Township of Southgate, Grey County  
Environmental Impact Study

Project No. 05-003-2021

November 15, 2021

23 HERRELL AVENUE, BARRIE ON L4N 6T5  
[WWW.BIRKSNHC.CA](http://WWW.BIRKSNHC.CA)



23 Herrell Avenue  
Barrie, Ontario  
L4N 6T5

November 15, 2021

Ian Martin  
22654 Southgate Rd. 22  
RR#1  
Dundalk, Ontario  
N0C 1B0

Attention: Mr. Martin

RE: Birks NHC File No: 05-003-2021  
Environmental Impact Study for proposed Residential Development  
712457 Southgate Sideroad 71, Township of Southgate, Grey County

Dear Mr. Martin:

Thank you for retaining Birks Natural Heritage Consultants, Inc. (Birks NHC) to prepare an Environmental Impact Study for the property located at 712457 Southgate Sideroad 71 in the Township of Southgate. We understand that this assessment is required as part of a development application for the property which would allow for the proposed creation of a second lot, with the intent of constructing a new house and access drive on the severance.

Site specific data was collected by Birks NHC staff during the 2021 field season. This report outlines the process by which features are considered for their natural heritage function and value and an assessment of potential impacts associated with the proposed activity. Where potential impacts are identified, mitigation measures are proposed to reduce the potential impacts that could result to those identified. Assuming the mitigation measures recommended in this report are implemented, there is no expectation that natural heritage features or functions associated with the study area defined herein would be negatively impacted.



If you have any questions or concerns regarding this report, please do not hesitate to contact the undersigned.

Birks Natural Heritage Consultants Inc.

Brad Baker, H.B.Sc.

Ecologist



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## 1 INTRODUCTION

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Birks Natural Heritage Consultants, Inc. (Birks NHC) was retained by Ian Martin (the client) to undertake an Environmental Impact Study (EIS) for the lands located at 712457 Southgate Sideroad 71, Township of Southgate, Grey County.

### 1.1 PURPOSE

The property is located within the rural agricultural community of Dundalk, in the Township of Southgate. The majority of the property is dominated by farmland, with a wetland located within the northern portion of the property (Figure 1). We understand that this assessment is required as part of a development application for the property which would allow for the proposed creation new rural residential lot and a new driveway to access the newly created lot. This EIS will be required to demonstrate that the proposed development will not result in any adverse effects to important natural heritage features or their functions. Based upon available background mapping, natural heritage features associated with the property are focused on the central wetland portions of the property and some potential habitat for Species at Risk within woodland areas.

The purpose of this EIS is to identify and characterize the natural heritage features and functions associated with the property and to determine if potential impacts to those features and functions could arise from the proposed works.

### 1.2 STUDY AREA

For the purpose of this EIS, the study area is focused on an area approximately 120 metres (m) surrounding the boundary of the proposed severance. The Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR) published the Natural Heritage Reference Manual (MNR, 2010) to provide technical guidance for the implementation of the natural heritage policies of the *Provincial Policy Statement, 2020 (PPS)* which outlines a distance of 120 metres for use in consideration of impacts to adjacent features. A landscape level screening was also undertaken using air photos within approximately one kilometer surrounding the study area for an understanding of other natural heritage features in the area

### 1.3 SITE DESCRIPTION

The property is a rural residential farmstead measuring approximately 82 hectares (ha) (Figure 1). The majority of the property utilized for active agricultural. The property is developed with one residence and outbuildings within the south corner. The northern and western portions of the property is largely naturalized with woodland and wetland communities, respectively.





#### 1.4 ADJACENT LAND USE

The property is bound by Southgate Sideroad 71 to the west, and rural residential properties to the south, east and north. Natural heritage features of note in the area include Significant Woodland, wetlands and a mapped watercourses associated with the headwaters of the Saugeen River.

## 2 ENVIRONMENTAL POLICY FRAMEWORK

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The following summarizes the planning policies and regulations related to natural heritage that apply to the proposed development.

### 2.1 PROVINCIAL POLICY STATEMENT, 2020

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

According to section 2.1.4 of the PPS stipulates policy for the protection of natural heritage features and functions as follows:

Development and site alteration shall not be permitted in:

- a) Significant wetlands in Ecoregions 5E, 6E; and 7E; and
- b) Significant coastal wetlands.

Section 2.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted in:

- a) Significant woodlands in Ecoregions 6E; and 7E;
- b) Significant valleylands in Ecoregions 6E; and 7E;
- c) Significant wildlife habitat;
- d) Significant areas of natural and scientific interest; and
- e) Coastal wetlands in Ecoregions 5E, 6E; and 7E that are not subject to policy 2.1.4(b)

Sections 2.1.6 and 2.1.7 state that development and site alteration is not permitted in fish habitat or habitat of endangered and threatened species except in accordance with federal and provincial requirements.

Section 2.1.8 extends protection of those features defined above in policies 2.1.4, 2.1.5 and 2.1.6 to adjacent lands, typically those within 120 m of the potential impact. Section 2.1.8 states that development and site alteration shall not be permitted on adjacent lands to natural heritage features 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 function.

While many of these features are mapped and direction is available to allow for candidate features and functions to be identified, it remains the responsibility of the Province and/or the Municipality to designate areas identified within Section 2.1.4 and 2.1.5 of the PPS as significant. The Natural Heritage Reference Manual (MNR, 2010) and Ecoregion 6E Significant Wildlife Habitat Criterion Schedule (MNRF, 2015) were used within this report to identify candidate features and functions not currently identified by the province and/or municipality.

## 2.2 ENDANGERED SPECIES ACT, 2007

Ontario's *Endangered Species Act, 2007* (ESA) provides regulatory protection for Endangered and Threatened species. The ESA prohibits harassment, harm and/or killing of individuals and destruction of their habitats. Habitat is broadly characterized within the ESA as the area prescribed by a regulation as the habitat of the species, or an area on which the species depends, directly or indirectly, to carry on its life processes including reproduction, rearing of young, hibernation, migration or feeding.

Ontario Regulation (O. Reg.) 230/08 of the ESA identifies Species at Risk in Ontario. These includes species listed as Extirpated, Endangered, Threatened, and Special Concern. As noted above, only species listed as Endangered and Threatened receive species and habitat protection through the ESA. Species designated as Special Concern may receive habitat protection under the Significant Wildlife Habitat provisions of the PPS. The ESA is regulated by the Ministry of Environment Conservation and Parks (MECP).

## 2.3 CONSERVATION AUTHORITIES ACT (1990)

Ontario's Conservation Authorities fall under the jurisdiction of the *Conservation Authorities Act, 1990* which was reviewed and modernized in 2017 and again in 2019. The purpose of *Conservation Authorities Act* is to "provide for the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources in watersheds in Ontario". Section 28 of the *Conservation Authorities Act* states that a Conservation Authority may make the following regulations applicable in the area under its jurisdiction:

- Restricting and regulating the use of water in or from rivers, streams, inland lakes, ponds, wetlands and natural or artificially constructed depressions in rivers or streams;
- Prohibiting, regulating or requiring the permission of the authority for straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;
- Prohibiting, regulating or requiring the permission of the authority for development if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development; and,



- Provide for the appointment of officers to enforce any regulation made under this section or section 29.

An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by Section 28, if, in the opinion of the authority, the activity is not likely to: a) affect the control of flooding, erosion, dynamic beaches or pollution or the conservation of land; b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and, (c) any other requirements that may be prescribed by the regulations are met.

The study area falls within the jurisdiction area of the Saugeen Valley Conservation Authority (SVCA) and is regulated due to the presence of wetlands and watercourses (Appendix A).

#### 2.4 GREY COUNTY OFFICIAL PLAN

The Grey County Official Plan (2019) has designated the property as containing both Hazard Lands and Rural land uses (Schedule A Map 2). The Hazard Lands are associated with the presence of unevaluated wetland and designated Significant Woodland (Appendix B of the Official Plan, Map 2).

The Rural designation is intended to protect existing farm operations while maintaining the visual appearance of a rural landscape. Permitted uses within this designation include lot creation, home rural occupations, and residential dwellings, provided they do not impact agriculture or the natural environment.

The Hazard Lands identified by the County include floodplains, steep or erosion prone slopes, organic or unstable soils, poorly drained areas, and lands along the Georgian Bay shoreline. These lands can be impacted by flooding, erosion, have poor drainage, or any other physical condition that is severe enough to pose a risk for the occupant, property damage, or social disruption if developed (Section 7.2 of the County Official Plan). Permitted uses within this land use include forestry and uses connected with the conservation of water, soil, wildlife and other natural resources. Other uses also permitted are agriculture, passive public parks, public utilities and resource based recreational uses. Development is generally not permitted within Hazard Lands, unless it can be proven that the development is outside of flood prone areas (Section 7.2 (2)), that the development will not create new hazards, and that the development will not result in adverse environmental impacts (Section 7.2 (9)).

#### 2.5 TOWNSHIP OF SOUTHGATE OFFICIAL PLAN

The Township of Southgate Official Plan (2009) has designated the property as containing both Hazard Lands and Rural land uses (Schedule A).

It is the goal within the Township to maintain and enhance the rural environment within the designated areas through enhancing the rural environment, encouraging compatible development as well as the protection of natural resources. Permitted land uses include agricultural operations, related buildings



and farm residences (Section 5.2.1 of the Township's Official Plan). Further, severances are permitted within the Rural designation, provided that the severance may occur by consent for future rural residential land use, among other options (Section 5.2.2).

Hazard lands comprise a portion of the Township's Natural Environment Area, and thus must consider the policies outlined within Section 6 of the Township's Official plan, as it relates to development within and adjacent to features comprising the Natural Environment Area. Development within these lands must be supported by an EIS and appropriate accessory studies for development within flood prone areas.

### 3 STUDY APPROACH

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The following activities and assessments were undertaken to fulfill the objectives of this study.

#### 3.1 DATA SOURCES

Background documents provide information on site characteristics, habitat, wildlife, rare species and communities, and other aspects of the study area. For the purpose of this EIS, the following sources were considered:

- Aerial images (Google)
- Atlas of the Breeding Birds of Ontario (Bird Studies Canada, 2006)
- Aquatic Species at Risk (DFO, 2019)
- Land Information Ontario (LIO; MNDMNRF, 2021)
- Natural Heritage Information Centre (NHIC; MNDMNRF, 2021)
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2021)
- Species at Risk in Ontario List (MECP, 2018)

#### 3.2 FIELD SURVEYS

Natural heritage features and functions within the study area were characterized through completion of field surveys. The following sections outline the methods used for each of the surveys, including specific provincial protocols utilized. Incidental wildlife, plant and habitat observations were considered during all surveys. Searches were also conducted to document the presence or absence of suitable habitat, based on habitat requirements of Threatened or Endangered species with habitat ranges overlapping the property. A summary of the surveys completed including the dates for the completion of the surveys are outlined in Table 1.



**Table 1: Summary of Field Surveys Conducted**

Dates	Start/End Time	Type of Survey	Biologists
May 14, 2021	09:00 – 10:00	Preliminary Site Review	Brad Baker / Melissa Fuller
April 13, 2021 May 26, 2021 June 13, 2021	20:00 – 20:30 21:15 – 21:45 21:30 – 22:00	Amphibian Surveys	Melissa Fuller
June 9, 2021 June 23, 2021	08:13 – 09:00 06:19 – 07:00	Breeding Bird Surveys	Melissa Fuller
May 14, 2021 August 9, 2021	09:30 - 10:00 09:00 – 12:00	Ecological Land Classification and Vegetation surveys	Brad Baker / Melissa Fuller

### 3.2.1 Vegetation Community Mapping and Surveys

As a first step in identifying and assessing natural heritage features on the property, the vegetation communities were assessed using Ecological Land Classification (ELC). The ecological community boundaries were determined through a review of aerial photography and then further refined during the site visits throughout the 2021 field season. The ELC system for Southern Ontario (Lee *et al.*, 1998) was used with modifications. In early 2007, the MDMNRF refined their original vegetation type codes to more fully encompass the vast range of natural and cultural communities across Southern Ontario. Through this process, new codes have been added while some have changed slightly. These updated ELC codes have also been used for reporting purposes in this study where they are more representative of the vegetation communities within the property. The resulting ELC Mapping is illustrated in Figure 2.

### 3.2.2 Dawn Breeding Bird Surveys

Breeding bird surveys within the property followed methods outlined in the Ontario Breeding Bird Atlas Guide for Participants (Cadman *et al.*, 2001). Specifically, breeding bird surveys consisted of ten-minute point counts that were used to establish quantitative estimates of bird abundance, species presence, and breeding activity in all habitat types within the property. The property was surveyed within the on June 8 and June 23 of 2021 at the locations identified on Figure 2. A formal list of species encountered during the breeding bird survey is included in Appendix B.

### 3.2.3 Amphibian Calling Surveys

Evening amphibian call surveys generally followed the Bird Studies Canada Marsh Monitoring Protocol (2008). One location was surveyed within the study area as shown on Figure 2. The monitoring station was surveyed three times during the spring and early summer to detect species presence, including early breeders, late-season breeders and a survey time that coincides with 'optimum' breeding season for the majority of amphibian species. For each visit, the monitoring station was surveyed for three minutes. Survey dates were selected based on weather conditions and occurred on April 13, May 26, and June 13, 2021.



712457 Southgate Sideroad  
 Township of Southgate, Grey County

— Property Limit  
 □ Area of Investigation

**Vegetation Communities**

- 1 MEGM3 Dry-Fresh Graminoid Meadow
- 2 FOC Tamarack Coniferous Forest
- 3 SWTM3 Willow Mineral Deciduous Thicket Swamp

- 4 MAMM1-5 Fowl Manna Grass Graminoid Mineral Meadow Marsh
- 5 FOMM8-1 Fresh-Moist Poplar Mixed Forest
- 6 DAGM1 Annual Row Crops

Figure 2:  
 Existing Conditions



MAP DRAWING INFORMATION:  
 DATA PROVIDED BY: ESRI CANADA  
 MAP CREATED BY: SB  
 MAP CHECKED BY: BB  
 MAP PROJECTION: NAD 1983 UTM ZONE 17N



PROJECT 05-003-001 STATUS DRAFT DATE 24/06/2021



The calling activity of individuals estimated to be within 100 m of the monitoring station were documented. For each species heard, call activity was ranked using one of the three call level code categories:

- Call Code 1 - Individuals can be counted; calls not simultaneous;
- Call code 2 - Calls distinguishable; some simultaneously calling; or,
- Call code 3 - Full chorus; calls simultaneous and overlapping.

#### 3.2.4 Wildlife Surveys

A wildlife assessment for the property was completed through incidental observations while on site. Any incidental observations of wildlife were noted including other wildlife evidence such as dens, tracks, and scat. For each observation notes and, when possible, photos were taken. These observations were also used in the consideration of the wildlife habitat function associated with the study area.

Wildlife habitat functions were evaluated according to provincial criteria outlined in the Ecoregion 6E Criterion Schedules (MNRF, 2015).

### 3.3 SPECIES AT RISK

The Species at Risk assessment included an analysis of the habitat requirements of Species at Risk reported to occur in the region to identify those having potential to occur within the study area. Birks NHC staff reviewed data obtained through desktop review and the site visit related to potential habitat for provincially designated species, notably Species at Risk listed under O. Reg. 230/08 of the ESA as Threatened or Endangered.

## 4 EXISTING CONDITIONS

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The following sections present an examination our findings as they relate to natural heritage features and functions in the study area.

### 4.1 GENERAL SITE OVERVIEW

The property is a rural residential farm measuring approximately 82 hectares (ha) (Figure 1). The majority of the property is utilized for active agriculture, specifically cash crop production. The property currently has one farm residence and associated farm buildings within the south corner. The northern and western portions of the property are naturalized with woodland and wetland communities, respectively.



## 4.2 VEGETATION COMMUNITIES

Vegetation communities and their respective locations are illustrated on Figure 2. A total of six distinct ecosites were identified within the property limits and adjacent lands to the southwest. The vegetation communities that occur on the property include:

1. MEGM3 Dry-Fresh Graminoid Meadow
  - The majority of this vegetation community is dominated by Goldenrod species. Common field species were prevalent throughout the community and included Virginia creeper, Dame's Rocket and Wild Carrot.
2. FOC Coniferous Woodland
  - This community borders the northern property limit, curving around the meadow and gradually transitioning to the meadow marsh habitat. Species within this community represent a transitional zone between the upland and wetland habitats, as indicated by the species composition which included Tamarack, Black Cherry, Balsam Fir, Trout-Lily and Raspberry.
3. SWTM3 – Willow Mineral Deciduous Thicket Swamp
  - Dense pockets of Willow Thicket Swamp were observed within the graminoid marsh. Willow species were prevalent, however additional woody species were observed including Speckled Alder, White Birch, Red-Osier Dogwood, Red Ash and Trembling Aspen.
4. MAMM1-5 – Fowl Manna Grass Meadow Marsh
  - This community represents the majority of the wetland habitat observed within the western portion of the property. The community was dominated by Fowl Manna Grass with occurrences of Swamp Milkweed, Water-Hemlock, Boneset, Red-Osier Dogwood and Joe Pyeweed.
5. FOMM8-1 – Poplar Mixed Forest
  - A narrow treed community bordered the eastern limit of the wetland, along the row crop community. Species observed within this community include old field meadow species (Yarrow, Wild Carrot Smooth Brome) as well as Trembling Aspen, Green Ash, Black Cherry, Tamarack and Scot's Pine.
6. Annual Row Crops
  - Approximately 50% of the property is planted with annual row crops. At the time of the 2021 field assessments, these fields were planted with soybeans. Other growth within the fields included common species such as mullein, dandelions, clovers, ragweed and



other species which are commonly associated with roadsides and recently disturbed spaces.

#### 4.2.1 Vascular Plants

Plants were considered over the course of a growing season. Vegetation surveys were undertaken by Birks NHC staff through the 2021 field season as outlined in Appendix C. No Species at Risk or provincially rare species were documented within the disturbed limits of the proposed severance.

### 4.3 WILDLIFE AND WILDLIFE HABITAT

#### 4.3.1 Birds

A total of 27 bird species were recorded during field surveys, including incidental observations (Appendix B). The majority of the species recorded are considered provincially and locally common, such as Blue Jay, Song Sparrow and Black-capped Chickadee.

#### 4.3.2 Mammals

Typical mammals observed in rural settings are expected to utilize the habitats within the study area. These include Raccoon, Skunk, White-tail Deer and Eastern Cottontail.

#### 4.3.3 Amphibians and Reptiles

Habitats suitable for amphibian breeding, foraging, and overwintering are present within the study area. An amphibian call station was established at the western limit of the property, along road 71. Table 1 below presents the results of the amphibian call surveys. The property was quite active in the early spring, with activity tapering off as the seasons progressed to summer, and water level in the wetlands receded.

**Table 2: Amphibian Call Survey Data**

	<b>April 13, 2021</b>	<b>May 26, 2021</b>	<b>June 13, 2021</b>
<b>Station 1</b>	Chorus Frog (L1-3) Spring Peeper (L3) Wood Frog (L3)	Northern Leopard Frog (L1-1) Spring Peeper (L2-23)	-----

L1 - #: Individuals can be counted, calls not simultaneous; L2: Calls distinguishable, some simultaneous calling; L3: Full chorus; calls simultaneous and overlapping.

No targeted reptile surveys were conducted within the property. Given the habitats present, species range maps, and observations in the general area (Ontario Nature, 2021), Snapping Turtle and Eastern Gartersnake could be expected to be present within the habitat associated with the study area.



#### 4.4 SPECIES AT RISK

The Species at Risk assessment included an analysis of the habitat requirements of Species at Risk known to occur in the region to identify those having potential to occur within the study area.

Birks NHC reviewed data obtained through desktop review and the field program, related to potential habitat for provincially designated species, notably Species at Risk listed under O. Reg. 230/08 of the ESA as Threatened or Endangered. Where it is determined that the species have potential habitat within the study area, survey results were considered to determine the function of the potential habitat and whether the proposed works are in compliance with the regulations of the ESA.

**Table 3: Species at Risk Assessment**

Common Name	Scientific Name	Designation		Habitat Affinities Present Within Study Area
		ESA	SARA	
<i>Mammals</i>				
<sup>1</sup> Little Brown Myotis	<i>Myotis lucifugus</i>	END	END	Marginal – Potential Habitat roosting habitat is associated with the Tamarack coniferous forest and Poplar Deciduous forest units
<sup>1</sup> Northern Myotis	<i>Myotis septentrionalis</i>	END	END	Marginal – Potential Habitat roosting habitat is associated with the Tamarack coniferous forest and Poplar Deciduous forest units
<sup>1</sup> Tri-colored Bat	<i>Perimyotis subflavus</i>	END	END	Marginal – Potential Habitat roosting habitat is associated with the Tamarack coniferous forest and Poplar Deciduous forest units
<i>Birds</i>				
<sup>1</sup> Barn Swallow	<i>Hirundo rustica</i>	THR	THR	Yes – Suitable structures present within the study area on adjacent properties. Foraging habitat is present within the wetland communities.
<sup>1</sup> Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR	No – Habitat for the species is present within the proposed severance limits.
<sup>1</sup> Chimney Swift	<i>Chaetura pelagica</i>	THR	THR	No – Habitat for the species is present within the proposed severance limits.
<sup>1</sup> Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR	No – Habitat for the species is present within the proposed severance limits.
<i>Vegetation</i>				
<sup>1</sup> Butternut	<i>Juglans cinerea</i>	END	END	No - Naturalized portions of the property could support individuals of this species. No Butternut trees were identified during surveys in 2021.

Source: (1) MECP SARA List, Birks NHC expertise; (2) NHIC (2021)

Designation Status

Provincial Status – Species at Risk in Ontario list as outlined in O. Reg. 230/08 of the *Endangered Species Act, 2007*

Federal Status – The *Species at Risk Act, 2002* establishes Schedule 1 as the official list of Species at Risk.



## 5 NATURAL HERITAGE FEATURES AND FUNCTIONS

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In the following sections we summarize the range of natural heritage and functions attributable to the study area based on existing designations/delineations by agencies and as revealed through the application of provincial guidelines for identification of significant natural heritage features and functions.

### 5.1 PROVINCIALY SIGNIFICANT WETLAND

There are no mapped Provincially Significant Wetland within the study area

### 5.2 OTHER WETLANDS

Background mapping (*i.e.*, LIO, NHIC) identifies the presence of un-evaluated wetlands within the property and study area. Birks NHC identified the presence of wetlands (*i.e.*, swamp thicket and meadow marsh) on the property as shown on Figure 2.

### 5.3 WOODLAND

The County has mapped the woodland habitat within the eastern portion of the proposed severance as Significant Woodland. No other woodland features present within the study area would meet the criteria for significance.

### 5.4 SIGNIFICANT WILDLIFE HABITAT

As a part of this assessment, Birks NHC staff reviewed the MDMNRF's Significant Wildlife Habitat Technical Guide (2000) and the accompanying Ecoregion 6E Criteria Schedules (MNR, 2015) to assess the potential for Significant Wildlife Habitat to be present in the study area. All functions noted below are linked to the associated habitats on the property and adjacent lands. The following candidate significant wildlife habitat functions may be associated with the property and study area.

#### 5.4.1 Seasonal Concentration Areas of Animals

As outlined within the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015), Seasonal Concentration Areas are areas where wildlife species occur annually. These seasonal aggregations result in large numbers of individuals, sometimes highly concentrated within relatively small areas. As a result, the loss of, or damage to, these features can result in a significant impact to populations. The following functions may be associated with the study area.

#### Bat Maternity Colonies

For many bat species in Ontario, natural maternal roosting habitat is comprised of roost trees that are in early stages of decay and contain features such as cavities or crevices, or loose, peeling bark. During the summer female bats often roost in large maternity colonies while males tend to roost in small groups or individually. According to the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015), candidate maternity colonies SWH are located in mature deciduous or mixed forest stands with



greater than 10 large diameter (>25cm dbh) wildlife trees per hectare. Bat maternity colonies for Silver-haired Bat and Big Brown Bat are identified as candidate SWH because known locations of forested bat maternity colonies are extremely rare in Ontario. It remains extremely difficult to confirm this SWH designation as it requires confirmation of use by more than ten Big Brown Bats or more than five Silver-haired Bats.

Potential bat roosting habitat is present within the study area, associated with the Significant Woodland. The lands to be developed are predominantly located outside of a 30 m setback to this feature.

#### Turtle Wintering Areas

Turtles will typically overwinter in areas where water levels achieve a depth great enough to prevent freezing, with a muddy substrate including permanent water bodies, large wetlands and bogs or fens with adequate dissolved oxygen. The wetland habitat may provide overwintering opportunity for Turtles within the study area. No suitable habitat was noted within areas proposed for alteration.

#### Reptile Hibernacula

Snakes overwinter in Ontario by accessing underground hibernation sites below the frost line. They will utilize rock crevices, rodent burrows, tree root systems and structures such as old building foundations to get below ground deep enough so they will not freeze. Because of the variability in features that snakes will use for hibernation, snake hibernaculum may be found in almost any habitat (except for very wet ones). Since features associated with this function appear to be common in the landscape, reptile hibernaculum SWH may be present within the study area, particularly in the wetland habitat. Within the study area, reptiles may gain access to below the frost line for hibernation through rodent burrows and tree root systems. No suitable habitat was noted within areas proposed for alteration.

#### 5.4.2 Specialized Habitats of Wildlife

Specialized Habitat for Wildlife is a category which is intended to reflect the need of many wildlife species for substantial areas of suitable habitat for successful breeding. The populations of species included under this category are expected to decline when habitat becomes fragmented and reduced in size. The following functions may be associated with the study area:

#### Woodland Raptor Nesting Habitat

Nesting habitat for woodland raptors is typically used annually, and is comprised of large woodland stands with large areas (>10 ha) of interior habitat. The Significant Woodland community may provide this habitat function.

#### Amphibian Breeding Habitat

During spring amphibians will congregate in woodland ponds, wetlands and other aquatic habitats to reproduce. Amphibian breeding habitat SWH is being considered due to the presence of wetland conditions within the study area (*i.e.* meadow marsh). Amphibian call survey results however, did not confirm the breeding presence of the required number of listed species in the Significant Wildlife



Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015) to confirm Amphibian Breeding SWH on the property.

Area-sensitive Breeding Bird Habitat

Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds. The Significant Woodland community may provide this habitat function.

5.4.3 Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Habitat of all Special Concern and provincially Rare (S1-S3, SH) plant and animal species is considered Significant Wildlife Habitat. When a NHC element occurrence is identified within a survey grid square for a Special Concern or provincially rare species, consideration for candidate habitat associated with the property is required.

Snapping Turtle (Special Concern)

The Snapping Turtle occurs in almost any freshwater habitat including small wetlands, ponds, and ditches. This species has recent occurrences recorded in the survey grid squares which encompass the study area (Ontario Herp Atlas square 17NJ49). This turtle has potential to utilize the wetland habitat travel through the study area.

5.5 AREAS OF NATURAL AND SCIENTIFIC INTEREST

No Areas of Natural and Scientific Interest are located in the study area.

5.6 HABITAT OF THREATENED AND ENDANGERED SPECIES

The habitat requirements of those species listed as Threatened and Endangered under the ESA were considered in relation to the habitat features noted within the property limits and the adjacent lands. Based on habitat use, site knowledge and data available from online resources (*i.e.*, the Ontario Breeding Bird Atlas, the Ontario Reptile and Amphibian Atlas) it was determined that the following species have candidate habitat associated with the study area and have the potential to occur in the region:

Little Brown Myotis, Northern Myotis, and Tri-colored Bat (Endangered)

Assessment of the characteristics of woodlands as they relate to potential use by Endangered bat species is a consideration in land development. Important habitat functions for Little Brown Myotis, Northern Myotis, and Tri-colored bats include hibernacula, maternity roost, day roosts, and foraging habitat. Of these habitat types, no features with potential to function as hibernacula exists within the study area.

Potential foraging habitat would be associated with woodland and wetland areas that provide an abundance of flying insects. Foraging habitat is widely available within wetland and wooded areas



common throughout Grey County. Day roosts are those that are used by males and non-reproductive females as they move across the landscape and can take the form of any tree with appropriate snag features such as loose bark, cracks or crevices. Maternity roosting habitat is found in woodlands providing a relatively high density of large wildlife cavity trees (*i.e.*, snags). Suitable tree species found within the development area did not contain features that would suggest the potential for a maternity roost. However, adjacent habitats, north and east of the property where the woodlands have a higher representation of snag trees, may provide suitable roosting habitat for maternity colonies of Endangered bat species

## 5.7 FISH HABITAT

An unnamed drainage feature has been mapped within the southern portion of the study area, west of Southgate Road 71. No other drainage features were noted in the study area, and specifically within the proposed severance.

## 5.8 NATURAL HERITAGE FEATURES SUMMARY

The results of field surveys, review of background information and analysis indicate the potential for significant natural heritage features and functions to be associated with the study area. Our impact assessment will consider potential impacts only to features and functions summarized in Table 3.



Table 4: Natural Heritage Features and Functions Summary

Natural Heritage Feature and Function	Within the development footprint of the Proposed Severance	Within 120 m of the Proposed Severance	Actions Required
Provincially Significant Wetland	None	None	No actions required.
Other Wetland	Yes	Yes	Evaluation for potential impact is required.
Significant Woodlands	Yes	Yes	Evaluation for potential indirect impacts required.
Significant Valleylands	None	None	No actions required.
Significant Wildlife Habitat	<u>Potential:</u> <ul style="list-style-type: none"> <li>• Reptile Hibernacula</li> <li>• Habitat for Species of Conservation Concern</li> </ul>	<u>Potential:</u> <ul style="list-style-type: none"> <li>• Bat Maternity Colony</li> <li>• Turtle Wintering Area</li> <li>• Amphibian Breeding Habitat</li> <li>• Woodland Raptor Nesting Habitat</li> <li>• Area-Sensitive Breeding Bird Habitat</li> <li>• Habitat for Species of Conservation Concern</li> </ul>	Evaluation for potential impacts required.
Provincial Areas of Natural and Scientific Interest	None	None	No actions required.
Fish Habitat	None	Mapped drainage feature is present.	Evaluation for potential indirect impacts required.
Habitat of Threatened or Endangered Species	Potential	Potential	Evaluation for potential impacts to species with potential habitat onsite.



## 6 IMPACT ASSESSMENT

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The intent of this study is to identify natural heritage features and functions associated with the study area and determine if potential impacts could arise from the proposed development. Natural Heritage functions are generally grouped into features. Given this association, within this report impacts are considered as they relate to the following key features and their associated functions:

- Other Wetland Habitat
  - Potential Habitat for Species for Species of Conservation Concern
  - Reptile Hibernacula
  - Bat Maternity Colony (Species at Risk and Significant Wildlife Habitat)
  - Turtle Wintering Area
  - Amphibian Breeding Habitat
- Significant Woodland
  - Potential Habitat for Species for Species of Conservation Concern
  - Reptile Hibernacula
  - Bat Maternity Colony (Species at Risk and Significant Wildlife Habitat)
  - Woodland Raptor Nesting Habitat
  - Area Sensitive Breeding Bird Habitat
- Fish Habitat (adjacent lands)

The environmental policy framework for the study area requires demonstration that no negative impact will occur to a natural feature or associated function. No Negative Impact means degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development activities or site alteration activities.

### 6.1 PROPOSED DEVELOPMENT

The proposed development plan includes the construction of an access drive and a residential dwelling. Vegetation removal will be required in the coniferous forest, meadow marsh and swamp thicket communities (Figure 3).



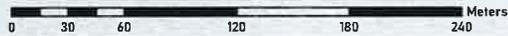
712457 Southgate Sideroad 71  
 Township of Southgate, Grey County

- Property Limit
- - - 30m Feature Setback
- Proposed Severance Area
- Proposed Development
- Feature Limit

Figure 3:  
 Proposed Development Plan



MAP DRAWING INFORMATION  
 DATA PROVIDED BY ESRI CANADA  
 MAP CREATED BY SB  
 MAP CHECKED BY SB  
 MAP PROJECTION NAD 83 UTM ZONE 17N



FILE LOCATION  
 Path: C:\Users\jz\Documents\Projects\712457\712457\_ProposedDevelopment2021 - ProposedDev\ProposedDev.mxd  
 PROJECT: 15-083-751 STATUS: DRAFT DATE: 10/17/2021



## 6.2 DIRECT IMPACTS

Direct impacts are those that are immediately evident as a result of a development. Typically, the adverse effects of direct impacts are most evident during the site preparation and construction phase of a development. Based on our review, potential impacts of the proposed development include the following:

- Alteration of wetland habitat
- Erosion and sedimentation into adjacent natural heritage features;
- Changes to water quality entering natural heritage features;
- Loss of and disturbance to wildlife and wildlife habitat

### 6.2.1 Alteration of Wetland Habitat

The proposal calls for the alteration of wetland and to allow for construction of the driveway to access the residence which will directly alter the wetland habitat by removal of wetland vegetation and the introduction of a barrier to water passage. The Jones Consulting Group Ltd. Flood Assessment Letter (November 8, 2021) notes that flow on the property is towards the south-east and that the driveway construction may result in additional ponding and water retention upgradient of the driveway, consequently causing areas immediately down gradient of the driveway to become drier. Jones has recommended that four 300 mm corrugated steel culverts be installed approximately 50 m apart along the length of the driveway, to ensure that hydrologic connection is maintained.

Construction within the wetland will provide an opportunity for invasive plant species to establish within disturbed areas and within the wetland proper. Care should be taken during construction to minimize this potential. Equipment utilized for the construction should be cleaned prior to use to ensure that the machines are not introducing exotic seeds to the local seedbank. Topsoil removed during construction should be stored on-site and used to achieve the finish grade along the driveway.

The area of wetland proposed for modification is linear and removed from potential wildlife habitat function areas of the feature. Assuming that appropriate mitigation measures are implemented, there should be no negative impact to wetland habitat feature or associated functions as a result in construction of the driveway.

### 6.2.2 Erosion and Sedimentation into Natural Heritage Features

Construction activities, especially operations involving the handling of earthen material, increases the availability of sediment for erosion and transport by surface drainage. Any potential direct impacts to habitats which could result from sedimentation can be mitigated through the application of erosion and sediment control plans around the perimeter of the proposed soil disturbance. In order to mitigate the potential for adverse environmental impacts caused by the release of sediment-laden runoff into any potential receiving wetland communities, measures for erosion and sediment control will be required for this development. An erosion and sediment control plan is recommended for implementation prior to and during the development and maintained until the site is stabilized. Assuming sedimentation is



controlled during construction, there should be no potential for later introduction of soils or sediment into the retained natural heritage features.

#### 6.2.3 Changes to Water Quality Entering Sensitive Features

Whenever changes in land use is proposed, specifically those that will result in intensification of development within rural areas, there is potential for alteration to the water quality of surface runoff. The proposed change in land use has the potential to introduce additional deleterious substances and pollutants associated with operation of a farm, to the receiving hydrologic features, specifically the wetland habitat. Mitigation measures are proposed which can be implemented to reduce this potential including restrictions related to storage and usage of pollutants (fuel, pesticides, fertilizers), ensuring proper function of private wastewater servicing, application of a 30 m setback from the building envelope of the residence and limiting salt use during winter maintenance. Assuming that appropriate mitigation measures are implemented, there should be no negative impact to wetland habitat as a result in alteration of water quality.

#### 6.2.4 Loss and Disturbance to Wildlife and Wildlife Habitat

Typical wildlife species observed in rural settings are expected to utilize habitat associated with the study area. Based on the review of site conditions and natural heritage policy direction within the province of Ontario, habitat functions which are considered to be significant have been identified within the severance limits and study area. Improper development in proximity to these features could cause habitat loss for important wildlife or disturbance which could reduce range or fecundity of these species. Direct impact could also occur through the intentional or accidental contraventions of Ontario's ESA specifically as it relates to maternity roosting habitat for bats

##### Endangered Bats

Male bats and non-reproductive females roost individually or in small groups as they move across the landscape. Potential day roosts are also often located within tree cavities, leaf clusters and protected areas within older buildings depending on the species being considered. While no work is proposed within areas of standing trees with potential to provide roost habitat for Endangered bats, accidental mortality resulting from trees cut during the active season would be considered a contravention of the ESA. Mitigation in the form of a timing removal for tree cutting is included which is intended to ensure that no accidental contraventions of the ESA occur as a result of this development.

##### Significant Wildlife Habitat

Significant Wildlife Habitat categories were assessed as occurring or potentially occurring within the study area.

The candidate SWH functions identified outlined within Table 4 (Bat Maternity Colony, Woodland Raptor Nesting Habitat, Area-Sensitive Breeding Bird Habitat) of this report are primarily provided by the Significant Woodland feature identified in the eastern portion of the property. No alteration is



proposed within this feature, and a 30 m setback to the feature is proposed. Thus, there is no expectation that the SWF associated with that feature will be affected by the proposal.

Candidate SWH functions associated with the wetland habitat include Habitat for Species of Conservation Concern (Snapping Turtle), Reptile Hibernacula, Amphibian Breeding Habitat and Turtle Wintering Area. The footprint of the driveway is not located within notable areas of ponding within the wetland that would allow for amphibian breeding and turtle overwintering. All amphibian breeding activity recorded on the property was focussed in the southern portion of the wetland, well removed from the proposed footprint of the driveway. Further, a small area (900 m<sup>2</sup>) of wetland habitat will be permanently altered for construction of the driveway, which is a relatively small area compared to the abundance of wetland habitat present within the property limits, and the study area. Thus, the proposed construction will not significantly reduce the availability of habitat that would provide hibernacula for reptiles, or general habitat for Snapping Turtles. Incidental impact to wildlife can be mitigated through appropriate timing of construction works to occur. Specifically for Turtle overwintering, if any pooled areas or areas of deep organics are identified during construction, these areas should only be filled when individuals are active and able to vacate the construction area.

Based on this review it is anticipated that the habitat functions within the study area would remain intact and wildlife would continue to access and utilize adjacent habitats. Mitigation is included to ensure the identified habitats continue to function in the area.

### 6.3 INDIRECT IMPACTS

Indirect impacts are those that do not always manifest in the core development area but in the lands adjacent to the development. Indirect impacts have potential to result following the completion of the proposed activity. Usually this comes as a result of the project or human use of the project site following completion of the project. Indirect impacts often have a wider potential area of impact. Indirect impacts of the proposed development include:

- Anthropogenic disturbance;

#### 6.3.1 Anthropogenic Disturbance

Anthropogenic disturbance post development can take many forms. A residential development could be expected to bring increased human presence and associated anthropogenic disturbances in the form of increased noise and light, predation by pets, waste deposition, and supplemental feeding (i.e., people depositing food for deer in the winter). These impacts would be more prominent when a new development is proposed in un-developed areas. The property is within a rural community bound by natural areas to the south. While the proposed development will result in an increase of human residence it is not expected to result in significant intensification of indirect human impacts. Notwithstanding, in proximity to the natural areas to the west and east, mitigation measures including a 30 m naturalized setback are recommended to reduce potential impacts and discourage encroachment into the retained natural areas.



## 7 RECOMMENDATIONS AND MITIGATION MEASURES

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Mitigation refers to the avoidance or reduction of impacts associated with the proposed activity through best management practices or other activities. As previously discussed, potential impacts were identified which could result to the natural heritage features and functions associated with the study area. Where applied correctly, mitigation is intended to reduce the potential for impacts to ensure that the natural heritage features and functions will continue uninhibited by the proposed development. Thus, mitigation would be required to ensure that there is no negative impact and the development can proceed in conformity with the relevant planning documents and in compliance with environmental law. The following mitigation measures should be incorporated into the plan.

### 7.1 OPERATIONS

#### 7.1.1 Materials and Equipment

Development activities should be contained within the proposed development area. This area should be appropriately delineated prior to beginning grading and construction to ensure that no accidental deviation from the intended removals will occur.

Equipment maintenance during and post construction should be undertaken in an appropriate area. Tool and vehicle maintenance and cleaning should be done away from the retained natural areas in a manner that does not encourage the migration of cleaning or maintenance products including cleaners, oils or fuel into the neighboring natural lands. Fuel and chemical storage should follow appropriate legislation to ensure that it is maintained and stored in a way that will not result in accidental release or spills to the neighboring forested areas or wetland.

#### 7.1.2 Sediment and Erosion Control

In advance of any vegetation clearing or earth works (*i.e.*, clearing or grubbing) it is recommended that the development limit be established to prevent accidental encroachment onto natural areas on adjacent lands. We suggest that sediment and erosion controls be installed prior to all construction activities. Sediment and erosion controls must be maintained throughout construction and until vegetation is re-established post-construction.

### 7.2 RESTORATION OR COMPENSATION

The proposed driveway through the wetland will remove an area of wetland to allow direct access to the new farmstead on the created lot. It is recommended that compensation be implemented for the loss of wetland area on the property. We understand that the client has areas within the property boundary which can be considered for restoration or compensation for the area of the lost wetland.

Improvements to the nearby natural heritage network or direct creation of wetland habitat on the property would both be beneficial for the maintained biodiversity of the area. It is expected that a



restoration of compensation plan can be included as a condition of approval by the SVCA rather than a section within this report.

### 7.3 SPECIES AT RISK

#### 7.3.1 General

This report was produced based on the most up-to-date policy information, however, is not intended to act as a long-term assessment of potential Species at Risk. The ESA is recognized as being a 'proponent-driven' piece of legislation and therefore it is the responsibility of the landowner/developer to ensure compliance with the regulations made under this act. Should any of the species listed as Threatened or Endangered be encountered on the property it is recommended that a natural heritage ecologist or the MECP be consulted to determine the appropriate actions to avoid accidental contravention of the ESA. Given the dynamic character of the natural environment, as well as changes to policy (*i.e.*, new species listing), consideration is recommended in the interpretation of potential presence of Threatened or Endangered species as protected under the ESA. A review of the assessment provided within this report should be undertaken by a qualified Ecologist prior to construction on any resultant lots to ensure compliance with the ESA at that time.

All current Threatened or Endangered species listed under O. Reg. 230/08 with a currency date of August 1, 2018 (the most recent as of November 1, 2021) made under the ESA have been considered within this report.

#### 7.3.2 Timing Windows

Site alteration should occur outside of the active breeding/roosting/nesting season (April 1 – October 31) for all Species at Risk species that may utilize the property. If the work schedule requires that site alteration be completed during the active season, screening by an ecologist with knowledge of species present in the area should be undertaken to ensure that the risk of impacting Species at Risk has been evaluated and assumed to be low to non-existent.

### 7.4 MIGRATORY BIRDS

Construction activities involving the removal of vegetation should be restricted from occurring during the bird breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act, 1994* and the *Fish and Wildlife Conservation Act, 1997*. Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html>)

For this location, vegetation removal should be avoided between April 1st and August 30th of any given year. If vegetation clearing is required between these dates, screening by an ecologist with knowledge of bird species present in the area could be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing.



## 8 CONCLUSIONS

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This EIS was prepared for the proposed development of the property identified as 712457 Southgate Sideroad 71 in the Township of Southgate. We understand that this assessment is required as part of a development application for the property which would allow for the proposed creation of a new driveway and rural residence. The objective of the EIS is to identify the functions associated with natural heritage features present on the property and determine if potential impacts to those functions could arise from the proposed activity. The assessment is focused on potential ecological impacts which could result from the proposed development as outlined in Section 6 of this report.

The results of this EIS demonstrate that where potential to Significant Natural Heritage Features and the associated ecological functions are identified, there is either no potential or limited potential for negative impacts. Where potential was identified mitigation, measures recommended in this report have been developed to mitigate potential negative ecological impacts. Provided the mitigation measures recommended in this report are followed, the proposed development will not impact any identified features negatively. Thus, the proposed development would conform with the Township and County Official Plans and the Provincial Policy Statement and comply with the *Endangered Species Act*.



## 9 REFERENCES

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**APPENDIX A**  
SVCA Regulated Lands

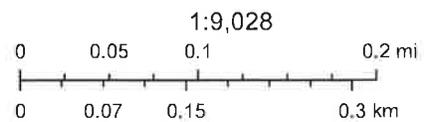


# SVCA Approximate Regulated & Approximate Screening Areas



3/3/2021, 2:58:20 PM

Property Boundary  
Saugen Valley Conservation Authority



Map data © OpenStreetMap contributors, Map layer by Esri, Esri Community Maps Contributors, Province of Ontario, Esri, HERE, Garmin, INCREMENT P, METI/NAGA, UGCC, EPA, NPG, UC Cenaua Bureau, USDA, NRCan, Parks Canada, Dufferin, USDA FSA, GeoEye, Maxar

**APPENDIX B**  
Breeding Bird Data



**Bird Species Documented**

Family	Scientific Name	English Common Name	Point Count Stations <sup>A, B</sup>				Evidence of Breeding	Conservation Rank <sup>B</sup>		
			1	2	3	Incidental*		G-rank <sup>E</sup>	S-rank <sup>F</sup>	SARO Status <sup>G</sup>
Cardinalidae	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak		S	S, S		Probable	G5	S4B	
Cathartidae	<i>Cathartes aura</i>	Turkey Vulture				X	Unlikely	G5	S5B	
Columbidae	<i>Zenaidura macroura</i>	Mourning Dove			S	X	Possible	G5	S5	
Corvidae	<i>Corvus brachyrhynchos</i>	American Crow	FO, FO	FO, FO	FO		Probable	G5	S5B	
Corvidae	<i>Corvus corax</i>	Common Raven	C	C	FO	X	Possible	G5	S5	
Corvidae	<i>Cyanocitta cristata</i>	Blue Jay	S, S	C	C		Probable	G5	S5	
Emberizidae	<i>Melospiza georgiana</i>	Swamp Sparrow	S				Possible	G5	S5B	
Emberizidae	<i>Melospiza melodia</i>	Song Sparrow	S	S, S	S, S		Probable	G5	S5B	
Emberizidae	<i>Spizella passerina</i>	Chipping Sparrow	S	S	S		Possible	G5	S5B	
Emberizidae	<i>Zonotrichia albicollis</i>	White-throated Sparrow	S		S		Possible	G5	S5B	
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird	S				Possible	G5	S4	
Icteridae	<i>Molothrus ater</i>	Brown-headed Cowbird			S		Possible	G5	S4B	
Paridae	<i>Poecile atricapillus</i>	Black-capped Chickadee	S	S, S	S, S	X	Probable	G5	S5	
Parulidae	<i>Dendroica petechia</i>	Yellow Warbler		S	S, S		Probable	G5	S5B	
Parulidae	<i>Geothlypis trichas</i>	Common Yellowthroat	S, S	S, S	S, S		Probable	G5	S5B	
Parulidae	<i>Vermivora ruficapilla</i>	Nashville Warbler		S			Possible	G5	S5B	
Phasianidae	<i>Bonasa umbellus</i>	Ruffed Grouse					Possible	G5	S4	
Phasianidae	<i>Meleagris gallopavo</i>	Wild Turkey				X	Confirmed	G5	S5	
Picidae	<i>Picoides pubescens</i>	Downy Woodpecker		S			Possible	G5	S5	
Troglodytidae	<i>Troglodytes aedon</i>	House Wren	S				Possible	G5	S5B	
Troglodytidae	<i>Troglodytes troglodytes</i>	Winter Wren	S		S		Possible	G5	S5B	
Turdidae	<i>Catharus fuscescens</i>	Veery	S	S			Possible	G5	S4B	
Tyrannidae	<i>Empidonax alnorum</i>	Alder Flycatcher	S	S	S, S		Probable	G5	S5B	
Tyrannidae	<i>Empidonax minimus</i>	Least Flycatcher			S		Possible	G5	S4B	
Tyrannidae	<i>Empidonax traillii</i>	Willow Flycatcher	S				Possible	G5	S5B	
Tyrannidae	<i>Myiarchus crinitus</i>	Great Crested Flycatcher	S				Possible	G5	S4B	
Vireonidae	<i>Vireo solitarius</i>	Blue-headed Vireo		S			Possible	G5	S5B	

Family	Scientific Name	English Common Name	Point Count Stations <sup>A, B</sup>				Evidence of Breeding	Conservation Rank <sup>D</sup>		
			1	2	3	Incidental*		G-rank <sup>E</sup>	S-rank <sup>F</sup>	SARO Status <sup>G</sup>
Surveys Conditions:										
<sup>A</sup> June 9, 2021; Start Time 0813hr/ End Time 0900hr; Temperature +20°C; Wind B0; Cloud Cover 0%; Precipitation Nil; M. Fuller										
<sup>B</sup> June 23, 2021; Start Time 0619hr/ End Time 0700hr; Temperature +8°C; Wind B0; Cloud Cover 0%; Precipitation Nil; Observer M. Fuller										

<sup>C</sup>OBBA Breeding Evidence Codes:

- H - Species observed in its breeding season in suitable nesting habitat
- C - Call heard (male or female), in suitable nesting habitat in nesting season.
- S - Singing male Present, or breeding calls heard, in suitable nesting habitat in nesting season.
- N - Nest Building or excavation of nest hole
- P - Pair observed in suitable nesting habitat in nesting season

<sup>D</sup>Conservation Rank - from MECP, NHIC, SARO Lists

<sup>F</sup>S-rank - S1 - Extremely Rare, S2 - Very Rare, S3 - Rare to Uncommon, S4 - Common, S5 - Very Common

<sup>E</sup>G-Rank - G1 - Critically Imperiled, G2 - Imperiled, G3 - Vulnerable, G4 - Apparently Secure, G5 - Secure

<sup>G</sup>SARO - EXP (Extirpated), END (Endangered), THR (Threatened), SC (Special Concern), NAR (Not At Risk)

**APPENDIX C**  
Plant Survey Data



## Vascular Plant List

Scientific Name	Common Name	Provincial S-Rank	Provincial Endangered Species Act (ESA)	Global G-Rank	MAMM1-5	MEGM3	FOC	SWTM3	FOMM8-1	OAGM1
<i>Abies balsamea</i>	Balsam Fir	S5	---	G5			X			
<i>Acer rubrum</i>	Red Maple	S5	---	G5		X				
<i>Acer saccharinum</i>	Silver Maple	S5	---	G5		X				
<i>Acer saccharum</i>	Sugar Maple	S5	---	G5		X				
<i>Achillea millefolium</i>	Common Yarrow	SNA	---	G5					X	X
<i>Alliaria petiolata</i>	Garlic Mustard	SNA	---	GNR			X			
<i>Alnus incana</i>	Speckled Alder	S5	---	G5				X		
<i>Ambrosia artemisiifolia</i>	Common Ragweed	S5	---	G5					X	X
<i>Asclepias incarnata</i>	Swamp Milkweed	S5	---	G5	X			X		
<i>Asclepias syriaca</i>	Common Milkweed	S5	---	G5			X		X	X
<i>Betula papyrifera</i>	Paper Birch	S5	---	G5				X	X	X
<i>Bromus inermis</i>	Smooth Brome	SNA	---	G5					X	X
<i>Centaurea stoebe</i>	Spotted Knapweed	SNA	---	G--					X	X
<i>Cicuta maculata</i>	Spotted Water-hemlock	S5	---	G5	X			X		
<i>Cirsium discolor</i>	Field Thistle	S3	---	G5					X	X
<i>Clematis terniflora</i>	Virgin's Bower	SNA	---	GNR					X	X
<i>Clinopodium vulgare</i>	Field Basil	S5	---	G5					X	X
<i>Cornus alternifolia</i>	Alternate Leaf Dogwood	S5	---	G5			X			
<i>Cornus racemosa</i>	Grey Dogwood	S5	---	G5		X				
<i>Cornus rugosa</i>	Round-leaf Dogwood	S5	---	G5			X			
<i>Cornus sericea</i>	Red-osier Dogwood	S5	---	G5	X		X	X	X	X
<i>Dactylis glomerata</i>	Orchard Grass	SNA	---	GNR					X	X
<i>Daucus carota</i>	Wild Carrot	SNA	---	GNR					X	X
<i>Epipactis helleborine</i>	Helleborine	SNA	---	GNR			X			
<i>Erigeron annuus</i>	Annual Fleabane	S5	---	G5			X			
<i>Erythronium americanum</i>	Yellow Trout-lily	S5	---	G5		X				
<i>Eupatorium perfoliatum</i>	Boneset	S5	---	G5	X			X	X	X
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	S5	---	G5	X			X	X	X
<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	S5	---	G5	X		X	X	X	X
<i>Fragaria virginiana</i>	Wild Strawberry	S5	---	G5			X		X	X
<i>Fraxinus pennsylvanica</i>	Red Ash	S4	---	G5				X		
<i>Galeopsis tetrahit</i>	Common Hemp-nettle	SNA	---	GNR		X				
<i>Geum aleppicum</i>	Yellow Avens	S5	---	G5		X				
<i>Glyceria striata</i>	Fowl Manna Grass	S5	---	G5	X			X		
<i>Heracleum maximum</i>	American Cow Parsnip	S5	---	G5		X				
<i>Hesperis matronalis</i>	Dame's Rocket	SNA	---	G4G5		X				
<i>Impatiens capensis</i>	Spotted Jewelweed	S5	---	G5	X			X		
<i>Larix laricina</i>	Tamarack	S5	---	G5			X	X	X	X
<i>Lepidium campestre</i>	Field Peppergrass	SNA	---	GNR					X	X
<i>Leucanthemum vulgare</i>	Oxeye Daisy	SNA	---	GNR		X			X	X
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	SNA	---	GNR					X	X
<i>Malus pumila</i>	Apple	SNA	---	G5			X			
<i>Medicago lupulina</i>	Black Medick	SNA	---	GNR		X			X	X
<i>Myosotis stricta</i>	Forget-me-not	SNA	---	GNR			X			
<i>Oenothera biennis</i>	Common Evening-primrose	S5	---	G5					X	X
<i>Onoclea sensibilis</i>	Sensitive Fern	S5	---	G5	X		X	X		
<i>Osmunda regalis</i>	Royal Fern	S5	---	G5	X			X		
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	S4?	---	S5		X				
<i>Persicaria hydropiper</i>	Marshpepper Smartweed	SNA	---	GNR					X	X
<i>Phalaris arundinacea</i>	Reed Canarygrass	S5	---	G5	X			X		
<i>Phleum pratense</i>	Common Timothy	SNA	---	GNR					X	X
<i>Phragmites australis</i>	European Reed	SNA	---	G5T5	X	X		X		
<i>Pinus sylvestris</i>	Scots Pine	SNA	---	GNR					X	X
<i>Plantago lanceolata</i>	English Plantain	SNA	---	G5					X	X
<i>Populus balsamifera</i>	Balsam Poplar	S5	---	G5					X	X
<i>Populus tremuloides</i>	Trembling Aspen	S5	---	G5			X	X		
<i>Prunus serotina</i>	Black Cherry	S5	---	G5			X		X	X
<i>Prunus virginiana</i>	Chokecherry	S5	---	G5					X	X
<i>Ranunculus acris</i>	Tall Buttercup	SNA	---	G5					X	X
<i>Ribes hirtellum</i>	Smooth Gooseberry	S5	---	G5			X		X	X
<i>Robinia pseudoacacia</i>	Black Locust	SNA	---	G5		X				
<i>Rubus idaeus</i>	Red Raspberry	S5	---	G5	X		X	X		
<i>Rubus pubescens</i>	Dewberry	S5	---	G5			X			
<i>Rudbeckia hirta</i>	Black-eyed Susan	S5	---	G5					X	X
<i>Salix discolor</i>	Pussy Willow	S5	---	G5	X			X		
<i>Salix nigra</i>	Black Willow	S4	---	G5			X			

Scientific Name	Common Name	Provincial S-Rank	Provincial Endangered Species Act (ESA)	Global G-Rank	MAMM1-5	MEGM3	FOC	SWTMS	FOMM8-1	OAGM1
<i>Scutellaria galericulata</i>	Marsh Skullcap	S5	---	G5	X			X		
<i>Solanum dulcamara</i>	Bittersweet Nightshade	SNA	---	GNR		X	X			
<i>Solidago altissima</i>	Tall Goldenrod	S5	---	G5		X				
<i>Solidago canadensis</i>	Canada Goldenrod	S5	---	G5		X	X		X	X
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	S5	---	G5		X	X			
<i>Solidago gigantea</i>	Giant Goldenrod	S5	---	G5		X				
<i>Solidago juncea</i>	Early Goldenrod	S5	---	G5		X				
<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	S5	---	G5			X		X	X
<i>Sorbus americana</i>	Mountain Ash	S5	---	G5			X			
<i>Spiraea alba</i>	Meadowsweet	S5	---	G5	X			X	X	X
<i>Symphotrichum lanceolatum</i>	Panicled Aster	S5	---	G5		X				
<i>Symphotrichum pilosum</i>	Old Field Aster	S5	---	G5					X	X
<i>Symphotrichum puniceum</i>	Purple-stemmed Aster	S5	---	G5	X			X		
<i>Taraxacum officinale</i>	Common Dandelion	SNA	---	G5		X	X			
<i>Thelypteris palustris</i>	Marsh Fern	S5	---	G5	X			X		
<i>Thuja occidentalis</i>	Eastern White Cedar	S5	---	G5					X	X
<i>Tussilago farfara</i>	Coltsfoot	SNA	---	GNR		X				
<i>Typha angustifolia</i>	Narrow-leaved Cattail	SNA	---	G5	X			X		
<i>Verbascum thapsus</i>	Common Mullein	SNA	---	GNR		X				
<i>Viburnum acerifolium</i>	Maple-leaf Viburnum	S5	---	G5	X			X		
<i>Vicia sativa</i>	Common Vetch	SNA	---	GNR					X	X
<i>Vincetoxicum rossicum</i>	European Swallowwort	SNA	---	GNR		X				
<i>Vitis riparia</i>	Riverbank Grape	S5	---	G5		X				

Provincial Rank: S1 - Extremely Rare, S2 - Very Rare, S3 - Rare to Uncommon, S4 - Common, S5 - Very Common

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

ESA: EXP (Extirpated), END (Endangered), THR (Threatened), SC (Special Concern), NAR (Not At Risk)