

**Scoped Natural Heritage Evaluation (sNHE)
Proposed Lot Addition, Cavan Agri Services
1377 County Road No. 10 (Cavan)
Part of Lot 13, Concession 8 (Cavan)
Township of Cavan Monaghan
County of Peterborough**

FOR DIGITAL DISTRIBUTION ONLY

Prepared For:

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Project #: 21-2915

December 2021



December 3rd, 2021

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Attention: **Mr. Murray J. Davenport**

Re: *Scoped* Natural Heritage Evaluation (sNHE)
Proposed Lot Addition, Cavan Agri Services
1377 County Road No. 10, Cavan
Part Lot 13, Concession 8 (Cavan)
Township of Cavan Monaghan, County of Peterborough
ORE File No. 21-2915

We are pleased to provide this *Scoped* Natural Heritage Evaluation (sNHE) for the above referenced property. The report has been completed in support of your client's application for a proposed lot addition to the Cavan Agri Services property.

The main Key Natural Heritage Features identified on the property are the wetland on the south side of the property and a few Butternut trees. However, these occur at a substantial distance from the proposed lot addition. Provided the recommendations outlined in this report are adhered to, any potential adverse impacts to these receptors should be mitigated.

We trust that this report will be sufficient for any agency reviews. Should you have any questions or require clarification, please do not hesitate to contact our office.

Yours truly,
Oakridge Environmental Ltd.

ORIGINAL SIGNED BY

Rob West, HBSc., CSEB
Senior Environmental Scientist

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1.0 Introduction

Oakridge Environmental Ltd. is pleased to present this *Scoped Natural Heritage Evaluation (sNHE)* as a supporting document to your client's application for a proposed lot addition.

It is understood that approximately 4.6 acres (1.9 ha) is proposed to be severed and added to the Cavan Agri Services operations. An unevaluated wetland occurs within 120 m of the subject property, and as a result, this report has been requested. The report has been scoped in accordance with the requirements outlined by the Township of Cavan Monaghan and Otonabee Region Conservation Authority (ORCA).

The mandate of this report is to characterize the current site conditions, identify any potential development constraints, determine whether the proposed lot addition is feasible with respect to any sensitive features, and if so, provide recommendations with regard to mitigating potential impacts on the identified features.

The following sections outline our data sources, methodologies, findings and recommendations.

2.0 Site Location and Description

The subject site is located southwest of Peterborough, Ontario, near the village of Cavan, on the east side of County Road 10 (Figures 1 and 2). The property is immediately on the right, at the intersection of County Road 10 and the Highway 115 exit ramp.

The total area of the property from which the parcel will be severed (to be added to the Cavan Agri Services property) is approximately 21.7 ha (53.07 acres). The parcel to be severed and added will consist of approximately 1.9 ha (4.6 acres). The majority of the site consists of agricultural land, with a mix of wetland and woodland along the southern boundary. The property currently contains no structures, however, is adjacent to the existing Cavan Agri Services operation.

3.0 Proposed Development / Site Alteration

It is understood that the property owner would like to construct a proposed warehouse, workshop and gravel parking area on the lot addition as an expansion of the existing

Cavan Agri Services operations. A copy of the Site Plan is provided in Appendix A.

It will be necessary to fill and grade the development footprints to achieve a relatively flat and stable surface. In addition, stormwater management and other Low Impact Design facilities (i.e., infiltration trench, etc.) are being proposed.

4.0 Policy

According to the information provided, the need for this study was triggered due to the subject site being located within 120 m of a hydrologic feature; the nearby Cavan Creek Wetland (both provincially significant and unevaluated). This study has been *scoped* specifically to address potential impacts to this feature and has been formatted in accordance with the Otonabee Region Conservation Authority (ORCA) Regulation for Development, Interference with Wetlands and Alterations to Shorelines And Watercourses and the *Watershed Planning & Regulations Policy Manual* (2015).

Based on the information provided, the following study requirements were provided by the Township and ORCA:

“Given the already large setbacks from the development to the wetland and watercourse features, rather than a complete natural heritage / hydrologic evaluation (EIS) for the purposes of satisfying Growth Plan requirements under section 4.2.4, a letter brief could be instead be prepared as per the description below from technical staff:

Given the development / site alteration is within 120m of features, the requirement of a small-scale ecological review should be submitted in support of the site plan application. The opinion letter, to address policy, should confirm wetland boundary and buffer to achieve a minimum 30m (Growth Plan) (this could be done by table top review and one site visit during the growing season to confirm active farming and dominant vegetation); table top review of SAR and mitigation for habitat protection (the ESA has exemptions for the species that would use fields / farms); landscaping to encourage naturalization of the buffer on subject property (screening at lot lines nearest wetland); and ecological review of SWM plan.

This should adequately address those applicable policies of the Growth Plan and Natural Heritage Constraints under Schedule B of the Township Official Plan.

In addition, this sNHE also has regard for the following:

- Federal Species at Risk Act (SARA);
- Provincial Endangered Species Act (ESA), and
- the 2020 Provincial Policy Statement (PPS).

5.0 Physical Setting

5.1 Topography and Drainage

The subject property occurs on the southeast flank of a major ridge feature (drumlin), with approximately 16 m of topographic relief (Figure 2). While the axis of the ridge represents a local drainage divide, the position of the property is such that the divide should have minimal effect. The proposed lot addition lot occurs within the mid to upper part of the slope, where drainage should be entirely southeastward.

Between the ridge and Highway 115, a small tributary of Cavan Creek flows northward toward the Cavan Creek (Provincially Significant) Wetland. The tributary is the principal receptor for runoff originating on the subject property (including the proposed lot). The watercourse exhibits significant meandering in a narrow and linear valley that also contains an unevaluated wetland. No part of the tributary or unevaluated wetland occurs within or near the proposed lot addition lot.

5.2 Geological Setting

The subject site occurs within the physiographic area referred to as the Peterborough Drumlin Field. As such, the dominant soil type and substrate in the site area is the drumlinized Newmarket Till (Figure 3). The subject property occurs on the flank of a large composite drumlin whose axis appears to be oriented approximately north-south, somewhat divergent from the typical northeast-southwest orientation of most drumlins in the area. However, as the ridge is likely comprised of two coalescing drumlins, the apparent axis direction is likely misleading.

The site area also contains fairly large expanses of glaciolacustrine deposits consisting of layered sand and silt, representing near-shore environments, grading to more distal (deeper water) deposits of silt and clay. These glaciolacustrine deposits represent a period of ancient inundation by glacial meltwaters, believed to have occurred near the most northerly extent of glacial Lake Iroquois. At that time, the ridge was likely a small island.

The glaciolacustrine deposits mantle the till substrate, typically filling the valley troughs between the drumlins. Areas containing these deposits often contain wetlands, including the narrow valley containing the above described tributary. As such, the

glaciolacustrine deposits will also generally exhibit shallow water table conditions.

According to the published mapping, the proposed lot occurs primarily within the Newmarket Till. However, a small pocket of glaciolacustrine sand and silt is mapped in the northernmost part of the lot. As such, a thin mantle of sandy soils may be present overlying the till.

Perusal of Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area reveals that there are numerous geotechnical/monitoring wells in the site area. Formation logs for these wells provide no clear indication that the glaciolacustrine units are present over a wide area, instead generally indicating that the till extends to a depth of at least 9.1 m (e.g., #7138896 and #7116458). Wet conditions were reported at a depth of about 4.5 m.

6.0 Background Data

6.1 Natural Heritage Information Centre (NHIC) and Land Information Ontario (LIO)

6.1.1 NHIC

The NHIC provides an online database managed by the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR). Within the database, Ontario has been divided into a grid consisting of 1 km² areas or *regional squares*, each given a unique identifier. The squares can be searched for historical *Species at Risk* (SAR) occurrences and for Areas of Natural and Scientific Interest (ANSI).

The property falls within the 1 km² squares 17QJ0296, 17QJ0295 and 17QJ0396. An excerpt from the NHIC's website illustrating the location of the squares relative to the subject site is included in Appendix B.

The query indicates that there are two (2) Natural Areas recorded in this area:

Natural Areas

Cavan Creek Wetland
Cavan Creek

The query also indicates that three (3) Species at Risk (SAR) have been recorded in the area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>S-Rank/SARO Status</u>
Eastern Meadowlark	<i>Sturnella magna</i>	S4B/Threatened
Bobolink	<i>Dolichonyx oryzivorus</i>	S4B/Threatened
Snapping Turtle	<i>Chelydra serpentina</i>	S4/Special Concern

ORE staff completed two (2) inspections on-site during the optimal period to detect the above listed species. The latter sections of our report discuss whether the SAR/rare species was observed on-site and addresses the presence of the species. If the species was absent during the inspections or if suitable habitat was not present, the species is not addressed or discussed further.

6.1.2 LIO

ORE staff reviewed the Land Information Ontario (LIO) mapping database and determined from the mapping layers within the Geographic Information System (GIS) that there is a Deer Wintering habitat situated 60 m east of the east property line of the retained lands boundary.

The distance to the Deer Wintering habitat would be on the order of approximately 300 m east of the proposed lot addition.

6.2 Ontario Breeding Bird Atlas (OBBA)

The OBBA¹ provides up-to-date reliable information on birds within Ontario. The information includes species descriptions, habitats, range, documented sightings, etc. The subject site occurs within the 10 km² area mapped as 17TQJ09, Region 17, Northumberland. The Summary Sheets for this atlas area are provided in Appendix C.

From our review of the information, significant breeding species that could potentially be associated with habitats in the site area include the following:

¹ managed by Bird Studies Canada.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern
Barn Swallow	<i>Hirundo rustica</i>	Threatened
Wood Thrush	<i>Hylocichla mustelina</i>	Threatened
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened
Bank Swallow	<i>Riparia riparia</i>	Threatened
Chimney Swift	<i>Chaetura pelagica</i>	Threatened
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern
Eastern Whip-poor-will	<i>Anthrostomus vociferus</i>	Threatened
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Special Concern
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Special Concern

Brief descriptions of each of the listed species and their associated preferred habitats are included in Appendix C. The site inspections included a review of potential SAR habitat and targeted searches for the listed species.

ORE staff completed two (2) inspections on-site during the optimal period to detect the above listed species. The latter sections of the report discuss whether the SAR/rare species was observed on-site and addresses the presence of the species. If the species was absent during the inspections nor is suitable habitat present, the species is not addressed or discussed further.

6.3 iNaturalist

The iNaturalist website is a database whereby citizens and scientists can provide locations and details of all types of species detected throughout Ontario. However, the NHIC version is a species collective identified by NHIC staff and research level professionals at Universities. The NHIC version focusses on SAR and rare species tracked by the NHIC. The nearest records to the subject property are:

Bald Eagle (*Haliaeetus leucocephalus*), reported approximately 80 m northwest of the site on February 2, 2021. Bald Eagle is listed as "Special Concern" by *Species at Risk Ontario* (SARO), and is not protected under the *Endangered Species Act* (ESA). The species has to be nesting below the boundary delineated within northern Ontario to be included in this group. The Bald Eagle prefers mature forests on the edge of waterways which includes large swamps and lake or river systems. Its main diet consists of fish and carcasses. The species tends to nest within lakeside pine trees as the dense needles tend to conceal their large stick nest from other predator species. There are several known nesting sites within the Trent-Severn Waterway and Kawartha Lakes system.

Snapping Turtle (*Chelydra serpentina*), reported approximately 80 m northwest of the site on September 4, 2012. Snapping Turtle is listed as “Special Concern” by SARO and is not protected under the ESA. Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid summer, females travel overland in search of a suitable nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dam and aggregate pits.

White-hair Rosette Grass (*Dichanthelium villosissimum*), reported approximately 1 km east of the site in May, 1999. This species of plant is not listed as a Species at Risk in Ontario, however, is tracked by the NHIC via the Nature Serve network which records species populations for all of North America.

Fall Coral Root (*Corallorhiza odontorhiza*), reported approximately 1.1 km south of the site in November, 2020. This species of plant is not listed as a Species at Risk in Ontario, however, is tracked by the NHIC via the Nature Serve network which records species populations for all of North America.

Schweinitz’s Sedge (*Carex schweinitzii*), reported approximately 1.7 km south of the site in June, 2015. This species of plant is not listed as a Species at Risk in Ontario, however, is tracked by the NHIC via the Nature Serve network which records species populations for all of North America.

Common Fungus Moth (*Metalectra discalis*), reported approximately 1.8 km east of the site on July 19, 2020. This species of moth is not listed as a Species at Risk in Ontario, however, is tracked by the NHIC via the Nature Serve network which records species populations for all of North America.

Monarch (*Danaus plexippus*), reported approximately 2 km northeast of the site on July 8, 2018. Monarch is listed as “Special Concern” by SARO and is not protected under the ESA. Throughout their life cycle, Monarchs use two different types of habitat in Ontario. Only the caterpillars feed on milkweed (*Asclepias* spp.) plants and are confined to meadows and open areas where milkweed grows. Adult butterflies can be found in more diverse habitats where they feed on nectar from a variety of wildflowers. Monarchs spend the winter in central Mexico.

Eastern Meadowlark (*Sturnella magna*), reported approximately 2.4 km west of the site on April 16, 2012. Eastern Meadowlark is listed as “Threatened” by SARO and is protected under the ESA. The Eastern Meadowlark is similar to Bobolink, as this species also prefers large tracts of agricultural fields or tallgrass prairies to nest within. Eastern Meadowlark is a ground nester, thus requires the tall grass to conceal its nest and eggs. Feeding includes beetles, crickets and spiders.

Midland Painted Turtle (*Chrysemys picta marginata*), reported approximately 2.5 km northeast of the site on June 12, 2021. Midland Painted Turtle is not listed as a Species at Risk in Ontario, but is federally listed as a “Special Concern” species.

ORE staff completed two (2) inspections on-site during the optimal period to detect the above listed species. The latter sections of the report discuss whether the SAR/rare species was observed on-site and addresses the presence of the species. If the species was absent during the inspections or the habitat is not present, the species is not addressed or discussed further.

6.4 eBird

eBird is a citizen science database, whereby birding individuals can attend public areas referred to as “hotspots” and list species of bird they have detected each time they visit the hotspot location. According to the eBird Geographic Information System (GIS) database, the nearest hotspot is Millbrook Conservation Authority, located approximately 4.5 km south of the site. A total of 117 species were recorded. Of those, six (6) species are considered SAR, they are:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Barn Swallow	<i>Hirundo rustica</i>	Threatened
Rusty Blackbird	<i>Euphagus carolinus</i>	Special Concern
Bank Swallow	<i>Riparia riparia</i>	Threatened
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened

Brief descriptions of each of the listed species and associated preferred habitats are included in Appendix D. The site inspections included a review of potential SAR habitat and targeted searches for the listed species.

ORE staff completed two (2) inspections on-site during the optimal period to detect the above listed species. The latter sections of the report discuss whether the SAR/rare species was observed on-site and addresses the presence of the species. If the species was absent during the inspections nor is suitable habitat present, the species is not addressed or discussed any further.

7.0 Inspection Methodologies

7.1 Vegetation

The site has been characterized by its various vegetation communities using the methodologies included in the *Ecological Land Classification (ELC) - First Approximation and Its Applications* (1998). The 1998 Ecological Land Classification - First Approximation is a guide used by Ecologists to standardize the classification of different vegetation community types across Ontario. The classification system enables an ecologist to identify vegetation communities based on the species present, soil materials and moisture regimes.

There have been a number of updates to the ELC scheme to further refine the classification of Ecosites throughout Ontario. As a result, the 2008 *Draft ELC Guide* provides a further breakdown of the 1998 ELC Guide - First Approximation communities and includes many new communities to index from. The 2008 ELC scheme also provides a cross-reference to the 1998 guide communities. This report uses a combination of both the 1998 ELC communities (which are considered the primary vegetation communities) and the 2008 Draft ELC to supplement the vegetation community lists.

Prior to conducting the site inspection, aerial photography of the subject site was analysed to roughly delineate communities based on recognizable vegetation differences. Each identified community was subsequently inspected. Dominant vegetation types were recorded and boundaries of the various communities mapped on an air photo or utilizing a dGPS.

In addition to identifying and mapping the ELC communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive, a provincially rare vegetation community according to the NHIC list, and/or whether they may represent Species at Risk habitat.

7.2 Avifauna Surveys

ORE staff attended the site twice during the early spring and peak breeding bird period, endeavouring to detect all available avian species by sight, calls and notes, within and proximal to the site. In some instances, bird calling devices and “pishing and squeaking” were used at the end of the inspection period to attract bird species from within the wetlands-woodland and thicket areas.

All species overheard or observed during the survey were recorded.

7.3 Mammals

Mammals were detected utilizing the methodologies outlined in the March 1998 - Wildlife Monitoring Programs and Inventory Techniques for Ontario. Mammals were generally identified by either direct observation or via their tracks and/or scat droppings at the site.

No live traps were set/installed at the site as a permit is necessary to trap mammals. Tracking, visual encounters and other signs to detect mammals were deemed sufficient for the purpose of this study.

According to the Land Information Ontario (LIO) database, the subject site does not contain any deer wintering habitat nor any other significant mammal wildlife habitat for those species outlined in the October 2000 - Significant Wildlife Habitat Technical Guide. A Deer Wintering Area (Stratum 2) is located approximately 60 m east of the subject property.

8.0 Site Inspection Data

8.1 Site Inspections

ORE staff attended the site on the following dates:

<u>Date of Inspection</u>	<u>Temp. °C</u>	<u>Beaufort (Wind) Scale</u>	<u>Conditions Reason for Inspections</u>
May 6 th , 2021 8AM - 11 AM	16	2 - Light air	5% cloud cover. Clear and warm. Observe vegetation conditions, hydrologic feature identification, ELC mapping, species list, habitat assessments.
June 25, 2021 5 AM - 9 AM	26	3 - Light Breeze	10% cloud cover. Clear and warm. Detect avian. Observe vegetation conditions, hydrologic feature identification, ELC mapping, species list, habitat assessments.

Appendix E contains the list of species identified on the property during our inspection.

8.2 Ecological Land Classification (ELC)

Based on our site observations, we have determined the dominant vegetation type in the area of the proposed lot addition is Cultural Meadow (CUM-1) as per the Ecological Land Classification for Southern Ontario (FG-02), 1998. The description for the CUM-1 community is provided below. The remaining communities within the retained lands that surround the cultural meadow severance parcel are also listed below:

Upland Communities:

1. Mineral Cultural Meadow (CUM1)
2. Dry - Fresh Sugar Maple Deciduous Forest (FOD5)
3. Fencerow (TAGM5)
4. Annual Row Crops (OAGM1)
5. Poplar - Conifer Mineral Mixed Swamp (SWM3-2)

Wetland or Watercourse Communities:

6. Red-osier Mineral Thicket Swamp (SWT2-5)
7. Willow Mineral Thicket Swamp (SWT2-2)
8. Cattail Mineral Shallow Marsh (MAS2-1)
9. Open Aquatic (OAO)

Upland Communities:

1. Mineral Cultural Meadow (CUM1)

The ELC describes the CUM1 communities as resulting from cultural or anthropogenic-based disturbances/alterations to land. Tree cover is typically less than 25% and the presence of shrubs is also less than 25%.

The Mineral Cultural Meadow is located in the western, and southwestern areas of the property. These areas are likely former agricultural fields that have been allowed to naturalize, and have become dominated by native and non-native grasses and herbs. The proposed severance area possesses this community.

2. Dry - Fresh Sugar Maple Deciduous Forest (FOD5)

According to the ELC, FOD5 is typically Sugar Maple rich with fewer occurrences of Beech (*Fagus grandifolia*), Red Oak (*Quercus rubra*), White Pine (*Pinus strobus*), Ironwood (*Ostrya virginiana*), Basswood (*Tilia americana*), Black Cherry (*Prunus*

serotina), White Ash (*Fraxinus americana*), Red Maple (*Acer rubrum*), White Birch (*Betula papyrifera*), Trembling Aspen (*Populus tremuloides*), and Largetooth Aspen (*Populus grandidentata*).

This ecosite occurs as a narrow band of forest vegetation in the northeast area of the property. It is adjacent to the Annual Row Crop (OAGM1) and the Poplar - Conifer Mineral Mixed Swamp (SWM3-2). The dominant species present are Sugar Maple (*Acer saccharum*), Basswood (*Tilia americana*) and White Birch (*Betula papyrifera*).

It is within this community that two (2) of the Butternuts occur on-site. This woodland type extends into the wetland as ridge-like features (fingers) and the Butternuts occur near the top of the fingers overlooking the wetland habitats. Some of the Butternuts occur in the fencerows on the north side of the property, where this type of community persisted before it was removed for farming purposes. A good example of this type of community occurs directly across the east property boundary where this woodland type has been retained by the neighbour. One (1) of the Butternuts was identified on this property, directly across the property line.

Details regarding the Butternuts is provided in a latter section of this report.

3. Fencerow (TAGM5)

There is no description given in the draft 2008 Ecological Land Classification manual for this ecosite.

There is a narrow treed fencerow located in between the two Annual Row Crop (OAGM1) ecosites, in the north end of the site.

It is within this community on the north side of the property where two (2) of the Butternuts were identified. Details regarding the Butternuts is provided in a latter section of this report.

4. Annual Row Crops (OAGM1)

There is no description given in the draft 2008 Ecological Land Classification manual for this ecosite.

This ecosite is represented by the two large agricultural fields located on the property.

Wetland & Watercourse Communities:

5. Poplar - Conifer Mineral Mixed Swamp (SWM3-2)

The ELC describes a Poplar - Conifer Mineral Mixed Swamp (SWM3-2) as having tree cover present in greater than 25% of the ecosite, with a relatively even mix of deciduous and coniferous species. This ecosite is dominated by poplar and conifer species such as Trembling Aspen (*Populus tremuloides*) and Eastern White Cedar (*Thuja occidentalis*) respectively. A typically fern-rich ground cover will be subject to variable flooding regimes.

This wooded swamp is located within the riparian zone of the watercourse that traverses the south end of the site. The co-dominant species are Balsam Poplar (*Populus balsamifera*), Ash (*Fraxinus* spp.) And American Elm (*Ulmus americana*)

6. Red-osier Mineral Thicket Swamp (SWT2-5)

The ELC describes the Red-osier Mineral Deciduous Thicket Swamp (SWT2-5) as having 75% trees being less than 5 m in height. This ecosite is typically fern and sedge rich but dominated by Red-osier Dogwood (*Cornus sericea*).

This ecosite is intermingled with the Willow Mineral Thicket Swamp (SWT2-2) ecosite described below. It occurs within the riparian zone of the watercourse. This community possesses an abundance of Reed Canary Grass (*Phalaris arundinacea*) and minor amounts of cattail (*Typha* sp.).

7. Willow Mineral Thicket Swamp (SWT2-2)

The ELC describes the Red-osier Mineral Deciduous Thicket Swamp (SWT2-5) as having 75% trees being less than 5 m in height. This ecosite is typically fern and sedge rich but dominated by Willow species (*Salix* spp.).

This ecosite is intermingled with the Red-osier Dogwood Mineral Thicket Swamp (SWT2-5) ecosite. It occurs within the riparian zone of the watercourse. This community possesses an abundance of Reed Canary Grass (*Phalaris arundinacea*) and minor amounts of cattail (*Typha* sp.).

8. Cattail Mineral Shallow Marsh (MAS2-1)

According to ELC, the Cattail Mineral Shallow Marsh (MAS2-1) primarily possesses less than 25% tree and shrub cover while hydrophytic emergent macrophyte cover must

be greater than 25%. Parent mineral substrates often consist of sand, gravel or cobble. Shallow marshes tend to have water up to 2 m deep.

The lower lying areas of the riparian zone contain the Cattail Mineral Shallow Marsh ecosite. The Cattail Marsh areas contain the meandering creek channel which is the core habitat of the wetland communities on-site.

9. Open Aquatic (OAO)

The ELC (2008) describes OAO as an environment containing no macrophyte vegetation and no tree or shrub cover. This ecosite tends to be dominated by plankton and has a lake trophic status.

This ecosite is represented by the meandering creek/watercourse that traverses the site along the southern boundary. The creek possesses some minor hydrophytic species such as Marsh Yellow Cress (*Rorippa palustris*) and Watercress (*Nasturtium officinale*) on the embankments, however, due to the ever-changing stream dynamics, no vegetation adheres to base of this feature.

Figure 4 illustrates the distribution of the community on-site. Representative photos of the site are provided in Figures 5 & 6.

8.3 Fauna & Flora

Fauna

No significant fauna were observed directly on-site. Only tracks of common/secure mammals were observed on the subject parcel. The fauna species observed on-site are listed within Appendix E.

Flora

Five (5) Butternut trees (*Juglans cinerea*) were observed along the eastern property boundary. The locations are illustrated on Figure 7. The closest tree is located approximately 240 m east of the proposed lot addition. The list of flora species observed on-site are listed within Appendix E.

8.4 Endangered or Threatened Species

The Endangered Species Act and many municipal level Official Plans provide regulation and guidelines with respect to protection of Endangered and Threatened

species. During our inspections, only one Endangered Species at Risk (SAR) was detected within the retained lands - Butternut.

The following species of significance were listed within the NHIC online database:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Eastern Meadowlark	<i>Sturnella magna</i>	S4B/Threatened
Bobolink	<i>Dolichonyx oryzivorus</i>	S4B/Threatened
Snapping Turtle	<i>Chelydra serpentina</i>	S3/Special Concern

Eastern Meadowlark and Bobolink would not find the subject site attractive, given the majority of the fields are planted each year for row crops. These avian prefer hay field habitats that are cut each year.

The Snapping Turtle would most likely utilize the Cavan Creek channel, the wetland and shoreline areas for part of their life cycle. The shores could be used for nesting purposes.

All of the SAR avian compiled from the OBBA could find the habitats in the general vicinity of the site to be attractive. However, the following SAR avian would find the lot addition area and retained lands to be potential habitat:

1. Barn Swallow - Potentially associated with the existing Agri Services buildings on-site.
2. Bank Swallow - Marginally possible as there were no steep embankments or cuts into the embankments associated with the tributary of Cavan Creek or the hillside/ridge feature along the north edge of the property.
3. Eastern Wood-Pewee - May occur within the off-site deciduous woodland to the east of the subject site that directly abuts the subject property. There are minor intrusions of this habitat within the southeast corner of the subject property in the area where the Butternuts occur.
4. Bobolink - Possibly associated with the agricultural fields on-site, if crops were rotated and/or row crops were not planted each year.
5. Eastern Meadowlark - Similar to Bobolink. Can occur in marginalised areas where crops do not grow, that possess tallgrass and minor shrub content for perching purposes.

No Species at Risk (SAR) avian were detected on the property, however, an Eastern Meadowlark was detected on the private parcel to the west of the subject site, across

County Road 10. This occurrence would be on the order of 200 m or greater from the proposed lot addition.

The only Endangered species detected on-site were the five (5) Butternut trees (*Juglans cinerea*) observed along the eastern property boundary. The closest tree is located approximately 240 m east of the proposed lot addition. All of the trees will occur within the retained lands which will remain unchanged.

9.0 Impact Assessment

9.1 General Considerations

Based on our assessment, it is our opinion that potential impacts related to future development of the site could include the following:

- 1) Potential degradation/alteration of the upland communities that could impact the Cavan Creek watershed system that occurs downgradient of the proposed lot addition, resulting from erosion - sedimentation and water quality deterioration.
- 2) Potential impacts related to construction activities (vegetation removal, etc.). The agricultural fields could host grassland bird species in the early spring period until the row crops are planted and germinate. As such, construction activities could potentially flush these bird species from a nest in the open field and/or destroy the nest site completely in the cultural meadow habitat on the proposed lot addition once the bird has settled in the area.
- 3) The presence of deer in the wintering areas to the east of the retained land's could be impacted during the construction period.

These general impact considerations are further discussed in the following sections.

9.2 Development Envelope

Our field investigations have confirmed that the nearest hydrologic feature is the Cavan Creek unevaluated wetland which is located approximately 55 m south of the boundary of the proposed lot addition (Figure 7). Cavan Creek is just further beyond the wetland boundary.

A warehouse, workshop and gravel parking areas are proposed to be developed. If not properly managed, the proposed development could impact Cavan Creek and its associated wetland in the form of runoff from the development site, potentially

impacting the quality of the adjacent wetland and creek.

Increasing the impermeable surfaces on the subject site can exacerbate potential poor quality runoff conditions as the impermeable surfaces of the buildings concentrate the runoff, potentially directing the increased and untreated flows toward the south unoff collection feature (receiving body).

Based on these findings, both the lack of tree and shrub vegetation in the downgradient direction and increase in impermeable surfaces directly upgradient may have undesirable impacts on the wetland and watercourse.

Recommendations are provided in a following section for mitigation of impacts on the watercourse features.

9.3 Species at Risk

One Species at Risk (SAR) was detected on the property - Butternut. Five (5) Butternut trees were recorded along the eastern boundary of the subject property. The closest tree is located approximately 240 m east of the eastern boundary of the proposed lot addition. As such, impacts to this SAR is not anticipated.

In addition to the on-site Butternuts, a single Eastern Meadowlark was overheard on the private property to the west of the subject property. The proposed lot addition will occur more than 200 m away from the habitat of this species. Therefore, impacts to the Eastern Meadowlark would be undetectable at this distance

It is unlikely that SAR turtles would enter onto the lot addition parcel (in its current state) for nesting purposes when there is an abundance of pristine waterways and grasslands associated with the creek and wetland edge, which are not occupied by people or row crops. However, fresh gravel to create a base on the proposed lot addition could be a potential attraction to nesting turtles. The 240 m distance from the wetland would not be a deterrent for the majority of turtles.

According to the databases, Snapping Turtle are potential reptile SAR that could be in the general area of the subject site. Turtles are most active between April 1st and October 31st each year. Consequently, if construction can avoid this period, these turtles would be unaffected by the proposed works. If construction is to take place during the spring and summer months when turtles are active, a series of Best Management Practices (BMP) should be implemented at the site during the construction period. These are discussed in the following section.

None of the woodland related SAR avian would occur on the lot addition as there is no suitable habitat for those species identified in the database. However, the agricultural

SAR may consider the subject parcel to be suitable habitat, if the row crops did not persist. Nevertheless, recommendations are provided in a following section for mitigation of impacts to these SAR, as conditions may change on yearly basis.

The introduction of the new structures on-site could improve conditions for certain SAR as these would potentially create new nesting sites for species such as Barn Swallow. The underside of the eaves would be potential nesting sites for this species. The nearby Cavan Creek would also be a foraging area for Barn Swallow.

No steep embankments were observed on the subject site that would be suitable for Bank Swallow. As such, ORE staff presume that the reported occurrence of this species was elsewhere within the Cavan Creek basin or within a local pit operation or road-cut. The absence of habitat on-site for this species would preclude any adverse impacts from occurring to Bank Swallow.

According to the OBBA, there could be an abundance of SAR avian present within the general vicinity of the site. ORE staff expect that any SAR nesting areas and habitat would remain unharmed during construction and into the post construction period. Breeding avian would not be impacted if major construction activities can avoid the Breeding Bird Period (i.e., April 1 to August 31st each year). Provided the vegetation clearing/alterations to prepare the site for constructing the majority of the main buildings can occur outside this period, impacts on any SAR and other common/secure species can be mitigated.

Given the above, it is our opinion that a SAR permit should not be necessary under the Endangered Species Act, as none of the SAR were detected during the site investigations and the site alterations (and possibly the buildings) could be constructed outside the peak season for SAR.

9.4 Construction Related Impacts

The main potential impacts associated with construction activities could include the following:

1. loss of natural vegetation;
2. erosion and sediment generated by exposed and/or disturbed soils during excavation and grading activities;
3. operation of equipment (e.g., noise and vibration) during the breeding period of local faunal species;
4. presence of construction debris and waste materials blowing into natural habitats;
5. potential fauna entering the work area during construction;
6. potential construction work impacting the deer wintering use to the east of

- the retained land parcel, and
7. sensitivity of the site with respect to imported fill materials, grading, altered areas and post construction rehabilitation of the ground surface.

Recommendations for mitigation of the above are presented in a following section.

10.0 Recommendations

10.1 General Mitigation

- The proposed warehouse and workshop are illustrated in Appendix A. The disturbance areas indicate where most machinery, excavating and surface alterations will occur. These areas will require protective measures to ensure the activities do not extend further than necessary, to limit potential impacts on surrounding vegetated areas.
- To mitigate for the site alterations and loss of cultural grass cover on the lot addition, ORE staff proposes a series of plantings along the lot boundary. According to the local municipal planning requirements, a 1.5 m wide agricultural zoning privacy screen must be maintained (September 20th, 2021 consolidated By-law No. 2018-58). ORE staff recommend a series of native tree plantings within this 1.5 m swath around the northern, eastern and southern lot edges. The plantings would secure the on-site soils in the post construction period and would provide a thin vegetation buffer between the row crop and downgradient Cavan Creek watershed system. The native trees would also act as a windscreen and identify the limit of the lot addition to reduce the potential for sprawl outside the lot boundary. Preferably, the tree row would consist of native White Spruce (*Picea glauca*) and planted approximately 3 m apart on the property line.
- In addition to the trees being planted around the edge of the proposed lot addition, ORE staff recommend in-filling the areas where the farming efforts imposed on the wetland fringe (and are currently devoid of trees and shrubs) with native trees, exposing the Cavan Creek watershed to the row crops and farming practices on-site. A series of plantings would occur within the openings and consist of native tree and shrub species that would improve the buffer between the proposed lot addition development, while not interfering with farming activities.
- The property owner shall provide a Planting Plan illustrating which native tree and shrub nursery stock species shall be planted within the specified planting areas outlined above. Nursery stock would be subject to availability at the time

of the planting and substitutions of similar species should be acceptable.

- All recommended erosion controls should be installed prior to any works on the property to ensure the sediments are contained on the lot addition. If the construction is to occur during the spring/summer months, a heavy-duty silt fence should be installed along the disturbance limits to ensure wildlife does not enter the work zone. If the work can be completed outside the April 1st to October 31st period, then a light-duty silt fence can be installed, instead. The silt fence will contain sediments within the construction zone and will also prevent construction debris (and waste materials) from blowing into natural areas.
- The trees to be planted in the above mentioned locations as part of a planting plan enhancement will help to stabilize the soils and buffer the Cavan Creek Wetland from the proposed lot addition development. Vegetation must be established on all bare soil areas at the end of the construction, and have taken/adhered to the ground surface before any of the additional controls (e.g., silt fence) can be removed. The Site Plan should illustrate how all surfaces/grades will be stabilized/finished and include all recommended erosion controls. The owner and contractor are reminded that other controls may be necessary, if silt fencing is deemed to be insufficient, based on the construction conditions. Construction should not proceed unless the proper controls are in place to prevent sediment from being released to sensitive areas, or off-site.
- Passive stormwater management controls should be incorporated into the development design. Examples include roof leaders being directed to an area where the flows will not gouge or destabilize soils over time. The warm flows from the roof leaders should be infiltrated into the ground, so as to reduce thermal impacts to the nearby natural waterways. The plan provided in Appendix A already includes such controls.

10.2 Construction Mitigation

- Proper erosion/sedimentation controls will be required at all times while heavy equipment is operating at the site. Heavy-duty silt fence (spring, summer and early fall period) should be installed along the construction limits as illustrated on Figure 7. Light-duty silt fence can be used outside those seasons. Bales of geotextile wrapped straw should be strategically placed inside the silt fence, especially, in areas where heavier sediment loads may occur during spring and summer storm activities. Examples of this would be at the edge of the property limits where runoff tends to drain when the lot has already been either filled and/or graded to drain radially towards the property edges. The bales can also be used at the corners of the silt fence for further stabilization. Construction should

not continue during heavy precipitation events to monitor the effectiveness of the controls and install more controls, if necessary. After any storm event, the fence, bales and other erosion controls should be checked to ensure their effectiveness. If the controls were not effective, the sediment transported to the other side of the controls should manually removed, and additional controls installed prior to the next storm event.

- The silt fence and hay bales provide a solution to mitigate sheet runoff, not concentrated flows. Therefore, if a concentrated flow results from construction, another type of erosion/sedimentation control, such as a rock check dam that incorporates both stone and geotextile filter cloth to prevent sediment laden runoff from entering the sensitive watercourse features, should be utilized.
- Only clean fill should be imported to the site. The fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species that could out-compete native species in the unnamed wetland or woodland. If imported topsoil is required, screened topsoil should be the only material applied to top-dress the fill.

The imported fill slopes prior to the limits of the setback should be at a reasonable grade (i.e., 3:1 or shallower), to ensure that materials do not erode past the limit once the heavy-duty silt fence has been removed. Any steeper embankment slopes proposed at the site would require the installation of slope stability controls, and should be incorporated into the final Grading Plans.

- To reduce potential post-construction sedimentation, the site should be quickly seeded or sodded to re-establish the root structure within the upper soils where areas have been disturbed and soils are exposed. Planting of native trees and shrubs is also encouraged at this stage (as per the Planting Plan recommendation). Once the seeding or sodding is determined to be a success and the soils are stable, the erosion/sedimentation controls can be removed.
- The property owner is responsible for the upkeep of the planted stock. If the stock dies within the first year of purchase, the property owner may still be able to obtain new stock from the nursery retailer. Most nurseries have a one (1) year warrantee provided proof of purchase and the dead stock is returned to the retailer. It may be beneficial to plant additional stock to compensate for any that die during the one year period. The compensatory plantings can be part of the overall landscaping plan in the post construction era. It should be possible to install the trees along the southern edge of the row crops in areas where row crops will never occur. The trees and/or shrubs would not be a hindrance to the farming efforts on-site.
- A deer wintering habitat has been detected within the LIO mapping database

60 m east of the retained lands eastern boundary. Considering the distance from the east boundary of the lot addition will be 300 m or more to the deer wintering area and that the lot addition would abut an industrial-type operation, it is highly unlikely the wintering deer would venture onto the lot addition for any part of their life cycle. In addition, the operational background noise of equipment and trucks entering the commercial portion of the property would also deter deer from utilizing the lot addition.

The only part of the construction that would occur during the fall to early winter months would be the vegetation clearing. That being said, the noise levels of the machinery clearing the lot addition area would be no different than those levels experienced throughout the year in the industrial-type area on the property. Therefore, wintering deer on the neighbouring parcel to the east should be unaffected by the construction on the proposed lot addition.

10.3 Species At Risk (SAR)

Only one (1) SAR was identified on-site during our inspections - Butternut. According to Figure 7, the nearest Butternut to the development is 240 m. The standard 50 m setbacks have been applied to the Butternut occurrences, and all of the setbacks fall well short of the proposed lot addition. Therefore, Butternut Health Assessments (BHAs) are not required and ORE staff have no further recommendations in this regard.

In regards to the Eastern Meadowlark sighting on the adjacent parcel to the west of County Road 10, there is nothing the proponent can do to improve conditions on-site for the Eastern Meadowlark. It appears to be content on this private parcel and the proposed lot addition will occur more than 200 m away from the habitat of this species. Therefore, impacts to the Eastern Meadowlark would be undetectable at this distance and no recommendations are necessary with respect to this species.

There is the potential for SAR turtles to access the site via the Cavan Creek Wetland. Therefore, mitigation in the form of the following shall apply:

- Conduct the majority of the construction outside the peak active window for turtle species (April 1st and October 31st each year), where possible. Heavy-duty silt fence not required.
- If the construction must occur during the above mentioned period, a heavy-duty silt fence shall be installed around the limit of construction denying turtles access to the lot addition during this highly sensitive period. The proposed heavy-duty silt fence is included in the list of SAR turtle and snake exclusionary fences in the provincial guidelines. A schematic of the

fence is provided in Appendix F.

In addition to the above, ORE recommends the following standard mitigation for potential SAR on-site:

- The proposed new buildings/structures on-site may provide surfaces for nesting Barn Swallows, which could be a net benefit to this species if the species inhabits the subject site in the future. In the event, the units do not provide suitable Barn Swallow habitat, or the proponent prefers the swallows have an alternative location, ORE recommends the installation of a communal barn swallow house on-site. The Barn Swallow house could either be erected within the lot addition or elsewhere on the Cavan Agri Services property.
- To mitigate the potential for impacts on nesting birds, vegetation (including non-maintained overgrown grass areas) cannot be cleared on the subject site between April 1st and July 31st, corresponding to the Migratory Bird Convention Act. Therefore, any remaining clearing, which should be very limited, must be completed before or after the above window. Maintaining this window will also prevent nesting avian from being flushed by the noise and vibration of heavy-duty construction equipment (ie. tandem dump trucks, bulldozers and excavators) during this sensitive period.

This window only applies to preparing the ground surface for construction. If the vegetation is cleared from the construction area and all erosion controls are installed, the building construction could resume during the spring and summer period.

- Provided the development is contained within the footprints illustrated by Figure 7, impacts should be undetectable to any SAR and other common/secure wildlife.

10.4 Closing Remarks

Considering the above, it is our opinion that the lot addition should be permitted, provided the mitigation measures recommended herein are adhered to. ORE staff recommends that the measures outlined in this report be included in the Site Plan and Planting Plan, and that a Mitigation Measures Agreement (or similar) should be formed with the Township. This ensures that the mitigation measures outlined in this sNHE are adhered to and that both parties can “sign-off” once the measures have been successfully implemented at the site.

The proponent should recognize that this report provides recommendations pertaining only to environmental issues. Other issues related to Land Use Planning, servicing

and/or Engineering may also need to be addressed with respect to any application(s) and/or development plans.

The proponent should obtain all required permits from the agencies prior to commencing any construction on-site. Failure to do so may result in delays and/or other liabilities.

****End of *Scoped* Natural Heritage Evaluation****

Yours truly,
Oakridge Environmental Limited

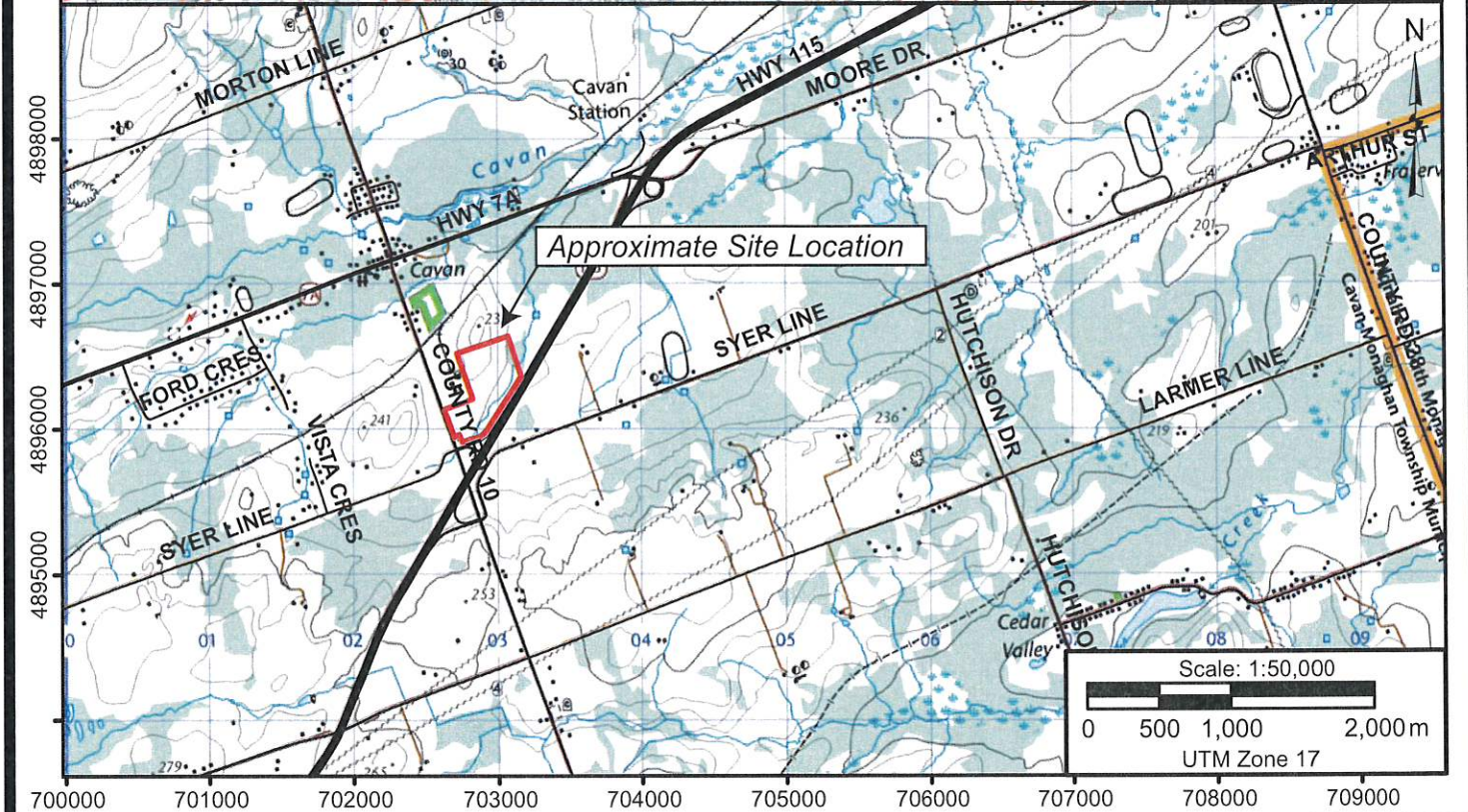
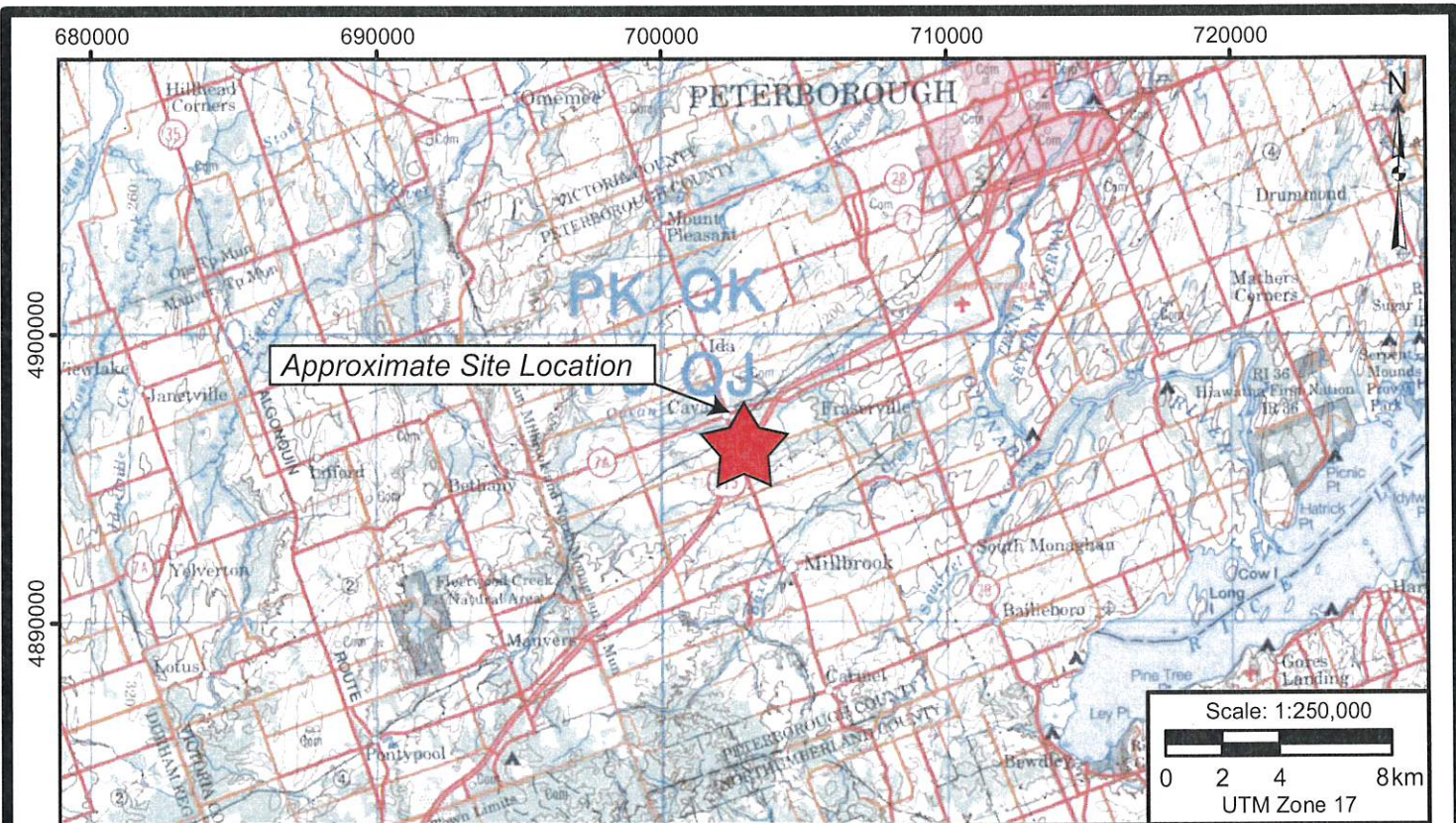
ORIGINAL SIGNED BY

Rob West, HBSc. CSEB
Senior Environmental Scientist

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Figures



Notes: Base maps provided by Natural Resources Canada, NTS maps 31-D (1998) and 31-D/1 (2011).

Scoped Natural Heritage Evaluation (sNHE)
Proposed Lot Addition, Cavan Agri Services
 1377 County Road No. 10, Cavan
 Part Lot 13, Concession 8 (Cavan)
 Township of Cavan Monaghan,
 County of Peterborough

North American Datum 1983

TITLE
General Location


















PROJECT #
21-2915
 DATE
December 2021

FIGURE NO.
1

**Scoped Natural Heritage Evaluation (sNHE)
Proposed Lot Addition,
Cavan Agri Services**
1377 County Road No. 10, Cavan
Part Lot 13, Concession 8 (Cavan)
Township of Cavan Monaghan,
County of Peterborough

LEGEND

-  Approximate Site Boundary
-  Proposed Severance Location
-  Unevaluated Wetland
-  Provincially Significant Wetland
-  Lot Fabric
-  Spot Height
-  Contour (5 m interval)
-  Building (symbol)
-  Building (to scale)
-  Railway
-  Road
-  Highway
-  Watercourse
-  Waterbody
-  Wooded Area

Notes: Base map provided by Land Information Ontario (2020).

Optimized for Oakridge Environmental Ltd. (ORE) printing.

TITLE

Topography & Drainage

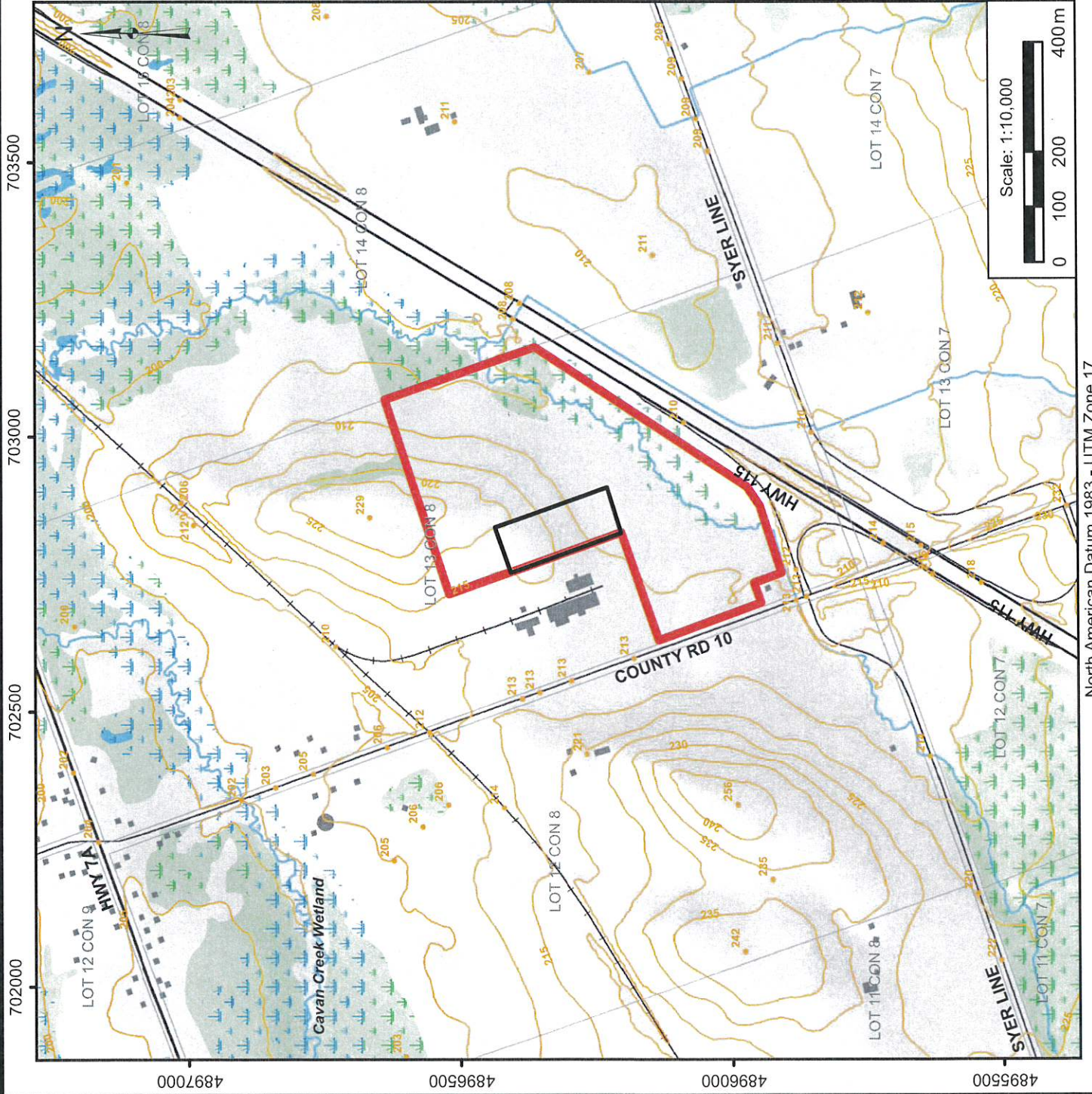


PROJECT #
21-2915

FIGURE NO.

DATE
December 2021

2



North American Datum 1983 - UTM Zone 17

**Scoped Natural Heritage Evaluation (sNHE)
Proposed Lot Addition,
Cavan Agri Services**
1377 County Road No. 10, Cavan
Part Lot 13, Concession 8 (Cavan)
Township of Cavan Monaghan,
County of Peterborough

LEGEND

- Approximate Site Boundary
- Proposed Severance Location
- Glacial Deposits (Till):**
- 5b Stone-poor, carbonate-derived silty to sandy till
- Glaciofluvial Deposits:**
- 7 Glaciofluvial deposits
- Fine-textured Glaciolacustrine Deposits:**
- 8a Massive-well laminated
- Coarse-textured Glaciolacustrine Deposits:**
- 9c Foreshore-basinal deposits
- 12 Older alluvial deposits
- 19 Modern alluvial deposits
- Geological Contact (approximate/assumed)
- Drumlin or Drumlinoid Ridges
- Railway
- Road
- Highway
- Watercourse
- Waterbody

TITLE

Surficial Geology

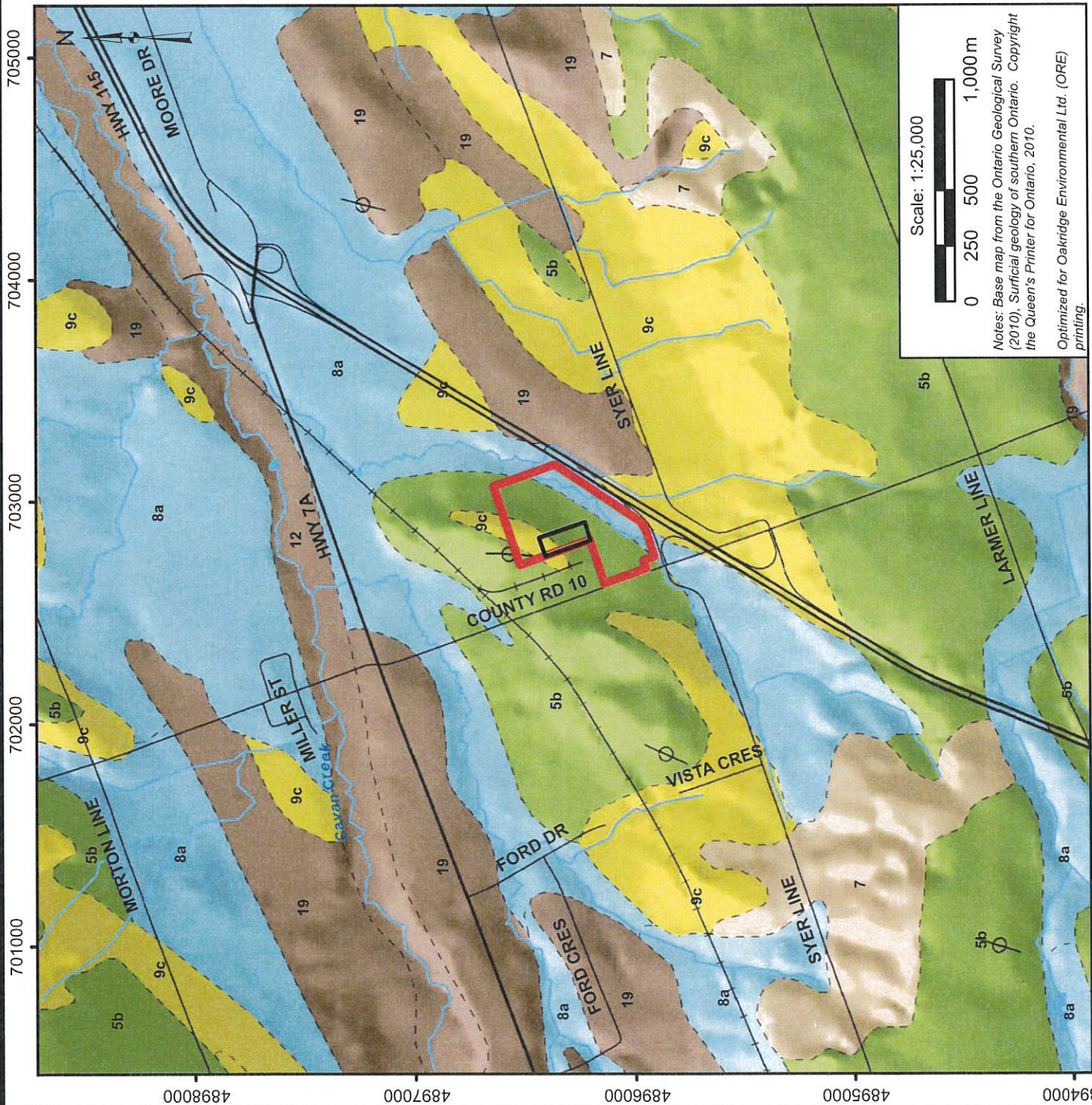


PROJECT #
21-2915

FIGURE NO.

DATE
December 2021

3



Scale: 1:25,000






Notes: Base map from the Ontario Geological Survey (2010). Surficial geology of southern Ontario. Copyright the Queen's Printer for Ontario, 2010.

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North American Datum 1983 - UTM Zone 17

**Scoped Natural Heritage Evaluation (sNHE)
Proposed Lot Addition,
Cavan Agri Services**
1377 County Road No. 10, Cavan
Part Lot 13, Concession 8 (Cavan)
Township of Cavan Monaghan,
County of Peterborough

LEGEND

-  Approximate Site Boundary
-  Proposed Severance Location
-  Mineral Cultural Meadow (CUM1)
-  Annual Row Crops (OAGM1)
-  Fencerow (TAGM5)
-  Dry - Fresh Sugar Maple Deciduous Forest (FOD5)
-  Cattail Mineral Shallow Marsh (MAS2-1)
-  Poplar - Conifer Mineral Mixed Swamp (SWM3-2)
-  Red-osier Dogwood Mineral Thicket Swamp (SWT2-5)/Willow Mineral Thicket Swamp (SWT2-2)
-  Watercourse (Open Aquatic, OAO)
-  Spot Height
-  Contour (5 m interval)
-  Road
-  Highway
-  Railway

TITLE

Vegetation

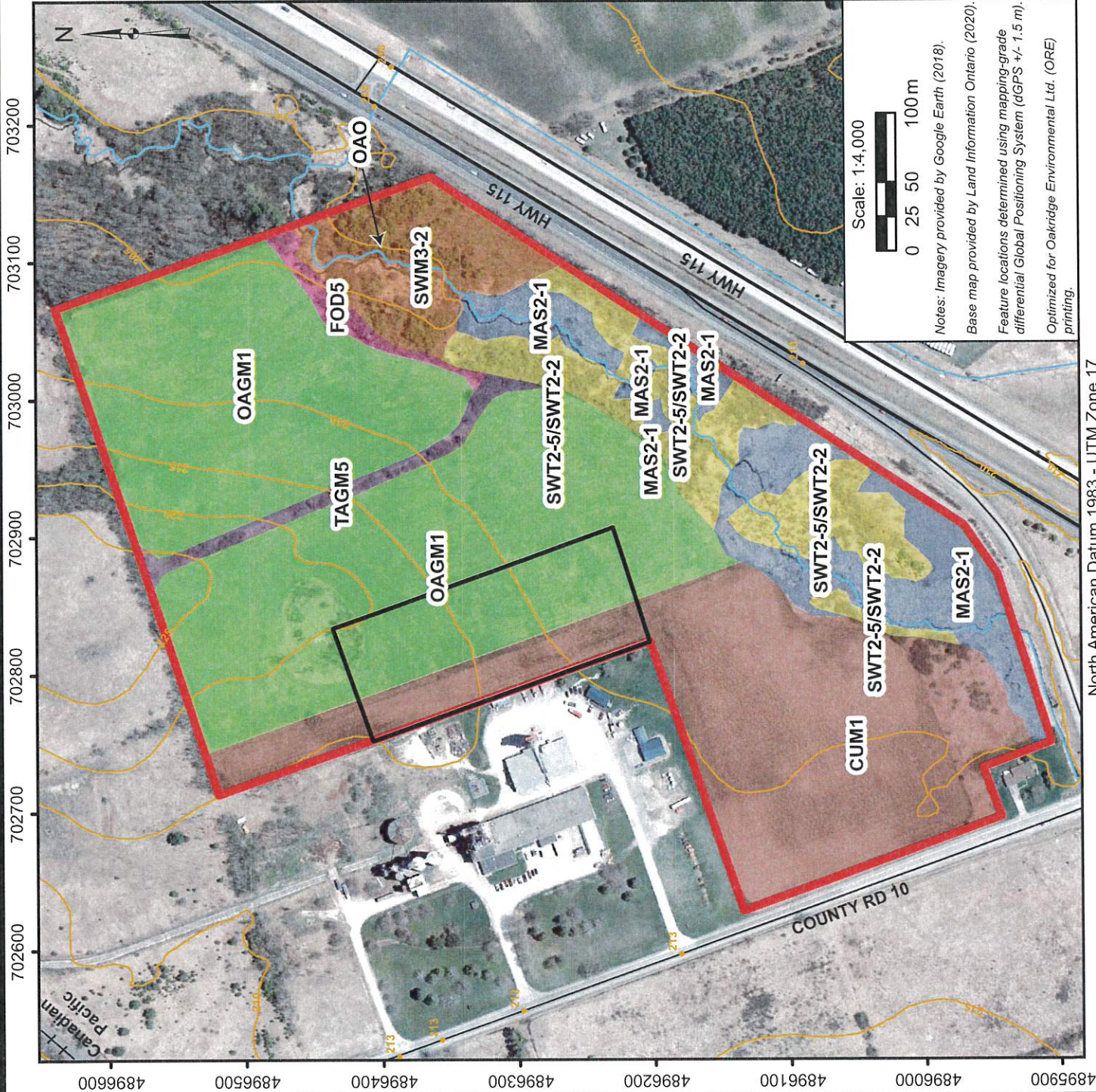


PROJECT #
21-2915

FIGURE NO.

4

DATE
December 2021



Scale: 1:4,000



Notes: Imagery provided by Google Earth (2018).
Base map provided by Land Information Ontario (2020).
Feature locations determined using mapping-grade differential Global Positioning System (dGPS +/- 1.5 m).
Optimized for Oakridge Environmental Ltd. (ORE) printing.

North American Datum 1983 - UTM Zone 17

Photo A (Right): Photo taken looking east along the agricultural field and wetland interface in the southern portion of the site.



Photo B (Left): Photo taken looking north from the southern wetland boundary limit towards the lot addition area in the background where the vehicles are located.



Photo C (Right): Photo taken looking east within the southern wetland feature. The tributary of Cavan Creek crosses the northern edge of the wetland feature in this photo.


	<p align="center">Scoped Natural Heritage Evaluation (sNHE) Proposed Lot Addition, Cavan Agri Services 1377 County Road No. 10, Cavan Part Lot 13, Concession 8 (Cavan) Township of Cavan Monaghan, County of Peterborough</p>	<p>TITLE Site Photos</p>	
		<p>PROJECT # 21-2915</p>	<p>FIGURE NO. 5</p>
		<p>DATE December 2021</p>	



Photo A (Left): Photo taken of Butternut in southeast corner of the site.



Photo B (Right): Photo of Butternut in northeastern portion of the property along the fencerow.



Photo C (Left): Photo taken looking west from the wetland boundary in the southeast corner of the property towards the commercial use area in the background where the lot addition is proposed.



Photo D (Left): Photo taken looking southeast of the proposed lot addition area (denuded area in forefront).

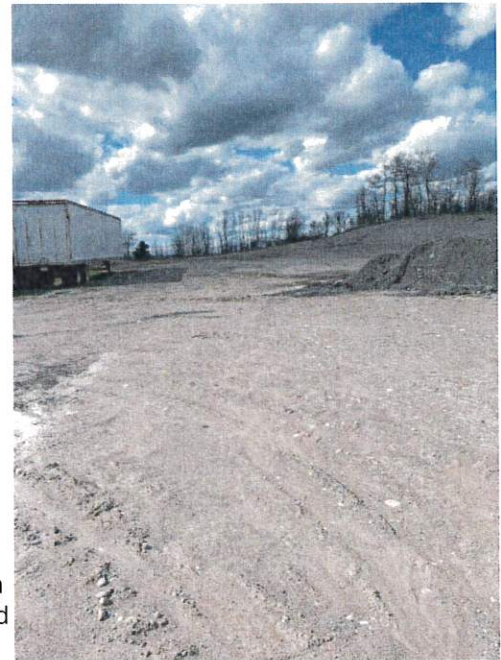



















Photo E (Right): Photo taken looking north of the proposed lot addition area.

	Scoped Natural Heritage Evaluation (sNHE) Proposed Lot Addition, Cavan Agri Services 1377 County Road No. 10, Cavan Part Lot 13, Concession 8 (Cavan) Township of Cavan Monaghan, County of Peterborough		TITLE Site Photos	
	 ORE Oakridge Environmental Ltd. Environmental and Hydrogeological Services		PROJECT # 21-2915	6
DATE December 2021			FIGURE NO.	

Scoped Natural Heritage Evaluation (sNHE)
Proposed Lot Addition,
Cavan Agri Services
 1377 County Road No. 10, Cavan
 Part Lot 13, Concession 8 (Cavan)
 Township of Cavan Monaghan,
 County of Peterborough

LEGEND

-  Approximate Site Boundary
-  Proposed Severance Location
-  Unevaluated Wetland
-  Provincially Significant Wetland
-  Wetland (ORE)
-  Wetland Setback (30 m)
-  Watercourse
-  Watercourse Setback (30 m)
-  Butternut
-  Butternut Setback (25 m, Setback subject to Butternut Health Assessment)
-  Eastern Meadowlark
-  Contour (5 m interval)
-  Spot Height
-  Road
-  Highway
-  Railway

TITLE

Constraints

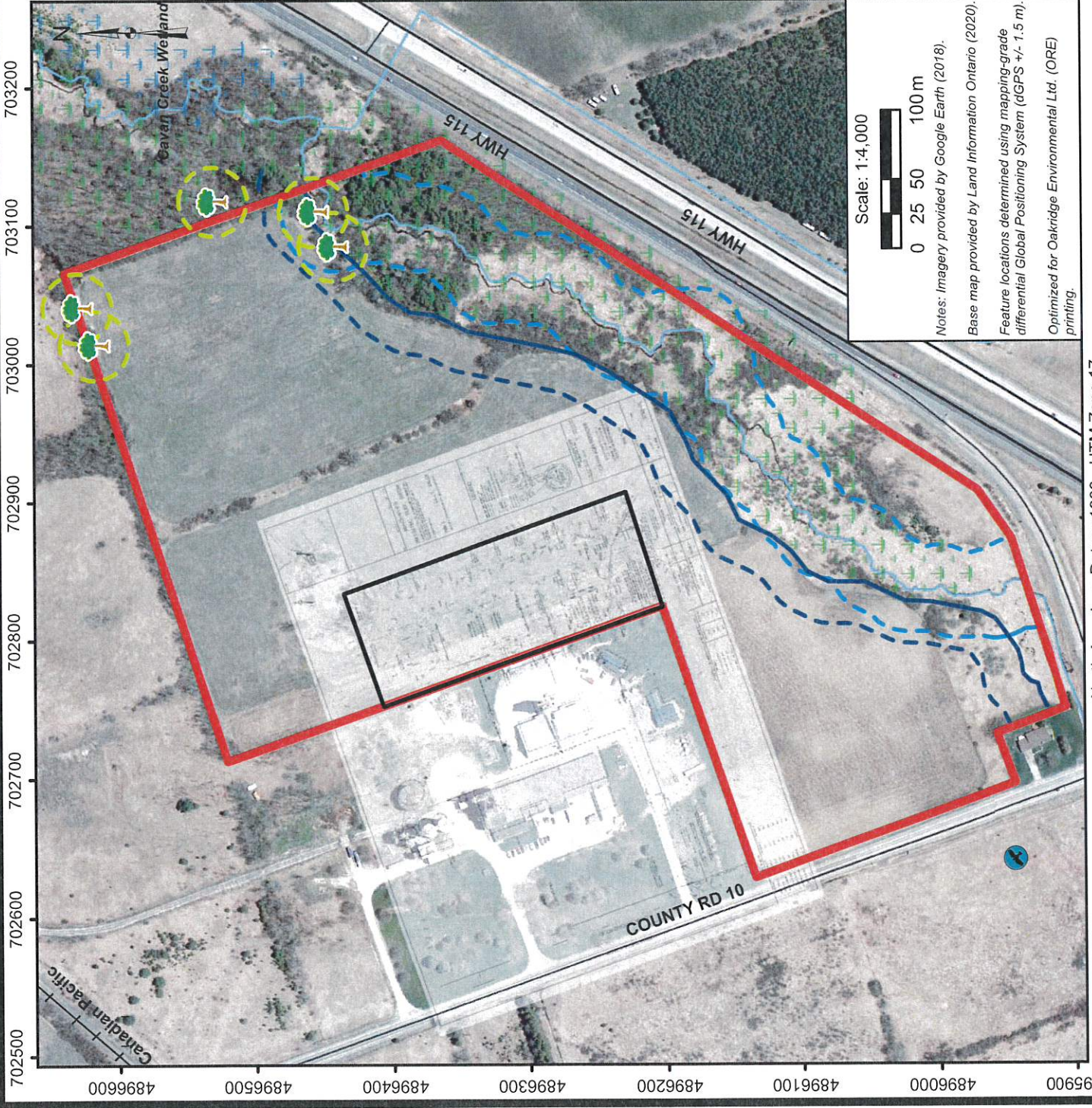


PROJECT #
21-2915

FIGURE NO.

DATE
December 2021

7



North American Datum 1983 - UTM Zone 17

Appendix A

Proponent's Site Plan

Appendix B

NHIC Data

NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1055759	SPECIES	Eastern Meadowlark	<i>Sturnella magna</i>		THR	THR	17QJ0295	
1055759	SPECIES	Bobolink	<i>Dolichonyx oryzivorus</i>		THR	THR	17QJ0295	

Bookmarks Pan Zoom In Zoom Out Initial View Previous Extent Next Extent



NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1055760	NATURAL AREA	Cavan Creek Wetlands					17QJ0296	
1055760	NATURAL AREA	Cavan Creek Wetland					17QJ0296	
1055760	SPECIES	Eastern Meadowlark	Sturnella magna	THR	THR		17QJ0296	
1055760	SPECIES	Snapping Turtle	Chelydra serpentina	SC	SC		17QJ0296	

Home

Navigation

Find Data

Markup and Printing



Bookmarks

Pan

Zoom In

Zoom Out

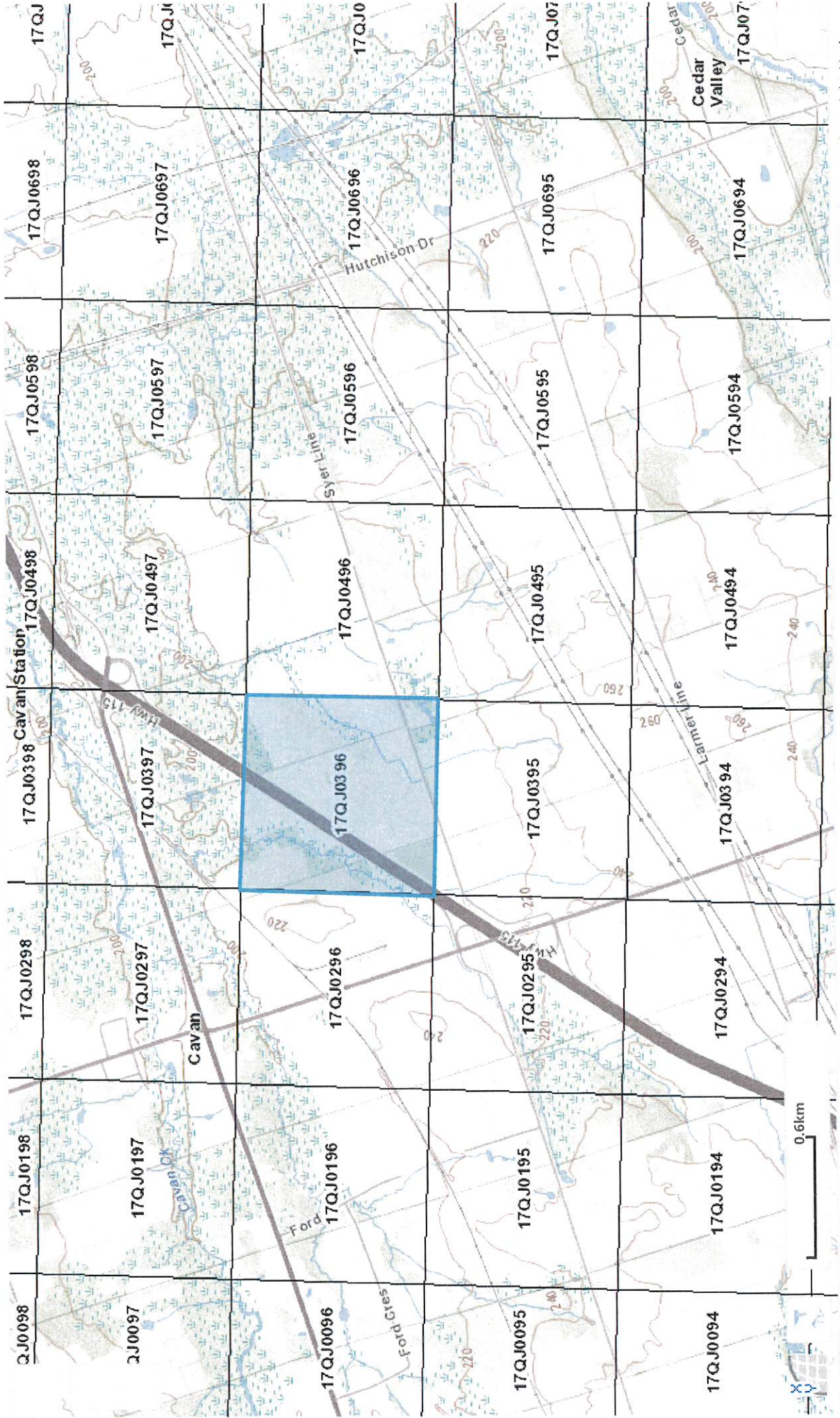
Initial View

Previous Extent

Next Extent



Tool Labels



NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1055770	NATURAL AREA	Cavan Creek Wetlands					17QJ0396	
1055770	NATURAL AREA	Cavan Creek Wetland					17QJ0396	
1055770	SPECIES	Eastern Meadowlark	Sturnella magna		THR		17QJ0396	
1055770	SPECIES	Snapping Turtle	Chelydra serpentina		SC		17QJ0396	

Bobolink (*Dolichonyx oryzivorus*) is listed as “Threatened” by *Species at Risk Ontario* (SARO) and is protected under the *Endangered Species Act* (ESA). The Bobolink prefers large tracts of tallgrass areas, either true prairies or hay fields, as it forages low to the ground in search of larvae and seeds.

Eastern Meadowlark (*Sturnella magna*) is listed as “Threatened” by SARO and is protected under the ESA. The Eastern Meadowlark is similar to Bobolink, as this species also prefers large tracts of agricultural fields or tallgrass prairies to nest within. Eastern Meadowlark is a ground nester, thus requires the tall grass to conceal its nest and eggs. Feeding includes beetles, crickets and spiders.

Snapping Turtle (*Chelydra serpentina*) is listed as “Special Concern” by SARO and is not protected under the ESA. Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid summer, females travel overland in search of a suitable nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dam and aggregate pits.

Appendix C

OBBA Data



**BIRDS CANADA
OISEAUX CANADA**

Square Summary (17TQJ09) [[change](#)]

	#species			#hours			#pc done		
	poss	prob	conf	total	total	peak	road	road	offrd
Curr.	41	29	11	81	18	6.5	0	0	0
Prev.	36	34	42	112	87.1	—			37

Region summary (#17: Northumberland, ON)

	#squares	#sq with data	#species	#squares (pc)	target	compl.
	41	44	173		41	1
	41	41	187		0	40

Target number of point counts in this square: 25 in total: 20 road side, 5 off road (Broadleaf Forest in 2, Mixed Forest in 3). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat. **Predef. completed:** [01]

SPECIES

	Prev. Code %	
	FY	AE
Canada Goose		65
Mute Swan		20
Trumpeter Swan		13
Wood Duck	FY	45
Blue-winged Teal §	FY	6
Northern Shoveler †		0
Gadwall		0
American Wigeon †		2
Mallard	FY	P 56
American Black Duck †		0
Northern Pintail †		0
Green-winged Teal †		2
Redhead †		0
Hooded Merganser		20
Common Merganser †		2
Red-breasted Merganser †		0
Ruddy Duck †		0

Wild Turkey	NE	D	70
Ruffed Grouse	FY	T	52
Ring-necked Pheasant †	H		6
Pied-billed Grebe			15
Rock Pigeon (Feral Pigeon)	AE	H	56
Mourning Dove	AE	T	90
Yellow-billed Cuckoo	H		27
Black-billed Cuckoo	H		38
Common Nighthawk \$	S		6
Eastern Whip-poor-will \$	V		20
Chimney Swift \$	H	H	15
Ruby-throated Hummingbird	H	H	34
King Rail †			0
Virginia Rail	A	FY	29
Sora	A		9
Common Gallinule \$			11

Prev. Code %

SPECIES			
American Coot †			0
Sandhill Crane †	H		6
Piping Plover †			0
Killdeer \$	FY	D	61
Upland Sandpiper †			6
American Woodcock	S		34
Wilson's Snipe	S	S	13
Spotted Sandpiper	H	H	29
Ring-billed Gull \$			2
Herring Gull \$			2
Great Black-backed Gull †			0
Caspian Tern †			0
Black Tern †			2
Common Tern \$ †			2
Common Loon	H		6
Double-crested Cormorant \$			9
American Bittern	S	S	22
Least Bittern †			9
Great Blue Heron \$	H		25
Great Egret †			2
Green Heron \$	H	H	38
Black-crowned Night-Heron †			4
Turkey Vulture	P	H	61

Osprey	V	AE	31
Northern Harrier	T	V	27
Sharp-shinned Hawk	H		9
Cooper's Hawk	H		18
Northern Goshawk ‡			2
Bald Eagle ‡			2
Red-shouldered Hawk	H	H	43
Broad-winged Hawk	DD	H	47
Red-tailed Hawk	A		11
Eastern Screech-Owl			

SPECIES **Prev. Code %**

Great Horned Owl	H	H	25
Barred Owl	S		22
Long-eared Owl ‡			0
Northern Saw-whet Owl			0
Belted Kingfisher	T	P	68
Yellow-bellied Sapsucker	A	T	61
Red-headed Woodpecker †			22
Red-bellied Woodpecker		T	70
Downy Woodpecker	N	S	70
Hairy Woodpecker	N	S	75
Pileated Woodpecker	H	H	68
Northern Flicker	AE	T	79
American Kestrel §	P	H	54
Merlin			29
Peregrine Falcon ‡			4
Olive-sided Flycatcher §			0
Eastern Wood-Pewee §	D	S	72
Yellow-bellied Flycatcher ‡			0
Alder Flycatcher	S	S	61
Willow Flycatcher	A	S	31
Least Flycatcher	T	S	34
Eastern Phoebe	N	T	63
Great Crested Flycatcher	T	S	75
Eastern Kingbird	D	P	75
Yellow-throated Vireo ‡			2
Blue-headed Vireo			20
Warbling Vireo	P	T	72
Red-eyed Vireo	NE	S	81
Golden-crowned Kinglet †			0

Blue Jay	A	H	84
American Crow	CF	H	90
Common Raven		H	68
Black-capped Chickadee	A	T	88

Breeding Bird Atlas - Summary Sheet for Square 17TQJ09 (page 2 of 2)

SPECIES	Prev. Code %	
	FY	S
Horned Lark \$	13	
Northern Rough-winged Swallow		29
Purple Martin \$	13	
Tree Swallow	NY	AE 72
Bank Swallow \$	AE	13
Barn Swallow \$	CF	H 72
Cliff Swallow \$	N	20
Golden-crowned Kinglet		11
Red-breasted Nuthatch	S	T 56
White-breasted Nuthatch	FY	S 72
Brown Creeper	H	S 25
Blue-gray Gnatcatcher		2
House Wren	AE	T 81
Winter Wren	S	S 34
Sedge Wren †		2
Marsh Wren	S	H 34
Carolina Wren †		11
European Starling	AE	CF 84
Gray Catbird	A	A 75
Brown Thrasher	A	T 77
Northern Mockingbird †		9
Eastern Bluebird	CF	CF 56
Veery	S	S 59
Hermit Thrush	A	13
Wood Thrush \$	NY	S 65
American Robin	NY	CF 90
Cedar Waxwing	FY	H 68
House Sparrow	CF	T 50
House Finch	S	S 25
Purple Finch	A	S 36
Red Crossbill †		0
White-winged Crossbill †		4
Pine Siskin †		2
SPECIES	Prev. Code %	
American Goldfinch	T	FY 84
Grasshopper Sparrow \$	CF	47
Chipping Sparrow	CF	T 81
Clay-colored Sparrow	S	25

<u>Field Sparrow</u> §	CF	70
Dark-eyed Junco †		0
<u>White-throated Sparrow</u>	A	50
Vesper Sparrow	CF T	47
Savannah Sparrow	FY T	70
Song Sparrow	FY T	95
Lincoln's Sparrow †		0
Swamp Sparrow	S T	56
Eastern Towhee §	S	45
Bobolink §	P S	56
<u>Eastern Meadowlark</u> §	CF NB	70
Orchard Oriole		18
Baltimore Oriole	CF T	81
Red-winged Blackbird	CF CF	90
Brown-headed Cowbird	P T	65
Common Grackle	CF CF	86
Ovenbird	NY	63
Louisiana Waterthrush †		0
Northern Waterthrush	A S	40
Golden-winged Warbler †	V	11
Blue-winged Warbler		25
Black-and-white Warbler	A S	59
Nashville Warbler	H	31
Mourning Warbler	S S	38
Common Yellowthroat	DD T	84
Hooded Warbler †		0
<u>American Redstart</u>	P	70
Cerulean Warbler †		0
Northern Parula †		0
SPECIES	Prev. Code %	
Magnolia Warbler	S	11
Blackburnian Warbler		11
<u>Yellow Warbler</u>	DD T	75
<u>Chestnut-sided Warbler</u>	S	52
Black-throated Blue Warbler		18
Pine Warbler	S	61
Yellow-rumped Warbler		22
Black-throated Green Warbler	A	47
Canada Warbler §		20
Scarlet Tanager	A	45

Northern Cardinal

Rose-breasted Grosbeak

Indigo Bunting

FY	T	84
N	S	68
S	S	75

This list includes all breeding species expected in the region #17 (Northumberland). Underlined species are those that you should try to add to this square (17TQJ09). They have not yet been reported in this square, but have been reported in more than 50% of the squares in this region so far. "Prev." is the code for the highest breeding evidence for that species in square 17TQJ09 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TQJ09 over the last 5 years. The % columns give the percentage of squares in that region where that species was reported (this gives an idea of the expected chance of finding that species in region #17). Rare/Colonial Species Report Forms should be completed for species marked: † (Species of interest), ‡ (regionally rare), † (provincially rare). An up-to-date version of this sheet is available from <https://www.birdscanada.org/birdmon/atlas/summaryform.jsp?squareID=17TQJ09&lang=EN>

Data current as of **29/11/2021 06:59**.

Bank Swallow (*Riparia riparia*) is listed as “Threatened” by *Species at Risk Ontario* (SARO) and is protected under the *Endangered Species Act* (ESA). This avian species nests in burrows into the banks of silt and sand deposits. Nests tend to be found on the shorelines of rivers and lakes. The Bank Swallow may also inhabit sand and gravel pits. Typically, this species forages on insects in flight, but will also glean insects off the water.

Barn Swallow (*Hirundo rustica*) is listed as “Threatened” by SARO and is protected under the ESA. The Barn Swallow inhabits open-rural and urban sites where buildings are situated near watercourses. Nesting is typically sporadic within loose colonies on building structures, bridges and other suitable overhanging structures. The cup-like mud nest is adhered to areas beneath the roof of the structure to conceal the nest from predators and keep it dry. The Barn Swallow feeds on insects by catching them on the wing.

Bobolink (*Dolichonyx oryzivorus*) is listed as “Threatened” by SARO and is protected under the ESA. The Bobolink prefers large tracts of tallgrass areas, either true prairies or hay fields, as it forages low to the ground in search of larvae and seeds.

Chimney Swift (*Chaetura pelagica*) is listed as “Threatened” by SARO and is protected under the ESA. The Chimney Swift is a somewhat generalist species. It will utilize empty cavity nests found in dead trees within fencerows or may utilize unused chimneys as suggested by its common name. This species is most active in early morning and early evening (i.e., dawn and dusk). It will venture outside of the nesting area and feast on insects during those times. It then flies back to the nesting site, entering the nest one after another in an orderly funnel-shaped sequence.

Common Nighthawk (*Chordeiles minor*) is listed as “Special Concern” by SARO, and is not protected under the ESA. The Common Nighthawk is part of the Nightjar family which prefers forest openings, bogs and sometimes open field/meadow areas. Nesting is on bare ground where both adults feed the young. Feeding can take place during day or night, while the species constantly forages for all types of insects.

Eastern Meadowlark (*Sturnella magna*) is listed as “Threatened” by SARO and is protected under the ESA. The Eastern Meadowlark is similar to Bobolink, as this species also prefers large tracts of agricultural fields or tallgrass prairies to nest within. Eastern Meadowlark is a ground nester, thus requires the tall grass to conceal its nest and eggs. Feeding includes beetles, crickets and spiders.

Eastern Whip-poor-will (*Anthrostomus vociferus*) is listed as “Threatened” by SARO and is protected under the ESA. The Whip-poor-will prefers a combination of large

natural tracts of secondary succession forest, watercourses and edge habitat consisting of meadow areas, with open deciduous and pine woodlands. The Whip-poor-will does not construct a nest, but rather uses the soft leaf litter on the ground to form a nest and lay the eggs directly on the ground. The Whip-poor-will is a nighttime hunter, calling its own name while searching for large flying insects, beetles, moths, mosquitos and sometimes grasshoppers. The Whip-poor-will often choose pine species adjacent to waterways to call from.

Eastern Wood-Pewee (*Contopus virens*) is listed as "Special Concern" by SARO and is not protected under the ESA. This species prefers mixed deciduous and coniferous woodlands which are open or considered edge habitat. Nesting occurs on a tree branch as the species catches insects from a perch.

Golden-winged Warbler (*Vermivora chrysoptera*) is listed as "Special Concern" by SARO and is not protected under the ESA. The Golden-winged Warbler prefers woodland edge habitat with young successional tree species and moist shrubby fields. This species gleans insects on shrubs and the forest floor and nesting occurs on the ground.

Grasshopper Sparrow (*Ammodramus savannarum*) is listed as "Special Concern" by SARO and is not protected under the ESA. The Grasshopper Sparrow prefers large (greater than 5 ha) grassland habitats where it breeds. Grassland habitats include pastures, hayfields, natural prairies, alvars. Nests are typically hidden within the grassland and its preferred diet in the summer is large insects (i.e., Grasshoppers).

Wood Thrush (*Hylocichia mustelina*) is listed as "Special Concern" by SARO and is protected under the ESA. The Wood Thrush enjoys relatively undisturbed, mature woodlands. Nesting occurs low in the fork of a tree as this species forages for berries and insects at ground level. Similar to the Eastern Wood-Pewee, this species prefers large tracts of woodland.

Appendix D

eBird Data

[Change location](#) ▼

[Year-round, All years](#) ▼

Millbrook CA

[Peterborough County](#)

[\(/region/CA-ON-PB?](#)

[yr=all&m=\)](#)

[Ontario \(/region/CA-ON?](#)

[yr=all&m=\)](#)

[CA \(/region/CA?yr=all&m=\)](#)

[Map\(/hotspots?hs=L1655275&yr=all&m=\)](#)

[Directions\(https://www.google.com/maps/search/?api=1&query=44.1492506,-78.4480704\)](#)

▶ [Hotspot navigation](#)

[Overview \(/hotspot/L1655275?yr=all&m=\)](#)

[Illustrated Checklist \(/hotspot/L1655275/media?yr=all&m=\)](#)

VIEW MY...

[My eBird \(/myebird/L1655275\)](#)

[Life List \(/lifelist/L1655275\)](#)

[Target Species \(/targets?r1=L1655275&bmo=1&emo=12\)](#)

[Checklists \(/mychecklists/L1655275\)](#)

EXPLORE...

[Hotspot Map \(/hotspots?hs=L1655275&yr=all&m=\)](#)

[Bar Charts \(/barchart?r=L1655275&yr=all&m=\)](#)

[Media \(https://ebird.org/media/catalog?regionCode=L1655275\)](#)

[Printable Checklist \(/printableList?regionCode=L1655275&yr=all&m=\)](#)

117

[Species observed](#)

[\(/hotspot/L1655275?yr=all&m=\)](#)

81

[Complete checklists](#)

[\(/hotspot/L1655275/activity?yr=all&m=\)](#)

Sightings

Updated 11 sec ago.

[Last seen \(/hotspot/L1655275?yr=all&m=&rank=mrec\)](#)

[First seen \(/hotspot/L1655275?yr=all&m=&rank=lrec\)](#)

[High counts \(/hotspot/L1655275?yr=all&m=&rank=hc\)](#)

Show all details Sort by ▼

[SPECIES NAME \(/HOTSPOT/L1655275?YR=ALL&M=&RANK=MREC&HS_SORTBY=TAXON_ORDER&HS_O=ASC\)](#)





[COUNT \(/HOTSPOT/L1655275?](#) [DATE \(/HOTSPOT/L1655275?](#) [OBSERVER](#)
[YR=ALL&M=&RANK=MREC&HS_SORTBY=COUNT&RANK=OBSERVER](#) [HS_SORTBY=DATE&HS_O=ASC\)](#)















1. [Canada Goose\(/species/cango/L1655275\)](#)



































120





































14 Nov 2021 [\(/checklist/S97575401\)](#)

• Dan Chronwin





















11. **Mallard(/species/mallar3/L1655275)**
7  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
12. **Mourning Dove(/species/moudov/L1655275)**
1  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
13. **Ring-billed Gull(/species/ribgul/L1655275)**
X  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
- gull sp.
300  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
14. **Blue Jay(/species/blujay/L1655275)**
4  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
15. **American Crow(/species/amecro/L1655275)**
2  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
16. **Common Raven(/species/comrav/L1655275)**
1  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
17. **Black-capped Chickadee(/species/bkcchi/L1655275)**
10  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
18. **White-breasted Nuthatch(/species/whbnut/L1655275)**
2  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
19. **Purple Finch(/species/purfin/L1655275)**
1  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
20. **American Goldfinch(/species/amegfi/L1655275)**
4  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
21. **Dark-eyed Junco(/species/daejun/L1655275)**
3  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
22. **White-throated Sparrow(/species/whtspa/L1655275)**
5  14 Nov 2021 (/checklist/S97575401)  Dan Chronowic
23. **Brown Creeper(/species/brncre/L1655275)**
1  11 Nov 2021 (/checklist/S97429833)  Luke Berg
24. **American Robin(/species/amerob/L1655275)**
15  11 Nov 2021 (/checklist/S97429833)  Luke Berg
25. **Greater Yellowlegs(/species/greyel/L1655275)**
1  1 Sep 2021 (/checklist/S94023690)  C Douglas
26. **Double-crested Cormorant(/species/doccor/L1655275)**
1  1 Sep 2021 (/checklist/S94023690)  C Douglas
27. **Great Blue Heron(/species/arbher3/L1655275)**

- # 1  [1 Sep 2021 \(/checklist/S94023690\)](/checklist/S94023690)  C Douglas
19. **Belted Kingfisher(/species/belkin1/L1655275)**
2  [1 Sep 2021 \(/checklist/S94023690\)](/checklist/S94023690)  C Douglas
20. **Spotted Sandpiper(/species/sposan/L1655275)**
1  [17 Aug 2021 \(/checklist/S93397216\)](/checklist/S93397216)  Luke Berg
21. **Killdeer(/species/killde/L1655275)**
1  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
22. **Warbling Vireo(/species/warvir/L1655275)**
1  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
23. **Tree Swallow(/species/treswa/L1655275)**
1  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
24. **Chipping Sparrow(/species/chispa/L1655275)**
1  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
25. **Swamp Sparrow(/species/swaspa/L1655275)**
1  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
26. **Red-winged Blackbird(/species/rewbla/L1655275)**
1  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
27. **Common Grackle(/species/comgra/L1655275)**
2  [11 Jun 2021 \(/checklist/S89991686\)](/checklist/S89991686)  Patrick Kramer
28. **Song Sparrow(/species/sonspa/L1655275)**
1  [4 Jun 2021 \(/checklist/S89595785\)](/checklist/S89595785)  Patrick Kramer
29. **American Redstart(/species/amerred/L1655275)**
1  [4 Jun 2021 \(/checklist/S89595785\)](/checklist/S89595785)  Patrick Kramer
- finch sp.
1  [3 Jun 2021 \(/checklist/S89560353\)](/checklist/S89560353)  Terri Burke
30. **Baltimore Oriole(/species/balori/L1655275)**
2  [14 May 2021 \(/checklist/S88128891\)](/checklist/S88128891)  Rena Sherring
- crow/raven sp.
1  [12 May 2021 \(/checklist/S87903536\)](/checklist/S87903536)  Terri Burke
- swallow sp.
2  [12 May 2021 \(/checklist/S87903536\)](/checklist/S87903536)  Terri Burke
31. **Hooded Merganser(/species/hoomer/L1655275)**
3  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
32. **Chimney Swift(/species/chiswi/L1655275)**


- # 2  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
33. **[Solitary Sandpiper\(/species/solsan/L1655275\)](/species/solsan/L1655275)**
1  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
34. **[Turkey Vulture\(/species/turvul/L1655275\)](/species/turvul/L1655275)**
5  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
35. **[Downy Woodpecker\(/species/dowwoo/L1655275\)](/species/dowwoo/L1655275)**
1  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
36. **[Northern Rough-winged Swallow\(/species/nrwsa/L1655275\)](/species/nrwsa/L1655275)**
2  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
37. **[Barn Swallow\(/species/barswa/L1655275\)](/species/barswa/L1655275)**
8  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
38. **[European Starling\(/species/eursta/L1655275\)](/species/eursta/L1655275)**
10  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
39. **[Black-and-white Warbler\(/species/bawwar/L1655275\)](/species/bawwar/L1655275)**
1  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
40. **[Palm Warbler\(/species/palwar/L1655275\)](/species/palwar/L1655275)**
1  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
41. **[Yellow-rumped Warbler\(/species/yerwar/L1655275\)](/species/yerwar/L1655275)**
8  [5 May 2021 \(/checklist/S87157168\)](/checklist/S87157168)  Scott McKinlay
42. **[Pileated Woodpecker\(/species/pilwoo/L1655275\)](/species/pilwoo/L1655275)**
1  [24 Apr 2021 \(/checklist/S86244735\)](/checklist/S86244735)  Robert Maciver
43. **[Northern Cardinal\(/species/norcar/L1655275\)](/species/norcar/L1655275)**
1  [24 Apr 2021 \(/checklist/S86244735\)](/checklist/S86244735)  Robert Maciver
44. **[American Tree Sparrow\(/species/amtspa/L1655275\)](/species/amtspa/L1655275)**
2  [17 Apr 2021 \(/checklist/S85767724\)](/checklist/S85767724)  Phyllis McNally
45. **[Eastern Bluebird\(/species/easblu/L1655275\)](/species/easblu/L1655275)**
2  [14 Apr 2021 \(/checklist/S85558045\)](/checklist/S85558045)  Phyllis McNally
46. **[Green-winged Teal\(/species/gnwtea/L1655275\)](/species/gnwtea/L1655275)**
2  [4 Apr 2021 \(/checklist/S84765435\)](/checklist/S84765435)  Ken Fulsang
47. **[Eastern Phoebe\(/species/easpho/L1655275\)](/species/easpho/L1655275)**
1  [4 Apr 2021 \(/checklist/S84765435\)](/checklist/S84765435)  Ken Fulsang
48. **[Wood Duck\(/species/wooduc/L1655275\)](/species/wooduc/L1655275)**
1  [27 Mar 2021 \(/checklist/S84180728\)](/checklist/S84180728)  Scott McKinlay
49. **[Bufflehead\(/species/buffle/L1655275\)](/species/buffle/L1655275)**
1  [27 Mar 2021 \(/checklist/S84180728\)](/checklist/S84180728)  Scott McKinlay

50. **American Woodcock(/species/amewoo/L1655275)**
 # 1  [13 Mar 2021 \(/checklist/S83337290\)](#)  Scott McKinlay
51. **House Finch(/species/houfin/L1655275)**
 # 1  [13 Mar 2021 \(/checklist/S83337290\)](#)  Scott McKinlay
52. **Rock Pigeon(/species/rocpig/L1655275)**
 # 5  [16 Oct 2020 \(/checklist/S74892017\)](#)  Matthew Tobey
53. **Northern Flicker(/species/norfli/L1655275)**
 # 1  [21 Sep 2020 \(/checklist/S74359273\)](#)  Ken Fulsang
54. **Great Egret(/species/greegr/L1655275)**
 # 1  [18 Sep 2020 \(/checklist/S73878958\)](#)  Scott Gibson
55. **Blue-winged Teal(/species/buwtea/L1655275)**
 # 2  [17 Sep 2020 \(/checklist/S73718022\)](#)  Luke Berg
56. **Pied-billed Grebe(/species/pibgre/L1655275)**
 # 1  [17 Sep 2020 \(/checklist/S73718022\)](#)  Luke Berg
57. **Black-throated Blue Warbler(/species/btbwar/L1655275)**
 # 1  [17 Sep 2020 \(/checklist/S73718022\)](#)  Luke Berg
58. **Broad-winged Hawk(/species/brwhaw/L1655275)**
 # 1  [7 Sep 2020 \(/checklist/S73310561\)](#)  Robert Maciver
 Bay-breasted/Blackpoll Warbler
 # 2  [7 Sep 2020 \(/checklist/S73310561\)](#)  Robert Maciver
59. **Green Heron(/species/grnher/L1655275)**
 # 1  [17 Jul 2020 \(/checklist/S71588702\)](#)  Dan Chronowic
60. **House Wren(/species/houwre/L1655275)**
 # 2  [17 Jul 2020 \(/checklist/S71588702\)](#)  Dan Chronowic
61. **Common Yellowthroat(/species/comyel/L1655275)**
 # 1  [17 Jul 2020 \(/checklist/S71588702\)](#)  Dan Chronowic
62. **Red-eyed Vireo(/species/reevir1/L1655275)**
 # 1  [17 Jun 2020 \(/checklist/S70527707\)](#)  Drew Monkman
63. **Bank Swallow(/species/banswa/L1655275)**
 # 2  [7 May 2020 \(/checklist/S68566385\)](#)  Dave Milsom
64. **Cliff Swallow(/species/cliswa/L1655275)**
 # 2  [7 May 2020 \(/checklist/S68566385\)](#)  Dave Milsom
65. **Yellow Warbler(/species/yelwar/L1655275)**
 # 1  [7 May 2020 \(/checklist/S68566385\)](#)  Dave Milsom
66. **American Black Duck(/species/ambduc/L1655275)**
 # 1  [13 Mar 2021 \(/checklist/S83337290\)](#)  Scott McKinlay



- # 2  12 Nov 2019 (</checklist/Sb1394822>)  Ben Taylor
67. **Cackling Goose(/species/cacgoo1/L1655275)**
1  6 Nov 2019 (</checklist/S61234731>)  Ben Taylor
68. **Common Nighthawk(/species/comnig/L1655275)**
1  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
69. **Yellow-bellied Sapsucker(/species/yebsap/L1655275)**
2  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
70. **Eastern Wood-Pewee(/species/eawpew/L1655275)**
1  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
- flycatcher sp. (Tyrannidae sp.)
2  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
71. **Gray Catbird(/species/grycat/L1655275)**
2  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
72. **Chestnut-sided Warbler(/species/chswar/L1655275)**
1  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
73. **Black-throated Green Warbler(/species/btnwar/L1655275)**
1  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
74. **Rose-breasted Grosbeak(/species/robgro/L1655275)**
2  2 Sep 2019 (</checklist/S59472057>)  Dan Chronowic
75. **Cedar Waxwing(/species/cedwax/L1655275)**
6  24 Aug 2019 (</checklist/S59229310>)  Jacek Mlynarek
76. **Blackburnian Warbler(/species/bkbwar/L1655275)**
1  24 May 2019 (</checklist/S56692060>)  Matthew Tobey
77. **Golden-crowned Kinglet(/species/gockin/L1655275)**
3  20 Oct 2018 (</checklist/S49325650>)  Dan Chronowic
78. **Merlin(/species/merlin/L1655275)**
1  23 Sep 2018 (</checklist/S48705484>)  Bill Crins
79. **Pine Siskin(/species/pinsis/L1655275)**
1  23 Sep 2018 (</checklist/S48705484>)  Bill Crins
80. **Common Merganser(/species/commer/L1655275)**
3  26 Apr 2018 (</checklist/S44969961>)  Lisa Stefaniak
81. **Osprey(/species/osprey/L1655275)**
1  26 Apr 2018 (</checklist/S44969961>)  Lisa Stefaniak
82. **Red-bellied Woodpecker(/species/rebwoo/L1655275)**
1  26 Apr 2018 (</checklist/S44969961>)  Lisa Stefaniak

83. **Red-breasted Nuthatch(/species/rednut/L1655275)**
 # 2  [26 Apr 2018 \(/checklist/S44969961\)](#)  Lisa Stefaniak
84. **Trumpeter Swan(/species/truswa/L1655275)**
 # 2  [3 Mar 2018 \(/checklist/S43339773\)](#)  Lisa Stefaniak
85. **Least Sandpiper(/species/leasan/L1655275)**
 # 3  [18 May 2017 \(/checklist/S39000703\)](#)  Matthew Tobey
86. **Least Flycatcher(/species/leafly/L1655275)**
 # 1  [18 May 2017 \(/checklist/S39000703\)](#)  Matthew Tobey
87. **Great Crested Flycatcher(/species/grcfly/L1655275)**
 # 5  [18 May 2017 \(/checklist/S39000703\)](#)  Matthew Tobey
88. **Eastern Kingbird(/species/easkin/L1655275)**
 # 3  [18 May 2017 \(/checklist/S39000703\)](#)  Matthew Tobey
89. **Ovenbird(/species/ovenbi1/L1655275)**
 # 2  [18 May 2017 \(/checklist/S39000703\)](#)  Matthew Tobey
90. **Ruffed Grouse(/species/rufgro/L1655275)**
 # 1  [15 May 2017 \(/checklist/S38051706\)](#)  Rene Gareau
91. **Brown-headed Cowbird(/species/bnhcow/L1655275)**
 # 6  [15 May 2017 \(/checklist/S38051706\)](#)  Rene Gareau
92. **Lesser Yellowlegs(/species/lesyel/L1655275)**
 # 3  [10 May 2017 \(/checklist/S36717471\)](#)  Anonymous eBirder
93. **Hairy Woodpecker(/species/haiwoo/L1655275)**
 # 1  [2 Oct 2016 \(/checklist/S31854053\)](#)  Michael Light
94. **White-crowned Sparrow(/species/whcspa/L1655275)**
 # 2  [2 Oct 2016 \(/checklist/S31854053\)](#)  Michael Light
- sparrow sp.
 # 6  [2 Oct 2016 \(/checklist/S31854053\)](#)  Michael Light
95. **Ruby-crowned Kinglet(/species/ruckin/L1655275)**
 # 1  [13 May 2016 \(/checklist/S29610589\)](#)  Iain Rayner
96. **Winter Wren(/species/winwre3/L1655275)**
 # 1  [13 May 2016 \(/checklist/S29610589\)](#)  Iain Rayner
97. **Common Loon(/species/comloo/L1655275)**
 # 1  [11 Oct 2015 \(/checklist/S25376128\)](#)  Luke Berg
98. **Rusty Blackbird(/species/rusbla/L1655275)**
 # 20  [11 Oct 2015 \(/checklist/S25376128\)](#)  Luke Berg
99. **House Sparrow(/species/houspa/L1655275)**

- # 1  [9 Oct 2015 \(/checklist/S25351028\)](/checklist/S25351028)  Luke Berg
100. **Virginia Rail(/species/virrai/L1655275)**
1  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
101. **Herring Gull(/species/hergul/L1655275)**
3  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
102. **Cooper's Hawk(/species/coohaw/L1655275)**
1  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
103. **Blue-headed Vireo(/species/buhvir/L1655275)**
5  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
104. **Swainson's Thrush(/species/swathr/L1655275)**
1  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
105. **Hermit Thrush(/species/herthr/L1655275)**
3  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
106. **American Pipit(/species/amepip/L1655275)**
12  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
107. **Lincoln's Sparrow(/species/linspa/L1655275)**
1  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
108. **Nashville Warbler(/species/naswar/L1655275)**
1  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
109. **Magnolia Warbler(/species/magwar/L1655275)**
1  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
110. **Blackpoll Warbler(/species/bkpwar/L1655275)**
2  [27 Sep 2015 \(/checklist/S25201574\)](/checklist/S25201574)  Luke Berg
111. **Great Horned Owl(/species/grhowl/L1655275)**
1  [6 May 2000 \(/checklist/S37779868\)](/checklist/S37779868)  Jarmo Jalava
112. **Brown Thrasher(/species/brnthr/L1655275)**
1  [6 May 2000 \(/checklist/S37779868\)](/checklist/S37779868)  Jarmo Jalava
113. **Evening Grosbeak(/species/evegro/L1655275)**
X  [6 May 2000 \(/checklist/S37779868\)](/checklist/S37779868)  Jarmo Jalava
114. **Vesper Sparrow(/species/vesspa/L1655275)**
1  [6 May 2000 \(/checklist/S37779868\)](/checklist/S37779868)  Jarmo Jalava
115. **Bobolink(/species/boboli/L1655275)**
1  [6 May 2000 \(/checklist/S37779868\)](/checklist/S37779868)  Jarmo Jalava

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No media submitted

[Latest media \(https://ebird.org/media/catalog?regionCode=L1655275\)](https://ebird.org/media/catalog?regionCode=L1655275)

Recent visits

OBSERVER	DATE	SPECIES
Dan Chronowic	14 Nov 2021 (/checklist/S97575401)	13
Matthew Tobey	11 Nov 2021 (/checklist/S97442949)	9
Luke Berg	11 Nov 2021 (/checklist/S97429833)	9
C Douglas	1 Sep 2021 (/checklist/S94023690)	7
Matthew Tobey	17 Aug 2021 (/checklist/S93412259)	1
Luke Berg	17 Aug 2021 (/checklist/S93397216)	1
Patrick Kramer	11 Jun 2021 (/checklist/S89991686)	10
Patrick Kramer	4 Jun 2021 (/checklist/S89595785)	6
Terri Burke	3 Jun 2021 (/checklist/S89560353)	2
Trent Ornithology	3 Jun 2021 (/checklist/S89801442)	2

Checklists submitted within the last hour are not shown.

[More recent visits \(/hotspot/L1655275/activity?yr=all&m=\)](/hotspot/L1655275/activity?yr=all&m=)

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[Checklists \(/hotspot/L1655275?yr=all&m=&sortBy=cl\)](/hotspot/L1655275?yr=all&m=&sortBy=cl)

1	Matthew Tobey		75
2	Luke Berg		67
3	Jarmo Jalava	47	
4	Dan Chronowic	44	
5	Iain Rayner	42	
5	Martin Parker	42	
7	Dave Milsom	39	
8	Scott McKinlay	35	
9	Drew Monkman	29	
10	Robert Maciver	23	

Bank Swallow (*Riparia riparia*) is listed as “Threatened” by *Species at Risk Ontario* (SARO) and is protected under the *Endangered Species Act* (ESA). This avian species nests in burrows into the banks of silt and sand deposits. Nests tend to be found on the shorelines of rivers and lakes. The Bank Swallow may also inhabit sand and gravel pits. Typically, this species forages on insects in flight, but will also glean insects off the water.

Barn Swallow (*Hirundo rustica*) is listed as “Threatened” by SARO and is protected under the ESA. The Barn Swallow inhabits open-rural and urban sites where buildings are situated near watercourses. Nesting is typically sporadic within loose colonies on building structures, bridges and other suitable overhanging structures. The cup-like mud nest is adhered to areas beneath the roof of the structure to conceal the nest from predators and keep it dry. The Barn Swallow feeds on insects by catching them on the wing.

Bobolink (*Dolichonyx oryzivorus*) is listed as “Threatened” by SARO and is protected under the ESA. The Bobolink prefers large tracts of tallgrass areas, either true prairies or hay fields, as it forages low to the ground in search of larvae and seeds.

Eastern Wood-Pewee (*Contopus virens*) is listed as “Special Concern” by SARO and is not protected under the ESA. This species prefers mixed deciduous and coniferous woodlands which are open or considered edge habitat. Nesting occurs on a tree branch as the species catches insects from a perch.

Evening Grosbeak (*Coccothraustes vespertinus*) is listed as “Special Concern” by SARO and is not protected under the ESA. During the breeding season, Evening Grosbeak is generally found in open, mature mixed-wood forests dominated by fir species, White Spruce and/or Trembling Aspen. Its abundance is strongly linked to the cycle of its primary prey, the Spruce Budworm. Outside the breeding season, the species depends mostly on seed crops.

Rusty Blackbird (*Euphagus carolinus*) is listed as “Special Concern” by SARO and is not protected under the ESA. It breeds in habitats that are dominated by coniferous forest with wetlands nearby including bogs, marshes and beaver ponds. During the winter, it is found in wet woodlands, swamps and pond edges and often forages in agricultural lands.

Appendix E

Species List

Appendix F

Turtle Exclusion Fence

