Scoped Natural Heritage Evaluation (sNHE) Proposed Three (3) Lot Severance Concession Road 1 West, Warkworth Part of Lots 23 & 24, Concession 10 Township of Cramahe, Northumberland County

Environmental Ltd.

Environmental and Hydrogeological Services

Prepared For:

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Project #: 24-3426

November 2024



November 14th, 2024

386 Old Shelter Valley Road Grafton, Ontario K0K 2G0

Attention: Randy Voskamp

Re: Scoped Natural Heritage Evaluation (sNHE) Proposed Three (3) Lot Severance Concession Road 1 West, Warkworth Part of Lots 23 & 24, Concession 10 Township of Cramahe, Northumberland County ORE File No. 24-3426

Oakridge Environmental Ltd. (ORE) is pleased to provide this *Scoped* Natural Heritage Evaluation (*s*NHE) for the above-referenced property located in the Northumberland County.

ORE staff completed two (2) inspections during the spring and summer seasons. The easternmost proposed severance parcels occur proximal to an unevaluated wetland/intermittent headwater tributary corridor. ORE staff verified that the published mapping was correct in this location.

Although the Species at Risk (SAR) pre-screen suggests there is an abundance of SAR that have been detected in the general vicinity of the subject property, only one (1) SAR was detected during the surveys - Eastern Meadowlark.

Recommendations to mitigate potential impacts on the natural heritage features have been included in this report. It is expected the development can proceed, provided those mitigation recommendations are implemented.

Yours truly, Oakridge Environmental Ltd.

That the

Rob West, HBSc. Senior Ecologist

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Scoped Natural Heritage Evaluation (SNHE) Proposed Three (3) Lot Severance Concession Road 1 West, Warkworth Part of Lots 23 & 24, Concession 10 Township of Cramahe, Northumberland County

1.0 Introduction

1.1 General

Oakridge Environmental Ltd. is pleased to present this *Scoped* Natural Heritage Evaluation (*s*NHE) in support of an application for a three (3) lot residential severance within the Township of Cramahe.

The proposed severances are located within 120 m of a hydrologic feature. As a result, an *s*NHE is required to support the consent application.

The purpose of the study is to characterize the site conditions on the subject site and adjacent lands, and to demonstrate that the severances and the proposed development can be sustainably accommodated without resulting in unacceptable/negative impacts to any Lower Trent Conservation Authority (LTCA) Regulated Features (includes wetlands and waterways) or Official Plan/Provincial Policy Statement (PPS) Natural Heritage Features (NHF).

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

1.2 Site Description, Location and Access

The subject site is located on the south side of Concession Road 1 West (east of the intersection of Mitchell Road) within Part Lots 23 & 24, Concession 10, Township of Cramahe, Northumberland County (Figures 1 & 2). The total property consists of approximately 20.75 Ha (51.28 acres), containing agricultural lands, unevaluated wetland and woodland. A headwater tributary crosses the property from north to south in the central and east portion of the site. No structures are located on the property.

The subject site can be accessed directly off Concession Road 1 West.

1.3 Proposed Development

Three (3) lot severances are being proposed for the purpose of single residential development. The proposed severances will include a single lot in the northwest corner of the property, and two (2) severance in the northeast corner of the property, all with frontage along the south side of Concession Road 1 West. The lots will consist of

approximately 0.55 ha (1.36 acres) each.

A proposed development concept plan has not been provided, as the plan will be based on any potential constraints identified in this report.

2.0 Policy Framework

2.1 Provincial Policy Statement

The updated 2024 Provincial Policy Statement (PPS) has been released and is expected to come into effect October 20th, 2024. The updated document is a streamlined province-wide Land Use Planning policy framework that replaces the 2020 Provincial Policy Statement and A Place To Grow: Growth Plan for the Greater Golden Horseshoe, 2019, typically referred to as just the "Growth Plan".

The PPS provides policy direction on matters of provincial interest related to land use planning and development. This document stresses the need for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of Natural Heritage Features. The PPS identifies the minimum planning requirements and it is the specific primary and/or secondary tiered municipal government to determine whether the minimum requirements are sufficient.

Section 3 of the Planning Act requires that Planning authorities shall "have regard for" the PPS when exercising any authority that affects municipal Planning matters. Since this is a Planning application, the Municipality/Township and County will usually apply the most recent version of the PPS Natural Heritage section requirements to ensure the relevant natural heritage features are detected and that any required mitigation is applied to protect those features.

ORE is knowledgeable of, and has reviewed Section 4.1 (Natural Heritage) of the 2024 PPS with specific regard to the applicability of the Policy to the subject site. In addition, ORE has reviewed and utilized the methodologies outlined in the Ministry of Natural Resources and Forestry's (MNRF's) <u>Natural Heritage Reference Manual for</u> <u>Natural Heritage Policies of the Provincial Policy Statement</u> (2005).

The PPS lists a number of features that must be addressed, including but not limited to the following:

- Significant Woodlands;
- Significant Wetlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Significant Fisheries Habitat, and

• Species at Risk.

The MNRF's assessment requirements under the *"Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E"* is applicable to Planning Applications. ORE staff reviewed the site's vegetation and formed a candidate SWH list which was further refined, based on our knowledge of the site. The SWH assessment focussed on the type of vegetation to be impacted by the development, rather than all of the ELC types observed on the subject property.

According to the province's mapping, there is no Provincially Significant Wetland on or directly adjacent to the property. The feature is mapped as "unevaluated". Therefore, the 2024 PPS would not apply to this feature.

Similarly, for any of the remaining Natural Heritage Features listed above that were identified on the property, these have been researched and discussed as per the PPS requirements.

An excerpt of the PPS is found in Appendix A.

2.2 Lower Trent Conservation Authority (LTCA)

The subject site is regulated by Ontario Regulation 41/24 *Prohibited Activities, Exemption, and Permits* and is in the jurisdiction of the Lower Trent Conservation Authority (LTCA).

LTCA has their own policies with respect to identifying wetlands. These are identified according to the following criteria:

""wetland" means land that,

(a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,

(b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,

(c) has hydric soils, the formation of which has been caused by the presence of abundant water, and

(d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water, but does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a wetland characteristic referred to in clause (c) or (d)."

Considering the most proximal regulated feature is the wetland habitat within the corridor, the proposed development areas were reviewed in the context of whether they could impact the wetland habitat identified proximal to the proposed easterly lot.

This study has regard for any/all regulated features such as potential hazardous lands, wetlands, and adjacent lands which may impact the associated feature.

This study was prepared to meet the requirements of the new provincial regulation effective April 1st, 2024. Based on our review, there is no flood mapping for the Salt Creek headwater feature that crosses the subject site.

2.3 Northumberland County

It is understood that Northumberland County is in the process of developing a Natural Heritage System Plan as stated on their website:

"Northumberland County is developing a Natural Heritage System to manage community growth in a way that preserves and enhances our natural environment for future generations...<u>Once finalized</u>, the Natural Heritage System Plan will result in updates to the Northumberland County Official Plan policies."

Even though the NHS was endorsed by County Council in July 2020, and an Official Plan (OP) amendment was initiated, approval of the plan is still pending. When approved, the NHS mapping and policies will be incorporated into the County Official Plan. In the meantime, all hydrologically related features such as wetlands, watercourses, seeps and springs, etc., are subject to the requirements under Lower Trent Conservation Authority's policies and the County's current OP.

The current Northumberland County OP does not include mapping for Significant Valleylands, Significant Woodlands, or Significant Fisheries, nor have any criteria been provided to assess these features.

Our assessment has reviewed the conditions associated with all of the remaining NHFs on-site and on the immediately surrounding lands. Appendix B contains an excerpt of the County's Environmental Impact Assessment (EIA) requirements.

2.4 Township of Cramahe

It is anticipated that the proponent's application will be circulated to the Township of Cramahe for the purpose of obtaining Planning approvals. The Township may rely on the County and its peer review process to ascertain whether the natural heritage objectives have been adequately addressed in this *s*NHE.

3.0 Scope of Work

In completing this *s*NHE, the following tasks were completed:

- Relevant background information regarding the site (air photos, topographic mapping, etc.) was compiled and reviewed. Queries of the following databases were completed: Natural Heritage Information Centre (NHIC), iNaturalist, eBird, the Ontario Breeding Bird Atlas (OBBA), and the Ontario Reptile & Amphibian Atlas.
- Two (2) site inspections were completed in the spring and summer season. A biological inventory of visible flora and fauna of the property was completed. Basic vegetation communities were identified, where possible.

Any significant environmental features or important wildlife species or habitat were identified and their positions/boundaries were determined utilizing a GPS.

• All data were interpreted and this report was prepared.

4.0 Physical Setting

1

4.1 Topography and Drainage

The subject property is situated on the northwest facing flank of a large drumlin-type ridge feature (Figure 2). The property exhibits approximately 34 m of topographic relief, ranging from elevation 177 masl in the southeastern corner to about 143 masl in a central trough feature. In contrast, relief in the area of the proposed severance lots, which are situated west of the trough (along Concession 1 W Road), is more subdued, generally <10 m.

The central topographic trough bisects the property from southwest to northeast, containing a secondary headwater tributary of Salt Creek and an associated (unevaluated) wetland that linearly follows the tributary.¹ The tributary emerges about 400 m southwest of the property within the Salt Creek Wetland Complex, conveying flows to the northeast through the property. The Salt Creek Wetland Complex consists of evaluated and unevaluated wetlands, none of which are mapped as being Provincially Significant near the site.

There are no watercourse features within any of the proposed lots. However, the unevaluated wetland/headwater tributary occurs close to the southeast corner of the

The man branch of Salt Creek occurs south of the subject property

easternmost proposed severance lot. An extension of the same wetland occurs extensively along the north side of Concession 1 W Road, also draining into the Salt Creek system.

Based on the presence of nearby wetlands and headwater features, the proposed severance lots are likely to be affected by an elevated water table condition.

4.2 Geological Setting

As illustrated by Figure 3, the site geology is dominated by coarse-textured (foreshore-basinal) glaciolacustrine deposits, comprised of layered and highly permeable sand, silty sand and sandy gravel. These deposits represent the remnants of a period of post-glacial inundation.

The main ridge feature described above is mapped as a drumlin. Several other drumlins are also mapped in the area. These ridges are generally composed of till. The till is referred to as the Newmarket Till, which is a dense, stone-poor, calcareous till comprised of mostly silt and sand, with small amounts of clay and fine gravel. The Newmarket Till is widely recognized as a regional aquitard due to its generally low permeability. From the mapping, it is likely that the till occurs as a substrate below the glaciolacustrine deposits. During the period of inundation, some of the larger drumlins were small islands, now exhibiting shore bluff type features resulting from ancient wave action.

Opposite the subject property's northwest corner, a linear ice-contact deposit (referred to as an "esker") occurs. While none of the esker is mapped as occurring on the site, given the resolution of the mapping, it is possible that some of the esker could occur within the westernmost proposed lot. Typically, soils associated with eskers consist of layered (and highly permeable) sand and gravel. These and some of the glaciolacustrine deposits have been identified by Provincial mapping as aggregate resources of varying significance.

It is not possible to determine the thickness of the most permeable (upper) soil layers from the published mapping. However, from perusal of the Ministry of the Environment, Conservation and Parks (MECP) well record database, we note that a nearby recorded well (No. 4502774) suggests that the shallow sandy soils are not thick at all, with the till encountered directly below the topsoil. This appears to be corroborated by another nearby well (No. 4504673) which also lists only clay in its log. However, a third nearby well (No. 7259605) penetrated 8.2 m of sand and gravel above the till. As such, the thickness of the permeable layers is highly variable in the site area.

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5.0 Background Data

5.1 Natural Heritage Information Centre (NHIC)

The NHIC provides an online database managed by the Ministry of Natural Resources and Forestry (MNRF). 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 species of conservation concern, plant communities, wildlife concentration areas and natural areas. This search includes 120 m of adjacent lands around the property.

The search area falls within three (3) of the 1 km^2 squares: 18TP6693, 18TP6793, and 18TP6794. There are no data for the northwest square.

The query indicates that four (4) Species at Risk (SAR) have been recorded in the area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>SAR Status</u>	
Bobolink	Dolichonyx oryzivorus	Threatened	
Canada Warbler	Cardellina canadensis	Special Concern	
Eastern Wood-Pewee	Contopus virens	Special Concern	
Red-headed Woodpecker	Melanerpes erythrocephalus	Endangered	

Brief descriptions of the SAR species above and their preferred habitats are included in Appendix C. Our site inspections included targeted searches for potential SAR habitat of these species. An excerpt from the NHIC's website illustrating the location of the squares relative to the 120 m search area around subject site is also included in Appendix D.

5.2 Ontario Breeding Bird Atlas (OBBA)

The OBBA² 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 18TTP69, Region 17, Northumberland. The Summary Sheets for this atlas area are provided in Appendix E.

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

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managed by Bird Studies Canada.

Common Name

Bank Swallow Barn Swallow Bobolink Canada Warbler Common Nighthawk Eastern Meadowlark Eastern Whip-poor-will Eastern Wood-Pewee Golden-winged Warbler Grasshopper Sparrow Red-headed Woodpecker Wood Thrush

Scientific Name

Riparia riparia Hirundo rustica Dolichonyx oryzivorus Cardellina canadensis Chordeiles minor Sturnella magna Antrostomus vociferus Contopus virens Vermivora chrysoptera Ammodramus savannarum Melanerpes erythrocephalus Hylocichla mustelina

SARO Status

Threatened Special Concern Threatened Special Concern Threatened Threatened Special Concern Special Concern Special Concern Endangered Special Concern

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

5.3 eBird

eBird is a citizen science database, whereby birding individuals can attend public areas referred to as "hotspots" and list species of bird they detect each time they visit the hotspot location. According to the eBird Geographic Information System (GIS) database, the nearest hotspot is the Red Cloud NCC property site, located approximately 3.5 km west of the site. A total of eighty-nine (89) species were recorded at this hotspot (Appendix F). Of the 89, six (6) are SAR, as listed below:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Barn Swallow	Hirundo rustica	Special Concern
Bobolink	Dolichonyx oryzivorus	Threatened
Eastern Meadowlark	Sturnella magna	Threatened
Eastern Wood-Pewee	Contopus virens	Special Concern
Olive-sided Flycatcher	Contopus cooperi	Special Concern
Wood Thrush	Hylocichla mustelina	Special Concern

Brief descriptions for each of the above identified SAR and their preferred habitats are included in Appendix C.

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5.4 iNaturalist

The iNaturalist database provides a geographical site map which contains individual species occurrences. The NHIC and Species at Risk in Canada projects on the iNaturalist database are specific to those species tracked by the two projects. These include SAR as per those identified in the Species at Risk Ontario website and also provincially rare species that the NHIC tracks. The occurrence data include the professional/surveyors name, confirmation identification by other professionals, occurrence photos, and the date the species was observed. The search extent is an approximate 2 km radius from the approximate property boundary.

The iNaturalist database was reviewed to determine if any SAR sightings of research grade have occurred either on, or within the vicinity of the subject site. Three (3) SAR species were reported either directly on or in the general vicinity of the subject site. The SAR occurrences have been compiled below:

<u>Scientific Names</u>	<u>SAR Status</u>	
Antrostomus vociferus	Threatened	
Erynnis martialis	Endangered	
Danaus plexippus	Special Concern	
	<u>Scientific Names</u> Antrostomus vociferus Erynnis martialis Danaus plexippus	

Rare species were reported as follows:

<u>Common Name</u>	<u>Scientific Name</u>	<u>S-Rank</u>	
Green Arrow Arum	Peltandra virginica	S3	
Slender Clearwing Moth	Hemaris gracilis	S3	
Slender (Cylindrical) Blazing-star	Liatris cylindracea	S3	

Brief descriptions of the above identified SAR are provided in Appendix C.

5.5 Ontario Reptile & Amphibian Atlas

The Ontario Reptile & Amphibian Atlas provides broad information on turtles, snakes, frogs, salamanders, and lizards within Ontario. The information includes earliest and latest observation dates within the square. The Atlas ceased collecting data for the project in 2019. The subject site occurs within the 10 km² area mapped as 18TP69.

The herptile SAR detected within the corresponding square are listed below and brief descriptions of each SAR and their preferred habitats are provided in Appendix C:

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Common Name

Scientific Names

Chelydra serpentina

Lampropeltis triangulum

Chrysemys picta marginata

SAR Status

NAR^{1 2} Special Concern² Special Concern

Eastern Milksnake Midland Painted Turtle Snapping Turtle

1 Not at Risk (NAR) 2 Special concern (SARA/COSEWIC)

6.0 Inspection Methodologies

6.1 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 the 1998 ELC communities (which are considered the primary vegetation communities) and the 2008 Draft ELC, to supplement the vegetation community lists, when the 1998 ELC does not accurately define the habitat.

Prior to conducting the site inspections, aerial photography of the subject site was analysed to roughly delineate communities based on recognizable vegetation differences. Each identified vegetation community was subsequently inspected during the growing season. Dominant vegetation types were recorded and boundaries of the various communities mapped using a GPS (when the boundary of the ELC community is not recognizable on the air photo).

In addition to identifying and mapping the ELC communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive, and/or whether they may represent SAR habitat.

Soils data were collected during the site inspections to confirm whether the mapped area of the unevaluated wetland is consistent with what was identified on the ground during the ORE site inspections. ORE staff applied the criteria outlined in the 2009 - Field Manual for Describing Soils in Ontario (4th Edition).

6.2 Avifauna Surveys

ORE staff attended the site twice, once within the spring season and the 2nd time during the early summer migratory bird period and endeavoured to detect all available avian species by sight, calls and notes, within and proximal to the site. Bird calling devices and "pishing and squeaking" were used to attract bird species from within the forest communities.

All species overheard or observed during the surveys were recorded.

If a SAR bird was detected, the habitat was identified in relation to the proposed severances and it was determined whether the proposed developments represent a potential risk to that avian SAR and/or its habitat.

If a SAR avian is detected within suitable habitat on or near the proposed development the occurrence must be recorded with the NHIC and Ministry of Environment, Conservation and Parks (MECP).

6.3 Mammals

Mammals were detected utilizing the methodologies outlined in the MNRF's 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 droppings³.

No live traps were set/installed at the site as a permit is necessary to trap mammals. This was deemed unnecessary as there are no known SAR mammals within the area. Tracking and other signs to detect mammals were sufficient for the purpose of this study.

6.4 Herptiles

ORE staff conducted an inspection for the purpose of detecting herptiles. If present, the habitat was identified in relation to the proposed severance locations and whether the proposed lots represent potential risks to the herptile(s). ORE staff rolled downed

3

Tracking and the Art of Seeing, 2nd Edition: How to Read Animal Tracks and Signs, Paul Rezendes, Harper Collins Publisher. March 24th, 1999.

woody debris or barn/construction materials debris to detect herptile in the morning period, when they are most likely to still be under cover/shelter.

6.5 Significant Wildlife Habitat (SWH)

SWH has been evaluated utilizing the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E*, published by the MNRF (January 2015).

Potential SWH were evaluated according to the criteria outlined in the schedules for candidate SWH. The SWH tables were consulted to assess whether the area of the proposed severances possesses Seasonal Concentration Areas of Animals, Rare Vegetation Communities, Specialized Habitats of Wildlife considered SWH, and Animal Movement Corridors.

7.0 Site Inspection Data

7.1 General

For this *s*NHE, ORE staff conducted two (2) site inspections on the following dates:

<u>Date of</u> <u>Inspection</u>	<u>Time of</u> Inspection	<u>Temp. ^oC</u>	<u>Beaufort (Wind)</u> <u>Index</u>	Conditions
Diurnal - June 12 th , 2024	9:30 AM - 11:30 AM	26	1 - Light Air	Mostly sunny with 40% cloud cover, sun and blue sky peaking through. Site visit to review the proposed severance areas with the property owner. Ecological Land Classification - vegetation surveys, topography and setting surveys. Verified mapped drainage features and any other hydrological features. SAR or SAR habitat diurnal period detection based on Pre-screen.
Diurnal June 23 rd , 2024	6 AM - 7:30 AM	24	2 - Light Breeze	Mostly sunny with 25% cloud cover. Site visit for early breeding bird surveys. SAR or SAR habitat diurnal period detection based on Pre-screen.

The above inspections were completed to identify any/all species on the property. The resulting species list was examined to identify any sensitive and/or rare species (S1, S2, S3), and whether they have a SARO status of Special Concern, Threatened, or

Endangered. The vegetation types were also reviewed in the context of whether they are classified by the NHIC as provincially rare ecotypes.

7.2 Ecological Land Classification (ELC)

ELC inspections were focussed on the proposed severance areas and the immediately adjacent lands, as per the recommendations of the MNRF's Natural Heritage Reference Manual. The identified ELC communities are illustrated on Figure 4, with photos of the communities/site conditions provided in Figure 5. <u>None</u> of the ELC communities listed below are considered to be provincially rare by the NHIC.

A list of species identified within these communities is provided in Appendix G.

Based on our site inspections, the following vegetation communities have been identified on the site, as per the *1998 and/or the draft 2008 Ecological Land Classification (ELC) for Southern Ontario*:

Upland Communities

1. Dry - Fresh Deciduous Forest (FOD4)

The ELC describes a Dry - Fresh Deciduous Forest (FOD4) ecosite as having greater than 60% tree cover, 75% of which must be deciduous species. Soils have moderately dry (0) to fresh (1, 2, 3) moisture regimes and occur on upper to middle slopes.

This community is located on the northern edge between the agricultural field and Concession Road 1. It is similar in appearance to a relatively wide fencerow containing mature deciduous species such as Red Oak (*Quercus rubrum*), Sugar Maple (*Acer saccharum*), Basswood (*Tilia americana*), and Trembling Aspen (*Populus tremuloides*). None of the proposed severance lots occur within this woodland habitat. It extends off-site to the north and becomes a very large tract of upland woodland on what appears to be a substrate of sandy well drained soils.

A Red-headed Woodpecker was detected northeast of where the most easterly severance lot is proposed to be created. The Red-headed Woodpecker did not come onto the subject property and most likely resides within the Oak/Maple Savannah-like woodland on the adjacent/neighbouring property to the north.

2. Mineral Fencerow (TAGM5)

The Mineral Fencerow (TAGM5) is described under the ELC as having a loamy substrate. Fencerow's can be "Fine", "Medium", or "Coarse", referring to the type of substrate the fencerow possesses.

The fencerow is present along the western edge of the property between the neighbouring property to the west and the subject property's agricultural field. There is also a section of fencerow between the north and south field on the subject parcel. The outer edge of the woodland swath that includes the unevaluated wetland on-site resembles a fencerow community.

No SAR were detected/observed in this community.

3. 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%.

This community occurs as a thin swath along the edge of the farm-fields and fencerows but occurs as a larger patch (denoted as a green patch on the side of the slope/top of bank) in the northern midsection of the farm field between the two severance areas, within the lands to be retained.

An Eastern Meadowlark was detected in this community within the "green patch/tallgrass area" atop the hill and on the hillside where no row crops are planted. It flew back and forth within this long grass area, perching atop the trees in the northerly fencerow.

4. Annual Row Crop (OAGM1)

The OAGM1 habitat is a cleared open agricultural field setting where annual row crops are planted and harvested from year to year. It corresponds to all of the bare farm field on the subject property where row crops are planted annually.

Wetland Communities

4. Green Ash Mineral Deciduous Swamp (SWD2-2)

The ELC (2008) describes the Green Ash Mineral Deciduous Swamp (SWD2-2) as

having tree cover over more than 25% of the ecosite. Water depth must be less than 2 m and present in greater than 20% of the ecosite. Vegetation must be predominately hydrophytic shrub and tree species. Deciduous species must be present in more than 75% of the canopy, with the dominant species being Ash (*Fraxinus spp.*).

This community occurs within the confines of the unevaluated wetland/headwater tributary feature swath located within the southeastern portion of the site, extending off-site to the east, onto the neighbouring lands. The Green Ash (*Fraxinus pennsylvanica*) intermingles with a series of dogwoods/willows, etc. There were also a variety of horsetail species, sedges, and Reed Canary Grass (*Phalaris arundinacea*) with minor patches of Narrow-leaved Cattail (*Typha augustifolia*) occurring toward the centre of the wetland, associated with the intermittent tributary/headwater corridor.

The soils in this feature contain a mineral peaty phase which extends from the surface to a depth of approximately 37 cm, with a silty sand mixture containing mottles from 37 cm to 41 cm. Gley and saturated conditions were observed within a grey fine sand mixture to a depth of 47 cm. The soil log for this community is provided in Appendix H, in addition to the ELC Card.

It is ORE's opinion that this wetland habitat meets all four (4) criteria under LTCA's definition for a wetland.

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.

The poplar and cedar mixture occur as a rim along the edge/slope just upgradient of the Green Ash swamp habitat described above. This wetland type has a mineral peaty phase measured from the surface to approximately 33 cm - 35 cm deep in the upper, with mottles at 40 cm in a fine brown silty sand, and gley between 46 cm and 49 cm, within a grey sandy silt. This wooded swamp type swath occurs between the outer fencerow habitat and the Green Ash Swamp inner swath in the unevaluated wetland area on the subject property.

The soil log for this community is provided in Appendix H, in addition to the ELC Card.

It is ORE's opinion that this wetland habitat meets all four (4) criteria under LTCA's definition for a wetland.

7.3 Fauna

All faunal species identified during the site inspections were recorded. The list of faunal species observed at the site is presented in Appendix G. Relevant observations of faunal activities on and adjacent to the site are briefly discussed below.

7.3.1 Avifauna

ORE staff completed two (2) diurnal inspections during the migratory/breeding bird period. The spring/early summer inspections were completed under ideal conditions in the early mornings of June 12^{th} and June 23^{rd} , 2024.

Although all species were detected and recorded according to their vocalizations and/or sightings, the focus was on detecting any potential Species at Risk avian and/or their habitat, either on or directly adjacent to the site.

Two (2) SAR avian were identified during the site inspections:

- 1. One (1) Eastern Meadowlark calling within open field/long grass areas situated within the retained lands between the east and west severance lots (detected twice), and
- 2. One (1) Red-headed Woodpecker within the savannah woodlands on the adjacent neighbouring property to the north (detected once).

7.3.2 Herptiles

Herptiles include amphibians, salamanders, lizards, turtles and snakes species. Diurnal searches were conducted during the site inspections in the habitats on-site where these species could occur.

Snapping Turtle and Midland Painted Turtle were detected during the SAR pre-screen. ORE staff assume that some of these turtles could be associated with the unevaluated wetland/creek corridor on the neighbouring property and within the southeastern portion of the subject property. There was no evidence of turtle nests or dead-on-road specimens in the area of the subject property or within the farm fields on-site.

No other herptile species were detected within the databases during the SAR pre-screen.

No amphibians, salamanders, lizards or snake species of significance were identified during the site inspections. Only common species were detected.

7.3.3 Mammals

Mammals include species such as fox, coyote, white-tailed dear, racoon, skunk, bats, etc.

The ESA lists very few species of mammal within south-central Ontario as either Endangered, Threatened, or Special Concern. The majority of the mammals that have attained SAR status occur within Northern and Southwestern Ontario. Very few of those mammal species listed within SARO occur in Northumberland County, other than certain bats and Mountain Lion (*Puma concolor*).

Mountain Lion sightings are sometimes recorded in the local newspapers. ORE staff completed a search for local sightings, and there are no records of sightings in the area of Warkworth.

ORE staff did not conduct nighttime surveys nor did we complete a bat assessment. Although the proposed east severance location contains some of the mature woodland habitat on-site and includes ELC communities identified to be bat habitat in the Guelph Districts - as per <u>Bats and Bat Habitats: Guidelines for Wind Power Projects</u>, bat detectors were not deployed as there were no good quality snags identified directly within the woodland edge areas associated with the proposed severances. There are some good quality snags outside the severance areas, however, these will be maintained for any roosting bats. The subject site does not contain fractured or exposed bedrock that could constitute bat hibernaculum. The site appears to contain relatively thick overburden.

ORE staff observed/detected only common/secure species of mammals on the subject property.

7.4 Endangered - Threatened or Provincially Rare Species

ORE staff completed a thorough search for potential SAR (and/or their habitat) on the subject property when conducting the inspections. This included efforts to identify Butternut and any of the database's provincially rare species identified during the pre-screen.

A total of two (2) SAR birds were identified during the inspections. Eastern Meadowlark was overheard calling in the central portion of the field, between the proposed east and west lots. It flew along the top edge of the slope calling out into the on-site farm fields.

The Red-headed Woodpecker called when ORE staff initially arrived on-site, then became very faint. It was initially detected on the neighbouring property to the

northeast, then appeared to migrate further east away from the subject property, well removed from the proposed easterly severances.

Eastern Meadowlark was detected during both site visits, whereas the Red-headed Woodpecker was only detected during the first site visit. ORE staff noted there were some cavity nesting snags about 10 m to 15 m off the roadside on the neighbour's land that would be ideal for this species to roost within.

8.0 Significant Wildlife Habitat Assessment (SWH)

The assessment of SWH is divided into five (5) broad categories, consisting of Seasonal Concentration Area of Animals; Rare Vegetation Communities; Specialized Habitat for Wildlife; Habitat for Species of Conservation Concern (other than Endangered or Threatened), and Animal Movement Corridors. A summary table is provided in Appendix I indicating the potential for SWH to occur based on the criteria provided by the MNRF and whether the site has suitable habitat and/or species occurrences.

The following provides a discussion of areas deemed to be confirmed SWH (based on the MNRF criteria) and as indicated in Appendix I.

<u>SWH</u>	SWH Location	<u>Confirmed Within Proposed</u> <u>Severances Y/N</u>
Bat Maternity Colonies	Includes the mature wooded areas on-site and surrounding connective woodland habitats in the vicinity of the subject property.	Y - The woodland tract on-site and connective woodlands on the adjacent parcel to the north would undoubtedly contain bats such as Big Brown Bat and Silver-haired Bat, based on our experience. In addition the large tract of wooded swamp on-site would connect/ contain bat roosting habitat and bat species to be SWH for bats. <i>Maternity colonies can be found in</i> <i>tree cavities, vegetation and often in</i> <i>buildlings (buildings are not</i> <i>considered to be SWH).</i> There are no buildings on-site but there is sufficient woodland and connective off-site treed habitats to be SWH for bats.

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Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs)	 The wooded swamp communities on the site and on the adjacent lands could constitute SWH for colonial birds and trees and shrubs: Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. Most nests in trees are 11 m to 15 m from ground, near the top of the tree. 	Y - "Confirmation requires the "Presence of 5. or more active nests of Great Blue Heron or other listed species." No nests were detected in the wooded swamp unevaluated wetland, therefore, the habitat may be present, although it has never been used for breeding/nesting.
Savannah	A Savannah is a tallgrass prairie habitat that has tree cover between 25% – 60%.	N- not observed on-site but patchy mosaic of Savannah and overgrown woodland observed off-site and to the north of the subject property. <i>"Field studies confirm one or more</i> of the Savannah indicator species listed in Appendix N should be present." Field studies could not be performed as this community is on a tract of land owned by others.
Woodland Area-Sensitive Breeding Bird Habitat	Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.	Y - This SWH is within the core woodland/unevalauted wetland and adjacent to maple/oak upland woodland habitat on-site. There were at least 3 species of woodland area sensitive species calling during the breeding bird/migratory bird period. Therefore, the <i>"Presence of nesting or breeding pairs of 3 or more of the listed wildlife species"</i> is met and if ORE staff attended the site the required number of times , we are certain it would have met the following criteria: <i>"Conduct field investigations in spring and early summer when birds are singing and defending their territories".</i>

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Amphibian Breeding Habitat (Woodland).	"Presence of a wetland, pond or woodland pool (including vernal pools) >500 m ² (about 25m diameter) ccvii within or adjacent (within 120 m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians."	Y - The criteria used to confirm this SWH is: Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3. ORE staff did not conduct breeding amphibian surveys according to the Marsh Monitoring Program (MMP). However, the Green Ash swamp habitat would contain enhemeral
		habitat would contain ephemeral pools due to the micromounding topography.

Mitigation for SWH is provided in the 2014 <u>Significant Wildlife Habitat Mitigation</u> <u>Support Tool</u> (SWHMiST). Mitigation is provided in the following sections and has regard for the tools outlined for Ecoregion 6E.

Brief descriptions of the SWH on and immediately adjacent to the property are provided in Appendix I.

9.0 Impact Assessment and Mitigation

9.1 Sensitive Features

The main receptor with respect to potential impacts associated with future development of the proposed lots is the unevaluated wetland/creek habitat situated south of the proposed severances. Potential impacts considered herein include the following:

- Potential impacts to the water quality of the downgradient intermittent headwater/unevaluated wetland feature from septic effluent;
- Potential impacts to the intermittent headwater/unevaluated wetland feature resulting from runoff water quality deterioration due to erosion and sedimentation during the construction phase;
- Potential impacts to the woodland and unevaluated wetland SWH from either vegetation removal/degradation directly within the these features or within the adjacent lands of these SWH;
- Potential impacts to the Threatened Eastern Meadowlark and the Endangered -

Red-headed Woodpecker and/or their habitats by the proposed severances during construction activities.

- Potential impacts from importation of fill to the site to raise or level areas of the lots for development; and
- Potential impacts from introduction of invasive non-native species in the construction and post-construction era, via machinery and/or imported materials.

Specific recommendations for mitigating potential impacts to sensitive features on and adjacent to the site are provided in a following section.

9.2 NHIC Species

According to the NHIC, the following SAR have been detected in the 1 km square areas the subject site falls within. The table indicates if habitat is present or was detected during the inspections:

<u>Species</u>	Preferred Habitat	<u>Habitat Present/Detected</u> <u>During Site Inspections</u>
Bobolink	Open field that appears to be either cut or grazed by livestock recently.	Yes, but not detected during the inspections.
Canada Warbler	Wooded areas (conifer dominant) along creeks, rivers, wetlands, waterways are consistent with Canada Warbler habitat.	No, the creek is dominantly lined with deciduous species and Canada Warbler was not detected during the inspections.
Eastern Wood-Pewee	Prefers deciduous secondary succession and old growth woodlands and which contain good quality nesting habitat in the understorey trees and shrubs.	Yes, woodland tracts surrounding the subject property are suitable habitat for Eastern Wood-Pewee, however, it was not detected during the inspections.

Red-headed WoodpeckerPrefers oak and maple wooded areas that have little to know understorey and mainly groundcover species. This type of habitat isYes, W northe decidu	ooded areas along the n edge of the property is a us secondary succession nd and off-site to the north
referred to as a savannah. woodla and ea which savan overhe on-site proper northe proper woodla then fa	t are deciduous tracts, ontain good quality ah-like habitat. It was ard when ORE staff arrived on the neighbouring y to the northeast of the ast corner of the subject y which contains mature and habitat. Only heard once ded into the distance.

9.3 Ontario Breeding Bird Atlas (OBBA)

The following species of SAR avian were detected in the general vicinity of the site during OBBA surveys. The table indicates if habitat is present or was detected during the inspections:

<u>Species</u>	Preferred Habitat	<u>Habitat Present/Detected</u> <u>During Site Inspections</u>
Bank Swallow	Bank Swallows prefer steeply cut banks that this species constructs cavity nests within.	No, banks not present for this species to nest within 120 m of the proposed severance areas.
Barn Swallow	Barn Swallow prefers open meadow fields and/or permanent watercourses and structures that would attract this Special Concern species.	No, not observed within the area of the proposed severances. The site contains farm fields but there are no barns/structures in the vicinity of the subject property that could contain this Special Concern species. There is a barn structure and outbuildings on the neighbouring property to the west of the proposed most westerly lot but no Barn Swallow was observed.
Bobolink	Already discussed above in NHIC.	Already discussed above in NHIC.
Canada Warbler	Already discussed above in NHIC.	Already discussed above in NHIC.

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Common Nighthawk	Prefers relatively open scrubby rock barren thicket habitats overlooking waterways. This type of habitat is not present within 120 m of the proposed east severance. Many Common Nighthawk migrate through Northumberland County in the spring and fall seasons, however, very few stay to breed.	No suitable habitat on or directly adjacent to the subject property in the area of the proposed severances. It was not observed nor flushed during the spring season site inspection and the habitat is not present.
Eastern Meadowlark	Prefers similar habitat to Bobolink. The subject property contains meadow field/agricultural field areas on-site, therefore, this species could be nesting on the subject property.	Yes, and it was detected on-site during the surveys between the two (2) severance areas (on the lands to be retained). There is a patch of open field that possesses hayfield conditions on the slope that was not ploughed/planted this year.
Eastern Whip-poor-will	Prefers relatively mature wooded areas which is marginally present within the proposed east severance and predominantly present within the retained lands.	Yes, on the north side of the property along Concession Road 1, but the main tract of suitable woodland occurs on the neighbouring property to the north, not within the subject property. This species was not detected during site the inspections.
Eastern Wood-Pewee	Already discussed above in NHIC.	Already discussed above in NHIC.
Golden-winged Warbler	Prefers relatively large swamp thicket-type habitats that possess an abundance of willows, dogwoods and other thicket species. It nests within the dense scrub in these wet meadow- like swampy habitats.	No, and it was not detected on-site during the spring season site inspection.
Grasshopper Sparrow	Prefers similar habitat to Bobolink and Eastern Meadowlark. The subject property contains meadow field/agricultural field areas on-site.	Yes, however, this species was not detected during the early spring season site inspection.
Red-headed Woodpecker	Already discussed above in NHIC.	Already discussed above in NHIC.

Wood Thrush	This species prefers to nest within mature late/secondary succession deciduous and mixed woodland habitats.	Yes, the deciduous-rich wooded area on the north side of the site along Concession Road 1 and the wooded area to the north on the neighbouring property is ideal habitat for Wood Thrush. Wood Thrush was not detected on or near the proposed severances during the spring season site inspection. Other similar sounding Thrush species were detected during the
		species were detected during the site investigations which can be confused with Wood Thrush.

The Eastern Meadowlark appears to be drawn to the open agricultural field areas within the retained lands. The Red-headed Woodpecker was drawn to the off-site maple/oak wooded area to the north of the subject property on neighbouring lands.

9.4 eBird

The only species not previously discussed is the Olive-sided Flycatcher:

<u>Species</u>	Preferred Habitat	<u>Habitat Present/Detected</u> <u>During Site Inspections</u>
Olive-sided Flycatcher	This species prefers to nest within mixed or deciduous dominated woodland edges in the area of wetland and watercourses.	Yes, there is potential nesting habitat within the edge of the creek/agricultural lands on the subject parcel and neighbouring lands, however, it was not detected during the spring season site inspection.

9.5 iNaturalist

The iNaturalist database detected several species in the vicinity of the subject property and the majority have already been discussed in previous database sections (above) with the exception of the following:

<u>Species</u> <u>Preferred Habitat</u>	<u>Habitat Present/Detected</u> <u>During Site Inspections</u>
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Mottled Duskywing	Requires its host plants, New Jersey Tea and Prairie Redroot during its life cycle. It occurs within the Marmora and surrounding area, in dry, well-drained soils or alvar habitat within oak woodland, pine woodland, roadsides, riverbanks, shady hillsides and tall grass prairies.	No, the habitat was not detected on-site during the site inspections, nor was the butterfly or its host plant detected on-site.
Monarch	This species prefers open meadows and edge habitats, including wetland meadows. It seeks out milkweed which occurs in these settings, which is its larval foodplant. It can also occur within or near farm related structures such as barns, outbuildings, etc.	Yes, we detected milkweed species along the edge of the farm field, however, no Monarchs or larvae were observed on-site.

9.6 Ontario Reptile & Amphibian Atlas

The Ontario Reptile & Amphibian Atlas database detected a few herptile species in the vicinity of the subject property, including the following:

<u>Species</u>	Preferred Habitat	<u>Habitat Present/Detected</u> <u>During Site Inspections</u>
Eastern Milksnake	This species prefers open meadows and edge habitats, in agricultural type settings. It seeks out burrows, decayed woody debris, horizontal pipes, basements, foundations, etc. in the ground to hibernate and nest within.	Yes, the subject site contains the agricultural habitat this species would forage within. However, the neighbouring property to the west contains the farm structures and buildings this species would likely prefer to hibernate or nest within.
Midland Painted Turtle	Prefers wetlands/waterways and is mainly an aquatic turtle with the exception of nesting within sandy soils along the shoreline and in road shoulders.	Yes, it may occur within the unevaluated wetland/creek corridor on the subject property and neighbouring property to the east of the most easterly proposed lots, however, there was no evidence of turtle nesting either in the shoulders of Concession Road 1 or within the on-site farm fields where the easterly lots are proposed.

Snapping Turtle	Prefers wetlands/waterways and is mainly an aquatic turtle with the exception of nesting within sandy soils along the shoreline and in road shoulders.	Yes, it may occur within the unevaluated wetland/creek corridor on the subject property and neighbouring property to the east of the most easterly proposed lots, but there was no evidence of Snapping Turtle nesting either in the shoulders of Concession Road 1 or within the on-site farm fields where the easterly lots are proposed.

9.7 Significant Wildlife Habitat

An assessment of SWH was completed based on the vegetation types observed from the classification of the vegetation communities in Appendix I.

Recommendations to protect the SWH should be implemented to mitigate direct and/or indirect impacts to the predominantly confirmed habitats in accordance with the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST).

A 30 m Vegetation Protection Zone shall be applied to all of the hydrologic features identified on the subject property. This setback area provides an added buffer to any development that is proposed within the adjacent lands to the wetland/creek corridor. This setback meets or exceeds the primary avoidance criteria in the SWHMiST requirements. Therefore, neither the form, function nor the SWH itself associated with the hydrologic feature will be affected by the proposed severance developments.

ORE provides mitigation/recommendations for the on-site wooded areas that marginally occur on the subject property to protect the Red-headed Woodpecker habitat. However, ORE staff are certain this species is nesting directly north of Concession Road 1 on a neighbour's property.

9.8 Identified SAR/SAR Habitat

Two (2) SAR birds were detected during the June 12th spring breeding bird inspection.

The Eastern Meadowlark has a status of threatened. Therefore, it is subject to the provisions in the Endangered Species Act (ESA) in addition to the provisions under the 2020 PPS or County OP. ORE staff will need to report this finding to the NHIC and the Ministry of Environment Parks and Conservation (MECP).

The Red-headed Woodpecker has a status of Endangered and will also need to be

reported to the NHIC and MECP. Similar to the Eastern Meadowlark, the Red-headed Woodpecker is protected under the provisions in the ESA. The location will be approximated based on what appears to be the snag that this species most likely roosts/nests within.

9.9 Construction

General potential impacts related to eventual construction activities are listed below:

- vegetation removal/disturbances/site alteration and potential to negatively impact either the Threatened or Endangered bird species themselves or their habitat;
- erosion and sedimentation generated by exposed unconsolidated soils during excavation and grading activities;
- mismanagement of fill materials and presence of construction debris or waste materials during the construction period, and
- importation of materials containing invasive species that out-compete well established native species.

To mitigate the potential for impacts associated with the above, appropriate construction scheduling will need to be considered. In addition, careful attention to the limits associated with building/grading envelopes and maintaining buffers will be required.

Specific recommendations for mitigation of impacts associated with construction activities are provided in a following section.

10.0 Conclusions

10.1 The future building envelopes of the proposed lots will need to maintain a distance greater than or equal to 30 m from the on-site unevaluated wetland/SWH observed east and south of the proposed severance areas. Provided the site alterations occur outside the 30 m setback from the wetland habitat within the proposed easterly lots, the development should be permitted as Lower Trent Conservation Authority's regulated feature requirements will be met (Figure 6). The proposed developments can also adhere to the "no negative impact test" requirement for any sensitive hydrological features on the property, thus complying with the Official Plans. The 2024 PPS reveres only Provincially Significant Wetlands (PSWs). The on-site wetland has an unevaluated status and, therefore, is not subject to the requirements in the 2024 PPS.

Considering a 30 m setback will be maintained from the unevaluated wetland/ intermittent headwater regulated feature, there should be no impacts from any properly constructed sewage disposal systems on the proposed lots. The 30 m setback/VPZ is twice the distance required under the Ontario Building Code for Sewage Systems - updated in 2020.

Detailed recommendations are provided in the following section to protect the unevaluated wetland/intermittent headwater tributary feature from being impacted as a result of future construction on the proposed lots.

10.2 The surveys were conducted during the migratory bird period in the month of June which is the ideal period to detect breeding birds. Two (2) SAR birds were detected. No SAR flora were detected.

Eastern Meadowlark

The Eastern Meadowlark was overheard calling in the area of the proposed severances early during the survey, but then moved to the west side of the open field area and resumed calling and flying down to the ground in this area.

Presumably, the Eastern Meadowlark is nesting in the area identified on Figure 6. Considering key nesting habitat used by the Eastern Meadowlark will be retained on the subject property it should be possible to avoid negatively impacting this species altogether. Therefore, the Eastern Meadowlark would be able to function within the green meadow/nesting habitat between the two severance areas (i.e., lands to be retained) while the proposed severances would assume/remove only a small portion of the areas where row crops tend to be planted, which is not Eastern Meadowlark habitat.

It is our opinion that the proposed severances would not negatively impact the Eastern Meadowlark as the key nesting area will not be displaced where this species appeared to be nesting. The nesting location is estimated on Figure 6.

Red-headed Woodpecker

The Red-headed Woodpecker could be nesting within the secondary succession woodland off-site and to the northeast of the northeast corner of the property. The proposed easternmost severance lots overlook the habitat of this species on the neighbouring property to the north. Concession Road 1 occurs between the proposed severances in the northeastern portion of the property within an open field environment and not a woodland environment.

The main objective is to avoid the individual Red-headed Woodpecker and the habitat altogether. Therefore, no tree removal will be allowed to occur within the most westerly

proposed lot which contains some fencerow trees along the western lot boundary. Similarly, no trees along the northern edge of the Concession Road 1 can be removed, other than what is necessary to create an access off Concession Road 1 for each lot..

Provided the building envelopes on all the proposed lots retain as much of the trees and shrubs along the north and east edge of the lots as possible, and one of the lots utilizes the existing entrance, it will create a vegetation screen between the habitat of the Redheaded Woodpecker on the adjacent property and the proposed severances. Other than that mitigation, the proposed lots will avoid the habitat of this species altogether.

10.3 In regards to the SWH, mitigation should be in the form of maintaining the form and function of the unevaluated wetland and on-site woodland habitats/corridors. Therefore, the SWH associated with these features that draw the majority of the wildlife will be maintained outside the building envelopes on each of the proposed severance lots and within the lands to be retained. Avoidance is the primary objective in the SWHMiST with respect to maintaining the SWH. When it is not possible to completely avoid the SWH, the secondary objective is to locate any residential or commercial developments within the periphery of the SWH, thus sustaining the core of the SWH.

The proposed severance developments are predominantly being directed within an existing farm field and provided the building envelopes illustrated on Figure 6 are adhered to, the developments will comply with the primary SWHMiST criteria of avoiding the unevaluated wetland and woodland habitat that comprise the SWH.

A 30 m setback/VPZ has been applied to the unevaluated wetland whereby no site alterations (as per the definition under the 2020 PPS) will be permitted within the adjacent lands of this feature. This means that activities such as clearing vegetation, grading, excavation and the placement of fill that would change either the landform and/or the natural vegetative characteristics of a site, will not be allowed within the VPZ. Considering no site alterations will occur within 30 m of the regulated feature (Figure 6), there would be no negative impact to this feature. The proposed developments will, therefore, comply with the LTCA and OP requirements, which exceeds the SWHMiST requirements.

As a means of mitigating impacts to the SWH, the building envelopes on the proposed severance lots will remain outside the drip-line of the wooded area on each parcel. Therefore, the primary avoidance objectives in the SWHMiST and PPS/OP will be met with respect to the woodland/wetland SWH areas on the property.

10.4 Provided the recommendations outlined in this *s*NHE report are adhered to and the site alterations occur outside both the 30 m VPZ for the LTCA regulated waterway feature

and the drip-line limit of the woodland SWH, there should be no negative impacts to either the Regulated Feature, SAR or the localized woodland SWH areas identified on Figure 6.

11.0 **Recommendations**

11.1 If the single residential severance lots are created as illustrated on Figure 6, the building envelope on the easternmost and westernmost lots should be confined to the area outside the existing drip-line of the Woodland SWH to ensure the site alterations adhere to the OP and PPS requirements.

The recommended 30 m VPZ to protect the unevaluated wetland area occurs greater than 30 m from the eastern proposed severances, therefore, no negative impacts are anticipated with respect to this LTCA regulated feature, as the developments would be well separated from this feature in the adjacent lands.

Below are some additional mitigation measures that should be applied to the severance lots to mitigate tree removal on the lots:

- Reduce the site alteration area to retain as many of the trees as possible within the proposed severances which inherently retains as much of the woodland/SWH in this area. In this instance, the building envelopes on each of the proposed severances should be targeted within the existing opening outside the drip-line of the trees along the northern, eastern and western extent of the row crop field.
- The proposed westerly and most easterly severance lots already contain an access opening in the fencerow which should be utilized to reduce tree removal overlooking the deciduous forest to the north where the Redheaded Woodpecker and Eastern Meadowlark may perch to overlook the farmfield and row crop areas to the south. A third opening may be necessary with respect to the westerly east lot this should be situated within the narrow confines of the fencerow rather than through the wider tract of fencerow west of the existing easterly opening.

Provided the above mentioned mitigation measures are applied, it should be possible to construct a single residence on each proposed lot while complying with the mitigation measures outlined in the SWHMiST. These additional measures are meant to retain the woodland SWH by limiting the clearing of the trees so that as many trees as possible are retained for the woodland sensitive breeding bird species, Endangered - Red-headed Woodpecker, and Threatened Eastern Meadowlark SAR.

- 11.2 The NHIC and MECP shall be contacted to identify the detection of the Endangered -Red-headed Woodpecker species within the neighbouring lands adjacent to the subject property and the Eastern Meadowlark on the subject lands.
- 11.3 As a means of improving the overall subsurface water quality draining to the unevaluated wetland/intermittent headwater tributary feature, the septic beds on the easterly proposed lots should be skewed to the west side of each lot thereby maximizing the distance between the septic units and this regulated feature.
- 11.4 Proper erosion/sedimentation controls will be required at all times while heavy equipment is in operation at this site (as per Appendix J). Considering there is an unevaluated wetland/creek within 30 m of the proposed easterly lots, a single row of heavy-duty silt fence must be installed to identify the boundaries of the approved development envelopes (i.e., site alteration areas) on the lots, once defined.

Heavy-duty silt fence is considered a turtle exclusion fence by the province and would prevent turtles (e.g. Snapping Turtle) from accessing the subject property during construction and reduce the risk to the turtle (and/or its eggs) being impacted by equipment/machinery. Light-duty silt fence is not considered a suitable turtle exclusion control and turtles could enter via the unevaluated wetland corridor and access the subject site during the construction phase. The heavy-duty silt fence should be checked for turtles and maintained on a regular basis. If any eroded materials from the construction bypass the silt fence, the materials should be removed manually (without equipment) and reestablished in the construction zone.

- 11.5 The contractor and/or property owner should provide a drawing that illustrates any/all Erosion Sediment Controls (ESC) necessary to contain sediment within the construction area.
- 11.6 Neither track-mounted nor tire-mounted construction equipment should operate during heavy precipitation events nor should the equipment operate outside the proposed lot lines or within the 30 m VPZ identified on Figure 6, regardless of the overlap into the farm fields.

After any such events, the ESC should be checked to ensure their effectiveness. Ultimately, it is up to the contractor and/or property owner to ensure the effectiveness of the ESC and their Site Plan should account for whatever controls (temporary or permanent) are required, based on the site conditions and final grades. 11.7 If filling/grading is necessary, the volume of imported fill and areas to be filled should be illustrated on the same plan as the ESC. Any/all fill materials must be contained on the respective lot and any containment ESC applied to prevent it from migrating off-lot towards either the unevaluated wetland or the on-site woodland edge areas..

Any imported fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species. If imported topsoil is required, screened topsoil should be the only material applied as top dressing. Any construction equipment operating on the subject property should be inspected and cleaned according to the province's Clean Equipment Protocol for Industry.

11.8 There is the potential for bird species to be impacted during their nesting, breeding and fledging stages, as a consequence of clearing/vegetation removal. To mitigate the potential for such impacts, the property owner must not conduct any vegetation removal <u>between April 1st and August 31st</u>, corresponding to the main Breeding Bird period under the Migratory Bird Convention Act. This is a standard requirement for all construction. Provided any/all vegetation is removed outside this period, the remainder of the construction within the building envelope can proceed during the Migratory bird/breeding bird period.

The remainder of the construction can proceed inside this window which only pertains to the tree/vegetation removal.

11.9 The core woodland areas in from the proposed lots may contain roosting/maternity bat habitats, however, no good quality snags were observed along the woodland edge. To mitigate potential bat maternity roosts within the core woodlands, the migratory bird/vegetation removal window should be extended from the end of August to the end of September each year to include the bat roosting period.

Considering the site alterations cannot impose on the drip-line of these trees other than if a new entrance is required along the northern edge of certain lots, the roosting/maternity trees will be protected/retained as much as possible on the subject property.

- 11.10 Following construction, any disturbed areas shall be quickly seeded or sodded with native grass species to re-establish the root structure within the upper soils. Once the seeding or sodding is determined to be a success and the soils are stable (i.e., vegetation has taken root), the erosion/sedimentation controls can be removed.
- 11.11 As part of the planning application package, the proponent shall provide the authorities
with a survey of the proposed lot areas. As it stands, a conceptual development footprint/site alteration area has been identified for all three (3) lots on Figure 6 that respects the SWH, LTCA Regulated Feature and VPZ, and also respects the mitigation measures to retain trees within the proposed lots.

If the severances are approved, an OLS should return to the site and stake the lot as it is proposed (or similar to what is illustrated).

* end of *s*NHE *

Yours truly, Oakridge Environmental Limited

That they

Rob West, HBSc. Senior Ecologist

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Figures











Photo A (Left): Photo was taken from Concession Road 1 across the ditch overlooking the easterly lot. The existing entrance to the farmfield would be to the right in this photo. The proposed lot would extend to the tree-line in the background of the photo (left side).

Photo B (Right): was taken from the entrance to the farmfield in the northwest corner of the site illustrating the conditions where the westerly lot is proposed to occur. The tree-line in the photo corresponds to the west property boundary. There is a single farm residence beyond the tree-line which is not apparent in the photo.





Photo C (Left): was taken overlooking the hillside grassland area within the farmfield that the Eastern Meadowlark was detected. It appeared to be nesting within the upper plateau (midfield area in the photo). It was observed to be calling from the trees along the northern edge of the grassland and from the hillside edge (top-of-bank on the slope).

Site photos were taken on June 12, 2024.	Scoped Natural Heritage Evaluation (sNHE) Proposed Three (3) Lot Severance				
	Part of Lots 23 & 24, Concession 10 Township of Cramahe, Northumberland County		Site Photos		
	D B ORE	PROJECT # 24-3426	FIGURE NO.		
	Oakridge Environmental Ltd. Environmental and Hydrogeological Services	DATE November 2024	5		



Appendix A

Excerpt from the 2024 Provincial Policy Statement (PPS)

The following has been copied from the 2024 Provincial Planning Statement (PPS):

- "4.1 Natural Heritage
- 1. Natural features and areas shall be protected for the long term.
- 2. The diversity and connectivity of natural features in an area, and the long-term *ecological function* and *biodiversity of natural heritage systems*, should be maintained, restored or, where possible, improved, recognizing linkages between and among *natural heritage features and areas, surface water features* and *ground water features*.
- 3. Natural heritage systems shall be identified in Ecoregions 6E & 7E1, recognizing that *natural heritage systems* will vary in size and form in *settlement areas, rural areas, and prime agricultural areas.*
- 4. *Development* and *site alteration* shall not be permitted in:
 - a) *significant wetlands* in Ecoregions 5E, 6E and 7E1; and
 - b) significant coastal wetlands.
- 5. *Development* and *site alteration* shall not be permitted in:
 - a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E1;
 - b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
 - c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
 - d) significant wildlife habitat;
 - e) significant areas of natural and scientific interest; and
 - f) coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 4.1.4.b),

unless it has been demonstrated that there will be no negative *impacts* on the natural features or their *ecological functions*.

6. Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

- 7. Development and *site alteration* shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*.
- 8. Development and *site alteration* shall not be permitted on *adjacent lands to the natural heritage features and areas* identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*.
- 9. Nothing in policy 4.1 is intended to limit the ability of *agricultural uses* to continue."

Appendix B

Excerpt from the Northumberland County Official Plan (OP)

The following has been copied from the County of Northumberland Official Plan:

"D1.9.2 Adjacent Lands

a) Adjacent lands are the lands contiguous to a natural heritage feature or area where it is likely that development or site alteration would have a negative impact on the feature or area. For the purposes of this Plan, adjacent lands are defined as all lands within the specified distance of the boundary of natural heritage features and areas as set out in Table K.

TABLE K Adjacent Lands						
NATURAL HERITAGE FEATURE	ADJACENT LANDS (metres)					
Provincially Significant Wetlands and Coastal Wetlands	120					
Significant woodlands	120					
Significant wildlife habitat and wildlife core areas	120					
Habitat of endangered species and threatened species	120					
Provincially Significant Areas of natural and scientific interest – Earth Science	50					
Provincially Significant Areas of natural and scientific interest – Life Science	120					
Significant Valleylands	120					
Fish Habitat	120					
Non-Significant Coastal Wetlands	120					

- b) No development or site alteration shall be permitted on these adjacent lands unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated, through an Environmental Impact Study (EIS), that there will be no negative impact on the natural features or their ecological functions.
- c) The approval authority may reduce the width of the adjacent lands set out in Table K if, in the opinion of the approval authority, the proposed development or site alteration is minor and is not anticipated to have a negative impact on the natural heritage feature.

D1.9.3 Environmental Impact Studies

Where the policies of this Plan require that an Environmental Impact Study ('EIS') be prepared, such an EIS shall be prepared in accordance with the requirements of this section of the Plan.

D1.9.3.1 Purpose of an Environmental Impact Study

The purpose of an EIS is to:

a) Collect and evaluate the appropriate information in order to have a complete

understanding of the boundaries, attributes and functions of natural heritage features and associated ecological and hydrological functions that exist;

- b) Determine whether there are any additional natural heritage features on the lands and adjacent lands; and,
- c) Make an informed decision as to whether or not the proposed development and/or site alteration will have a negative impact on the natural heritage features and ecological and hydrological functions.

The approval authority, in consultation with the appropriate Conservation Authority and Parks Canada as appropriate, must be satisfied with an EIS prior to the granting of development approvals. The recommendations of an EIS shall be implemented through Official Plan Amendments, zoning bylaws, subdivision conditions, site plan control, and/or applicable regulations.

D1.9.3.2 What an Environmental Impact Study Should Demonstrate

Before development is considered for approval in the area subject to the EIS, the EIS shall demonstrate that the use will not have a negative impact on significant natural heritage features and related ecological functions."

Appendix C

Species Descriptions

<u>Birds</u>

<u>Bank Swallow</u> (*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.

<u>Barn Swallow</u> (*Hirundo rustica*) is listed as "Special Concern" by SARO and is not 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.

<u>Bobolink</u> (*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.

<u>Canada Warbler</u> (*Cardellina canadensis*) is listed as "Special Concern" by SARO, and is not protected under the ESA. It prefers large tracts of mixed forests on bottomlands within wetlands or drainage courses. The species nests within the upper extremities of the canopy in deciduous and coniferous trees. The Canada Warbler feeds on beetles, caterpillars and common insects. Typically, this species prefers creeks and mixed forests with a coniferous edge along a moving creek, tributary or river system.

<u>Common Nighthawk</u> (*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.

<u>Eastern Meadowlark</u> (*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. <u>Eastern Whip-poor-will</u> (*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 Whippoor-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.

<u>Eastern Wood-Pewee</u> (*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.

<u>Golden-winged Warbler</u> (*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.

<u>Grasshopper Sparrow</u> (*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).

<u>Olive-sided Flycatcher</u> (*Contopus cooperi*) is listed as "Special Concern" by SARO and is not protected under the ESA. This species is typically found within natural forest edges and openings. Its preferred habitat is within coniferous or mixed forests adjacent to rivers or wetlands. It likes to inhabit conifers such as White/Black Spruce, Jack Pine, and Balsam Fir.

<u>Red-headed Woodpecker</u> (*Melanerpes erythrocephalus*) is listed as "Endangered" by SARO and is protected under the ESA. It prefers a combination of deciduous forests and rural development areas, similar to a park-like setting. The deciduous species can be oak or maple, however, the understory must be meadow-like or maintained lawnspace in parklands. This species will either roost within cavities constructed by other woodpeckers, or create its own cavity. It feeds on beetles, caterpillars and common insects that are found within the bark of trees.

<u>Wood Thrush</u> (*Hylocichia mustelina*) is listed as "Special Concern" by SARO and is not 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.

Amphibians & Reptiles

<u>Eastern Milksnake</u> (*Lampropeltis triangulum*) is listed as "Not at Risk" by SARO however, it is listed as "Special Concern" under COSEWIC. Gray or tan in colour, with alternating reddish brown patches that have a black outline, the Eastern Milksnake commonly has a distinct Y shape on the top of the head. They prefer open areas for their habitat such as rocky areas, forest and field edges.

<u>Midland Painted Turtle</u> (*Chrysemys picta marginata*) is listed as "Special Concern" by COSEWIC and is currently under review by COSSARO. Midland Painted Turtles spend the majority of their lives in water. They prefer shallow water with aquatic vegetation, soft mud, and leaf litter at the bottom. Typically found basking on logs, rocks, and shorelines in sunlight. Midland Painted Turtles nest between mid-spring and early summer. They tend to choose gravely, sandy and loam soils for nesting.

<u>Snapping Turtle</u> (*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.

Insects

<u>Monarch</u> (*Danaus plexippus*) 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.

<u>Mottled Duskywing</u> (*Erynnis martialis*) is listed as "Endangered" by SARO and is protected under the ESA. Mottled Duskywings are medium-sized butterflies, dark gray with yellow-brown spots on the hind wings. They prefer dry habitats with sparse vegetation like: open barrens, alvars, and sandy patches within woodlands. Mottled Duskywings deposit eggs on New Jersey tea (*Ceanothus americanus*) and Prairie redroot (*Ceanothus herbaceus*).

Appendix D

NHIC Database



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
1067064	SPECIES	Eastern Wood-pewee	Contopus virens	S4B	SC	SC	18TP6693	
1067064	SPECIES	Canada Warbler	Cardellina canadensis	S5B	SC	SC	18TP6693	
1067064	SPECIES	Red-headed Woodpecker	Melanerpes erythrocephalus	S3	END	END	18TP6693	
1067074	SPECIES	Canada Warbler	Cardellina canadensis	S5B	SC	SC	18TP6793	
1067074	SPECIES	Bobolink	Dolichonyx oryzivorus	S4B	THR	SC	18TP6793	
1067075	SPECIES	Bobolink	Dolichonyx oryzivorus	S4B	THR	SC	18TP6794	

Appendix E

OBBA Database





Non classifié

Region / Région: 17

4893000

1892000

4891000

260000

261000

Square / Parcelle: 18TTP69



Square Summary (18TTP69) [change]

		#spe	cies		#ho	ours	#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	28	40	31	99	70.4	33.2	1	0
Prev.	18	59	41	118	99.1	-	2	9

Region summary (#17: Northumberland, ON)

#squares	#sq with	#species	#squares (pc)		
	data	data		compl.	
41	45	175	41	16	
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 1, Mixed Forest in 4). 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: [C]

SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%
Canada Goose	FY	AE	84	American Coot ‡			0	Great Horned Owl	н		35
Mute Swan			28	Sandhill Crane ‡			24	Barred Owl	т		48
Trumpeter Swan			28	Killdeer §	FY	S	86	Long-eared Owl ‡			2
Wood Duck	FY	FY	77	Piping Plover †			2	Northern Saw-whet Owl	т	S	2
Blue-winged Teal §	Т		15	Upland Sandpiper †	Т		11	Belted Kingfisher	т	н	88
Northern Shoveler ‡			0	American Woodcock	Т	Т	64	Yellow-bellied Sapsucker	D	AE	88
Gadwall			6	Wilson's Snipe	NE	н	46	Red-headed Woodpecker †	н		33
American Wigeon ‡			4	Spotted Sandpiper	Р	Α	55	Red-bellied Woodpecker		FY	88
Mallard	FY	FY	80	Ring-billed Gull §			13	Downy Woodpecker	Р	D	93
American Black Duck ‡			4	Herring Gull §			8	Hairy Woodpecker	Р	FY	93
Northern Pintail ‡			2	Great Black-backed Gull † §			0	Pileated Woodpecker	FY	AE	86
Green-winged Teal ‡			4	Caspian Tern ‡			6	Northern Flicker	Р	FY	97
Redhead †			0	Black Tern † §			4	American Kestrel §	AE	Α	73
Hooded Merganser	н	FY	37	Common Tern § ‡			2	Merlin			68
Common Merganser ‡			6	Common Loon			24	Peregrine Falcon ‡			4
Red-breasted Merganser ‡			0	Double-crested Cormorant §			13	Olive-sided Flycatcher §			2
Ruddy Duck ‡			0	American Bittern		S	42	Eastern Wood-Pewee §	т	т	95
Wild Turkey	FY	D	93	Least Bittern †			24	Yellow-bellied Flycatcher ‡			2
Ruffed Grouse	FY	т	80	Black-crowned Night Heron † §			4	Alder Flycatcher	т	т	84
Ring-necked Pheasant ‡	S		11	Green Heron §	н	н	73	Willow Flycatcher	S		66
Pied-billed Grebe	Р	н	37	Great Egret † §			4	Least Flycatcher	т	S	73
Rock Pigeon (Feral Pigeon)	NE	D	84	Great Blue Heron §		н	46	Eastern Phoebe	NY	AE	93
Mourning Dove	NY	NE	100	Turkey Vulture	NE	NY	86	Great Crested Flycatcher	CF	S	97
Yellow-billed Cuckoo		н	40	Osprey	н		62	Eastern Kingbird	NE	NB	100
Black-billed Cuckoo	FY	S	60	Northern Harrier	P	н	57	Yellow-throated Vireo ‡			17
Common Nighthawk §	Т		15	Sharp-shinned Hawk	н	н	22	Blue-headed Vireo	т		35
Eastern Whip-poor-will §	S		24	Cooper's Hawk	н	Т	44	Warbling Vireo	т	S	93
Chimney Swift §			33	American Goshawk ‡			0	Red-eyed Vireo	NE	т	100
Ruby-throated Hummingbird	Р		64	Bald Eagle ‡			11	Loggerhead Shrike †			0
King Rail †			2	Red-shouldered Hawk	D		26	Blue Jay	NE	NB	97
Virginia Rail	FY		57	Broad-winged Hawk	P	Р	60	American Crow	S	FY	97
Sora			22	Red-tailed Hawk	Т	Α	75	Common Raven	Р	AE	97
Common Gallinule §			24	Eastern Screech-Owl	Т		40	Black-capped Chickadee	NE	Т	100

Breeding Bird Atlas - Summary Sheet for Square 18TTP69 (page 2 of 2)

4

2

SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%
Horned Lark §			24	Pine Siskin ‡			2
Bank Swallow §	AE		33	American Goldfinch	Р	Р	100
Tree Swallow	NE	AE	93	Grasshopper Sparrow §	т	т	71
Purple Martin §			33	Chipping Sparrow	NE	NE	100
Northern Rough-winged Swallow	н		55	Clay-colored Sparrow	т	т	42
Barn Swallow §	NE	AE	91	Field Sparrow §	т	в	91
Cliff Swallow §	AE		42	Dark-eyed Junco ‡			0
Golden-crowned Kinglet			26	White-throated Sparrow	т	Т	66
White-breasted Nuthatch	V	S	91	Vesper Sparrow	т	S	77
Red-breasted Nuthatch	V	т	80	Savannah Sparrow	т	т	95
Brown Creeper	н	Р	51	Song Sparrow	NE	NY	100
Blue-gray Gnatcatcher			11	Lincoln's Sparrow ‡			0
House Wren	NU	AE	97	Swamp Sparrow	D	т	86
Winter Wren		т	66	Eastern Towhee §	т	т	77
Pacific/Winter Wren ‡	т		0	Bobolink §	Α	S	86
Sedge Wren ‡			4	Eastern Meadowlark §	NE	т	93
Marsh Wren	S		51	Orchard Oriole			37
Carolina Wren ‡			20	Baltimore Oriole	AE	NU	97
European Starling	FY	NY	93	Red-winged Blackbird	NE	CF	100
Gray Catbird	NE	т	97	Brown-headed Cowbird	NY	D	88
Brown Thrasher	NE	NY	100	Common Grackle	NY	FY	95
Northern Mockingbird ‡	н		13	Ovenbird	т	т	88
Eastern Bluebird	NY	NY	82	Louisiana Waterthrush †			0
Veery	Α	т	86	Northern Waterthrush	т	S	75
Hermit Thrush	Т	т	42	Golden-winged Warbler †	т		11
Wood Thrush §	т	S	95	Blue-winged Warbler	т	т	42
American Robin	NE	NE	100	Black-and-white Warbler	т	NB	86
Cedar Waxwing	Т	н	95	Nashville Warbler	т	S	51
House Sparrow	NY	н	88	Mourning Warbler	т	DD	66
House Finch	Р	Н	53	Common Yellowthroat	А	Т	100
Purple Finch	Т	Т	71	Hooded Warbler ‡			4
Red Crossbill ‡			11	American Redstart	S	S	95
White-winged Crossbill ‡			0	Cerulean Warbler †			2

SPECIES	Prev.	Code	%
Northern Parula ‡			0
Magnolia Warbler	S		24
Blackburnian Warbler			26
Yellow Warbler	NE	DD	93
Chestnut-sided Warbler	NE	т	88
Black-throated Blue Warbler	S	S	26
Pine Warbler	т	т	82
Yellow-rumped Warbler	т		51
Black-throated Green Warbler	т	S	71
Canada Warbler §	Р	S	37
Scarlet Tanager	т	т	71
Northern Cardinal	т	т	95
Rose-breasted Grosbeak	NE	т	95
Indigo Bunting	Α	Α	97

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 (18TTP69). 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 18TTP69 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 18TTP69 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://naturecounts.ca//nc//atlas/squaresummaryform.jsp?squareID=18TTP69&lang=EN Data current as of 16/06/2024 18:26.

Appendix F

eBird Database

eBird

S Change Region 🔻

Red Cloud NCC property Northumberland, Ontario, Canada

▶ HOTSPOT NAVIGATION

Bird List

Updated ~8 seconds ago

\$

0

R 89 All Years	Q 0 This Yea	r	O This Month		
Last Observed First Observe	ed Hig	gh Count		Custom Time Period 🔻	
SPECIES NAME	COUNT	DATE 🔻	OBSERVER	LOCATION	
1. Red-eyed Vireo Vireo olivaceus	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
2. Blue Jay Cyanocitta cristata	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
3. American Crow Corvus brachyrhynchos	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
4. Common Raven Corvus corax	2	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
5. House Wren Troglodytes aedon	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
6. Brown Thrasher Toxostoma rufum	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
7. Eastern Bluebird Sialia sialis	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
8. American Robin Turdus migratorius	2	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	
9. American Goldfinch Spinus tristis	2	24 Jun 2023	Kevin Seymour	Red Cloud NCC property	

10.	Chipping Sparrow Spizella passerina	2	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
11.	Field Sparrow Spizella pusilla	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
12.	Song Sparrow Melospiza melodia	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
13.	Eastern Towhee Pipilo erythrophthalmus	2	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
14.	Baltimore Oriole Icterus galbula	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
15.	Red-winged Blackbird Agelaius phoeniceus	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
16.	Scarlet Tanager Piranga olivacea	2	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
17.	Northern Cardinal Cardinalis cardinalis	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
18.	Indigo Bunting Passerina cyanea	1	24 Jun 2023	Kevin Seymour	Red Cloud NCC property
19.	Yellow-bellied Sapsucker Sphyrapicus varius	2	10 May 2023	Owen Jamieson	Red Cloud NCC property
20.	Northern Flicker Colaptes auratus	1	10 May 2023	Owen Jamieson	Red Cloud NCC property
21.	Black-and-white Warbler Mniotilta varia	1	10 May 2023	Owen Jamieson	Red Cloud NCC property
22.	Hairy Woodpecker Dryobates villosus	1	16 Jan 2023	Owen Jamieson	Red Cloud NCC property
23.	Black-capped Chickadee Poecile atricapillus	10	16 Jan 2023	Owen Jamieson	Red Cloud NCC property
24.	White-breasted Nuthatch Sitta carolinensis	1	16 Jan 2023	Owen Jamieson	Red Cloud NCC property
25.	Dark-eyed Junco Junco hyemalis	4	16 Jan 2023	Owen Jamieson	Red Cloud NCC property

26.	Ruby-throated Hummingbird Archilochus colubris	2	6 Sep 2022	Doug Johnston	Red Cloud NCC property
27.	Red-bellied Woodpecker Melanerpes carolinus	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
28.	Pileated Woodpecker Dryocopus pileatus	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
29.	Eastern Phoebe Sayornis phoebe	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
30.	Red-breasted Nuthatch Sitta canadensis	2	6 Sep 2022	Doug Johnston	Red Cloud NCC property
31.	Lincoln's Sparrow Melospiza lincolnii	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
32.	Tennessee Warbler Leiothlypis peregrina	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
33.	Nashville Warbler Leiothlypis ruficapilla	2	6 Sep 2022	Doug Johnston	Red Cloud NCC property
34.	Common Yellowthroat Geothlypis trichas	2	6 Sep 2022	Doug Johnston	Red Cloud NCC property
35.	American Redstart Setophaga ruticilla	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
36.	Northern Parula Setophaga americana	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
37.	Chestnut-sided Warbler Setophaga pensylvanica	1	6 Sep 2022	Doug Johnston	Red Cloud NCC property
38.	Black-throated Green Warbler Setophaga virens	2	6 Sep 2022	Doug Johnston	Red Cloud NCC property
39.	Rose-breasted Grosbeak Pheucticus Iudovicianus	2	6 Sep 2022	Doug Johnston	Red Cloud NCC property
40.	Rock Pigeon *	12	2 Sep 2022	Doug Johnston	Red Cloud NCC property

41.	Mourning Dove Zenaida macroura	10	2 Sep 2022	Doug Johnston	Red Cloud NCC property
42.	Great Blue Heron Ardea herodias	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
43.	Turkey Vulture Cathartes aura	4	2 Sep 2022	Doug Johnston	Red Cloud NCC property
44.	Broad-winged Hawk Buteo platypterus	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
45.	Red-tailed Hawk Buteo jamaicensis	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
46.	Merlin Falco columbarius	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
47.	Barn Swallow Hirundo rustica	12	2 Sep 2022	Doug Johnston	Red Cloud NCC property
48.	European Starling * Sturnus vulgaris	6	2 Sep 2022	Doug Johnston	Red Cloud NCC property
49.	Cedar Waxwing Bombycilla cedrorum	18	2 Sep 2022	Doug Johnston	Red Cloud NCC property
50.	Ovenbird Seiurus aurocapilla	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
51.	Cape May Warbler Setophaga tigrina	3	2 Sep 2022	Doug Johnston	Red Cloud NCC property
52.	Magnolia Warbler Setophaga magnolia	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
53.	Bay-breasted Warbler Setophaga castanea	6	2 Sep 2022	Doug Johnston	Red Cloud NCC property
54.	Black-throated Blue Warbler Setophaga caerulescens	2	2 Sep 2022	Doug Johnston	Red Cloud NCC property
55.	American Woodcock Scolopax minor	1	13 Aug 2022	Andrea Kingsley	Red Cloud NCC property
56.	Tree Swallow Tachycineta bicolor	2	13 Aug 2022	Andrea Kingsley	Red Cloud NCC property

57.	Ruffed Grouse Bonasa umbellus	1	4 Feb 2021	Baxter Naday	Red Cloud NCC property
58.	Northern Harrier Circus hudsonius	1	21 Jul 2020	Baxter Naday	Red Cloud NCC property
59.	Great Crested Flycatcher <i>Myiarchus crinitus</i>	2	21 Jul 2020	Baxter Naday	Red Cloud NCC property
60.	Eastern Kingbird Tyrannus tyrannus	1	21 Jul 2020	Baxter Naday	Red Cloud NCC property
61.	Gray Catbird Dumetella carolinensis	1	21 Jul 2020	Baxter Naday	Red Cloud NCC property
62.	Savannah Sparrow Passerculus sandwichensis	1	21 Jul 2020	Baxter Naday	Red Cloud NCC property
63.	Common Grackle Quiscalus quiscula	1	21 Jul 2020	Baxter Naday	Red Cloud NCC property
64.	Ruby-crowned Kinglet Corthylio calendula	3	1 Oct 2019	Mike V.A. Burrell	Red Cloud NCC property
65.	White-throated Sparrow Zonotrichia albicollis	5	1 Oct 2019	Mike V.A. Burrell	Red Cloud NCC property
66.	Canada Goose Branta canadensis	17	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property
67.	Downy Woodpecker Dryobates pubescens	1	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property
68.	Eastern Wood-Pewee Contopus virens	1	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property
69.	Blue-headed Vireo Vireo solitarius	1	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property
70.	Philadelphia Vireo Vireo philadelphicus	1	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property
71.	Hermit Thrush Catharus guttatus	1	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property

72.	Palm Warbler Setophaga palmarum	1	17 Sep 2019	Mike V.A. Burrell	Red Cloud NCC property
73.	Ring-billed Gull Larus delawarensis	1	31 May 2019	Mike V.A. Burrell	Red Cloud NCC property
74.	Wood Thrush Hylocichla mustelina	1	31 May 2019	Mike V.A. Burrell	Red Cloud NCC property
75.	Pine Warbler Setophaga pinus	1	31 May 2019	Mike V.A. Burrell	Red Cloud NCC property
76.	Black-billed Cuckoo Coccyzus erythropthalmus	1	31 Aug 2018	Donald A. Sutherland	Red Cloud NCC property
77.	Purple Finch Haemorhous purpureus	1	31 Aug 2018	Donald A. Sutherland	Red Cloud NCC property
78.	Blackburnian Warbler Setophaga fusca	1	17 May 2018	Mike V.A. Burrell	Red Cloud NCC property
79.	Yellow Warbler Setophaga petechia	1	17 May 2018	Mike V.A. Burrell	Red Cloud NCC property
80.	Bobolink Dolichonyx oryzivorus	1	23 Aug 2017	Mike V.A. Burrell	Red Cloud NCC property
81.	Bald Eagle Haliaeetus leucocephalus	1	15 Sep 2016	Mike V.A. Burrell	Red Cloud NCC property
82.	Yellow-rumped Warbler Setophaga coronata	5	15 Sep 2016	Mike V.A. Burrell	Red Cloud NCC property
83.	Sharp-shinned Hawk Accipiter striatus	1	3 Sep 2016	Doug Johnston	Red Cloud NCC property
84.	Olive-sided Flycatcher Contopus cooperi	2	3 Sep 2016	Doug Johnston	Red Cloud NCC property
85.	American Kestrel Falco sparverius	1	2 Sep 2016	Doug Johnston	Red Cloud NCC property
86.	Common Loon Gavia immer	1	1 Sep 2016	Mike V.A. Burrell	Red Cloud NCC property
87.	Swainson's Thrush Catharus ustulatus	1	1 Sep 2016	Mike V.A. Burrell	Red Cloud NCC property

88.	Caspian Tern Hydroprogne caspia	2	6 May 2015	Travis Cameron	Red Cloud NCC property
89.	Eastern Meadowlark Sturnella magna	1	6 May 2015	Travis Cameron	Red Cloud NCC property
AD	DITIONAL TAXA (4)				
	gull sp. Larinae sp.	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
	Alder/Willow Flycatcher (Traill's Flycatcher) Empidonax alnorum/traillii	1	2 Sep 2022	Doug Johnston	Red Cloud NCC property
	swallow sp. Hirundinidae sp.	3	2 Sep 2022	Doug Johnston	Red Cloud NCC property
	new world warbler sp. Parulidae sp.	4	3 Sep 2016	Doug Johnston	Red Cloud NCC property

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		Jobs	
		Getting started with eBird	

Frequently asked questions

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Appendix G

Species List

Species List

KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia				
	American Crow	Corvus brachyrhynchos		
	American Redstart	Setophaga ruticilla		
	American Robin	Turdus migratorius		
	American Woodcock	Scolopax minor		
	Baltimore Oriole	Icterus galbula		
	Black-capped Chickadee	Poecile atricapillus		
	Blue Jay	Cyanocitta cristata		
	Broad-winged Hawk	Buteo platypterus		
	Brown-headed Cowbird	Molothrus ater		
	Canadian Toad	Anaxyrus hemiophrys		
	Cedar Waxwing	Bombycilla cedrorum		
	Chestnut-sided Warbler	Setophaga pensylvanica		
	Chipping Sparrow	Spizella passerina		
	Cicada Killer	Sphecius speciosus		
	Clay-colored Sparrow	Spizella pallida		
	Common Baskettail	Epitheca cynosura		
	Coyote	Canis latrans		
	Downy Woodpecker	Dryobates pubescens		
	Eastern Chipmunk	Tamias striatus		
	Eastern Cottontail	Sylvilagus floridanus		
	Eastern Kingbird	Tyrannus tyrannus		
	Eastern Meadowlark	Sturnella magna	THR	Threatened/Menacée
	Eastern Phoebe	Sayornis phoebe		
	Eastern Towhee	Pipilo erythrophthalmus		
	European Starling	Sturnus vulgaris		
	Gray Catbird	Dumetella carolinensis		
KINGDOM	Common Name	Scientific Name	SARO	SARA
---------	------------------------	----------------------------	------	------
	House Wren	Troglodytes aedon		
	Indigo Bunting	Passerina cyanea		
	Mourning Dove	Zenaida macroura		
	Nashville Warbler	Leiothlypis ruficapilla		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		
	Northern Leopard Frog	Lithobates pipiens	NAR	
	Ovenbird	Seiurus aurocapilla		
	Purple Finch	Haemorhous purpureus		
	Red Admiral	Vanessa atalanta		
	Red Fox	Vulpes vulpes		
	Red Squirrel	Tamiasciurus hudsonicus		
	Red-headed Woodpecker	Melanerpes erythrocephalus	END	END
	Red-shouldered Hawk	Buteo lineatus	NAR	
	Ring-billed Gull	Larus delawarensis		
	River Jewelwing	Calopteryx aequabilis		
	Rose-breasted Grosbeak	Pheucticus Iudovicianus		
	Ruffed Grouse	Bonasa umbellus		
	Scarlet Tanager	Piranga olivacea		
	Song Sparrow	Melospiza melodia		
	Spring Peeper	Pseudacris crucifer		
	Striped Skunk	Mephitis mephitis		
	Tree Swallow	Tachycineta bicolor		
	White-faced Meadowhawk	Sympetrum obtrusum		
	Widow Skimmer	Libellula luctuosa		
	Wild Turkey	Meleagris gallopavo		
	Yellow Warbler	Setophaga petechia		
	Yellow-rumped Warbler	Setophaga coronata		

Plantae

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Annual Bluegrass	Poa annua		
	Basswood	Tilia americana		
	Black Cherry	Prunus serotina		
	Black Locust	Robinia pseudoacacia		
	Black-eyed Susan	Rudbeckia hirta var. hirta		
	Bull Thistle	Cirsium vulgare		
	Bur Oak	Quercus macrocarpa		
	Butter-and-eggs	Linaria vulgaris		
	Calico Aster	Symphyotrichum lateriflorum		
	Catnip	Nepeta cataria		
	Chokecherry	Prunus virginiana		
	Coltsfoot	Tussilago farfara		
	Common Boneset	Eupatorium perfoliatum		
	Common Burdock	Arctium minus		
	Common Buttercup	Ranunculus acris		
	Common Dandelion	Taraxacum officinale		
	Common Milkweed	Asclepias syriaca		
	Common Morning Glory	Ipomoea purpurea		
	Common Motherwort	Leonurus cardiaca		
	Common Mullein	Verbascum thapsus		
	Common Plantain	Plantago major		
	Common Self-heal	Prunella vulgaris ssp. vulgaris		
	Common Speedwell	Veronica officinalis		
	Common St. John's-wort	Hypericum perforatum		
	Common Teasel	Dipsacus fullonum		
	Common Timothy	Phleum pratense		
	Common Viper's Bugloss	Echium vulgare		
	Common Yarrow	Achillea millefolium		
	Curled Dock	Rumex crispus		
	Dark-green Bulrush	Scirpus atrovirens		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Eastern Burning-bush	Euonymus atropurpureus		
	Eastern White Cedar	Thuja occidentalis		
	Eastern White Pine	Pinus strobus		
	English Plantain	Plantago lanceolata		
	European Buckthorn	Rhamnus cathartica		
	Grey Dogwood	Cornus racemosa		
	Hairy Flat-top White Aster	Doellingeria umbellata var. pubens		
	Hard Fescue	Festuca trachyphylla		
	Hedge Bindweed	Fallopia dumetorum		
	Hungarian Lilac	Syringa josikaea		
	Large-leaved Aster	Eurybia macrophylla		
	Meadow Willow	Salix petiolaris		
	Narrow-leaved Cattail	Typha angustifolia		
	Narrow-leaved Kentucky Bluegrass	Poa pratensis ssp. angustifolia		
	New England Aster	Symphyotrichum novae-angliae		
	Northern Red Oak	Quercus rubra		
	Norway Maple	Acer platanoides		
	Old Switch Panicgrass	Panicum virgatum		
	Ostrich Fern	Matteuccia struthiopteris		
	Panicled Aster	Symphyotrichum lanceolatum		
	Paper Birch	Betula papyrifera		
	Pearly Everlasting	Anaphalis margaritacea		
	Perennial Ragweed	Ambrosia psilostachya		
	Philadelphia Fleabane	Erigeron philadelphicus		
	Poison Ivy	Toxicodendron radicans		
	Poverty Oatgrass	Danthonia spicata		
	Purple Loosestrife	Lythrum salicaria		
	Purple-flowering Raspberry	Rubus odoratus		
	Pussy Willow	Salix discolor		
	Red Ash	Fraxinus pennsylvanica		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Red Maple	Acer rubrum		
	Red Pine	Pinus resinosa		
	Red Trillium	Trillium erectum		
	Red-osier Dogwood	Cornus sericea		
	Reed Canarygrass	Phalaris arundinacea		
	Riverbank Grape	Vitis riparia		
	Rough Canada Goldenrod	Solidago lepida var. salebrosa		
	Rough-leaved Mountain Rice	Oryzopsis asperifolia		
	Round-leaved Dogwood	Cornus rugosa		
	Round-lobed Hepatica	Hepatica americana		
	Scots Pine	Pinus sylvestris		
	Sensitive Fern	Onoclea sensibilis		
	Shagbark Hickory	Carya ovata		
	Sheep Sorrel	Rumex acetosella		
	Small Beggarticks	Bidens discoidea		
	Smooth Brome	Bromus inermis		
	Spotted Joe Pye Weed	Eutrochium maculatum		
	Spreading Dogbane	Apocynum androsaemifolium		
	Staghorn Sumac	Rhus typhina		
	Sugar Maple	Acer saccharum		
	Swamp Fleabane	Erigeron elatus		
	Tatarian Honeysuckle	Lonicera tatarica		
	Thyme-leaved Speedwell	Veronica serpyllifolia		
	Trembling Aspen	Populus tremuloides		
	Virginia Creeper	Parthenocissus quinquefolia		
	White Ash	Fraxinus americana		
	White Elm	Ulmus americana		
	White Heath Aster	Symphyotrichum ericoides		
	White Oak	Quercus alba		
	White Spruce	Picea glauca		

Common Name	Scientific Name	SARO	SARA
White Sweet-clover	Melilotus albus		
White Willow	Salix alba		
Wild Bergamot	Monarda fistulosa		
Wild Carrot	Daucus carota		
Wild Chicory	Cichorium intybus		
Wild Lily-of-the-valley	Maianthemum canadense ssp. canadense		
Wild Strawberry	Fragaria virginiana		
Yellow Birch	Betula alleghaniensis		
Zigzag Goldenrod	Solidago flexicaulis		
	Common NameWhite Sweet-cloverWhite WillowWild BergamotWild CarrotWild ChicoryWild Lily-of-the-valleyWild StrawberryYellow BirchZigzag Goldenrod	Common NameScientific NameWhite Sweet-cloverMelilotus albusWhite WillowSalix albaWild BergamotMonarda fistulosaWild CarrotDaucus carotaWild ChicoryCichorium intybusWild Lily-of-the-valleyMaianthemum canadense ssp. canadenseWild StrawberryFragaria virginianaYellow BirchBetula alleghaniensisZigzag GoldenrodSolidago flexicaulis	Common NameScientific NameSAROWhite Sweet-cloverMelilotus albusSalix albusWhite WillowSalix albaSalix albaWild BergamotMonarda fistulosaSalix albaWild CarrotDaucus carotaSalix albaWild ChicoryCichorium intybusSalix albaWild Lily-of-the-valleyMaianthemum canadense ssp. canadenseSalix albaWild StrawberryFragaria virginianaSalix albaYellow BirchBetula alleghaniensisSalix albaZigzag GoldenrodSolidago flexicaulisSalix alba

Appendix H

Soils Data and ELC Cards

ELC STAND and SOIL			SITE: Concessio	n Road 1 West,	Warkworth		
CHARACTERISTICS	_		POLYGON:	SWD2-2 - BH-1	. Soil Probe Cor	npleted in Wetland	
	_		DATE: June 12t	h. 2024			
			SURVEYORS:	Rob West, Sen	ior Ecologist O	RE	
TREE TALLY BY SPECIES:			GPS Location:	Refer to Figure	e 6 - Constraint	s Plan.	
PRISM FACTOR:	N/A				_		
SPECIES	TALLY1	TALLY2	TALLY3	TALLY4	TOTAL	RELATIVE AVERAGE	
Green Ash					not tallied	Estimated 60%	
Red-osier Dogwood					not tallied	Estimated 10%	
Grey Dogwood					not tallied	Estimated 15%	
Trembling Aspen					not tallied	Estimated 5%	
American Elm					not tallied	Estimated 5%	
Red Maple					not tallied	Estimated 5%	
TOTAL					not tallied	Estimated 100%	
BASAL AREA (BA)					not tallied		
DEAD					not tallied	Mostly Green Ash	
						,	
STAND COMPOSITION:	Green Ash Dom	ninated Wooded	l Swamp (ash dy	ing due to ash l	oorer)		
		1	n	n	Λ	7	
JUIL AJJEJJIVIEN I: TEXTURE		L Organic Soil	Z Rework Sil+ Till	5 Fine Sand	4	-1	
IEATURE		none obsory	0 27 to 0 41	none obsory		-1	
DEFTH TO GLEV (m)		none observ.	0.37 10 0.41	0.41 - 0.47		-1	
DEPTH OF ORGANICS (m)).	0-0 37	none observ	0.41 - 0.47			
	<i>.</i>	none observ	none observ	none observ		-1	
		(5)	(6)	7-8		-	
	IAGRAM	N/A	N/A	, 0 N/A	1	-	
		Soil Depth (m)	Soils Descriptio	ns			
		(···)					
**************************************		0-0.37 m	Upper minerali	sed peat/organ	ic. Greasy feeli	ng texture, minor	
	Peat		amount of silt i	nterspersed in	peaty horizon,I	Moist.	
		0.37-0.41 m	Brown iron stai	ned reworked s	ilt till with mo	tling present, very	
	0.37 m		moist.				
		0.41-0.47 m	Grey fine sand (minor fraction of silt) gley throughout,				
			moderately we	t to wet.			
	Brown Silt Till						
	0.41 m						
1	0.41 111						
1	Grev Fine Sand						
	Sie, inc Salu						
	0.47 m EOH						
SOIL PROFILE		L					
SOLFROFILE							
NOTES:	Hole was hand	augured within	the unevaluated	wetland areas	southeast of th	e most easterly lot.	
	A total depth o	f 0.47 m and en	ded presumably	due to gravel o	r harder packe	, d sand.	
	•		. ,	5	•		

LC STAND and SOIL SITE: Concession Road 1 West, Warkworth							
CHARACTERISTICS PO			POLYGON: SWM3-2 - BH-2 Soil Probe Completed in Wetland				
	DATE: June 12th. 2024			h. 2024	·		
			SURVEYORS:	Rob West, Seni	or Ecologist ORE		
TREE TALLY BY SPECIES:			GPS Location:	Refer to Figure	6 - Constraints F	Plan	
PRISM FACTOR:	N/A						
SPECIES	TALLY1	TALLY2	TALLY3	TALLY4	TOTAL	RELATIVE AVERAGE	
Green Ash					not tallied	Estimated 60%	
Red-osier Dogwood					not tallied	Estimated 10%	
Grey Dogwood					not tallied	Estimated 15%	
Trembling Aspen					not tallied	Estimated 5%	
American Elm					not tallied	Estimated 5%	
Red Maple					not tallied	Estimated 5%	
ΤΟΤΑΙ					not tallied	Estimated 100%	
BASALARFA (RA)					not tallied		
						Mostly Green Ach	
DLAD						Wostly Green Ash	
STAND COMPOSITION:	Poplar - Conifer	Mineral Mixed	Swamp				
STAND COMI OSITION.		Willief al Wilked	Swamp				
SOIL ASSESSMENT		1	2	3	4		
TEXTURE		Organic Soil	 Rework Silt Till	Fine Sand			
DEPTH TO MOTTLES (m):		none observ.	0.37 to 0.46	none observ.			
DEPTH TO GLEY (m):		none observ	none observ	0 46 - 0 49			
DEPTH OF ORGANICS (m).	0-0.37	none observ.	none observ			
DEPTH TO BEDROCK (m)	,.	none observ	none observ.	none observ			
		(3)	(5)	8			
COMMUNITY PROFILE D	AGRAM:	N/A	N/A	N/A			
		Soil Depth (m)	Soils Descriptio	ns			
		()					
		0-0.37 m	Upper minerali	sed peat/organi	c. Greasy feeling	texture, minor	
	Peat		amount of silt interspersed in peaty horizon, very fresh.				
		0.37-0.46 m	Fine Brown silty sand with mottling at 40 cm, moist.				
	0.37 m						
		0.46-0.49 m	Grey sandy silt	rey sandy silt gley throughout, wet			
	Fine Silt/Sand						
1							
	0.46 m						
	Grey Sandy Silt						
	0.49 m EOH						
SOIL PROFILE							
NOTEC	Hala !						
NUTES:	Hole was hand	augured within	the unevaluated	wetiand area so	outneast of the	most easterly lot.	
	A total depth of	0.47 m and end	aed presumably	une to gravel or	пагиег раскей	sanu.	

Appendix I

Significant Wildlife Habitat (SWH)

Significant Wildlife Habitat Screening							
Signficant Wildlife Habitat	General Habitat Description	ELC SWH		SWH Verified			
Туре	Wildlife Concentration A	reas	Candidate				
Waterfowl Stopover and Staging	Fields with sheet water during the spring	VEO	NO	OVAILEN Lat Data and			
Areas (Terrestrial)		YES	NO	SWH Not Present			
Waterfowl Stopover and Staging Areas (Aquatic)	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration	NO	NO	SWH Not Present			
Shorebird Migratory Stopover	Shorelines of lakes, rivers and wetlands, including beach areas,						
Area	bars and seasonally flooded, muddy and un-vegetated shoreline	NO	NO	SWH Not Present			
Raptor Wintering Area	The habitat provides a						
1 3	combination of fields and woodlands that provide roosting, foraging	NO	NO	SWH Not Present			
	and resting			owniterresent			
Bat Hibernacula	Caves, mine shafts, underground foundations and Karsts.	10	10				
	Hibernacula relatively poorly known	NO	NO	SWH Not Present			
Bat Maternity Colonies	Mature forests with >10 ha of large diameter (>25 cm dbh) wildlife	YES	YES	SWH Present			
Turtle Wintering Areas	Within core habitat, water must be deep enough not to freeze and	NO	NO				
-	have soft mud substrates	NO	NO	SWH Not Present			
Reptile Hibernaculum	Below frost lines in burrows, rock crevices and other natural or naturalized locations						
	Rock crevices, talus slopes, etc.	NO	NO	SWH Not Present			
Colonial Nesting Bird Breeding	Froding banks sandy hills horrow nits steen slopes sand niles cliff						
Habitat	faces, bridge abutments, silos, barns. Man-made structure and	NO	NO	ELC Not Present			
(Bank and Cliff)	disturbance over 2 years old						
Habitat	lakes, islands and peninsulas. Occasionally shrubs and emergent	YES	YES	SWH Present			
(Tree/Shrubs)	vegetation.						
Colonial Nesting Bird Breeding	Rocky island or peninsula within a lake or river.			CV//LINet Dresent			
(Ground)	scattered trees or shrubs		NO	SWH Not Present			
Migratory Butterfly Stopover	At least 10 ha in size with combination of field and forest within 5 km of						
Areas	Lake Ontario	NO	NO	Not within 5 km of Lake Ontario			
Landbird Migratory Stopover	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario						
Areas		NO	NO	Not within 5 km of Lake Ontario			
Deer Yarding Areas	Core (Stratum I) is located within Stratum II. Core is critical for survival			CV//LINet Dresent			
			NO	SWH Not Present			
Deer Winter Congregation Areas	Large woodlots typically >100 ha, however smaller woodlots with	NO	NO	SWH Not Present			
	densities of 0.1 - 1.5 deer/ha may also be considered	nitice					
Cliffs and Talus Slopes	Cliff is vertical to near vertical >3 m tall						
	Talus slope is rock rubble at base of a cliff made up of coarse rock	NO	NO	SWH Not Present			
Sand Parron	debris						
Sand Darren	caused by lack of moisture, periodic fires and erosion	NO	NO	SWH Not Present			
Alvar	Typically >0.5 ha with level, mostly fractured calcareous bedrock	NO	NO	SWH Not Present			
Old Growth Forest	Woodland areas 30 ha or greater with at least 10 ha interior habitat						
old Glowin Glost	assuming 100 m buffer at edge of forest	NO	NO	SWH Not Present			
Savannah	Any tallgrass prairie habitat that has tree cover between 25 - 60%	YES	YES	SWH Present			
Tallgrass Prairie	Dominated by prairie grasses with < 25% tree cover	NO	NO	SWH Not Present			
Communities		NO	NO	SWH Not Present			
Waterfowl Nesting Area	Specialized Habitat for W	ldlife	1				
Wateriowi Nesting Area	any small wetlands or a cluster of 3 small wetlands where waterfowl	NO	NO	SWH Not Present			
	nesting is known to occur						
Bald Eagle and Osprey Nesting,	Nests are associated with lakes, ponds, rivers or wetlands along	NO	NO	SWH Not Present			
r oraging and r oroning habitat				own not resent			
Woodland Raptor Nesting	All natural or conifer plantation woodland / forest stands >30 ha with						
Habitat	>10 ha of interior habitat	NO	NO	SWH Not Present			
Turtle Nesting Areas	Close to water with sand and gravel that turtles are able to dig in,						
	located in open sunny areas.	NO	NO	SWH Not Present			
Seeps and Springs	Any forested area (with >25% meadow/field/pasture) within						
	headwaters of a stream or river system	NO	NO	SWH Not Present			
Amphibian Breeding Habitat	Presence of a wetland, pond or woodland pool >500m ² , within or	YES	YES	SWH Present			
(Woodland) Amphibian Breeding Habitat	adjacent to woodland						
(Wetlands)	vvetiands >500m (25m diameter), supporting high species diversity	NO	NO	SWH Not Present			
Woodland Area-Sensitive Breeding Bird Habitat	Habitats where interior forest birds are breeding, typically large mature $(>60 \text{ yrs old})$ forest stands or woodlots >30 ba	YES	YES	SWH Present Woodland Birds Detected in Excess			
	Habitat of Species of Conservation Concern (other	than Threate	ned or Enda	ngered)			
Marsh Breeding Bird Habitat	Nesting occurs in wetlands consisting of shallow water with emergent						
	aquatic vegetation Green Heron: edge water babitat	NO	NO	SWH Not Present			
Open Country Bird Breeding	Large grassland areas (including natural and cultural field and		NO	CM/11 Not Depart			
Habitat	meadows) >30 ha			SWIT NOL Present			

Significant Wildlife Habitat Screening								
Signficant Wildlife Habitat General Habitat Description		ELC Observed	SWH Candidate	SWH Verified				
Shrub/Early Successional Bird Breeding Habitat	Large field areas succeeding to shrub thicket habitats >10 ha in size	NO	NO	SWH Not Present				
Terrestrial Crayfish	Wet meadow edges of shallow marshes Only found in SW Ontario	NO	NO	SWH Not Present				
Special Concern and Rare Wildlife Species	All Special Concern and Provincially Rare plant and animal species. May also consider Area Sensitive and Culturally Sensitive Species	NO	NO	SWH Not Present (Habitat Off-site)				
	Animal Movement Corri	dors						
Amphibian Movement Corridors	Determined as part of breeding habitat assessment	NO	NO	SWH Not Present				
Deer Movement Corridors	All proposals within Stratum II Deer Wintering Area have potential for corridors	NO	NO	No Concentrated Cervid Movement, Minor Along farmfield edge.				
General Comments:								

Appendix J

Heavy-Duty Silt Fence Schematic

