

Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
White Valley Road
Part of Lot 29, Concession 19 (Harvey)
Municipality of Trent Lakes, County of Peterborough

Prepared For:

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Project #: 22-3167

November 2022



ORE

Oakridge Environmental Ltd.

Environmental and Hydrogeological Services

November 24, 2022

14 Moon Line Road
Trent Lakes, Ontario
K0M 1A0

Attention: **Kari Stevenson**

Re: *Scoped* Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
White Valley Road
Part of Lot 29, Concession 19 (Harvey)
Municipality of Trent Lakes, County of Peterborough
Our Project No. 22-3167

We are pleased to provide this *scoped* Natural Heritage Evaluation (sNHE) in support of the above-referenced application. The site consists of approximately 46 ha, located north of Bobcaygeon, Ontario.

Based on our review of the site conditions, the main sensitive feature is a small ephemeral recharge area on the proposed east lot. This recharge feature is not a wetland; it contains shallow soils and bare bedrock at surface and is in a topographic low. Therefore, directing development and/or altering this feature could impact local runoff drainage. Similarly, the proposed west lot contains a localized bedrock low feature along its southern edge, that drains runoff to the bedrock dominated recharge area. Development should be avoided in this area to maintain a positive runoff regime.

Provided the recommendations outlined in this report are adhered to, neither proposed lot should impact the ephemeral recharge feature on the east lot.

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

Yours truly,

Oakridge Environmental Ltd.



Rob West, HBSoc., CSEB
Senior Environmental Scientist

Table of Contents

	<u>Page No.</u>
1.0 Introduction	1
2.0 Site Locations and Description	1
3.0 Proposed Development	2
4.0 Policy Framework	2
4.1 Provincial Policy Statement	2
4.2 Growth Plan for the Greater Golden Horseshoe	3
4.3 County of Peterborough	4
4.4 Municipality of Trent Lakes	4
5.0 Topography and Drainage	5
6.0 Geological Setting	5
7.0 Background Data	6
7.1 Natural Heritage Information Centre (NHIC)	6
7.2 Ontario Breeding Bird Atlas (OBBA)	7
7.3 Other	8
8.0 Inspection Methodologies	8
8.1 Vegetation	8
8.2 Fauna Surveys	9
8.3 Significant Wildlife Habitat (SWH)	9
9.0 Site Inspection Data	10
9.1 Site Inspections	10
9.2 Ecological Land Classification (ELC)	10
9.3 Fauna	13
10.0 Significant Wildlife Habitat Assessment (SWH)	13
11.0 Impact Assessment	15
11.1 General Considerations	15
11.2 SAR Prescreen	16
11.3 Significant Wildlife Habitat	19
11.4 Construction	20
12.0 Conclusions	20
13.0 Recommendations	22

Figures

Figure 1	General Location
Figure 2	Topography & Drainage
Figure 3	Surficial Geology
Figure 4	Vegetation
Figure 5	Site Photos
Figure 6	Site Photos
Figure 7	Constraints

Appendices

Appendix A	PSR
Appendix B	Species Descriptions
Appendix C	NHIC Database
Appendix D	OBBA Database
Appendix E	Species List
Appendix F	Significant Wildlife Habitat

Scoped Natural Heritage Evaluation (sNHE)
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1.0 Introduction

Oakridge Environmental Ltd. (ORE) is pleased to present this *scoped* Natural Heritage Evaluation (sNHE) in support of the above-referenced consent application.

It is our understanding that the proponent wishes to sever two (2) residential lots along White Valley Road. The subject site is situated within the Growth Plan for the Greater Golden Horseshoe (GPGGH) and contains Unevaluated Wetlands. As such, a *scoped* Natural Heritage Evaluation is required to support the application.

The purpose of the sNHE is to characterize the site conditions in order to demonstrate that the subject property can sustainably accommodate the proposed severances and residential developments without resulting in unacceptable impacts to any environmentally sensitive features. The study focussed on the northeast portion of the property, with the proposed east lot abutting the existing access road. The proposed west lot abuts the western edge of the east lot.

The following sections outline the property and development details, policy, data sources, methodologies, findings and recommendations.

2.0 Site Locations and Description

The subject property is a vacant lot and consists of approximately 113.7 acres (46 ha) comprised mainly of woodland located on the south side of White Valley Road, within Part of Lot 29, Concession 19 (Harvey), in the Municipality of Trent Lakes. The property is located north of Bobcaygeon, Ontario (Figures 1 and 2), at the intersection of County Road 49.

The subject site is predominantly surrounded by vacant lands with some residences situated toward the White Valley Road and County Road 49 intersection. The Unevaluated Wetlands are noted to occur in the central and southern portion of the subject property, south and west of the proposed severance lots located in the northeast corner. Unevaluated wetlands also occur on surrounding adjacent lands. The property is located within the Natural Heritage System (NHS) of the GPGGH.

The focus of the study included the proposed severance lots and immediate adjacent lands in the northeast portion of the parcel. The ORE inspection area is defined on Figure 2.

3.0 Proposed Development

Two (2) lot severances are proposed on the subject property, with frontage on the south side of White Valley Road. The proposed lots will be located in the northeast corner of the site and are estimated to be approximately 1.5 acre (0.61 ha) each.

The lots are being severed for the purpose of single residential development with private servicing for potable water and sewage. The recommended development envelope for each lot will be determined in coordination with the recommendations in this study, and as determined through applicable Planning requirements.

The proposed severance lots are illustrated in the Preliminary Severance Review (PSR) package in Appendix A.

4.0 Policy Framework

4.1 Provincial Policy Statement

The 2020 Provincial Policy Statement (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.

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 and County will usually apply the most recent version of the PPS’s Natural Heritage section requirements to ensure that 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 2.1 (Natural Heritage) of the 2020 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 Northern Development, Mines, Natural Resources and Forestry’s (MNDMNR’s) *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement* (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 MNDMNR's assessment requirements under the "*Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E*" are 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.

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

4.2 Growth Plan for the Greater Golden Horseshoe

The proposed severances are subject to a Planning application and related approvals. Consequently, the Growth Plan is applicable.

The Growth Plan is issued under the authority of Section 7 of the Places to Grow Act, 2005. According to the Province's website (A Place to Grow: Growth plan for the Greater Golden Horseshoe), the Plan was approved through an Order in Council under that Act to come into effect on May 16, 2019. It was most recently amended through an Order in Council, effective August 28, 2020. The Plan replaces the Growth Plan for the Greater Golden Horseshoe, 2017 that took effect on July 1, 2017.

The Growth Plan is a policy document intended to assist planning authorities implement a set of standardized objectives for development within their jurisdictions. Among other things, the Growth Plan established a Natural Heritage System (NHS) in accordance with the PPS for the entire region. The NHS identifies Key Natural Heritage Features (KNHF) and water resource systems (Key Hydrologic Features - KHF).

The Growth Plan also prescribes certain setbacks from these features, typically in the form of a "Vegetation Protection Zone" (VPZ). The NHS and these prescribed setbacks are intended to be applicable to all new developments that require a Planning application, outside the designated settlement areas of the Greater Golden Horseshoe.

Section 4.2.3.1 of the Growth Plan states that:

“outside of settlement areas, development or site alteration is not permitted in key natural heritage features that are part of the Natural Heritage System for the Growth Plan or in key hydrologic features...”

Since the Natural Heritage System for the Growth Plan has not yet been implemented by the County of Peterborough nor the Municipality, this policy currently does not prohibit development in key natural heritage features (such as significant woodlands on site). However, this policy provides protection to the key hydrologic features from development and site alteration.

Neither the Municipality nor County have a current NHS that would apply in this area.

This assessment has reviewed the site conditions to determine if there are any KHF within the subject site. The applicable setbacks have been applied as per the Growth Plan.

4.3 County of Peterborough

A Preliminary Severance Review (PSR) was completed by the County of Peterborough on August 16th, 2022. The PSR states that a Natural Heritage Evaluation will be required to address wetlands, significant wildlife habitat, Species at Risk, habitat of Endangered or Threatened Species, and other key hydrologic features. A portion of the subject property was identified as Deer Wintering Area - Stratum II, however, the County provided direction that the NHE was not required to address this feature.

The PSR states that there have been no observations of SAR on or adjacent to the proposed severance lots. Therefore, a SAR assessment is not required. However, a SAR screening must be included in the sNHE. In addition, it was noted that neither the Township nor the County identified any significant woodlands associated with the subject site in their Official Plan. Regardless, the PSR states that the sNHE should:

“...assess whether the woodlands identified on the property meets the criteria to be deemed significant and demonstrate no negative impacts by offering appropriate prevention / mitigation measures for future development.”

This sNHE addresses the items outlined in the PSR.

4.4 Municipality of Trent Lakes

It is anticipated that the proponent’s application will be circulated to the Municipality

of Trent Lakes for the purpose of obtaining Planning approvals for the two (2) lot severances. The Municipality may rely on the County and the peer review process to ascertain whether the natural heritage objectives have been adequately addressed in this sNHE.

5.0 Topography and Drainage

As illustrated by Figure 2, the subject property is situated in a generally flat area, with minimal topographic relief, typical of terrain controlled by a substrate of flat-lying bedrock. The bedrock surface forms two subdued plateau areas, with one being in the southwestern part of the property and the other in the northeast (where the severance lots are proposed). The wetlands occupy the gap between the two.

While much of the property (and the surrounding lands) are covered by unevaluated wetland, the area of the proposed severance lots is slightly elevated and separated from those features. The mapping does not indicate the presence of any channelized water features on or near the proposed lots. A poorly defined drainage divide appears to cross the property from southwest to northeast, with the proposed lots occurring on the north side of the divide. As such, runoff generated in the area of the lots would be expected to flow northward.

The preponderance of wetlands on and surrounding the subject property is indicative of a probable shallow water table condition.

6.0 Geological Setting

As illustrated by Figure 3, most of the property (and both of the proposed severance lots) is underlain by extensive deposits of stony, carbonate-rich silt and sand till. This till is part of the Dummer Complex. Dummer Complex sediments have a sandy matrix supporting a coarse stony component. The coarse component is typically composed of large and angular (broken) blocks of Paleozoic bedrock limestone. The stone composition primarily reflects the underlying bedrock lithology, although can contain some granitic materials. Dummer Complex is composed of scattered, pitted hummocks of blocky, angular debris extending as a broad belt from Lake Simcoe to northeast of Kingston, traditionally regarded as an “end moraine”. The northern margin generally follows the Precambrian - Paleozoic bedrock contact. The somewhat loose density of this till can locally enhance permeability.

The published mapping also indicates that a basal till occurs in the extreme southwest corner of the property, being a thin veneer on the bedrock surface. This till could

extend below the Dummer Complex soils, although would likely be a very thin and discontinuous layer. From the mapping, it is also apparent that the soil cover above the bedrock is likely to be fairly thin, as there are some locations where outcrop/subcrop occurs and bedrock scarps have been identified.

The thickness of the above soils cannot be determined from the mapping. However, from perusal of Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area, we note that nearby well No. 6418394 encountered 3.4 m of clay and stone (i.e., till) overlying the limestone bedrock. Another nearby well (No. 6407707) penetrated through 2.9 m of till before encountering the limestone bedrock. These descriptions are also consistent with a comparatively thin layer of Dummer Till.

The above wells reportedly had static water levels of 11.6 m and 2.4 m (respectively) below the ground surface at the time of drilling. However, these water levels were measured with respect to the bedrock aquifer. It is possible that a shallower water table condition could occur in the overburden, possibly including perched conditions within the Dummer Till.

The bedrock below the site consists of Limestone of the Bobcaygeon Formation. The upper part of the Bobcaygeon Formation is thinly bedded, fine to medium-grained, bioclastic limestone. The lower part of the formation consists of fine to medium-grained nodular limestone with beds up to 80 cm thick.

7.0 Background Data

7.1 Natural Heritage Information Centre (NHIC)

The NHIC provides an online database managed by the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR). Within the database, Ontario has been divided into a grid consisting of 1 km² areas or regional squares, each given a unique identifier. The squares can be searched for species of conservation concern, plant communities, wildlife concentration areas and natural areas. This search includes 120 m of adjacent lands around the property.

The property falls within four (4) of the 1 km² squares: 17PK9242, 17PK9243, 17PK9342, and 17PK9343

The query indicates that one (1) Natural Area is recorded in the area.

Natural Areas:

Sturgeon Lake No. 2 - this wetland is located approximately 200 m to the south of the proposed lots, near the southeastern property boundary. The wetland in the southern portion of the property is unevaluated and appears to be an extension of the Sturgeon Lake No. 2 wetland complex. The unevaluated wetland portion has most likely not been formally complexed with the Sturgeon Lake No. 2 Provincially Significant Wetland.

The query also 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	<i>Dolichonyx oryzivorus</i>	Threatened
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern
Western Chorus Frog ¹	<i>Pseudacris maculata pop. 1</i>	NAR ²

1. Great Lakes - St. Lawrence - Canadian Shield population
2. NAR (Not at risk - SARO). Threatened (COSEWIC)

Brief descriptions of the species above and their preferred habitats are included in Appendix B. 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 the subject site is included in Appendix C.

7.2 Ontario Breeding Bird Atlas (OBBA)

The OBBA¹ provides up-to-date reliable information on birds within Ontario. The information includes species descriptions, habitats, range, documented sightings, etc. The subject site occurs within the 10 km² area mapped as 17TPK94, Region 16, Peterborough. The Summary Sheets for this atlas area are provided in Appendix D.

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

¹ managed by Bird Studies Canada.

<u>Common Name</u>	<u>Scientific Name</u>	<u>SARO Status</u>
Barn Swallow	<i>Hirundo rustica</i>	Threatened
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern
Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern

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

7.3 Other

Accessible information from the eBird and iNaturalist databases was also reviewed. The nearest hotspot for eBird was over 7 km away, and as such, is not relevant to this study.

The iNaturalist database reported the following species either directly on or in the general vicinity of the subject site (search extent of an approximate 2 km² area centred on the site):

<u>Common Name</u>	<u>Scientific Names</u>	<u>SAR Status</u>
Butternut	<i>Juglans cinerea</i>	Endangered
West Virginia White	<i>Pieris virginiensis</i>	Special Concern

The descriptions of the SAR species occurrences are provided in Appendix B. ORE staff conducted targeted searches for Butternut, however, the West Virginia White would not be present during the surveys as these were conducted outside the period to detect this species. Instead, ORE staff conducted searches for the West Virginia White's larval foodplant, Tooth-wort.

8.0 Inspection Methodologies

8.1 Vegetation

The site has been characterized by its various vegetation communities using the methodologies included in the *Ecological Land Classification (ELC) - First*

Approximation and Its Applications (1998). The 1998 Ecological Land Classification - First Approximation is a guide used by Ecologists to standardize the classification of different vegetation community types across Ontario. The classification system enables an ecologist to identify vegetation communities based on the species present, soil materials and moisture regimes.

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

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

In addition to identifying and mapping the ELC communities, ORE staff assessed each vegetation community from the perspective of whether they are Key Hydrological Features (KHF) under the Growth Plan.

8.2 Fauna Surveys

ORE staff attended the site outside the peak period to detect Species at Risk. The PSR stated a SAR assessment is not required for this study, but rather, a SAR prescreen must be completed.

8.3 Significant Wildlife Habitat (SWH)

SWH has been evaluated utilizing the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E*, published by the MNDMNR (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 site possesses Seasonal Concentration Areas of Animals, Rare Vegetation Communities, Specialized Habitats of Wildlife considered SWH, and Animal Movement Corridors.

9.0 Site Inspection Data

9.1 Site Inspections

ORE staff attended the site to observe/detect fauna and determine the vegetation types within the Study Areas (Figure 4), as indicated below.

<u>Date of Inspection</u>	<u>Temp. °C</u>	<u>Beaufort (Wind) Scale</u>	<u>Conditions & Reason for Inspections</u>
September 20 th , 2022 10:30 AM - 2 PM	14	2 - Light Air	80% Cloud Cover and minor fog burning off. Initial preliminary inspection/site review terrain and conditions. Inventory species. Map any hydrological features.
October 7 th , 2022 4 PM - 5 PM	15	1 - Calm	50% clear. Observe vegetation conditions, ELC mapping, species list, habitat assessments.

The above-mentioned inspections were completed to identify any/all species on the property. The resulting species list was examined to identify any sensitive rare species (S1, S2, S3), and/or 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 ecosites and/or whether the woodland habitats within the Study Area could be considered significant, as per the PSR.

9.2 Ecological Land Classification (ELC)

Based on our site observations, we have determined there are three (3) vegetation types in the Study Area. The vegetation types were determined as per the standard Ecological Land Classification for Southern Ontario (FG-02), 1998 protocols. Where the 1998 ELC does not satisfactorily identify the community, the draft 2008 ELC was utilized.

Figure 4 illustrates the distribution of the on-site vegetation communities. These habitats and their associated vegetation and environmental sensitivities are characterized below. Figures 5 and 6 include representative photos of the site conditions and ELC communities described below.

ELC Communities:

1. Common Juniper Calcareous Shrub Rock Barren (RBS1-1)
2. Dry - Fresh Sugar Maple - White Ash Deciduous Forest (FOD5-8)
3. Dry - Fresh White Cedar Coniferous Forest (FOC2-2)

Terrestrial Communities:

1. Common Juniper Calcareous Shrub Rock Barren (RBS1-1)

Field Guide Description:

Tree Cover <25%; shrub cover <25%, Patchy to continuous cover of shrubs; understory of Common Juniper (*Juniperus communis*). These rock barren habitats are subject to extreme temperature and moisture regimes, trees and shrubs have stunted growth and the bare rock surfaces contain an abundance of lichens.

Habitat Observations:

This habitat occurs as a small inclusion in the middle to western edge of the proposed east lot. It occurs as a rock knob formation which is slightly elevated above the remaining woodland communities that surround it. The majority of the junipers had signs of dieback and some had completely died, likely due to the secondary succession trees on the periphery of the rock barren habitat shading the junipers for extended periods. There was also minor amounts of Paper Birch (*Betula papyrifera*) and Common Buckthorn (*Rhamnus cathartica*) growing in the soil-filled crevasses of the bedrock.

This community is not considered a woodland, therefore, would not potentially be considered a Significant Woodland.

2. Dry - Fresh Sugar Maple - White Ash Deciduous Forest (FOD5-8)

Field Guide Description:

The ELC describes the Dry - Fresh Sugar Maple Deciduous Forest (FOD5-8) as possessing a moderately dry (0) to fresh (1, 2, 3) moisture regime. This ecosite is dominated by Sugar Maple (*Acer saccharum*) and White Ash (*Fraxinus americana*) including a number of associate species such as, Ironwood (*Ostrya virginiana*), American Basswood (*Tilia americana*), Red Oak (*Quercus rubra*), and Bitternut

Hickory (*Carya cordiformis*) among others. The ELC characterizes the community as possessing 75% or more deciduous canopy cover.

Habitat Observations:

This community sandwiches the FOC2-2 - Eastern White Cedar dominated habitat that follows. It occurs to the south of the proposed lots in the Study Area and across the road frontage of White Valley Road. It is dominated by Sugar Maple and to a lesser extent White Ash, Red Oak, Basswood, Hop Hornbeam, American Elm (*Ulmus americana*) and Trembling Aspen (*Populus tremuloides*). There is also the occasional occurrence of White Pine interspersed within this community. Bitternut Hickory had a very limited presence in the study area, comprising only a few occurrences. However, this species was observed in the understorey/regeneration level of the woodland, and will likely increase in numbers over time. The dominant herbs in this community are Wild Sarsaparilla (*Aralia nudicaulis*) and Wild Canada Mayflower (*Maianthemum canadense*).

If this woodland community were assessed according to the Natural Heritage Reference Manual for Natural Heritage Policies in the 2005 PPS and/or Growth Plan, this woodland would likely meet the criteria for a Significant Woodland.

3. Dry - Fresh White Cedar Coniferous Forest (FOC2-2)

Field Guide Description:

The Dry - Fresh White Cedar Coniferous Forest (FOC2-2) possesses a dry to fresh moisture regime, dominated by Eastern White Cedar (*Thuja occidentalis*) and possesses very little understory species. The ELC characterizes the community as possessing 75% or more canopy cover.

Habitat Observations:

This community occurs through the southern third of the two (2) proposed lots. There are very little herbaceous species in this community due to the leaf litter of the cedars. ORE staff observed some cultural species in the openings. This habitat possesses very thin till-type soils overlying a mosaic of highly fractured traprock. The less competent caprock appears to transmit water atop the more competent limestone bedrock which is approximately 0.5 m below grade in areas. These conditions were observed on-site when some of the mature cedars had blown over and plucked the caprock in its roots. ORE suspects runoff levels in the spring season are transmitted via the fractured

caprock below the surface and does not reflect these wetter conditions on the surface, other than during the spring freshet period.

If this woodland community were assessed according to the Natural Heritage Reference Manual for Natural Heritage Policies in the 2005 PPS and/or Growth Plan, this woodland would likely meet the criteria for a Significant Woodland.

9.3 Fauna

ORE staff did not observe any significant mammals on the subject site. Only tracks of common/secure mammals were observed on the subject parcel.

ORE staff attended the subject site in the mid morning to afternoon periods and were able to detect some wildlife on-site during the fall season inspections.

The fauna species observed on-site are listed within Appendix E.

10.0 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 F indicating the potential for SWH to occur based on the criteria provided by the MNDMNR 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 MNDMNR criteria) and as indicated in Appendix F.

The SWH in the area of the subject parcel and immediate surrounding lands is summarized below:

<u>SWH from Analysis</u>	<u>Description of Habitat On-site</u>	<u>SWH Confirmed On-site</u>
Bat Maternity Colonies	The Sugar Maple-Red Oak - Basswood species in the deciduous tract possess woodpecker cavities and rough bark	SWH present. The snag cavities, dead peeling bark and rough bark species are present in this woodland tract. A few good quality snags are present directly within the proposed lot areas.

Reptile Hibernaculum (Turtles assessed separately)	Bedrock outcropping with fractures and crevasses. Accessible to snakes and other herps to enter the openings and hibernate below the frost line.	SWH Present. Snake species could enter the fractured limestone rock to access hibernacula below the frost line.
Deer Yarding Areas	Site contains Stratum 2 deer yarding habitat mapped by the MNDMNR.	SWH Present, in the form of dense cedar winter tree cover and deciduous tract foraging areas. Some concentrated trails along southern edge of proposed lots. Deer attempting to circumnavigate White Valley Road.
Deer Winter Congregation Areas	Site contains large acreage of contiguous woodland habitats. Both deciduous and coniferous stands for cover and forage materials. Bare rock areas with lichens which deer forage upon.	SWH Present, in the form of woodland communities deer utilize for winter cover and forage. Snow depths are less in the conifer tracts. Lichen food source in winter month associated with bedrock communities.
Woodland Raptor Nesting Habitat	Ideal nesting areas in the elevated bedrock ridge areas on the property. The trees overlook unevaluated wetland in the southern portion of the property.	SWH present on the retained lands where the unevaluated wetlands are located in the southern portion of the property. Not on the proposed severance parcels.
Woodland Area-Sensitive Breeding Bird Habitat	Secondary succession woodland habitat on-site is considered suitable for woodland area sensitive breeding birds. The combination of relatively mature cedar and mature open deciduous stands is ideal for area sensitive bird species.	SWH Present in the form of relatively mature deciduous and conifer stands. The woodland is greater than 30 ha in the area of the subject property. The core woodland habitats are also present on the retained lands portion of the subject property. The location of the proposed severances is within the edge of the woodland.

<p>Deer Movement Corridors</p>	<p>The corridors occur as well-used paths along the southern edge of the proposed severances in the FOC2-2 vegetation type. The nearest trail navigates the low-ground, allowing the deer to migrate east-west across the subject property. The deer remain a certain distance back from White Valley Road, to avoid potential collisions. Consequently, the trails parallel the roadway.</p>	<p>SWH present, occupying the low-lying areas, allowing deer to migrate east-west onto the other neighbouring parcel to the east, while avoiding collisions on White Valley Road. The trails also allow deer to move from the outside areas to the core deer wintering woodland habitats.</p>
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Recommended mitigation measures for SWH are provided in the 2014 Significant Wildlife Habitat Mitigation Support Tool (SWHMiST). Mitigation is provided in the following sections and has regard for the tools outlined for Ecoregion 6E.

A more detailed analysis of the confirmed SWH on and immediately adjacent to the property is provided in Appendix F.

11.0 Impact Assessment

11.1 General Considerations

Based on our assessment, it is our opinion that potential impacts related to the proposed development on the property could include the following:

- 1) Potential impacts related to the discharge of any nutrient-rich wastewaters (to surface or subsurface).
- 2) Potential impacts associated with denuding of potentially Significant Woodland vegetation, either during preparation of the site for construction, or from equipment grading the surface around the building site during construction.
- 3) Potential to impact local sheet runoff including the shallow soil recharge area in the southeastern portion of the east lot.
- 4) Potential impacts related to post-construction occupation and stabilizing of bare or disturbed/denuded surficial soils.
- 5) Potential impacts to SWH, identified according to the types of vegetation communities on-site.

These impact considerations are further discussed in the following sections.

11.2 SAR Prescreen

The following lists the types of SAR identified in the database prescreen and determines whether the species has no probability of occurring on the subject site, or could potentially occur on the subject site based on habitat being present:

NHIC

<u>Species at Risk (SAR)</u>	<u>Preferred Habitat</u>	<u>Habitat Present/Absent - Applicable Guideline</u>	<u>SAR probable or not probable on-site</u>
Bobolink	Would not use the subject site for any part of its life cycle as it prefers large open farm fields.	Habitat absent from the subject property, only woodland habitats present on-site.	Not probable
Eastern Meadowlark	Would not use the subject site for any part of its life cycle as it prefers large farm fields similar to the Bobolink.	Habitat absent from the subject property, only woodland habitats present on-site.	Not probable.
Snapping Turtle	Snapping Turtle typically stays proximal to permanent watercourses, except to lay their eggs. There are no permanent watercourses on or within 120 m of the proposed severances suitable for Snapping Turtle. There is also no open gravel/sand areas for Snapping Turtle to nest within, other than White Valley Road.	Habitat absent from the subject property. Snapping Turtle would not attend the site as there are an abundance of roads proximal to permanent watercourses and/or ditches that this species could nest within, well away from the subject property.	Not probable.

Western Chorus Frog	There are a number of ephemeral pools associated with the unevaluated wetlands in the vicinity of the subject site, however, there are no permanent water bodies/ponds the Western Chorus Frog could return to once breeding in the ephemeral pools is finished in the vicinity (120 m or greater) of the proposed lots. Typically, Western Chorus Frog will breed and lay their eggs in the ephemeral pools surrounding a permanent water body that does not aerate in the late spring/early summer season	Habitat absent from the subject property. The core permanent wetland or watercourse is not present for this species to return to once the ephemeral pool (recharge area) aerates after the spring freshet.	Not probable.
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OBBA

<u>Species at Risk (SAR)</u>	<u>Preferred Habitat</u>	<u>Habitat Present/Absent - Applicable Guideline</u>	<u>SAR probable or not probable on-site</u>
Barn Swallow	Prefers waterfronts and/or farms with structures.	Habitat absent. Neither of these habitats occur on the subject site in the area of the proposed severances.	Not probable.
Bobolink	Addressed in NHIC	Addressed in NHIC	Not probable.
Canada Warbler	Prefers conifer woodlands along the edge of permanent watercourses such as creeks, some wetlands, ponds and lakes.	Habitat absent from the subject property. There is conifer woodland habitat on-site, however, it does not abut a watercourse or wetland feature.	Not probable.
Eastern Meadowlark	Addressed in NHIC	Addressed in NHIC	Not probable.

Eastern Wood-Pewee	Suitable woodland habitat is present within the area of the proposed severances. Regardless, if this species was detected on-site, it is a Special Concern species and therefore, the habitat is protected by the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST).	Habitat is present on the subject property. When the habitat cannot be avoided, the SWHMiST directs development to the edge of the habitat to protect the core. The proposed severances occur in the corner of the lot where two (2) roads intersect, therefore, this would be the ideal location in the edge of the woodland, thus protecting the core woodland, consistent with the measures in the SWHMiST.	Probable.
Evening Grosbeak	The proposed severances occur within a woodland that this species may find suitable habitat, however, it lacks the waterways this species typically prefers.	Habitat absent from the subject property. The small ephemeral wooded swamps in the area would not be sufficient for this species. It typically prefers the woodland edge of large marshes, lakes, streams, etc., either flowing or stagnant water bodies.	Not probable
Wood Thrush	This Special Concern woodland species prefers secondary succession woodland similar to the mature woodland habitats Eastern Wood-Pewee is attracted to.	Habitat is present on the subject property. Similar to the Eastern Wood-Pewee, the residential developments can be permitted within the habitat of this species, provided the lots are directed to the woodland edge, thereby, protecting/retaining the core woodland for this species.	Probable.

iNaturalist

<u>Species at Risk (SAR)</u>	<u>Preferred Habitat</u>	<u>Habitat Present/Absent - Applicable Guideline</u>	<u>SAR probable or not probable on-site</u>
Butternut	All types of woodland habitats. ORE staff made a concerted effort to identify any/all walnut species, neither Butternut or Black Walnut were observed within the Study Area, during the inspections.	Habitat present on the subject property, but Butternut was not detected during the Butternut specific inspections.	Not Probable as it was undetected in the Study Area.
West Virginia White	Prefers deciduous woodland habitats that contain its larval foodplant - Tooth-wort (<i>Dentaria ssp</i>).	Deciduous woodland habitat is present on the subject property. However, ORE staff did not observe Tooth-wort within the proposed severance parcels or within Study Area. Therefore, the Study Area would not be used by the West Virginia White for its life cycle.	Not probable without larval food plant. Could be a migrant if detected.

11.3 Significant Wildlife Habitat

Potential SWH were examined on-site and confirmed using the MNDMNR criteria.

The SWH outlined in Section 9.0 are predominantly associated with the woodland communities. Although there are some associated with a calcareous rock barren community, this community was overgrown and in poor condition. No wetland habitats were detected in the Study Area, making it a dry to damp regime. There is an area of recharge on the proposed east lot. ORE suspects that flows may fill the underlying bedrock in the spring season, drain to this area and infiltrate the rock surface. Therefore, provided mitigation is applied to the proposed development that avoids and retains these habitats, the proposed building envelopes would avoid the majority of the above-listed SWH.

The recharge area is neither a seep nor a spring area. Therefore, it is not considered a Key Hydrologic Feature (KHF) according to the Growth Plan. Sheet/overland flows are

targeted from a very localized area. The flows congregate in this area for a short period during the spring freshet and likely last only as long as the snow melts. It is dry the remainder of the year.

Included below are specific recommendations for avoiding negative impacts to the features listed above.

11.4 Construction

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

- noise and vibration from operation of equipment;
- bedrock blasting for in-ground basements, etc.;
- encroachment into recharge area;
- excessive vegetation removal or disturbance;
- 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 proposed setbacks will be required.

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

12.0 Conclusions

12.1 ORE staff reviewed the conditions in the northeastern portion/corner of the site as they relate to the proposed new severances. No development is proposed to occur within the retained lands, therefore, the retained parcel was only examined from the perspective of the potential constraints that occur within the Study Area, as defined on Figures 2 and 7.

12.2 There are a series of unevaluated wetlands to the north and east of the proposed severance lots on the neighbouring parcels. To be consistent with the Growth Plan, the

appropriate setbacks should be applied to these KHF. However, both White Valley Road and the access road along the east edge of the subject property occur between them and the proposed lots. The unevaluated wetlands to the south on the subject property occur much further than 30 m, therefore, it should not be necessary to apply any setbacks/vegetation protection zones to these features.

- 12.3 Provided the proposed lot severances can adhere to the recommended setback requirements illustrated on Figure 7 and the recommendations outlined in the following section, the severances should be permitted as both proposed lots comply with the Provincial Policy Statement (PPS) sections 2.1.4a, 2.1.5b, and Growth Plan for the Greater Golden Horseshoe sections 4.2.3 and 4.2.4.
- 12.4 One (1) inspection was conducted in the mid morning to early afternoon period and another in the late afternoon period in the fall season of 2022. ORE staff did not detect any provincially rare, Special Concern, Threatened or Endangered species while conducting the inspections. Therefore, there are no Endangered Species Act (ESA) nor any Significant Wildlife Habitat Mitigation and Support Tool (SWHMiST) requirements applicable in this regard.
- 12.5 The property and surrounding area possess ideal Significant Wildlife Habitat (SWH) for a variety of wildlife species. The proposed severance lots occur directly off of White Valley Road and abut an existing access road that is aligned along the eastern extent of the subject property. The proposed severance locations are ideal with respect to the SWH measures which recommend targeting developments within the woodland edge. For the most part, the SWH is associated with the core woodland area that occurs in the southern portion of the subject property. That area is where the majority of the wildlife was observed (for instance, deer concentration trails associated with the deer wintering activity, etc.), as the wildlife attempts to avoid White Valley Road and the existing residences located towards the intersection of White Valley Road and County Road 49.
- Therefore, measures should be implemented to target the building envelopes as close to White Valley Road and the existing access road as possible to keep the vegetation removal and residential development in the fringe of the SWH.
- 12.6 As a means of avoiding the small ephemeral recharge area in the northeastern portion of the site, it may be necessary to shift the proposed severance parcels westward to avoid this feature. Alternatively, the proposed east lot could be enlarged to allow for a suitable building envelope further west of the ephemeral recharge area.

The property owner should submit a site plan that identifies the building envelopes on each lot. The site plan would include the proposed building footprints and locations for the private services on each lot, while avoiding the recharge area.

A series of recommendations is provided below to mitigate impacts to the identified SWH.

12.7 The PSR requested that the woodland be reviewed in the context of the following:

“should assess whether the woodlands identified on the property meets the criteria to be deemed significant and demonstrate no negative impacts by offering appropriate prevention / mitigation measures for future development.”

According to the ELC/vegetation mapping, the secondary succession coniferous and deciduous woodland types would be considered significant based on either the Natural Heritage Reference Manual’s definition or the Growth Plan’s definition (which are effectively, the same).

That being said, this sNHE offers a variety of methods/measures to retain as much of the woodland cover as possible. The majority of the mitigation measures are outlined in the SWHMiST for proposed residential developments. According to the SWH guidelines and SWH analysis completed by ORE, the woodland communities are considered SWH. Therefore, provided the SWHMiST measures are applied to the woodland SWH, the proposed developments would be consistent with SWHMiST and the appropriate amount of prevention/mitigation measures applied to the developments.

The following section outlines those measures. Provided the concessions are recognized in a development agreement and site plan, the two (2) severances can proceed with no negative or unacceptable impacts to the woodland habitats on-site.

13.0 Recommendations

13.1 According to the SAR prescreen, the only potential SAR identified in the databases would likely be Special Concern bird species (i.e., Wood Thrush and Eastern Wood-Pewee) based on the woodland communities identified within the Study Area.

The SWHMiST states that residential developments can occur within the SWH of Special Concern species (if it can’t be avoided altogether) provided it is directed to the outskirts/edge of the core habitat. In this instance, the two (2) severance lots are being proposed directly off of White Valley Road and the east lot is abutting an existing access road on the eastern edge of the property. Therefore, the proposed developments appear

to comply with the SWHMiST in this regard.

No further recommendations are necessary with respect to SAR.

13.2 The following SWH were identified in the analysis provided in Appendix F. ORE includes recommendations for each of the SWH below:

- Bat Maternity Colonies - To preserve bat roosting/maternity on-site, the proponent must construct and install one (1) communal bat house for each lot.
- Reptile Hibernaculum (Turtles assessed separately) - the majority of the fractured rock was observed on the retained lands in the area of the ephemeral recharge. If a setback is applied to the ephemeral recharge area, the hibernaculum will be retained. See below regarding mitigation for ephemeral recharge area.
- Deer Yarding Areas - PSR states there are no requirements. However, locating the development along White Valley Road will retain the core woodland habitats for the deer yarding area.
- Deer Winter Congregation Areas - Similar to above, locating the development within the woodland edge habitat will retain the main/core tract for deer wintering congregations.
- Woodland Raptor Nesting Habitat - It is unlikely woodland raptors would want to nest directly next to White Valley Road as it appears to possess a steady flow of traffic. Therefore, locating the developments directly alongside the roadway is the best option with respect to retaining nesting habitats for raptor species.
- Woodland Area-Sensitive Breeding Bird Habitat - Similar to raptor nesting, the woodland area sensitive bird species tend to nest in the core of the woodland. Locating the developments within the woodland edge, retains the core nesting areas for area sensitive bird species.
- Deer Movement Corridors - The deer movement corridors were observed towards the southern boundary of the proposed severance lots. The deer tend to avoid White Valley Road. By locating the residential developments along the road edge, the deer movement corridors can be maintained along the southern edge of the proposed developments.

Therefore, it should be possible to retain the core SWH by locating the developments in the woodland edge. In doing so, this will comply with the SWHMiST as it pertains to the SWH identified above.

In addition to locating the development in the edge of the woodland, ORE staff recommends reducing the overall size of the building envelope. In doing so, it will retain some of the woodland setting on the lots, which is beneficial to the woodland related wildlife in the area.

Provided the above measures are applied to the SWH, the SWH will not be negatively impacted by the proposed developments.

- 13.3 A 5 m Vegetation Protection Zone (VPZ) is recommended off the limit of the ephemeral recharge area. The ephemeral recharge area is not considered a KHF under the Growth Plan. Therefore, a 30 m setback is not required off this feature. The recharge feature does not possess hydrophytic plant species or hydric soils and is not considered a wetland or waterway. Consequently, a 5 m VPZ should be sufficient to retain this feature and provide a protective vegetation buffer around its limit as illustrated on Figure 7.

Provided the 5 m VPZ is applied to the recharge area, the localized runoff that drains to this feature will be unaffected and maintain a positive flow regime on-site. The retained natural vegetation around this feature will ensure the positive flow regime and quality of runoff will be protected and maintained.

- 13.4 A 30 m VPZ has been applied to the off-site unevaluated wetlands in the vicinity of the proposed severances. That being said, the White Valley Road and on-site access road corridors effectively isolate/fragment these features from the habitats in the area of the proposed severances.

Therefore, regardless of the 30 m VPZ overlapping portions of the proposed development areas, there is no hydrological connection between these features and the subject site, and consequently no potential to impact these KHF's.

- 13.5 The proposed septic systems should be constructed on the downgradient (southwest) side of each lot, increasing the distance to the ephemeral recharge area. By locating the septic systems on the southwest side of each lot, they will be situated greater than 30 m from any watercourse/wetland, which is double the minimum distance recommended in the Ontario Building Code for Sewage Systems. At this distance, the effluent should be thoroughly renovated in the subsurface, and there will be no impacts to any of the unevaluated wetland in the vicinity of the proposed lots.

Considering the lots are approximately 1.5 acre each, it maybe in the best interest of future property owners to determine whether a filter bed system can be constructed on

each lot. Filter bed systems are typically a third the size of conventional-type sewage disposal systems and achieve better filtration. The proponent and or future property owners should contact a local septic installer and have them contact either the Municipality or the local Health Unit to determine whether a filter bed system could be permitted on the lots. If not, the lots may have to be enlarged to fit the residence, a conventional bed sewage disposal system and a drilled well for potable water supply.

- 13.6 Proper erosion/sedimentation controls will be required at all times while heavy equipment is in operation at this site. Silt fencing (double-row) must be installed to identify the boundaries of the approved development envelopes (i.e., work area) and to serve as a barrier to prevent construction activities from imposing on the 5 m VPZ.

The first row should be positioned directly along the boundary of the VPZ and the 2nd row should be situated within 2 m of the 1st row on the downgradient side of the 1st row. Both rows should be inspected and maintained on a regular basis. The 2nd row is meant to be a secondary barrier/last defence in the event of a catastrophic failure that surpasses the 1st row of fence. If eroded materials bypass either row of silt fence, the materials should be removed manually (without equipment) and reestablished in the construction zone. The 2nd row may be necessary due to the surficial soils being shallow in some areas. The 2nd row of silt fence will provide some additional assurance in those areas where installation of the 1st row of silt fence may prove challenging.

The lot owners shall include any/all interim or permanent Erosion Sedimentation Controls (ESC), as needed. The ESC should be included on the Site Plan. Construction should not continue during heavy precipitation events. After any such events, the fence and any other 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 erosion-sedimentation controls.

ORE staff do not expect concentrated flows to occur on the site. The above should only be necessary if the contractor introduces fill to the area or undertakes significant grading.

If filling is necessary, the volume and areas should be illustrated on the site plan/grading plan. No fill materials shall be placed within the KHF's or their VPZs.

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.

Following the construction, any/all 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.

- 13.7 There is the potential for bird species to be impacted during their nesting, breeding and fledging stages in the woodland ecosystems, as a consequence of clearing/vegetation removal. To mitigate the potential for such impacts, the property owner/future lot owners must not conduct any vegetation removal between April 1st and August 31st, corresponding to the main Breeding Bird period under the Migratory Bird Convention Act. This is a standard requirement for all construction. Provided the vegetation is removed outside this period, the remainder of the construction within the building envelopes can proceed during the migratory bird/breeding bird period without impacting birds during the peak period identified above.
- 13.8 The site plan should be completed by an Ontario Land Surveyor (OLS) and include the constraints identified on Figure 7 outlined in this sNHE. If the severances are approved, the OLS shall return to the site and stake both the lot boundaries and the VPZ, so the authorities and/or prospective purchasers can review them on-site. The OLS shall also stake the limits of the identified building envelope that is consistent with retaining as much of the woodland habitat as possible. Figure 7 identifies a suitable building envelope on each lot that would have the desired effect with respect to retaining the woodland and the corresponding SWH.
- 13.9 It is anticipated that the Municipality of Trent Lakes and County of Peterborough will choose to apply the above-mentioned recommendations through a combination of site plan control/requirements and zoning. The ephemeral recharge area and its 5 m VPZ will likely obtain an Environmental Control (EC) or Environmental Protection (EP) designation. The new east lot owner and retained lands property owner should not alter any lands within the VPZ or ephemeral recharge feature. Depending on what size of residence the east property owner intends to build, they may have to build higher rather than sprawling to achieve their desired floor plan space.

****End of Scoped NHE Report****

Yours truly,
Oakridge Environmental Limited

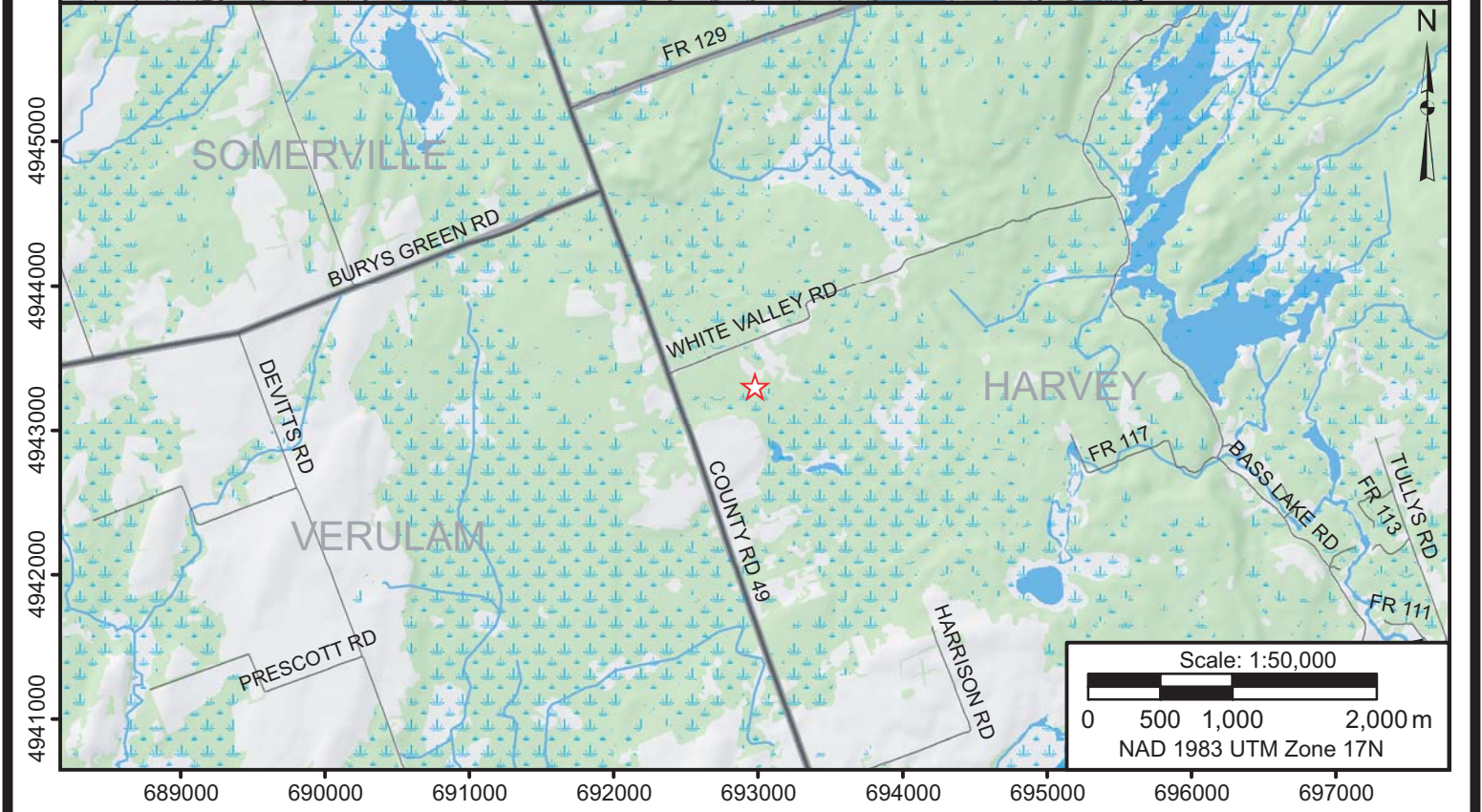
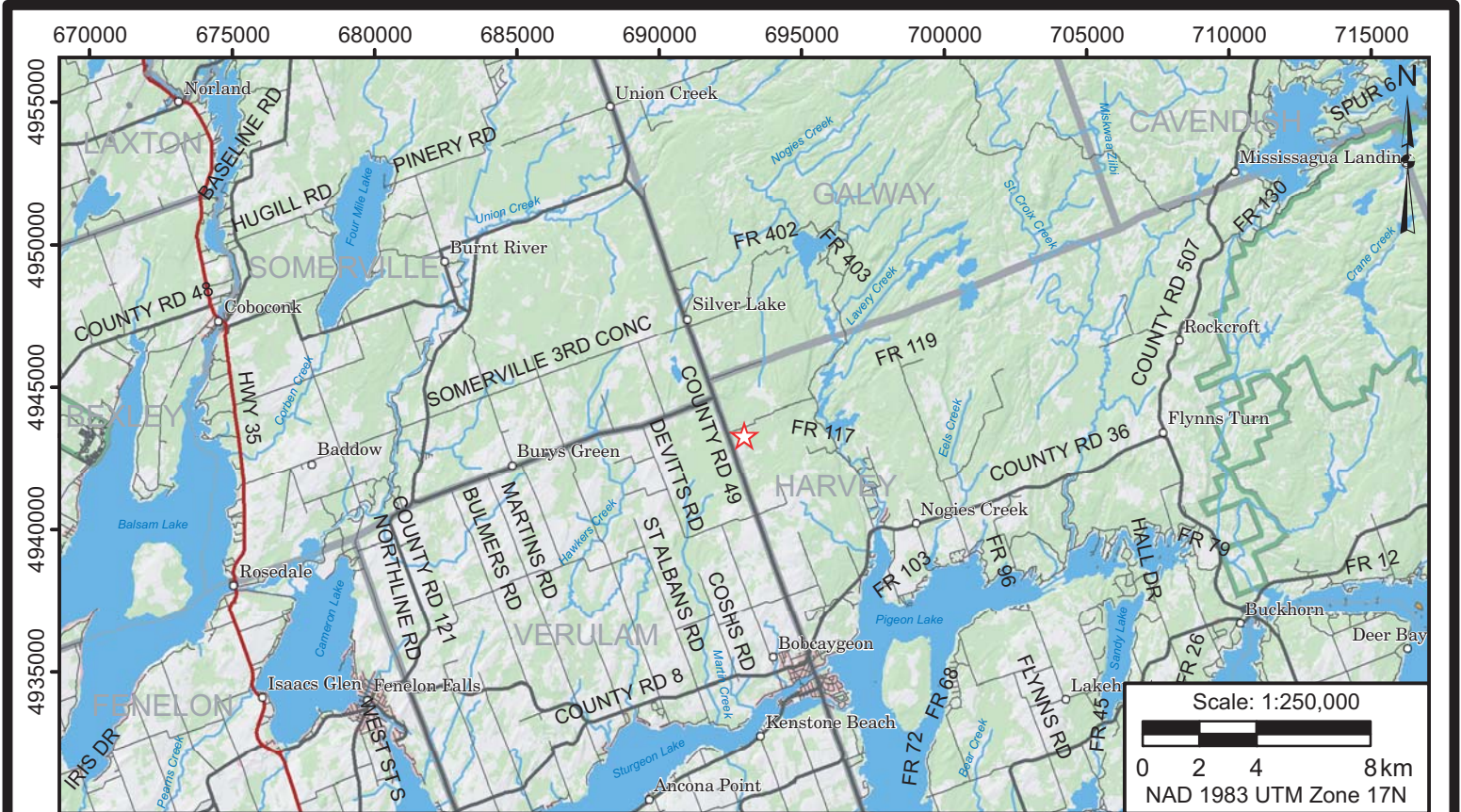


Rob West, HBSoc. CSEB
Senior Environmental Scientist

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Figures



★ Approximate Site Location

**Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance**
White Valley Road,
Part of Lot 29, Concession 19 (Harvey)
Municipality of Trent Lakes,
County of Peterborough

North American Datum (NAD) 1983

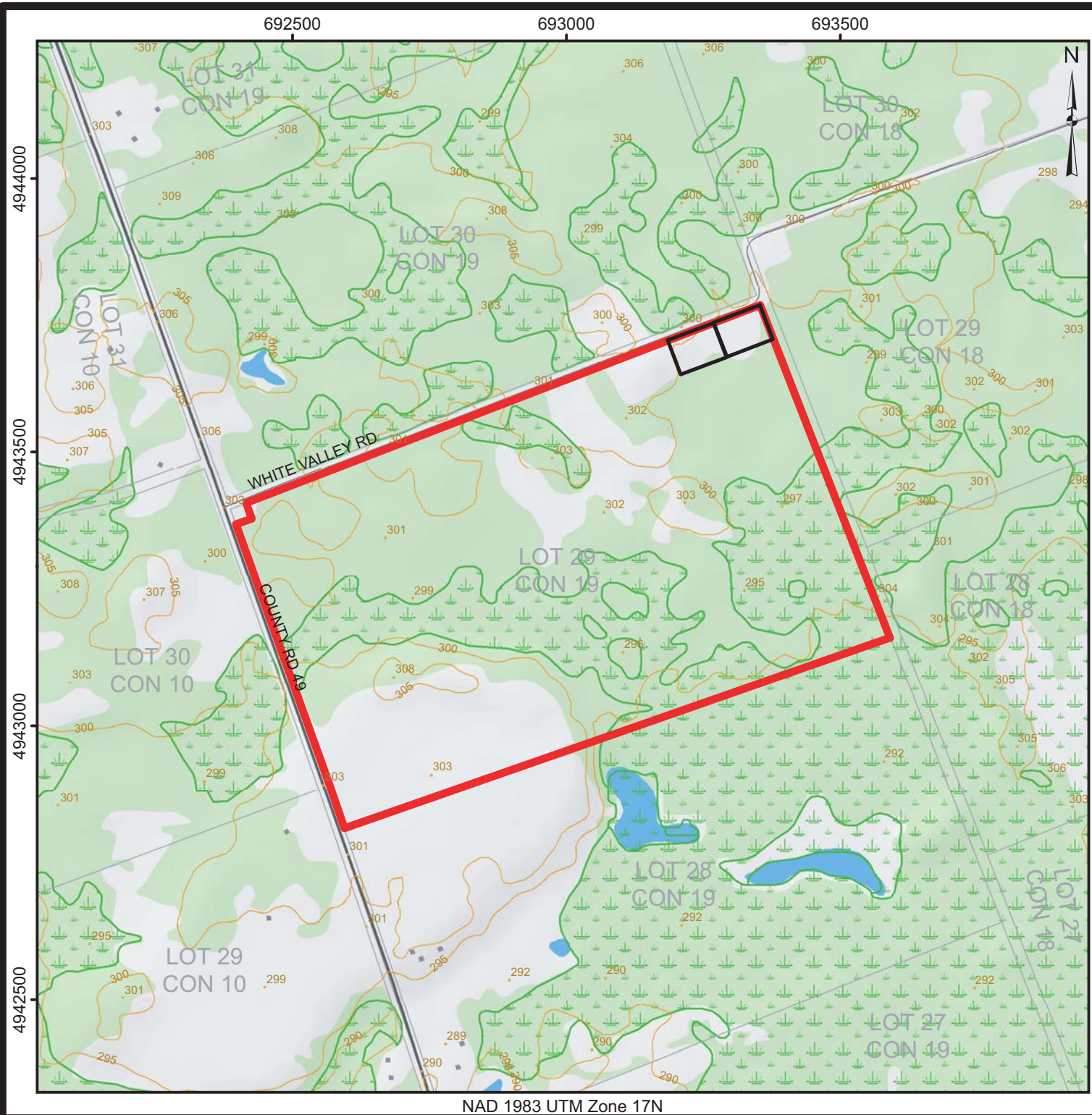
TITLE
General Location

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)












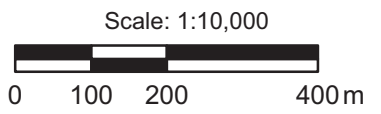
PROJECT #
22-3167
DATE
November 2022

FIGURE NO.
1



Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
 White Valley Road,
 Part of Lot 29, Concession 19 (Harvey)
 Municipality of Trent Lakes,
 County of Peterborough

-  Approximate Property Boundary
-  Proposed Severances
-  Wetland (Unevaluated)
-  Waterbody
-  Wooded Area
-  Spot Height (m asl)
-  Contour (5m Intervals)
-  Building (symbol)
-  Arterial Road
-  Road
-  Geographic Lot Fabric



Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)

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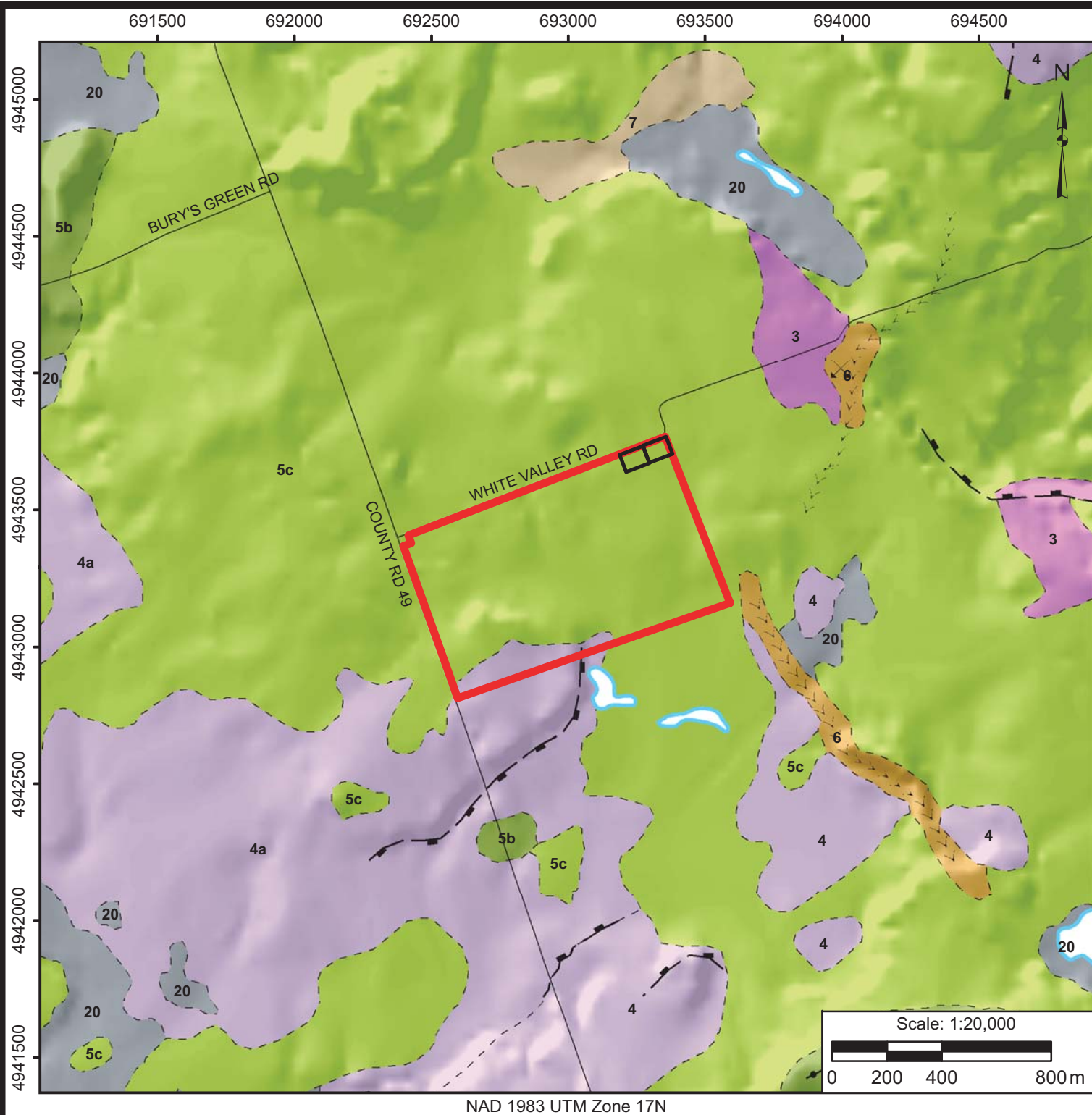
TITLE
Topography and Drainage



PROJECT #
 22-3167

DATE
 November 2022

FIGURE NO.
2



Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
 White Valley Road,
 Part of Lot 29, Concession 19 (Harvey)
 Municipality of Trent Lakes,
 County of Peterborough

- Approximate Property Boundary
- Proposed Severance
- Lake
- Sand and Gravel Pit
- Moraine (major)
- Bedrock Escarpment
- Esker (direction of flow known)
- Contact (approximate/assumed)
- 3 Paleozoic bedrock
- 4 Paleozoic bedrock-drift complex
- 4a Mainly till veneer
- 5b Stone-poor, carbonate-derived silty to sandy till
- 5c Stony, carbonate-derived silty to sandy till
- 6 Ice-contact stratified deposits
- 7 Glaciofluvial deposits
- 20 Organic deposits

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)
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TITLE
Surficial Geology

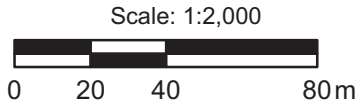


PROJECT # 22-3167	FIGURE NO. 3
DATE November 2022	



Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
 White Valley Road,
 Part of Lot 29, Concession 19 (Harvey)
 Municipality of Trent Lakes,
 County of Peterborough

-  Approximate Property Boundary
-  Study Area (120 m)
-  Proposed Severance
-  Common Juniper Calcareous Shrub Rock Barren (RBS1-1)
-  Dry - Fresh Sugar Maple - White Ash Deciduous Forest (FOD5-8)
-  Dry - Fresh White Cedar Coniferous Forest (FOC2-2)
-  Wetland (Unevaluated)
-  Contour (5 m Intervals)
-  Spot Height (m asl)



Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)
 Imagery provided by the County of Peterborough (2018)
 Feature locations determined by differential GPS (+/- 3.0 m)
 Optimized for Oakridge Environmental Ltd. printing

TITLE
Vegetation



PROJECT #
22-3167

DATE
November 2022

FIGURE NO.
4



Photo A (Above): was taken within the recharge area in the western portion of the property.



Photo B (Above): illustrates the abrupt transition between the coniferous and deciduous habitats on-site.



Photo C (Above): illustrates the typical deciduous woodland habitat observed on-site.



Photo D (Above): was taken looking west along White Valley Road illustrating the conditions along the frontage of the proposed severance lots.

Photos Taken:
September 20, 2022

Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
White Valley Road,
Part of Lot 29, Concession 19 (Harvey)
Municipality of Trent Lakes,
County of Peterborough



TITLE

Site Photos

PROJECT #
22-3167

DATE
November 2022

FIGURE NO.

5



Photo A (Above): was taken looking south along the internal roadway that accesses the property along the east side of the property.



Photo B (Above): was taken from the east roadway looking into the woodland where the recharge area is located.



Photo C (Above): was taken within the deciduous woodland habitat on-site illustrating a relatively young poplar dominated area.

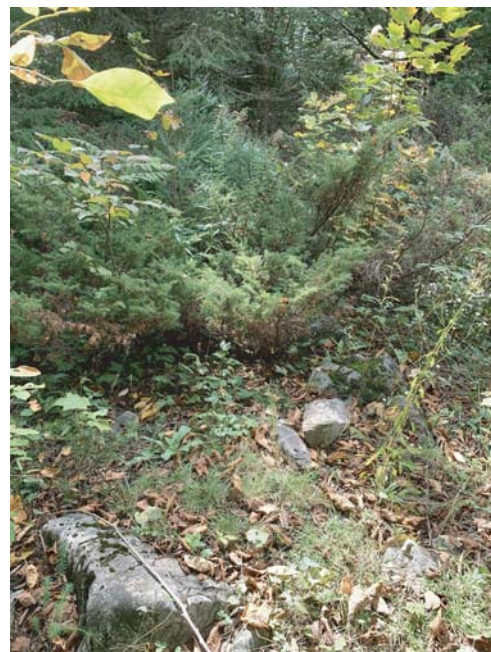

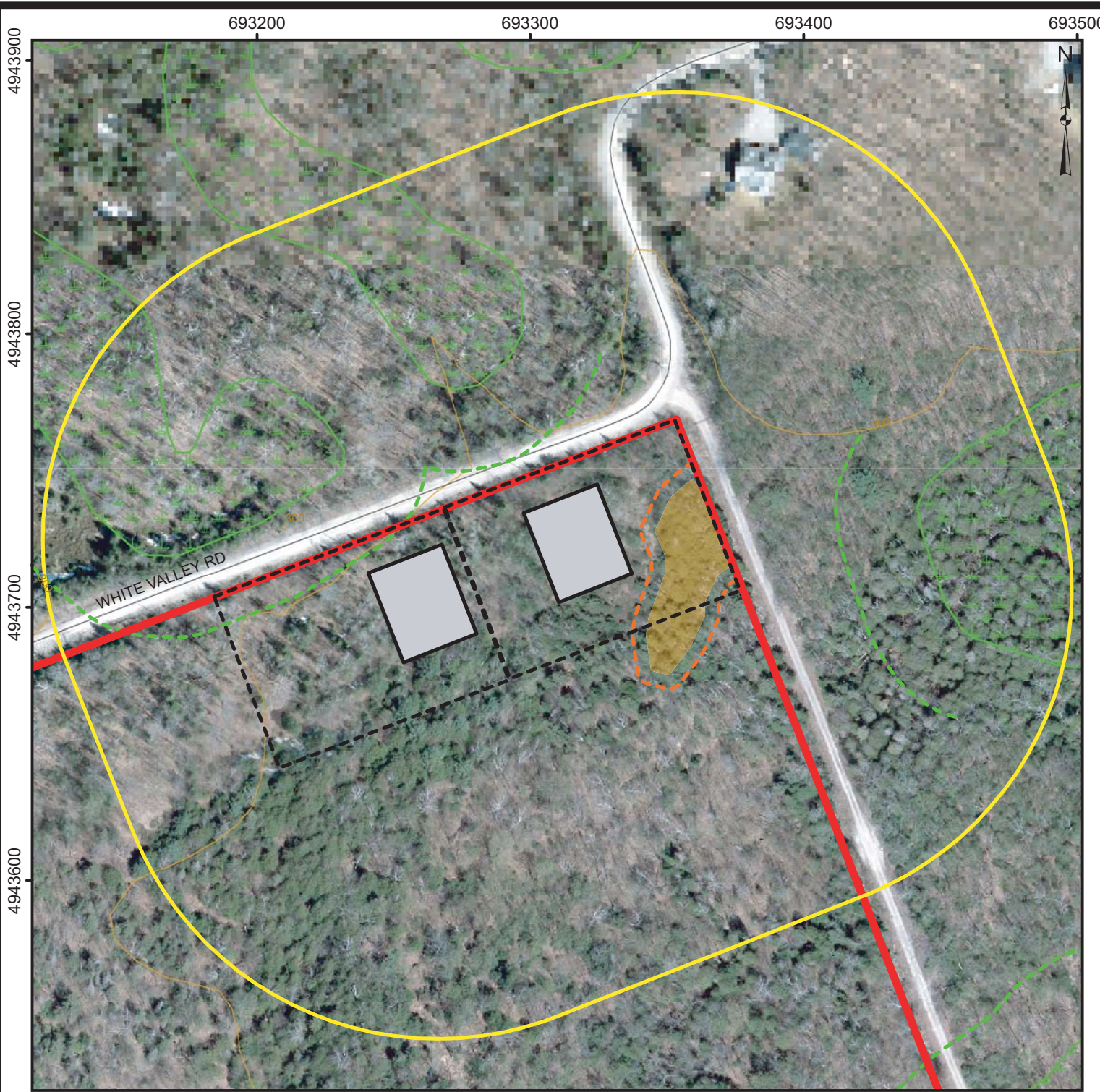


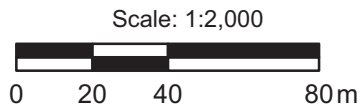
Photo D (Above): was taken in the area of the basic rock barren opening on-site.

Photos Taken: September 20, 2022 October 07, 2022	Scoped Natural Heritage Evaluation (sNHE) Proposed Two (2) Lot Severance White Valley Road, Part of Lot 29, Concession 19 (Harvey) Municipality of Trent Lakes, County of Peterborough	TITLE <p style="text-align: center;">Site Photos</p>	
		PROJECT # 22-3167	FIGURE NO. <p style="text-align: center;">6</p>
Optimized for Oakridge Environmental Ltd. printing	DATE November 2022		



Scoped Natural Heritage Evaluation (sNHE)
Proposed Two (2) Lot Severance
 White Valley Road,
 Part of Lot 29, Concession 19 (Harvey)
 Municipality of Trent Lakes,
 County of Peterborough

- Approximate Property Boundary
- Study Area (120 m)
- Proposed Severance
- Conceptual Building Envelope (1/4 acre)
- Wetland (Unevaluated)
- VPZ (30 m)
- Recharge Area
- VPZ (5 m)
- Contour (5 m Intervals)
- Spot Height (m asl)



Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)
 Imagery provided by the County of Peterborough (2018)

Feature locations determined by differential GPS (+/- 3.0 m)

Optimized for Oakridge Environmental Ltd. printing

TITLE
Constraints



PROJECT #
22-3167

DATE
November 2022

FIGURE NO.
7

Appendix A

PSR

Preliminary Severance Review

Prepared by the Peterborough County
Planning Department



Date: August 16, 2022

Name: Chris, Ralph and Heather Harrison **Agent:** N/A

Email: kjstevenson08@hotmail.com

Phone: 705-731-7371

Municipality: Trent Lakes, Harvey Ward

Lot: 29

Concession: 19

Roll No.: 1542-010-004-12600

Municipal Address: N/A

Type of Severance: residential lot(s)

	Severed	Retained
County Official Plan	Rural	Rural
Municipal Official Plan	Rural	Rural
Municipal Zoning	(RU)	(RU)
Area and Frontage	Lot 1: ± 0.4 ha, ± 60 m frontage on White Valley Rd Lot 2: ± 0.4 ha, ± 60 m frontage on White Valley Rd	± 45 ha, ± 588 metres frontage on CR 49
Existing Use/Buildings	Vacant	Hunt Camp

Conforms to Provincial policies?

Yes No

Studies are required to demonstrate conformity to provincial policies.

Conforms to County Official Plan policies?

Yes No

Conforms to Township Official Plan policies?

Yes No

Conforms to Township Zoning By-Law?

Severed parcel meets Zoning requirements:

Yes No

Retained parcel meets Zoning requirements:

Yes No

Severed parcels do not meet lot area requirements.

Studies required to support the application?

Yes No

Natural Heritage Evaluation (i.e. Environmental Impact Study)

Provincial Policy Review:

The following key natural heritage features and/or key hydrologic features have been identified on or adjacent to the subject property:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Wetlands | <input checked="" type="checkbox"/> Significant Wildlife Habitat | <input type="checkbox"/> Area of Natural and Scientific Interest (ANSI) |
| <input type="checkbox"/> Fish habitat | <input type="checkbox"/> Significant Woodlands | <input checked="" type="checkbox"/> Other key hydrologic feature (stream, pond, lake) |
| <input checked="" type="checkbox"/> Species at Risk | <input checked="" type="checkbox"/> Habitat of Endangered or Threatened Species | |

Does the proposal require a Natural Heritage Evaluation to address the features identified above?

- Yes No

Section 4.2.4.1 of the Growth Plan (2019) states that development and site alteration, including lot creation, within 120 metres of a key hydrologic feature will require a natural heritage evaluation/hydrologic evaluation that identifies a vegetation protection zone (VPZ) that is no less than 30 metres. Since the severed parcels are located within 120 metres of the above key hydrologic features, a natural heritage evaluation and/or hydrologic evaluation is required. Evaluations undertaken in accordance with policy 4.2.4.1 will identify any additional restrictions to be applied before, during and after development to protect the hydrologic and ecological functions of the feature. Please note that any technical study submitted to the County will be peer reviewed at the County's request. Both the cost of the study and the peer review will be at the applicant's expense.

A portion of the subject property is traversed by an area identified as significant wildlife habitat as shown on the attached sketch as Deer Wintering Area - Stratum II. Policies 2.1.5 (d) and 2.1.8 of the Provincial Policy Statement (PPS) prohibits development, including lot creation, and site alteration within and adjacent to significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. In accordance with the County's significant wildlife habitat screening protocol, the deer wintering area identified is considered a Stratum II Deer Yard and the proposed development does not appear to limit access to the Stratum I Core Area. The NHE referenced above is not required to address this feature.

A portion of the subject property is traversed by an area identified for habitat of endangered species and threatened species. Policy 2.1.7 of the PPS prohibits development and site alteration, including lot creation, within habitat of endangered species and threatened species, except in accordance with provincial and federal requirements. Species at Risk Data available to the County indicates that there have been no observations of species at risk on or adjacent to the proposed severed lot. Therefore, a Species at Risk Assessment is not required, however, SAR screening should still be included in the above noted NHE.

Section 2.1.5 (b) of the PPS states that development and site alteration shall not be permitted in significant woodlands in Ecoregions 6E and 7E unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. The subject lands are located in Ecoregion 6E, however, the

Township or County has not identified any significant woodlands in their Official Plans. The NHE referenced above should assess whether the woodland identified on the property meets the criteria to be deemed significant and demonstrate no negative impacts by offering appropriate prevention/mitigation measures for future development.

The subject property contains mineral aggregate resources (i.e. sand and gravel deposits). Policy 2.5.2.5 of the 2014 PPS states that "in known deposits of mineral aggregate resources and on adjacent lands, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:

- d) resource use would not be feasible; or
- e) the proposed land use or development serves a greater long-term public interest; and
- f) issues of public health, public safety and environmental impact are addressed."

The proposed severed parcels are located outside the 300 metre area of influence and therefore no studies would be required to demonstrate the above.

Does the proposal meet Minimum Distance Separation requirements?

Yes No Not Applicable

There does not appear to be any livestock facilities (i.e. barns) within 750 m of the proposed severed lot (2017 MDS I, guideline #6).

County Official Plan Policy Review:

Section 2.6.3.5 of the Plan suggests that residential severances for land holdings located in the Rural Area should be discouraged in favour of development in Settlement Areas in an effort to promote orderly growth and development. However, severances in the Rural Area may be considered provided Health Unit, road frontage and access and Minimum Distance Separation requirements can be met (Ss.2.6.3.5 (A), (C) & (G)) and provided the applicable policies of Sections 2.6.3.1, 2.6.3.5, 4.1.3 and 4.3 are complied with (S.2.6.3.5 (H)).

The County adopted a new Official Plan on June 29th, 2022. That document has been forwarded to the Province for approval (timing of which is unknown). Any formal severance application filed before Provincial approval of the new County Official Plan will be subject to the policies contained in this report. Applications filed after the approval of the new Official Plan will be subject to the new Official Plan policies.

Municipal Official Plan Policy Review:

Section 5.2.2 states that "In general, consents for residential purposes in the Rural area shall be discouraged and development shall be encouraged by plan of subdivision. However residential severances may be granted in accordance with the policies of Section 6.0 of this Plan."

In the Rural designation, the maximum number of lots that may be created by consent per land holding shall be two (2) severed lots and one (1) retained lot where a land holding is defined as a parcel of land recorded as a separate parcel in the Land Registry

Office at least fifteen (15) years prior to the date of the severance application (S. 6.2.1.1). A search of County Land Division records indicate that the subject lands have not received any consents (severances) for new lot creation within the past 15 years and is therefore eligible for consent.

Section 5.10.7 states in part that sensitive land uses (i.e. residential) should not be permitted to locate within 300 metres of lands identified as Mineral Aggregate Resource for Sand and Gravel on Schedule "C" unless studies are completed to demonstrate that the encroachment of the sensitive land uses will not be impacted by such matters as groundwater interference, noise, dust, traffic and vibration. The proposed severed parcels are located outside the 300 metre area of influence and therefore no studies would be required to demonstrate the above.

Section 6.2.1.9 states, in part, that where proposed severances are considered which would create new lots abutting or adjacent to a County Road, the Peterborough County Infrastructure Services will be consulted to ensure that the requirements of their entrance by-law are met. See attached comments from County Public Works.

As applicable, all consent applications must comply with Zoning, road frontage and access, Health Unit, and Minimum Distance Separation requirements (S. 6.2.1.5, 6.2.1.4.1, 6.2.1.6 & 6.2.1.14). The severed parcels do not appear to meet the lot area requirements of the Rural (RU) Zone for a single detached dwelling and a rezoning will be required. The proposal should be discussed with the Township to determine if a rezoning will be required.

Reviewed By: Amanda Warren

Additional Notes

Agencies to be contacted by landowner or agent (marked with an X):

- | | |
|--|--|
| <input checked="" type="checkbox"/> Township | <input checked="" type="checkbox"/> Peterborough Public Health |
| <input checked="" type="checkbox"/> Conservation Authority | <input type="checkbox"/> Trent-Severn Waterway |
| <input type="checkbox"/> Source Water Risk Management Officer | <input type="checkbox"/> First Nations |
| <input type="checkbox"/> Ministry of Environment, Conservation and Parks | <input type="checkbox"/> Other |

Proposal requires confirmation from the Township or identified agency regarding policy conformity.

* The landowner should be aware that local council may not support a rezoning or minor variance to create a lot that is not in compliance with the provisions of the Zoning Bylaw.

* The lands may be within the watershed of a local Conservation Authority. It is recommended that you contact the Authority to determine what, if any, permits may be necessary:

- No Conservation Authority in the area
- Otonabee Region Conservation Authority (ORCA), (705) 745-5791
- Crowe Valley Conservation Authority (CVCA), (613) 472-3137
- Kawartha Region Conservation Authority (KRCA), (705) 328-227

* It is the responsibility of the landowner to identify endangered and threatened species and their habitat on the property prior to undertaking work, and to ensure that the work/activity will not result in negative impacts. Landowners are encouraged to consult with the Ministry of Environment, Conservation and Parks (MECP) if they have questions about the *Endangered Species Act, 2007 (ESA)*. Any sightings of a threatened or endangered species during development and construction on the property must be reported in accordance with the ESA.

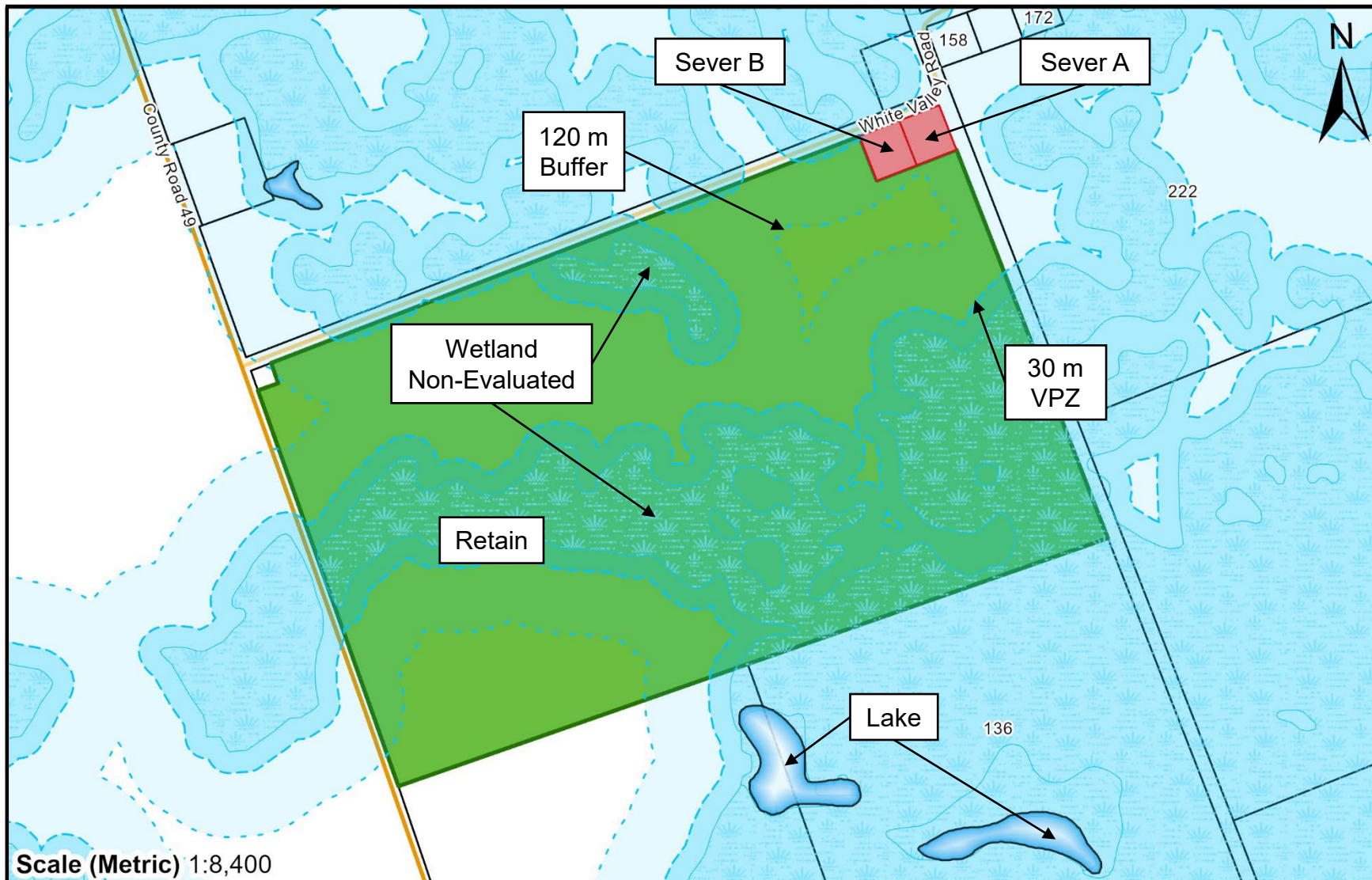
Important

Our position on the overall conformity of the proposal is based on information available at the time of review. Subsequent information from commenting agencies can change our comments relating to any formal application for severance which is subsequently filed. The above-noted comments should not be construed as preliminary approval or denial of a proposal but recognized as a position of the County Planning Department based on the availability of current information.

Roll #1542-010-004-12600
Lot 29 Concession 19 Harvey
Harrison
Severance Sketch



Roll #1542-010-004-12600
Lot 29 Concession 19 Harvey
Harrison
Key Hydrologic Features



Scale (Metric) 1:8,400

NOTE: Development and site alteration, including lot creation, is not permitted within key hydrologic features; any development proposed within the 120 metre buffer surrounding key hydrologic features requires a natural heritage evaluation/hydrologic evaluation to identify a vegetative protection zone (no less than 30 metres). No development, including lot creation, is permitted within the 30 metre vegetation protection zone (VPZ).

Roll #1542-010-004-12600
Lot 29 Concession 19 Harvey
Harrison
Mineral Aggregate Deposits





**Public Works
Engineering & Design**

John Ward
Engineering Technician

Location:
310 Armour Road
Peterborough, Ontario
K9H 1Y6

Mailing Address:
470 Water Street
Peterborough, Ontario
K9H 3M3

Ph: (705) 772-0308
Fax: (705) 749-2551

jward@ptbocounty.ca

www.ptbocounty.ca

Severance Review Form

Applicant: Harrison

File No.: N/A
Date: Feb 14 /2022

County Road: 49

Speed limit in front of subject property: 80km/hr

Conditions:

	Yes	No
Traffic Study required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Road Widening required	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Length/Width/Location of Widening: N/A

Permits:	Yes	No
Single Entrance Permit required for Severed	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Single Entrance Permit required for Retained	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mutual Drive Entrance Permit required	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Notes / further comments: The proposed severed parcel does not front onto a County of Peterborough road. Therefore, the County of Peterborough's Engineering and Design division has no comment.

Please contact the township of Trent Lakes for more information.

If you have any questions/concerns, please contact John Ward via email at jward@ptbocounty.ca.

John Ward
Engineering Technician
Engineering & Design Division,
Public Works Department



Appendix B

Species Descriptions

Birds

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

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

Canada Warbler (*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.

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

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

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

Wood Thrush (*Hylocichia mustelina*) is listed as “Special Concern” by SARO and is protected under the ESA. The Wood Thrush enjoys relatively undisturbed, mature woodlands. Nesting occurs low in the fork of a tree as this species forages for

berries and insects at ground level. Similar to the Eastern Wood-Pewee, this species prefers large tracts of woodland.

Amphibians & Reptiles

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

Western Chorus Frog - Great Lakes - St. Lawrence - Canadian Shield population (*Pseudacris maculata pop. 1*) is listed as “Not at Risk” by SARO, however is listed as “Threatened” by SARA and COSEWIC. The Western Chorus Frog is a small frog which is brown to olive gray in colour. It has three dark lines on its back, a wider line on each side, and broad line across the eyes. Its call is a “cre-ee-eeek” sound similar to a fingernail being dragged across a comb. The Western Chorus prefers lowland habitats with open or discontinuous canopy. Also preferring areas which can become vernal pools in the spring. Vegetation typical to find Western Chorus Frogs are: sedges (*Carex spp.*), cattails (*Typha spp.*), Reed Canary Grass (*Phalaris arundinacea*), Red Osier Dogwood (*Cornus stolonifera*), willows (*Salix spp.*), Speckled Alder (*Alnus incana ssp. rugosa*), Black Ash (*Fraxinus nigra*), and Red Maple (*Acer rubrum*).

Insects

West Virginia White (*Pieris virginiensis*) is listed as “Special Concern” by SARO and is not protected under the ESA. West Virginia White is a small (3 - 4 cm wingspan) white butterfly with wings that appear translucent. As a caterpillar they are yellow-green and a lateral green stripe along their sides. West Virginia Whites prefer moist deciduous woodlands and feed on toothwort.

Plants

Butternut (*Juglans cinerea*) is listed as “Endangered” by SARO and is protected under the ESA. Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well-drained soil and is often found along streams. It may

also be found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges.

Appendix C

NHIC Database

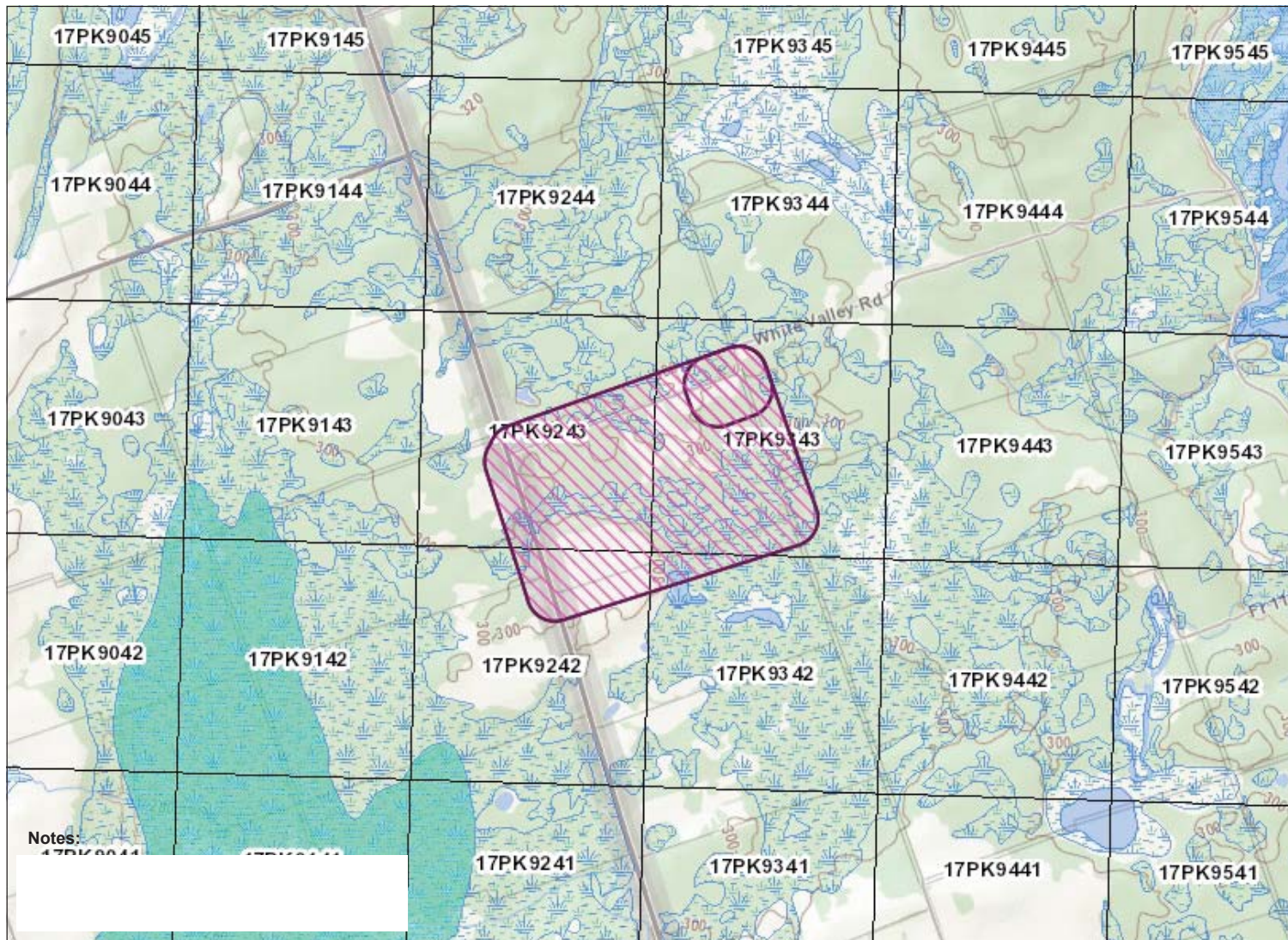


NHIC Map

Map created:8/25/2022

Legend

- NHIC 1 Km Grid
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland



Notes:
17PK9041

1.3 0 0.65 1.3 Kilometres

Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry(OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

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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
1053166	SPECIES	Eastern Meadowlark	<i>Sturnella magna</i>		THR	THR	17PK9342	
1053166	SPECIES	Bobolink	<i>Dolichonyx oryzivorus</i>		THR	THR	17PK9342	
1053156	NATURAL AREA	Sturgeon Lake No. 2					17PK9242	
1053156	SPECIES	Eastern Meadowlark	<i>Sturnella magna</i>		THR	THR	17PK9242	
1053156	SPECIES	Bobolink	<i>Dolichonyx oryzivorus</i>		THR	THR	17PK9242	
1053156	SPECIES	Snapping Turtle	<i>Chelydra serpentina</i>		SC	SC	17PK9242	
1053167	SPECIES	Eastern Meadowlark	<i>Sturnella magna</i>		THR	THR	17PK9343	
1053167	SPECIES	Bobolink	<i>Dolichonyx oryzivorus</i>		THR	THR	17PK9343	
1053157	SPECIES	Eastern Meadowlark	<i>Sturnella magna</i>		THR	THR	17PK9243	
1053157	SPECIES	Bobolink	<i>Dolichonyx oryzivorus</i>		THR	THR	17PK9243	
1053157	SPECIES	Western Chorus Frog - Great Lakes - St. Lawrence - Canadian Shield populati	<i>Pseudacris maculata</i> pop. 1		NAR	THR	17PK9243	

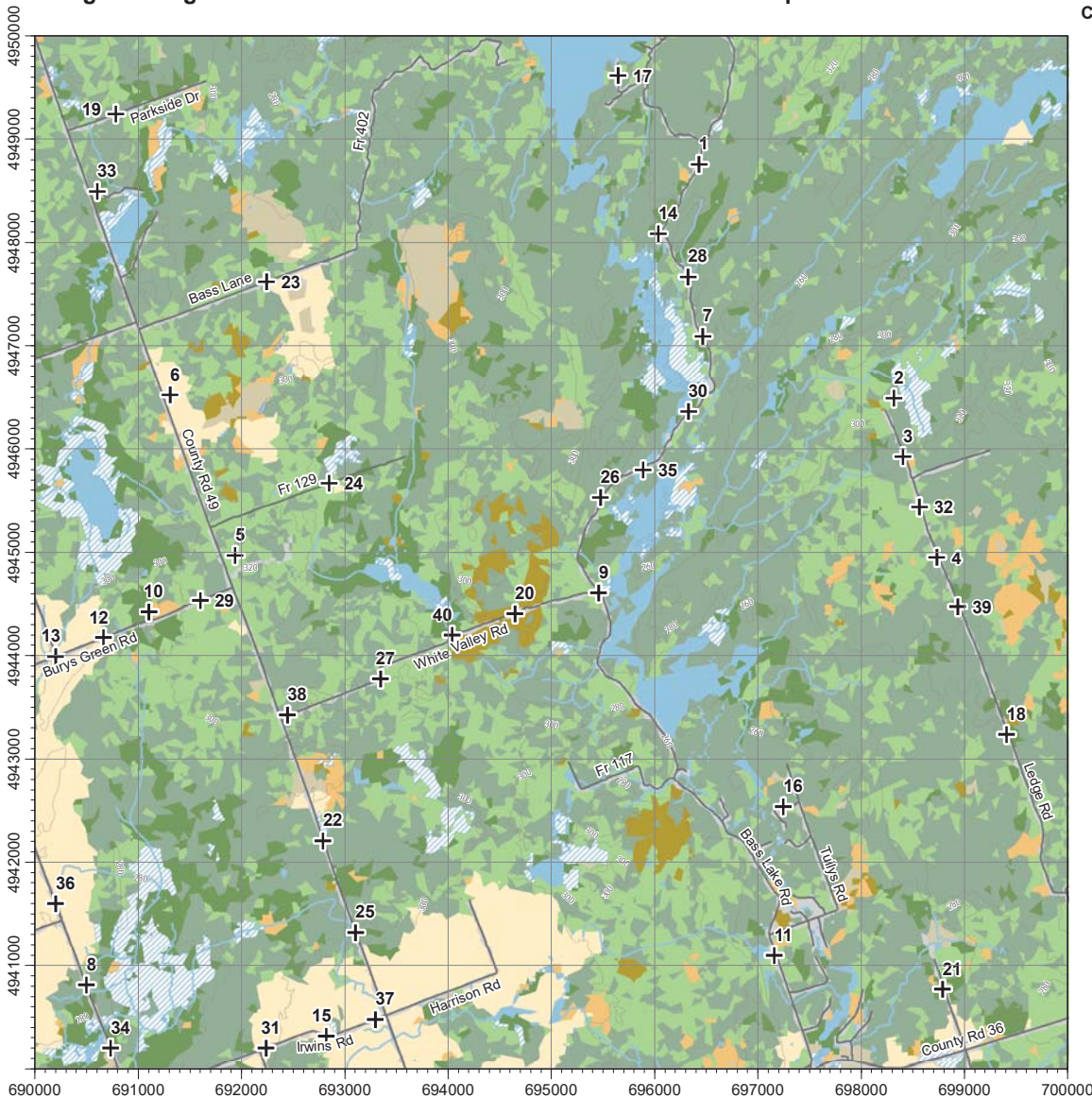
Appendix D

OBBA Database

Region / Région: 16

Square / Parcelle: 17TPK94

Predefined point count coordinates
Coordonnées des points d'écoute prédéterminés



POINT	EASTING UTM Est	NORTHING UTM Nord
+		
1	696428	4948758
2	698320	4946492
3	698406	4945925
4	698734	4944953
5	691937	4944972
6	691309	4946523
7	696466	4947090
8	690497	4940812
9	695460	4944607
10	691100	4944423
11	697162	4941095
12	690664	4944172
13	690200	4943990
14	696036	4948083
15	692821	4940315
16	697245	4942538
17	695648	4949614
18	699411	4943237
19	690785	4949242
20	694647	4944406
21	698789	4940768
22	692789	4942207
23	692243	4947618
24	692850	4945671
25	693101	4941317
26	695474	4945530
27	693346	4943776
28	696324	4947668
29	691601	4944535
30	696329	4946364
31	692236	4940200
32	698563	4945441
33	690604	4948495
34	690734	4940200
35	695890	4945798
36	690199	4941596
37	693294	4940477
38	692443	4943423
39	698936	4944471
40	694042	4944197

Legend / Légende

- Expressway or highway — Autoroute ou route nationale (asphaltée)
- Regional or local road — Route régionale ou locale (asphaltée ou non)
- Resource / Recreation --- Ressource / route récréative
- Rail line — Chemin de fer
- Utility corridor --- Ligne de transport d'énergie
- Watercourse — Rivière ou ruisseau
- Protected or conserved area — Zone protégée ou conservée
- Fire disturbance since 2000 — Incendie perturbé depuis 2000
- Broadleaf forest 22 — Forêt de feuillus
- Coniferous forest 8 — Forêt de conifères
- Mixed forest 49 — Forêt mixte
- Shrubland 2 — Milieu arbustif
- Grassland 1 — Prairie
- Barren 1 — Dénudé
- Wetland 3 — Milieu humide
- Agriculture 6 — Milieu agricole
- Water 4 — Eau
- Developed area 3 — Zone développée
- Unclassified — Non classifié

The approximate percent coverage of each habitat type is indicated by the numbered box in the legend.
La couverture approximative est indiquée en pourcentage dans le rectangle coloré de la légende.

Cartographic production by Birds Canada
Production cartographique par oiseaux Canada

Note: The project partners are in no way responsible for any inaccuracies, mistakes or omissions in the information that appears on this map.
Avis : Les responsables du projet d'atlas ne peuvent être tenus responsables de toute inexactitude, erreur ou omission concernant les informations apparaissant sur cette carte.

**Number of off-road point counts
Nombre de points d'écoute hors route**

Broadleaf forest: 1	Grassland: 0
Coniferous forest: 1	Wetland: 0
Mixed forest: 3	Shrubland: 0

Predefined / Prédéterminés: 20
Off-road / Hors route: 5

Atlas-2 off-road point ● **Point hors route Atlas-2**



0 1 km

BIRDS CANADA / OISEAUX CANADA
March 2021 / mars 2021
<https://www.birdsontario.org/>



Square Summary (17TPK94) [\[change\]](#)

	#species			#hours			#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	67	16	9	92	12.9	11.4	24	0
Prev.	39	31	36	106	24.4	—	32	

Region summary (#16: Peterborough, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
60	60	162	60	23
60	60	185	0	60

Target number of point counts in this square: 25 in total: 20 road side, 5 off road (Broadleaf Forest in 1, Coniferous Forest in 1, Mixed Forest in 3). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat. Predef. completed: [01, 04, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24]

SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%
Canada Goose		FY	76	Common Gallinule ‡			10	Short-eared Owl †			0
Mute Swan ‡			3	American Coot ‡			1	Northern Saw-whet Owl			3
Trumpeter Swan		P	20	Sandhill Crane ‡	NE		21	Belted Kingfisher	S	H	86
Wood Duck	FY	H	76	Killdeer §			51	Yellow-bellied Sapsucker	D	NY	96
Blue-winged Teal ‡			8	Upland Sandpiper †	T		8	Red-headed Woodpecker †			8
Northern Shoveler ‡			0	American Woodcock	S		43	Red-bellied Woodpecker			35
Gadwall ‡			0	Wilson's Snipe	S		48	Black-backed Woodpecker ‡			1
American Wigeon ‡			0	Spotted Sandpiper			41	Downy Woodpecker	T	H	81
Mallard	FY	P	78	Ring-billed Gull § ‡			1	Hairy Woodpecker	S	S	91
American Black Duck			5	Herring Gull §	H		23	Pileated Woodpecker	D	S	86
Northern Pintail ‡			0	Caspian Tern ‡			0	Northern Flicker	S	S	91
Green-winged Teal ‡			0	Black Tern †			1	American Kestrel §	H	H	46
Redhead †			0	Common Tern § ‡			0	Merlin		H	41
Ring-necked Duck			20	Common Loon	NE	P	71	Peregrine Falcon ‡			0
Lesser Scaup ‡			0	Double-crested Cormorant § ‡			3	Olive-sided Flycatcher ‡			6
Hooded Merganser	H	H	53	American Bittern	S	S	63	Eastern Wood-Pewee §	FY	S	100
Common Merganser ‡			20	Least Bittern †			21	Yellow-bellied Flycatcher ‡	S		0
Ruddy Duck ‡			0	Great Blue Heron §		H	60	Alder Flycatcher	S	S	90
Wild Turkey		H	86	Green Heron §	H	H	43	Willow Flycatcher			33
Ruffed Grouse	FY	FY	85	Turkey Vulture	H	H	85	Least Flycatcher	S	S	90
Ring-necked Pheasant ‡			0	Osprey	AE	H	48	Eastern Phoebe	NY	P	98
Pied-billed Grebe	N		15	Northern Harrier			26	Great Crested Flycatcher	FY	S	100
Rock Pigeon (Feral Pigeon)	AE	P	50	Sharp-shinned Hawk		H	20	Eastern Kingbird	AE	S	86
Mourning Dove	P	S	80	Cooper's Hawk			18	Yellow-throated Vireo	S		30
Yellow-billed Cuckoo		S	50	Northern Goshawk ‡			1	Blue-headed Vireo	T	S	71
Black-billed Cuckoo	S	S	66	Bald Eagle ‡			5	Philadelphia Vireo ‡			0
Coccyzus sp. ‡	S		0	Red-shouldered Hawk	T		30	Warbling Vireo	S	S	73
Common Nighthawk §			21	Broad-winged Hawk	H	S	78	Red-eyed Vireo	CF	M	100
Eastern Whip-poor-will §			33	Red-tailed Hawk			46	Loggerhead Shrike †			0
Chimney Swift ‡			6	Eastern Screech-Owl			10	Canada Jay ‡			0
Ruby-throated Hummingbird	D	H	70	Great Horned Owl ‡			13	Blue Jay	CF	S	100
Virginia Rail	S	S	53	Barred Owl	P		38	American Crow	FY	FY	93
Sora			18	Long-eared Owl ‡			3	Common Raven	T	FY	91

Breeding Bird Atlas - Summary Sheet for Square 17TPK94 (page 2 of 2)

SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%	SPECIES	Prev.	Code	%
Black-capped Chickadee	FY	S	96	House Finch	H		15	Mourning Warbler	S	S	66
Boreal Chickadee ‡			0	Purple Finch	T	S	95	Common Yellowthroat	CF	M	100
Horned Lark ‡	S		5	Red Crossbill ‡			5	Hooded Warbler ‡			0
Northern Rough-winged Swallow	V	H	18	White-winged Crossbill ‡			3	American Redstart	S	M	96
Purple Martin ‡	AE		0	Pine Siskin ‡	P		10	Cape May Warbler ‡			0
<u>Tree Swallow</u>	P		81	American Goldfinch	P	S	93	Cerulean Warbler †			3
Bank Swallow §			11	Grasshopper Sparrow §			21	Northern Parula ‡			10
Barn Swallow §	NY	AE	73	Chipping Sparrow	FY	S	95	Magnolia Warbler	A	S	70
Cliff Swallow §	AE		16	Clay-colored Sparrow ‡			15	Bay-breasted Warbler ‡			0
Ruby-crowned Kinglet ‡			0	Field Sparrow §	S	S	60	Blackburnian Warbler	FY	S	65
Golden-crowned Kinglet	T		26	Dark-eyed Junco ‡	S		3	Yellow Warbler	S	A	83
Red-breasted Nuthatch	T	S	93	White-throated Sparrow	CF	P	95	Chestnut-sided Warbler	A	M	93
White-breasted Nuthatch	T	S	86	Vesper Sparrow			28	Black-throated Blue Warbler	S	S	53
Brown Creeper	T	H	65	Savannah Sparrow	S	S	56	Pine Warbler	S	S	91
Blue-gray Gnatcatcher ‡			3	Song Sparrow	CF	DD	100	Yellow-rumped Warbler	T	S	81
House Wren		S	76	Lincoln's Sparrow ‡			5	Prairie Warbler †			0
Winter Wren	T	S	96	Swamp Sparrow	FY	S	98	Black-throated Green Warbler	T	S	91
Sedge Wren ‡	S		8	Eastern Towhee §			48	Canada Warbler §	S	S	60
Marsh Wren	S	T	43	Bobolink §	S	S	50	Scarlet Tanager	S	S	91
Carolina Wren ‡			5	Eastern Meadowlark §	T	S	55	Northern Cardinal	S	S	50
European Starling	FY	S	80	Orchard Oriole ‡			3	Rose-breasted Grosbeak	P	P	98
Gray Catbird	CF	S	80	Baltimore Oriole	FY	AE	75	Indigo Bunting	FY	S	95
Brown Thrasher	S	H	73	Red-winged Blackbird	FY	CF	100				
Northern Mockingbird ‡			1	<u>Brown-headed Cowbird</u>	S		60				
Eastern Bluebird		S	51	Common Grackle	CF	S	98				
Veery	T	M	100	Ovenbird	CF	M	98				
Swainson's Thrush			13	Northern Waterthrush	CF	S	91				
Hermit Thrush	T	S	75	Golden-winged Warbler †			13				
Wood Thrush §	T	S	85	Blue-winged Warbler ‡			8				
American Robin	FY	M	98	Golden-winged/Blue-winged Warbler ‡	S		0				
Cedar Waxwing	P	H	83	Black-and-white Warbler	CF	S	96				
House Sparrow			33	Tennessee Warbler ‡			0				
Evening Grosbeak ‡	T		0	Nashville Warbler	FY	S	90				

This list includes all breeding species expected in the region #16 (Peterborough). Underlined species are those that you should try to add to this square (17TPK94). 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 17TPK94 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TPK94 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 #16). 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/summaryform.jsp?squareID=17TPK94&lang=EN> Data current as of 24/08/2022 22:28.

Appendix E

Species List

Observed Species List

KINGDOM	Common Name	Scientific Name	SARO	SARA
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Animalia

Blue Jay	Cyanocitta cristata
Carolina Chickadee	Poecile carolinensis
Common Grackle	Quiscalus quiscula
Common Raven	Corvus corax
Eastern Chipmunk	Tamias striatus
Eastern Cottontail	Sylvilagus floridanus
European Starling	Sturnus vulgaris
Northern Cardinal	Cardinalis cardinalis
Red-breasted Nuthatch	Sitta canadensis
Song Sparrow	Melospiza melodia
Spring Peeper	Pseudacris crucifer
White-tailed Deer	Odocoileus virginianus
Wild Turkey	Meleagris gallopavo

Plantae

American Beech	Fagus grandifolia
Basswood	Tilia americana
Black Cherry	Prunus serotina
Blue-beech	Carpinus caroliniana
Blue-stemmed Goldenrod	Solidago caesia
Bracken Fern	Pteridium aquilinum
Bur Oak	Quercus macrocarpa
Canada Goldenrod	Solidago canadensis
Common Bugloss	Anchusa officinalis
Common Buttercup	Ranunculus acris
Common Elderberry	Sambucus canadensis

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Common Hawkweed	Hieracium lachenalii		
	Common Hop	Humulus lupulus		
	Common Juniper	Juniperus communis		
	Common Lilac	Syringa vulgaris		
	Common Milkweed	Asclepias syriaca		
	Common Morning Glory	Ipomoea purpurea		
	Common Mullein	Verbascum thapsus		
	Common Plantain	Plantago major		
	Common Prickly-ash	Zanthoxylum americanum		
	Common Ragweed	Ambrosia artemisiifolia		
	Common Self-heal	Prunella vulgaris		
	Common Sow-thistle	Sonchus oleraceus		
	Common Speedwell	Veronica officinalis		
	Common St. John's-wort	Hypericum perforatum		
	Common Tansy	Tanacetum vulgare		
	Common Timothy	Phleum pratense		
	Common Yarrow	Achillea millefolium		
	Eastern Cottonwood	Populus deltoides		
	Eastern Hemlock	Tsuga canadensis		
	Eastern Hop-hornbeam	Ostrya virginiana		
	Eastern Poison Ivy	Toxicodendron radicans var. radicans		
	Eastern Red Cedar	Juniperus virginiana		
	Eastern White Cedar	Thuja occidentalis		
	Eastern White Pine	Pinus strobus		
	Elm-leaved Goldenrod	Solidago ulmifolia		
	Flat-top White Aster	Doellingeria umbellata		
	Hair Fescue	Festuca filiformis		
	Kentucky Bluegrass	Poa pratensis		
	Large-toothed Aspen	Populus grandidentata		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	New England Aster	<i>Symphyotrichum novae-angliae</i>		
	Old Switch Panicgrass	<i>Panicum virgatum</i>		
	Paper Birch	<i>Betula papyrifera</i>		
	Poverty Oatgrass	<i>Danthonia spicata</i>		
	Red Fescue	<i>Festuca rubra</i> ssp. <i>rubra</i>		
	Red Maple	<i>Acer rubrum</i>		
	Red Pine	<i>Pinus resinosa</i>		
	Rough-stemmed Goldenrod	<i>Solidago rugosa</i>		
	Scots Pine	<i>Pinus sylvestris</i>		
	Sensitive Fern	<i>Onoclea sensibilis</i>		
	Sheep Sorrel	<i>Rumex acetosella</i>		
	Small White Aster	<i>Symphyotrichum racemosum</i>		
	Smooth Crabgrass	<i>Digitaria ischaemum</i>		
	Spinulose Wood Fern	<i>Dryopteris carthusiana</i>		
	Spreading Dogbane	<i>Apocynum androsaemifolium</i>		
	Strict Blue-eyed-grass	<i>Sisyrinchium montanum</i>		
	Sugar Maple	<i>Acer saccharum</i>		
	Tall Hawkweed	<i>Pilosella piloselloides</i>		
	Tatarian Honeysuckle	<i>Lonicera tatarica</i>		
	Trembling Aspen	<i>Populus tremuloides</i>		
	Tufted Hairgrass	<i>Deschampsia cespitosa</i>		
	Western Poison Ivy	<i>Toxicodendron radicans</i> var. <i>rydbergii</i>		
	White Ash	<i>Fraxinus americana</i>		
	White Elm	<i>Ulmus americana</i>		
	White Oak	<i>Quercus alba</i>		
	White Spruce	<i>Picea glauca</i>		
	White Sweet-clover	<i>Melilotus albus</i>		
	White Trillium	<i>Trillium grandiflorum</i>		
	Wild Carrot	<i>Daucus carota</i>		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Wild Chicory	Cichorium intybus		
	Wild Lily-of-the-valley	Maianthemum canadense		
	Wild Sarsaparilla	Aralia nudicaulis		
	Wild Strawberry	Fragaria virginiana		
	Wiry Panicgrass	Panicum flexile		
	Woodland Strawberry	Fragaria vesca		
	Zigzag Goldenrod	Solidago flexicaulis		

Appendix F

Significant Wildlife Habitat

Significant Wildlife Habitat Screening					
Significant Wildlife Habitat Type	ELC Habitat (for internal use)	General Habitat Description	ELC Observed	SWH Present	Comments
Wildlife Concentration Areas					
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM1, CUT1, plus annual spring flooding	Fields with sheet water during the spring	NO	NO	ELC not observed
Waterfowl Stopover and Staging Areas (Aquatic)	MAS1 to MAS 3, SAS1, SAM1, SAF1, SWD1 to SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration	NO	NO	ELC not observed
Shorebird Migratory Stopover Area	BBO1 to 2, BBS1 to 2, BBT1 to 2, SDO1, SDS2, SDT1, MAM1 to 5	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats	NO	NO	ELC not observed
Raptor Wintering Area	At least one of FOD, FOM or FOC and one of CUM, CUT, CUS, CUW	The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors	NO	NO	ELC not observed
Bat Hibernacula	CCR1, CCR2, CCA1, CCA2	Caves, mine shafts, underground foundations and Karsts. Hibernacula relatively poorly known	NO	NO	ELC not observed
Bat Maternity Colonies	FOD, FOM, SWD, SWM	Mature forests with >10 ha of large diameter (>25 cm dbh) wildlife trees, 21 snags per hectare preferred	YES	YES	ELC present in the form of secondary succession woodlands
Turtle Wintering Areas	Classes SA, MA, OA and SA, ELC Community Series FEO and BOO	Within core habitat, water must be deep enough not to freeze and have soft mud substrates	NO	NO	ELC not observed
Reptile Hibernaculum (Turtles assessed separately)	Any Ecosite with the exception of very wet communities, Five-lined Skink prefers FOD and FOM communities, Ecosites FOC1 & FOC3	Below frost lines in burrows, rock crevices and other natural or naturalized locations. Rock crevices, talus slopes, etc.	YES	YES	ELC present in the form of Rock Barren habitat
Colonial Nesting Bird Breeding Habitat (Bank and Cliff)	CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1	Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, barns. Man-made structure and disturbance over 2 years old	NO	NO	ELC not observed
Colonial Nesting Bird Breeding Habitat (Tree/Shrubs)	SWM2, SWM3, SWM5, SWM6, SWD1-7, FET1	Live or dead standing trees (typically 11 to 15 m tall) in wetlands, lakes, islands and peninsulas. Occasionally shrubs and emergent vegetation.	NO	NO	ELC not observed
Colonial Nesting Bird Breeding Habitat (Ground)	MAM1 - 6, MAS1 - 3, CUM, CUT, CUS	Rocky island or peninsula within a lake or river. Close proximity to watercourses in open fields or pastures with scattered trees or shrubs	NO	NO	ELC not observed
Migratory Butterfly Stopover Areas	At least one of FOD, FOM, FOC and CUP and one of CUM, CUT, CUS	At least 10 ha in size with combination of field and forest within 5 km of Lake Ontario	NO	NO	ELC not observed
Landbird Migratory Stopover Areas	FOC, FOM, FOD, SWC, SWM, SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario	YES	NO	Not within 5 km of Lake Ontario
Deer Yarding Areas	FOM, FOC, SWM, SWC, CUP2, CUP3, FOD3, CUT MNRF to confirm	Core (Stratum I) is located within Stratum II. Core is critical for survival of deer during winter months	YES	YES	Stratum II - PSR states no requirements
Deer Winter Congregation Areas	FOC, FOM, FOD, SWC, SWM, SWD	Large woodlots typically >100 ha, however smaller woodlots with densities of 0.1 - 1.5 deer/ha may also be considered	YES	YES	PSR states not requirements
Rare Vegetation Communities					
Cliffs and Talus Slopes	TAO, TAS, TAT, CLO, CLS, CLT	Cliff is vertical to near vertical >3 m tall Talus slope is rock rubble at base of a cliff made up of coarse rock debris	NO	NO	ELC not observed
Sand Barren	SBO1, SBS1, SBT1	Typically >0.5 ha with exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion	NO	NO	ELC not observed
Alvar	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW	Typically >0.5 ha with level, mostly fractured calcareous bedrock	NO	NO	ELC not observed
Old Growth Forest	FOD, FOM, SWD, SWC, SWM	Woodland areas 30 ha or greater with at least 10 ha interior habitat assuming 100 m buffer at edge of forest	YES	NO	Woodland Consists of Secondary Succession younger Deciduous and Coniferouse stands
Savannah	TPS1, TPS2, TPW1, TPW2, CUS2	Any tallgrass prairie habitat that has tree cover between 25 - 60%	NO	NO	ELC not observed
Tallgrass Prairie	TPO1, TPO2	Dominated by prairie grasses with < 25% tree cover	NO	NO	ELC not observed
Other Rare Vegetation Communities	Provincially Rare S1, S2 and S3 vegetation communities, refer to Appendix M of SWHTG	Beaches, fens, forest, marsh, barrens, dunes and swamps	NO	NO	ELC not observed
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	MAS1 to 3, SAS1, SAM1, SAF1, MAM1 to 6, SWT1, SWT2, SWD1 to 4	Extends 120 m from a wetland (>0.5 ha) or a wetland (>0.5 ha) and any small wetlands or a cluster of 3 small wetlands where waterfowl nesting is known to occur	NO	NO	ELC not observed
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands or in structures over water	YES	NO	ELC not observed
Woodland Raptor Nesting Habitat	All forested ecosites May also occur in SWC, SWM, SWD, CUP3	All natural or conifer plantation woodland / forest stands >30 ha with >10 ha of interior habitat	YES	YES	Deciduous stand is greater than 30 ha and has greater than 10 ha interior woodland habitat
Turtle Nesting Areas	Exposed mineral soil area adjacent (<100m) or within MAS1 to 3, SAS1, SAM1, SAF1, BOO1, FEO1	Close to water with sand and gravel that turtles are able to dig in, located in open sunny areas.	NO	NO	ELC not observed
Seeps and Springs	Any forested Ecosite within a headwater area	Any forested area (with >25% meadow/field/pasture) within headwaters of a stream or river system	NO	NO	No headwater conditions

Significant Wildlife Habitat Screening					
Significant Wildlife Habitat Type	ELC Habitat (for internal use)	General Habitat Description	ELC Observed	SWH Present	Comments
Amphibian Breeding Habitat (Woodland)	FOC, FOM, FOD, SWC, SWM, SWD	Presence of a wetland, pond or woodland pool >500m ² , within or adjacent to woodland	YES	NO	No permanent pools or ponds present, only ephemeral pools
Amphibian Breeding Habitat (Wetlands)	Classes SW, MA, FE, BO, OA, SA Typically isolated (>120 m) from woodland ecosites	Wetlands >500m ² (25m diameter), supporting high species diversity	NO	NO	ELC not observed
Woodland Area-Sensitive Breeding Bird Habitat	FOC, FOM, FOD, SWC, SWM, SWD	Habitats where interior forest birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha	YES	YES	Deciduous stand is greater than 30 ha and has greater than 10 ha interior woodland habitat, secondary succession trees are likely 60 years or greater.
Habitat of Species of Conservation Concern (other than Threatened or Endangered)					
Marsh Breeding Bird Habitat	MAM1 to 6, SAS1, SAM1, SAF1, FEO1, BOO1 Green Heron: SW, MA, CUM1	Nesting occurs in wetlands consisting of shallow water with emergent aquatic vegetation Green Heron: edge water habitat	NO	NO	ELC not observed
Open Country Bird Breeding Habitat	CUM1, CUM2	Large grassland areas (including natural and cultural field and meadows) >30 ha	NO	NO	ELC not observed
Shrub/Early Successional Bird Breeding Habitat	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub thicket habitats >10 ha in size	NO	NO	ELC not observed
Terrestrial Crayfish	MAM1 to 6, MAS1 to 3, SWD, SWT, SWM CUM1 with inclusions above meadow marsh or swamp ecosites	Wet meadow edges of shallow marshes Only found in SW Ontario	NO	NO	ELC not observed
Special Concern and Rare Wildlife Species	Varies	All Special Concern and Provincially Rare plant and animal species. May also consider Area Sensitive and Culturally Sensitive Species	NO	NO	Not detected
Animal Movement Corridors					
Amphibian Movement Corridors	Corridors found in all ecosites associated with water, determined from breeding habitats	Determined as part of breeding habitat assessment	NO	NO	ELC not observed
Deer Movement Corridors	All forested Ecosites	All proposals within Stratum II Deer Wintering Area have potential for corridors	YES	YES	Minor Corridors in retained lands area 100 m back from White Valley Road
General Comments:					