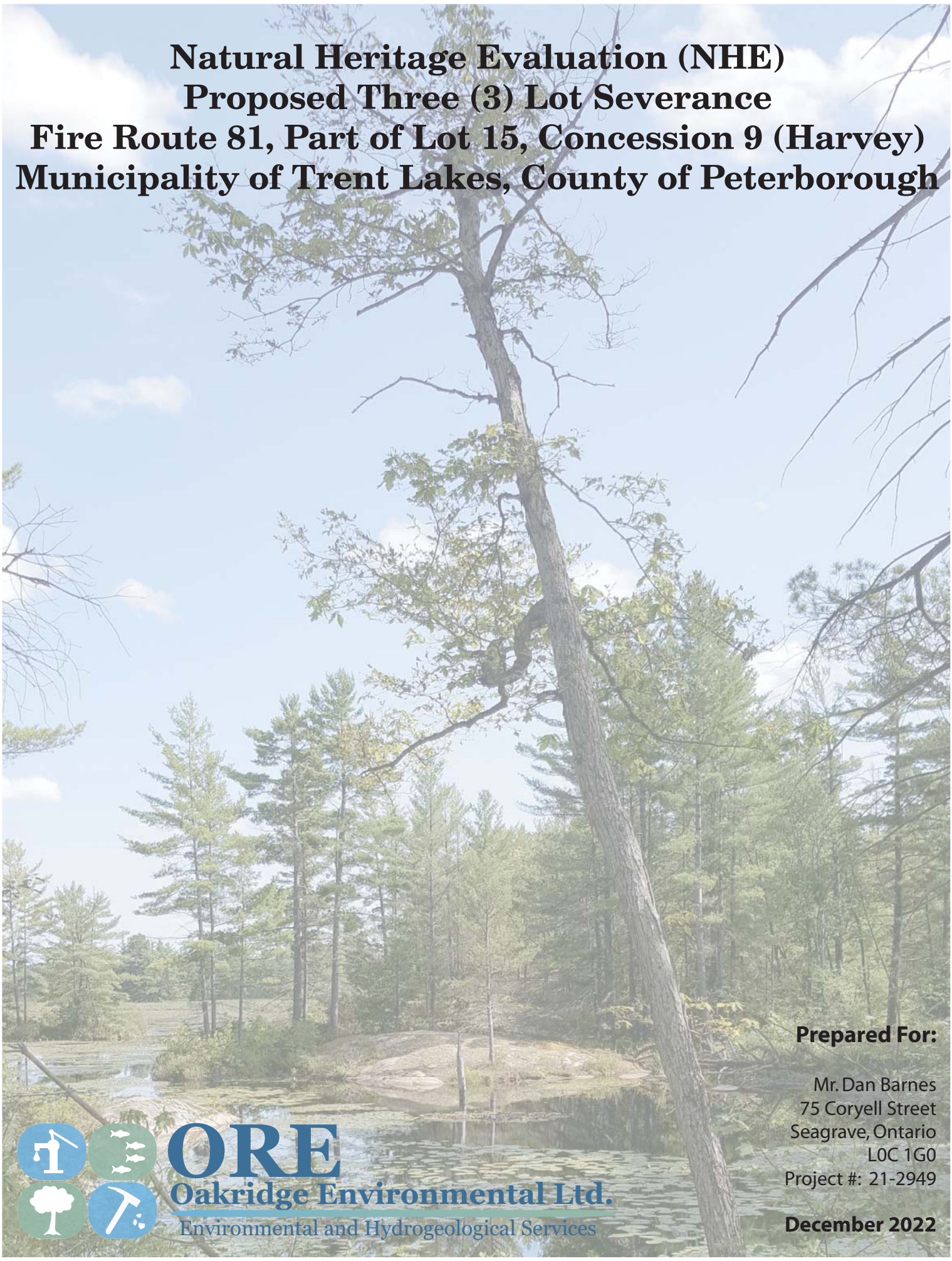
Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15, Concession 9 (Harvey)
Municipality of Trent Lakes, County of Peterborough



Prepared For:

Mr. Dan Barnes
75 Coryell Street
Seagrave, Ontario
L0C 1G0
Project #: 21-2949

December 2022

ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

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December 7th, 2022

75 Coryell Street
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Attention: **Mr. Dan Barnes**

Re: Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15, Concession 9 (Harvey)
Municipality of Trent Lakes, County of Peterborough
ORE File No. 21-2949

Dear Mr. Barnes:

As requested, Oakridge Environmental Ltd. (ORE) is pleased to provide this Natural Heritage Evaluation (NHE) for the above-referenced property located in the Municipality of Trent Lakes.

ORE staff completed a series of site inspections during the spring/summer periods in 2021 and 2022. ORE staff detected only one (1) Endangered species on the subject site - Little Brown Myotis, which is a bat species. A series of unevaluated wetlands in addition to the already mapped unevaluated wetland/PSW were identified on the property in addition to the Big Bald Lake watercourse.

This NHE has addressed the Key Natural Heritage Features and Significant Wildlife Habitat (SWH) identified on the property. Recommendations with respect to mitigation measures intended to limit the development from imposing on these local environmental features have been included in this report. It is expected that the development can proceed, provided the recommendations in this report are implemented.

Yours truly,
Oakridge Environmental Ltd.

Rob West, HBSc., CSEB
Senior Environmental Scientist

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1.0 Introduction

1.1 General

Oakridge Environmental Ltd. (ORE) is pleased to provide this Natural Heritage Evaluation (NHE) for the above-referenced property (referred to as the subject site), located in the Municipality of Trent Lakes (Figure 1). It is understood that the current property owner would like to sever three (3) lots; two (2) for the purpose of developing single residences on each lot, one (1) as a lot addition to an existing lot of record, with the remaining lot being the retained lands.

The subject site possesses a provincially significant wetland and three (3) smaller unevaluated wetland areas that appear to be bedrock dominated features. Given the presence of these sensitive environmental features, an NHE must be completed to demonstrate that there will be no negative impacts to these Key Hydrological Features (KHF) as a result of the proposal. Our NHE also includes an assessment of Species at Risk (SAR) on and in the vicinity of the site, in accordance with the provincial Endangered Species Act (ESA) and the Municipal Official Plan (OP).

1.2 Site Description, Location and Access

The site is situated at Fire Route 81,within part of Part of Lot 15, Concession 9, in the former Township of Harvey, now in the Municipality of Trent Lakes, County of Peterborough (Figure 1). The northern portion of the property fronts onto County Road 36 and the southwestern portion overlooks Big Bald Lake. Building construction is already underway in the southwestern portion of the property. This area has undergone recent filling and grading (etc.), as part of an existing Building Permit application. The remaining severances and retained lands are vacant.

The site is accessed from Fire Route 81 via County Road 36, northwest of Buckhorn. The subject site includes a section of Fire Route 81. It also includes a section of land that fronts directly onto County Road 36. The total area of the subject site is approximately 8.77 ha (21.69 acres).

According to the Consent Sketch by Ecovue Consulting, one of the proposed lots is to occur in the southwestern portion of the property consisting of approximately 0.59 ha (1.45 acres), fronting onto Big Bald Lake. The 2nd is a lot addition in the northwestern portion of the property, that will add 0.11 ha (0.28 acres) to an existing waterfront parcel with access directly off of Fire Route 81. The 3rd is located in the eastern portion of the property, being 4.24 ha (10.49 acres) fronting onto County Road 36. The retained

lands will consist of 3.83 ha (9.47 acres) and will not contain a residence. The proposed lot layout by Ecovue Consulting is provided in Appendix A.

2.0 Policy Framework

2.1 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 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 (Appendix B).

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 (MNDMNRF's) *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005* (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 MNDMNRF's assessment requirements under the *"Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E"* is applicable to Planning Applications. ORE staff reviewed the site's vegetation and formed a candidate SWH list, which was further refined based on our knowledge of the site. The SWH assessment focussed on the type of vegetation to be impacted by the development, rather than all of the ELC types observed on the subject property.

2.2 Conservation Authority

The site does not occur within the jurisdiction of any Conservation Authority. Therefore, the proponent should not be required to satisfy any associated regulatory requirements.

2.3 Growth Plan for the Greater Golden Horseshoe (Growth Plan)

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

In July of 2017, the Ministry of Muncipal Housing and Affairs (MMAH) issued the Growth Plan for the Greater Golden Horseshoe (Growth Plan). 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.

The Growth Plan was amended in May 2019 due to its restrictive nature. It was revised to allow Municipalities more decision-making abilities in their jurisdiction by providing their own Natural Heritage System (NHS), rather than adopting the Growth Plan in its entirety.

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, this policy currently does not prohibit development in key natural heritage features (such as the significant woodlands on site). However, this policy provides protection to the key hydrologic features (i.e., the unevaluated wetland) from development and site alteration. Neither the Municipality nor the County have a current NHS that would apply.

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.

2.4 Peterborough County Official Plan

The Official Plan (OP) of Peterborough County states the relevant requirements for all studies to be completed in support of a proposed development application. The OP lists certain criteria that must be met for an "Environmental Impact Assessment". The applicable excerpts from the OP are included in Appendix C.

The County has not completely adopted the provincial Growth Plan requirements. Although the County adheres to the requirements under the Growth Plan regarding Key Hydrological Features (KHF), it does not adhere to the Significant Woodland requirements. It is understood that the County is in the midst of obtaining approval of their new OP, which includes their own Natural Heritage System (NHS). Until then, the Significant Woodland requirement for NHEs is not necessary.

Based on the current County requirements, an EIA/NHE must be completed for this application due to the proposed location of the severances occurring within 120 m of a KHF. The County also requires that the study include a review and discussion of threatened and endangered species, either on or directly adjacent to the subject site, as part of a Planning application.

In addition to the OP's standard requirements, some of the NHE requirements were also discussed during the County's Preliminary Severance Review (PSR) process. A copy of the PSR comments is provided in Appendix D. The PSR may not be entirely accurate as the development has changed since the PSR was drafted.

The County may require a peer review of this report. Therefore, additional information may be requested to satisfy their peer review consultant and Peterborough County.

2.5 Municipality of Trent Lakes

The proponent's application is to be submitted to the Municipality of Trent Lakes for the purpose of obtaining Planning approvals for the three (3) lot severances. The Municipality relies on the County and the peer review process to ascertain whether the natural heritage objectives have been adequately addressed in this NHE.

3.0 Scope of Work

In completing this NHE, the following tasks have been completed:

- Relevant background information regarding the site (air photos, topographic mapping, etc.) was compiled and reviewed. Queries of the following databases were completed: MNDMNRF's Natural Heritage Information Centre (NHIC) website database, iNaturalist database, eBird database, FishOnline, and the Ontario Breeding Bird Atlas (OBBA) database.

- Site features were mapped using a differential Global Positioning System (dGPS). A base plan (using geo-referenced aerial photography) was prepared and all site information (i.e., vegetation and sensitive features) was plotted.

- A series of seven (7) inspections were completed in the spring breeding bird and summer season periods. A biological inventory of the flora and fauna of the property was completed. Basic vegetation communities were identified. The aquatic habitats within the waterways were also inspected to determine the fisheries significance/potential. However, not all of the property was inspected during the ideal periods to detect SAR. The majority of the SAR and amphibian surveys were completed in the western half of the property and not within the eastern severance parcel, as no development was proposed in this portion of the property at the time. ORE staff later inspected the eastern portion of the property to detect any SAR that might be present.

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

- All data have been interpreted and this report has been prepared.

4.0 Physical Setting

4.1 Topography and Drainage

The subject site occurs in a generally low-lying area of limited topographic relief (Figure 2), near the southern edge of the Canadian (Precambrian) Shield. Although the maximum relief is on the order of 5 m, relief is typically 1 m to 2 m, as measured between the bedrock ridges. The rock ridges tend to have a north-northeast to south-southwest orientation with linear wetlands, ponds and streams occurring in the intervening troughs.

Due to the bedrock ridge control of the topography, the site contains at least two local drainage divides that split runoff into westerly and easterly flow components. However, the troughs ultimately drain southward to the Provincially Significant Big Bald Lake East Wetland No. 53 and to Big Bald Lake.

4.2 Geological Setting

As illustrated by Figure 3, the subject site occurs within an area of Precambrian bedrock outcroppings, mapped as having minimal soil cover. While the soils are generally thin, they are not completely absent (except on the outcrops). Soil accumulations occur between the linear rockoutcrop ridges, consisting typically of a thin silt till substrate with an overlying layer of silty sand and thick organic deposits at the surface. However, the soil composition and thickness is highly variable from place to place.

Although not mapped on the site, the local area contains fairly extensive deposits of Newmarket Till and soils of the Dummer Till Complex. As such, those soil types (or remnants of them) could also exist on the site. Both tills are mixtures of silt (dominant), sand and gravel. The Newmarket Till is generally recognized as a regional aquitard. The Dummer Complex soils are rich in bedrock-derived stone that reflects the underlying bedrock composition.

While the site is technically within the Precambrian Shield terrain, its location occurs along the Shield's southern edge where the Paleozoic limestone is discontinuous. South of the site, the limestone terrain dominates. To the north, an outlier of limestone occurs, creating a narrow and low-lying corridor of Precambrian rock between them. All of Big Bald Lake occurs within this low corridor. The Precambrian rocks are mapped as banded quartz-feldspar-biotite gneiss, which for all intents and purposes, is of granitic composition.

Given the low-lying topography and presence of extensive wetlands in the area, the subject site is expected to exhibit a shallow water table condition. Where the soils have an appreciable thickness, saturated conditions would be expected above the rock. However, where the bedrock is exposed, the water table will occur in fractures, with elevated static water levels.

The above conditions are reflected in local well records from Ministry of the Environment, Conservation and Parks' (MECP) database. For example, the log of nearby well No. 7355518 indicates the presence of some overburden, consisting of 1.7 m of loose sand at the surface, with 0.2 m of till below, overlying granite bedrock. Although the aquifer was encountered at a depth of 44.5 m, the reported static water level was 0.5 m below grade at the time of well completion, consistent with an elevated

water table condition.

5.0 Background Data

5.1 Natural Heritage Information Centre (NHIC)

The NHIC provides an online database managed by MNDMNRF. Within the database, Ontario has been divided into a grid consisting of 1 km^2 areas or *regional squares,* each given a unique identifier. The squares can be searched for historical *Species at Risk* (SAR) occurrences and for Areas of Natural and Scientific Interest (ANSI).

The property falls within the 1 km^2 squares 17QK0839, 17QK0840, 17QK0939 and 17QK0940.

The query indicates that there are two (2) Natural Areas:

Natural Area

- Kawartha Highlands Signature Site park (Natural Environment Class) - closest point located approximately 400 m north of the subject site. The park occurs as a large swath north and southeast of the subject property.

- Big Bald Lake East Wetland No. 53 - located on the subject site.

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

Common Name	Scientific Name	S-Rank/SARO Status
Snapping Turtle	*Chelydra serpentina*	S3/Special Concern
Blanding's Turtle	*Emydoidea blandingii*	S3/Threatened
Common Five-Lined Skink[1]	*Plestiodon fasciatus*	S3/Special Concern
Eastern Milksnake	*Lampropeltis triangulum*	NAR[2]
Restricted Species	N/A	N/A
Midland Painted Turtle	*Chrysemys picta marginata*	S4/Special Concern[3]
Western Chorus Frog	*Pseudacris maculata pop. 1*	NAR[4]

1 Southern Shield Population
2 Not at risk (SARO), Special Concern (COSEWIC)
3 Great Lakes - St. Lawrence - Canadian Shield population
4 Not at risk (SARO), Threatened (COSEWIC)

Brief descriptions of these species and their preferred habitats are included in Appendix E.

The NHIC was contacted directly to determine what the restricted species occurrence is. The NHIC stated in an email to ORE staff that it is Eastern Hog-nosed Snake (*Heterodon platirhinos*). The occurrence information for this species is considered sensitive and should not be shared with the general public.

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 subject site is also included in Appendix F.

5.2 Ontario Breeding Bird Atlas (OBBA)

The OBBA[1] 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 km^2 area mapped as 17TQK03, Region 16, Peterborough, and 17TQK04, Region 16, Peterborough. The Summary Sheets for this atlas area are provided in Appendix G.

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

Common Name	**Scientific Name**	**Status**
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Barn Swallow	*Hirundo rustica*	Threatened
Wood Thrush	*Hylocichla mustelina*	Threatened
Eastern Meadowlark	*Sturnella magna*	Threatened
Common Nighthawk	*Chordeiles minor*	Special Concern
Bobolink	*Dolichonyx oryzivorus*	Threatened
Grasshopper Sparrow	*Ammodramus savannarum*	Special Concern
Canada Warbler	*Cardellina canadensis*	Special Concern
Eastern Whip-poor-will	*Anthrostomus vociferus*	Threatened
Golden-winged Warbler	*Vermivora chrysoptera*	Special Concern
Black Tern	*Chlidonias niger*	Special Concern

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

[1] managed by Bird Studies Canada.

5.3 eBird

eBird is a citizen science database, whereby birding individuals can attend public areas referred to as "hotspots" and list species of bird they have detected each time they visit the hotspot location. According to the eBird Geographic Information System (GIS) database, the nearest hotspot is Kawartha Highlands Signature Site Provincial Park - Mississauga Trail, located approximately 600 m southeast of the site. A total of 104 species were recorded. Of those, eight (8) species are considered SAR, including the following:

Common Name	**Scientific Name**	**Status**
Barn Swallow	*Hirundo rustica*	Threatened
Eastern Wood-Pewee	*Contopus virens*	Special Concern
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern
Olive-sided Flycatcher	*Contopus cooperi*	Special Concern
Wood Thrush	*Hylocichia mustelina*	Special Concern
Bald Eagle	*Haliaeetus leucocephalus*	Special Concern
Common Nighthawk	*Chordeiles minor*	Special Concern
Eastern Whip-poor-will	*Anthrostomus vociferus*	Threatened

Brief descriptions of each of the listed species and associated preferred habitats are included in Appendix E. The site inspections included a review of potential SAR habitat and targeted searches for the listed species. The eBird dataset for the Kawartha Highlands Signature Site Provincial Park - Mississauga Trail is provided in Appendix H.

5.4 iNaturalist

The iNaturalist database provides a geographical site map which contains individual species occurrences. The NHIC version of the iNaturalist database is specific to those species tracked by the NHIC. These include SAR as per those identified in the Species at Risk Ontario website and also provincially rare species that the NHIC tracks in their records. The occurrence data includes the professional/surveyors name, confirmation identification by other professionals, occurrence photos, and the date the rare species was observed. The search extent is an approximate 2 km^2 area centred on the site.

The iNaturalist database was reviewed to determine if any SAR sightings have occurred either on, or within the vicinity of the subject site. Five (5) SAR species were reported either directly on or in the general vicinity of the subject site. The SAR occurrences have been compiled below:

Common Name	**Scientific Names**	**SAR Status**
American Bumble Bee	*Bombus pensylvanicus*	Special Concern[1]
Black Ash	*Fraxinus nigra*	Threatened[1]
Butternut	*Juglans cinerea*	Endangered
Common Five-Lined Skink[2]	*Plestiodon fasciatus pop. 2*	Special Concern
Monarch	*Danaus plexippus*	Special Concern

1 COSEWIC status only
2 Southern Shield population.

5.5 FishOnline Database

ORE staff contacted the FishOnline Geographic Information System (GIS) website database to determine the types fish species that have been detected within Big Bald Lake by either provincial staff or the general public. These include the following species:

- Black Crappy (*Pomoxis nigromaculatus*);
- Bluegill (*Lepomis macrochirus*);
- Brown Bullhead (*Ameiurus nebulosus*);
- Common Carp (*Cyprinus carpio*);
- Largemouth Bass (*Micropterus salmoides*);
- Muskellunge (*Esox masquinongy*);
- Pumpkinseed (*Lepomis gibbosus*);
- Rock Bass (*Ambloplites rupestris*);
- Smallmouth Bass (*Micropterus dolomieu*);
- Walleye (*Sander vitreus*);
- White Sucker (*Catostomus commersonii*), and
- Yellow Perch (*Perca flavescens*).

ORE staff also reported any species of fish that were observed in the lake during the inspections. These are identified in Appendix I.

None of the fish species listed above are SAR.

6.0 Inspection Methodologies

6.1 Vegetation

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

There have been a number of updates to the ELC scheme to further refine the classification of Ecosites throughout Ontario. As a result, the 2008 *Draft* ELC Guide provides a further breakdown of the 1998 ELC Guide - First Approximation communities and includes many new communities to index from. The 2008 ELC scheme also provides a cross-reference to the 1998 guide communities. This report uses a combination of 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 inspections, aerial photography of the subject site was analysed to roughly delineate vegetation communities based on recognizable vegetation differences. Each identified community was subsequently inspected through soil and vegetation analysis. Dominant vegetation types were recorded and boundaries of the various communities mapped using a dGPS (when the boundary of the ELC community is not recognizable on the air photo).

Soil characteristics were determined using the methods outlined in the *Field Manual for Describing Soils in Ontario* (2009) and the results were used to further classify the ecological community. Where possible, any exposed soil areas were also explored to determine the overall texture of the soils in the area.

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

6.2 Avifauna Surveys

ORE staff attended the site a total of seven (7) times during the migratory/breeding bird periods and conducted site surveys according to, and exceeding, the OBBA survey techniques. ORE staff endeavoured to detect all available avian species by sight, calls

and notes, within and/or proximal to the site. Bird calling devices and "pishing and squeaking" sounds were used to attract bird species from within the forest communities outside the typical morning chorus hours when birds are less vocal/active. All of the breeding bird surveys were conducted in the western portion of the property. ORE staff attempted to locate any/all bird species in the eastern portion of the property during the August 2022 site visit.

All species overheard or observed during the surveys were recorded. A total of three (3) diurnal surveys were conducted during the early morning chorus hours between approximately 5 AM and 10 AM. The majority of birds were very active in the early morning period, foraging, singing, with dominant males defending their territories. One (1) of the diurnal site inspections was completed in August 2002 towards the end of the Migratory Bird period. This inspection provided an opportunity to detect SAR and the fledglings in nesting areas across the entire property.

The avian surveys did not stop during the early morning time periods; the late morning periods were spent searching the vegetation communities and identifying plant species, which were also useful in flushing and detecting birds.

Four (4) evening inspections were completed in 2021 and 2022 to determine whether any nocturnal Species at Risk avian were present. The nocturnal surveys were completed between approximately 7 PM and 11 PM. Two (2) of the inspections were conducted within the shoulder dates of the full moon phase, which is favourable with respect to the Bird Studies Canada Roadside protocol, as Nightjars are more active during full moon phases.

6.3 Mammals

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

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

The subject site does not contain any deer wintering habitat nor any other significant mammal wildlife habitat for those species outlined in the MNDMNRF's October 2000 - Significant Wildlife Habitat Technical Guide.

ORE staff installed an acoustic bat detector on-site between July 28th, 2021 and August 2nd, 2021, for a total of five (5) evenings. The acoustic detectors were situated to overlook the upland woodland and open embayment on the south side of the property. Although detectors were not positioned in the eastern portion of the property, ORE staff presume that any species detected in the southwestern portion of the property would be applicable to the remainder of the site.

6.4 Fish

A permit to collect fish was not obtained from the local MNDMNRF office. Visual inspections from the shore and a kayak were deemed sufficient to detect all species present offshore of the subject site during the time of year the inspections were completed. In addition to the visual inspections, ORE staff contacted the FishOnline website database to obtain fisheries information for Big Bald Lake.

6.5 Herptiles

The protocol employed for detection of Herptiles followed MNDMNRF's March 1998 - Wildlife Monitoring Programs and Inventory Techniques for Ontario. Furthermore, the December 2016 Survey Protocol for Ontario's Species at Risk Snakes was implemented on-site. The surveys of basking habitats within the waterfront and wetlands were completed during the spring and summer season, when most herptiles are active. The surveys were conducted during warm, typically low wind conditions, which were ideal for detecting basking snakes and lizards.

During the inspections, ORE staff conducted visual encounter surveys while searching through brush piles, rolled over lumber and dead-fall within the woodland to determine whether any significant species of herptile could be detected. The visual encounter surveys extended to County Road 36 and Fire Route 81 to identify dead-on-road herptiles from the previous evening.

ORE staff also checked within any covered areas such as downed wooded debris, brush piles, plywood pieces, and any other artificial cover objects looking for basking snakes in the early morning and evening periods, when temperatures are lower.

No SAR snakes such as Eastern Hog-nosed Snake were detected on the property during the surveys.

In addition, ORE staff completed evening surveys for the purpose of collecting nocturnal avian data and to identify amphibian species utilizing the site. The amphibian surveys were conducted according to the MNDMNRF's Marsh Monitoring Program (MMP).

This program identifies the abundance of amphibians according to a numerical scale (from 1-3) such that: 1 = 1 to 2 individuals calling; 2 = there are several individuals calling, however, the number of individuals can still be identified; and, 3 = an abundance of amphibians calling and it is either very difficult to or impossible to determine the number of individuals due to overlap in the number of calling males. The amphibian surveys were targeted within the southwest corner, where the original severance was initially proposed.

The wetland and lakefront would likely provide suitable habitat for the turtles listed in the NHIC database from the early spring into mid-summer period. The sandy roads and sand/rock barren conditions would provide potential turtle nesting habitat during the breeding period in the early spring season.

6.6 Significant Wildlife Habitat (SWH)

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

The subject site possesses acidic Precambrian bedrock conditions. The bedrock domes and ridges were observed throughout the property, especially along the Big Bald Lake shoreline. These conditions suggest the SWH criteria for Ecoregion 5E should be applicable in this situation, however, the provincial mapping suggests the boundary/contact zone between Ecoregions 5E and 6E is north of the subject property. Even though the subject site contains Precambrian granites and gneisses and no Ordovician limestone bedrock was observed, the Ecoregion 6E criteria will apply based on the provincial interpretation of the boundary being north of the subject property.

7.0 Site Inspection Data

7.1 General

For this NHE, ORE staff conducted seven (6) site inspections - three (diurnal) and four (nocturnal) on the following dates:

Date of Inspection	**Time of Inspection**	**Temp. ^{O}C**	**Beaufort (Wind) Index**	**Conditions**
Diurnal - May 16, 2021	5:30 AM - 9 AM	20	1 - Light Air	15% Cloud Cover, Early Migratory/Breeding Bird Detection, Emerging/Early Spring Reptile and Mammal Surveys. Vegetation Inspections and Inventories.
Nocturnal - July 28, 2021	7 PM - 10:30 PM	18	1 - Light Air	50% Cloud Cover. Full Moon Cycle, Amphibian and Nocturnal SAR Detection. Vegetation and Mammal Inspections.
Nocturnal - August 6, 2021	7 PM - 10 PM	17	1 - Light Air	100 % Cloud Cover, Amphibian and Nocturnal SAR Detection. Early Evening (Dusk) Vegetation and Mammal Inspections.
Nocturnal - August 17, 2021	9 PM - 10 PM	21	3 - Gentle Breeze	0% Cloud Cover, Amphibian and Nocturnal SAR Detection, Vegetation Inspections.
Diurnal & Nocturnal, June 17, 2022	5 AM - 10 AM 8 PM to 11 PM	27 23	1 - Light Air 2 - Light Breeze	Overcast in morning and Breaking-up 10% Cloud Cover by evening. Hot and Humid. Breeding Bird Survey. Reptile, Mammal, Insect and Vegetation Surveys. Full Moon Cycle. These surveys targeted the western portion of the property (proposed southwest lot, retained lot and lot addition).
Diurnal - August 4, 2022	6 AM - 12 PM	23	2 - Light Breeze	15% Cloud Cover; Late season Migratory Bird Detection for SWH; Reptile Hibernaculum Surveys. Wetland Inspections/Delineations. The surveys on this date were conducted to obtain information regarding species in the eastern portion of the property for the purpose of severing a lot in this location.

The above-mentioned inspections were completed to identify any/all species on the property. The species list was examined to identify any sensitive rare species (S1, S2, S3), and/or whether they have a Species at Risk Ontario 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. ORE staff collected data regarding any KHFs on the property and also examined the bedrock and soil conditions.

7.2 Ecological Land Classification (ELC)

ELC inspections were focussed on the proposed severance lots and immediate adjacent lands, as per the recommendations of the MNDMNRF's Natural Heritage Reference Manual. The identified ELC communities are illustrated on Figure 4 and photos of the communities/site conditions are provided in Figures 5 and 6.

Based on our site inspections, the following vegetation communities have been identified on the site, as per the *1998 and/or the draft 2008 Ecological Land Classification (ELC) for Southern Ontario* and *Field Guide to Forest Ecosystems of Central Ontario - SCSS Field Guide FG-01 (1997*):

Upland Communities:

1. Dry - Fresh White Pine - Hardwood Mixed Forest (FOM2)

According to the ELC, this community possesses a dry to moderately fresh regime with shallow soils over bedrock, sands and course loams. It is well drained due to the sandy soils which result in dry conditions in these upper to middle slope and tableland type habitats. The ELC also states that the dominant species are White Pine *(Pinus strobus*), Sugar Maple (*Acer saccharum*), Red Oak (*Quercus rubra*) and to a lesser extent Trembling Aspen (*Populus tremuloides*).

This community covers the majority of the upland regimes on the property. This woodland type occurs within bedrock dominated ridges and dry valleys on the property.

All of the proposed severance areas possess some of this upland woodland vegetation.

2. Fresh - Moist Hemlock - Hardwood Mixed Forest Ecosite (FOM6)

The ELC describes a Fresh-Moist Hemlock - Hardwood Mixed Forest (FOM6) as having a mix of greater than 25% coniferous species and greater than 25% deciduous species.

This ecosite's deciduous species can be comprised of Ironwood (*Ostrya virginiana*), White Birch (*Betula papyrifera*) and other hardwood species such as Sugar Maple (*Acer saccharum)*. The dominant coniferous species is Eastern Hemlock (*Tsuga canadensis*) but can contain other coniferous species such as Eastern White Pine (*Pinus strobus*).

This community is located in the southwestern portion of the subject property, fronting onto Big Bald Lake. It also occurs within the northeastern portion of the property within an area that was formerly mapped as wetland by Land Information Ontario. This upland woodland community occurs as a transition between the FOM2 community described above and the aquatic habitats associated with Big Bald Lake. Some of this woodland habitat was removed for the purpose of establishing the building envelope under the auspices of a municipal Building Permit. As the vegetation removal/clearing was completed recently, the air photo does not illustrate the work area.

Only the severance in the southwest corner of the property will impact this woodland habitat. This woodland type was not observed elsewhere on the subject parcel.

Wetland and Waterway Communities:

3. Ash Mineral Deciduous Swamp Ecosite (SWD2) and Alder Mineral Deciduous Thicket Swamp Ecosite (SWT2)

The ELC (2008) describes the Ash Mineral Deciduous Swamp (SWD2) as having tree cover in greater than 25% of the ecosite. Water depth must be less than 2 m and present in greater than 20% of the ecosite. Vegetation must be predominately hydrophytic shrub and tree species. Deciduous species must be present in more than 75% of the canopy with the dominant species being Ash (*Fraxinus spp.*).

According to the ELC, a Mineral Thicket Swamp must contain greater than 25% tree and shrub cover and be dominated by hydrophytic tree and shrub species. It can experience variable flooding regimes and would possess 20% or more vernal pooling. During the drought periods in the late summer, the vernal pools can be dry.

These two (2) vegetation communities occur together within the small unevaluated wetland identified by ORE staff in the northwestern portion of the property. This small wetland is perched within a bedrock depression/shallow swale-type feature that is elevated above the PSW and unevaluated wetlands to the east. The majority of the tree species in this wetland consists of Black Ash (*Fraxinus nigra*) with minor amounts of Green Ash (*Fraxinus pennsylvanica*), American Elm (*Almus americana*) and Paper Birch (*Betula papyrifera*). The thicket occurs interspersed throughout this community beneath the deciduous trees and includes Red-Osier Dogwood (*Cornus sericea*) and Speckled Alder (*Alnus incana*) with minor amounts of willows (Salix ssp.).

This wetland will remain entirely within the retained lands parcel.

4. Graminoid Mineral Meadow Marsh Ecosite (MAM2)

The MAM2 community persists due to variable flooding regimes and water depths up to 2 m. These zones have mineralized substrates, are seasonally flooded and represent the core to terrestrial interface area within the wetland.

This community possesses a variety of hydrophytic species such as reeds, sedges, and rushes. The Mineral Meadow Marsh habitat is interspersed within the PSW and unevaluated wetland habitats that are dominated by cattail species. The marshy habitats tend to have either standing water or water just below the surface of the vegetation.

This habitat will be included within the easterly proposed severance parcel and the retained lands.

5. White Cedar Mineral Coniferous Swamp Ecosite (SWC1)

The ELC describes a White Cedar Mineral Coniferous Swamp (SWC1) as having tree cover present in greater than 25% of the ecosite. This ecosite is dominated almost entirely by Eastern White Cedar (*Thuja occidentalis*). Ground cover will vary with the degree of open canopy.

This wetland habitat occurs in the southwestern portion of the property and is the transitional habitat between the FOM2 habitat and the wetland habitats just across the south property line associated with the embayment of Big Bald Lake.

This wetland habitat will be within the retained lands if the proposed severances are approved.

6. Open Aquatic (OAO)

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

This habitat corresponds to Big Bald Lake which fronts onto the southwestern portion of the subject property. The lake contains little to no macrophyte vegetation as the bottom consists of sand, minor detritus and bedrock/fractured rock. The lake possesses

a trophic status as per the description above. There were some minor floating-leaved aquatic plants, however, insufficient in area to map as an Ecosite on its own.

No development is proposed to occur within Big Bald Lake. The proposed severance boundary will occur directly along the lake interface, flood elevation, or highwater mark, whichever is applicable.

7.3 Fauna

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

7.3.1 Avifauna

ORE staff completed seven (7) migratory bird/breeding bird inspections - three (3) diurnal and four (4) nocturnal.

Early morning chorus hour surveys were completed approximately between the hours of 5 AM and 10 AM. Although all species were detected and recorded according to their vocalizations and/or sightings, the focus was on detecting Species at Risk avian, either on or directly adjacent to the site.

No SAR avian was detected on the subject property.

ORE staff detected a number of Area Sensitive woodland bird species within the mature woodlands on the subject property where the severances are proposed to occur. The presence of woodland breeding birds can constitute an SWH. The species detected included:

- Ovenbird (*Seiurus aurocapilla*);
- Pileated Woodpecker (*Hylatomus pileatus*);
- Black-throated Green Warbler (*Setophaga virens*);
- Downy Woodpecker (*Picoides pubescens*);
- Yellow-bellied Sapsucker (*Sphyrapicus varius*);
- American Woodcock (*Scolopax minor*);
- Northern Flicker (*Colaptes auratus*), and
- Blue-Grey Knatcatcher (*Polioptila caerulea*).

7.3.2 Herptiles

Herptiles include amphibians, salamanders, lizards, turtles and snakes species. Although surveys for salamanders, lizards, turtles and snakes were conducted across the entire site during the growing season, amphibian data collection was only conducted during the spring season of 2021, in the southwestern portion of the property.

ORE staff viewed beneath wood debris, and scanned the water from the shore and a kayak to detect aquatic herptiles and inspected the roadways for road-kill, in order to determine which herptile species are present on or near the subject site.

The main focus of the surveys was to detect those herptiles listed within the SARO website (provincial amphibian SAR not included as they do not exist in the Buckhorn area[2]) using the available provincial protocols.

ORE staff did not detect any of the SAR herptiles listed in the NHIC section. Only common herptile species were overheard or observed. These are listed within Appendix I. Had any of the federal herptile SAR been detected on-site, ORE staff would have addressed these SAR according to the federal Species at Risk Act requirements.

In addition, to the inspections for herptiles, ORE staff conducted amphibian surveys according to the Marsh Monitoring Program (MMP). The data is presented in Appendix I.

According to the amphibian evening surveys, Pickerel Frog (*Lithobates palustris*) was one of two species detected at the survey location; the 2nd species was a Bullfrog (*Lithobates catesbeianus*). The unevaluated wetland and PSW in the central portion of the site is where the majority of these frogs were overheard, suggesting these KHFs represent Amphibian Breeding Habitat (Wetlands) SWH.

7.3.3 Mammals

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

The ESA lists very few species of mammal within south-central Ontario as either Endangered, Threatened, or Special Concern. The majority of the listed mammals that have statuses occur within Northern and Southern Ontario regimes. Very few of those

[2] Western Chorus Frog is a federal Special Concern species and not provincial. If Western Chorus Frog was detected on-site, ORE staff would address the presence of this species, however, there are no ESA requirements for Western Chorus Frog as it is not listed as a provincial SAR and is considered common/secure.

mammal species listed within the ESA occur in the Peterborough region, other than bat and Mountain Lion (*Puma concolor*).

An Anabat Swift bat detector was deployed at the site from July 28th to August 2nd, 2021. Over the course of five (5) nights, the detector recorded a total of 968 sound (.wav) files. The sound files were processed using SonoBat 4.4.1 North America. The software's built-in algorithm assigns each identifiable echolocation call with a confidence level for the purpose of compiling a quick inventory of individual species of bats. Provided each sound file contains a sufficient quantity of repeatedly identifiable calls, the software assigns a species to that sound file. Given the sensitivity of the bat detector's omni-directional microphone, many files contain background "noise", especially near infrastructure (i.e., hydro lines, etc) and do not provide any identifiable calls.

A compiled summary of the data collected from the site is presented in Appendix I and are briefly summarized below.

Bat Detector 5 (BD5) produced 361 sound files with bat calls. Of those, the SonoBat algorithm was able to extract 283 auto-identifiable sound files (i.e., with a 90% confidence level), consisting of 82 files attributed to Little Brown Myotis (*Myotis lucifugus*), 1 Tri-coloured Bat (*Perimyotis subflavus*), 1 Eastern Red Bat *(Lasiurus borealis*), 170 Big Brown Bat (*Eptesicus fuscus*), 23 files attributed to Silver-haired Bat (*Lasionycteris noctivagans*) and 6 files attributed to Hoary Bat (*Lasiurus cinereus*).

The data collected clearly demonstrates that Little Brown Myotis (a SAR bat) utilizes the subject site on multiple nights. The density of the files attributed to this species represents 31% of the files with at least one identifiable call (i.e., confidence level of 50% or greater). As a result, there is a high probability that this SAR utilizes the subject site repeatedly. This is not unusual, given the number of waterways on and directly abutting the site, which most bat species utilize for foraging purposes. Based on the number of calls, it is likely the Little Brown Myotis may be roosting within the woodland habitats on-site and accessing the waterways to forage.

From the above, only one (1) Endangered mammal species was detected on-site listed with Species at Risk Ontario (SARO) - Little Brown Myotis.

7.3.4 Fish

Although all of our inspections included observations of the lakeshore for fisheries, the final inspection focussed primarily on determining the quality of the fish habitat offshore in the southwestern portion of the property. Inspections were completed from the shoreline and from a kayak.

None of the MNDMNRF historical databases suggest that there is the possibility of any SARO listed species of fish present within the Big Bald Lake watershed. Nevertheless, our inspections focussed on gathering data on all species to define the use of the shoreline area that spans the subject property. There are no fish species in this waterway that possess a status of Special Concern, Threatened or Endangered.

The combination of slow flowing lake water, bedrock shelves, and skiffs of sand, gravel and minor amounts of detritus along the lakeshore likely serve as a spawning zone for centrarchid species such as Pumpkinseed, Smallmouth Bass, Rock Bass, Black Crappie and Bluegill. It is also likely that Muskellunge would spawn in the southerly weedy bays of Big Bald Lake in the spring season.

The offshore environment is not suitable for spawning Walleye as the lake would be slow moving and lacking the bedrock shoals and clean sands and gravels this species prefers.

Regardless, Big Bald Lake is considered a significant fisheries habitat/resource. Therefore, under the PPS/Growth Plan, this habitat would not be impacted by the proposed severances.

7.4 Endangered - Threatened or Provincially Rare Species

ORE staff completed a thorough search of all potential SAR in the western/central portion of the subject property when conducting the inspections. Although less time was spent detecting SAR in the eastern portion of the property, ORE staff applied a best efforts search during the August 2022 site inspection to detect any/all SAR in that area, where the single residential severance is proposed. All of the inspections included efforts to identify any/all of the OBBA - provincially rare species listed within this report. No SAR avian were identified on the subject site.

One (1) SAR was identified on-site by the bat detectors. Little Brown Myotis is an Endangered species according to SARO. Therefore, it is subject to the provisions in the Endangered Species Act (ESA).

Although ORE staff did not observe any SAR turtles, suitable habitat for SAR Turtles such as Blanding's Turtle (*Emydoidea blandingii*), Snapping Turtle (*Chelydra serpentina*) and Musk Turtle (*Sternotherus odoratus*) are likely to occur within Big Bald Lake and the PSW. These types of turtles utilize interconnecting waterways to navigate to other suitable breeding/nesting/foraging habitat in the spring season when water levels are high. Therefore, their presence could be intermittent within the lake and on-site wetlands. The lake and PSW areas undoubtedly support habitat for all

three SAR turtles above. However, Musk Turtle was not identified in any of the databases.

No SAR snakes were observed on-site. ORE staff looked beneath artificial cover objects on-site in an effort to detect basking snakes. Snakes can cover a large area during the spring and summer period, but tend to come back to the same hibernaculum each year. The site possesses fractured bedrock that snakes could enter and gain access to the shallow water table. Therefore, the fractured rock on-site could be used for snake hibernaculum.

8.0 Significant Wildlife Habitat Assessment (SWH)

The assessment of SWH is divided into five (5) broad categories, consisting of Seasonal Concentration Area of Animals; Rare Vegetation Communities; Specialized Habitat for Wildlife; Habitat for Species of Conservation Concern (other than Endangered or Threatened), and Animal Movement Corridors. A summary table is provided in Appendix J indicating the potential for SWH to occur based on the criteria provided by the MNDMNRF 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 MNDMNRF criteria) and as indicated in Appendix J:

- Waterfowl Stopover and Staging Areas (Aquatic) - Big Bald Lake and PSW;
- Bat Maternity Colonies - On-site Woodlands;
- Turtle Wintering Areas - Big Bald Lake and PSW;
- Reptile Hibernaculum (Turtles assessed separately) - Rock barren habitats in woodland communities;
- Waterfowl Nesting Area - Big Bald Lake and PSW;
- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat - On-site woodland overlooking waterways;
- Woodland Raptor Nesting Habitat - On-site woodlands;
- Amphibian Breeding Habitat (Woodland) - Wooded swamps on-site;
- Amphibian Breeding Habitat (Wetlands) - Big Bald Lake, PSW and unevaluated wetlands;
- Woodland Area-Sensitive Breeding Bird Habitat - Woodland avian in on-site woodlands;
- Marsh Breeding Bird Habitat - PSW and unevaluated wetlands, and
- Amphibian Movement Corridors - Movement between PSW and unevaluated wetland both on and directly adjacent to the subject site.

Mitigation for SWH is 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 brief description of the SWH on and immediately adjacent to the property is provided in Appendix J.

9.0 Impact Assessment

9.1 Sensitive Features

The main receptor with respect to potential impacts associated with future development of the subject site is the unevaluated wetland/PSW and Big Bald Lake KHFs. Potential impacts considered herein include the following:

- Potential impacts to the water quality of the waterways from septic effluent;
- Potential impacts to Local SWH;
- Potential impacts to water quality from erosion and sedimentation during the construction phase;
- Potential impacts to the unevaluated wetland/PSW from onshore vegetation removal/ degradation;
- Potential impacts from importation of fill to the site to raise areas of the lot for development;
- Potential impacts to migratory/breeding birds during the nesting and fledgling period;
- Potential impacts due to introduction of invasive non-native species in the construction era via imported materials and unclean machinery; and,
- Potential impacts by disruption or degradation of the waterways that could impact fisheries spawning habitat within Big Bald Lake.

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

9.2 NHIC Species

According to the NHIC, Blanding's Turtle, Common Five-Lined Skink, Western Chorus Frog, Eastern Milksnake, Midland Painted Turtle and Snapping Turtle have been detected in the 1 km square area that the subject site falls within.

The subject site possesses suitable habitat for Blanding's Turtle, with specific reference to Big Bald Lake and the PSW/unevaluated wetlands on-site. Similarly, Midland

Painted Turtle would find the same watercourses to be suitable habitat. Common Five-Lined Skink and Eastern Milksnake could be associated with the mixed upland woodland and rock barren habitats that possess exposed fractured bedrock conditions. Snapping Turtle could occur within the lake anytime throughout the year, however, is less likely to attend the on-site wetlands as they tend to be shallow water features. ORE staff did not observe turtle nesting sites (either old or fresh) on the property.

9.3 iNaturalist

According to the iNauralist, American Bumble Bee , Black Ash, Butternut, Common Five-Lined Skink and Monarch have been detected in the 2 km square area that the subject site falls within.

ORE staff inspected the site for Bumble Bee species and only three (3) types were observed on the property. All were common/secure species and not SAR.

ORE staff observed Black Ash on the property. The trees appear to be healthy and predominantly within the small unevaluated wetland feature in the northwest portion of the site. No new development is proposed to occur proximal to this wetland, and therefore, this feature would not be negatively impacted. The existing road off of Fire Route 81 bypasses the edge of this feature. Black Ash was also detected within the PSW, although not to any great extent. Habitat avoidance will be key with respect to maintaining the moisture regime in the habitats that Black Ash is present within.

Similarly, Blanding's Turtle and Snapping Turtle may occur in Big Bald Lake or the unevaluated wetlands/PSW features. Therefore, protection/avoidance measures should be applied to the watercourse features these species could occur within.

Butternut is a calcophile species and does not typically grow within acidic Precambrian Rock conditions. No Butternuts were detected on the subject property. Therefore, no ESA requirements are necessary to protect this species.

The site contains suitable habitat for Common Five-Lined Skink. This is a Special Concern species and subject to the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST) requirements. The SWHMiST states that residential developments should either avoid the habitat of this species or minimize the footprint within the core SWH.

9.4 Significant Wildlife Habitat

Potential SWH were examined on-site and confirmed using the MNDMNRF criteria. The following SWH have been compiled based on the types of vegetation present on the

property:

- Waterfowl Stopover and Staging Areas (Aquatic) - Measures to protect the waterways should mitigate impacts to this SWH.

- Bat Maternity Colonies - Tree loss could impact the bat maternity colonies, therefore, measures to protect the good quality roosting trees (as per the MNDMNRF requirements) should be applied.

- Turtle Wintering Areas - Potential to impact onshore areas, therefore, measures to protect watercourse wintering areas should be applied to this SWH.

- Reptile Hibernaculum (Turtles assessed separately) - Potential for filling and grading to impact rock barren habitats; measures to reduce the overall footprint of the residential footprint on each lot should be applied to the SWH.

- Waterfowl Nesting Area - Potential to impact onshore areas, therefore, measures to protect the unevaluated wetland/PSW and southern bays/inlets of Big Bald Lake should be applied to this SWH.

- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat - Tree loss could impact these species; measures to protect tall Pines on-site overlooking the waterways would mitigate impacts to this SWH.

- Woodland Raptor Nesting Habitat - similar measures to Bald Eagle and Osprey habitat should be applied.

- Amphibian Breeding Habitat (Woodland) - Onshore vegetation removal could impact the adjacent lands to the wetlands that amphibians use for breeding; measures to protect the shoreline around the waterways should be applied to this SWH.

- Amphibian Breeding Habitat (Wetlands) - Same measures as woodland above should be applied to protect core wetland SWH.

- Woodland Area-Sensitive Breeding Bird Habitat - vegetation/tree loss would impact these area sensitive woodland bird species; measures to minimize woodland loss should be applied to this on-site SWH.

- Marsh Breeding Bird Habitat - development directly along the shoreline of the wetland could impact marsh breeding birds; measures to protect the

wetlands should be applied to mitigate impacts to this SWH.

- Amphibian Movement Corridors - Movement corridors exist within the low-lying sections between watercourses, therefore, connectivity between wetlands and waterways should be protected.

The above mentioned SWH seem to be predominantly associated with the on-site and off-site Key Hydrologic Features (KHF) in the area. Provided that mitigation is applied to the proposed development that avoids and retains these watercourse features, the development would not interfere with the majority of the above listed SWH.

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

9.5 Identified SAR/SAR Habitat

One (1) SAR was detected on-site - the Little Brown Myotis. This bat species is presumed to be utilizing either the upland woodland habitat or the existing cottages in the area to either roost and/or for maternity colonization use. The high number of calls detected by the bat detector suggests this Endangered bat species is utilizing these on-site habitats. Therefore, mitigation to protect the good quality snags and foraging areas is key to retaining the habitat of the Little Brown Myotis and other bat species.

Although the herptile SAR detected in the NHIC database were not detected on-site during the surveys, the wetland and lake habitats on and proximal to the site appear to be good quality habitat for Blanding's Turtle, Western Chorus Frog, Eastern Milksnake, Midland Painted Turtle, Snapping Turtle and Common Five-Lined Skink. The Eastern Milksnake, Midland Painted Turtle, Snapping Turtle and Common Five-Lined Skink are all Special Concern Species, therefore, are subject to the SWHMiST. Provided that measures to avoid the SWH completely and/or minimize the footprint of the development in the SWH, it should be possible to retain the habitat of these species.

Western Chorus Frog is considered Threatened nationally but common/secure in Ontario. Regardless, if Western Chorus Frog was detected on-site, ORE staff would have applied the protective measures/requirements outlined within the Species at Risk Act (SARA). However, this species was not detected on-site and the potential habitat along the edge of the wetland bodies will be retained under the Growth Plan and local Official Plan requirements.

As for the Threatened Blanding's Turtle, it was not observed in either the wetland or the embayments of Big Bald Lake. Therefore, the habitat is likely a Category 2 type habitat, whereby the Turtle was detected in a nearby waterway that contains a nesting

site. Category 2 Blanding's Turtle habitat can occur within 2 km of the nesting site. It is possible either Big Bald Lake and/or the unevaluated wetlands/PSW in the area could be part of the species' watercourse network. The province provides the following regarding development and Category 2 Blanding's habitats:

> "*wetlands/waterbodies (Category 2) will be considered to have a moderate level of tolerance to alteration before their function is compromised. For the purpose of general habitat protection for Blanding's Turtle, a wetland complex is defined as all wetlands that are within 500 m of each other*."

The three (3) severances adjacent to these waterways would result in a moderate level of alteration. Provided that measures to protect the waterways are administered, implemented and adhered to during the construction stage, the function of the habitat will not be compromised.

9.6 Fisheries

Potential impacts to fisheries within Big Bald Lake would mainly be in the form of the following:

- removal or degradation of the shoreline vegetation directly adjacent to the lakeshore;
- insertion of fill materials within any drainage courses or unevaluated wetland that drains to the lake, and
- noise related to construction (adjacent to the lakeshore) on the site during the spawning period.

No SAR fish were detected within the waterway during the shoreline assessments nor were any detected in the provincial FishOnline database. However, the worse-case approach should be taken with respect to fisheries, as the littoral zone in the lake possesses spawning habitat for Centrarchid species. In addition, Muskellunge could also utilize the weedy embayments for spawning purposes.

Recommendations to mitigate impacts to any fish and fish habitat offshore of the southwestern severance parcel are presented in a following section.

9.7 Construction

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

- noise and vibration from operation of equipment;
- wetland habitat damage, 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 maintaining buffers will be required. Although construction is not typically addressed until the Building Permit application phase, this NHE includes some measures that should be established at this stage and applied to the proposed lots, if they are approved by the authorities.

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

10.0 Conclusions

10.1 The proposed three (3) lot severance should be permitted as the proposed developments can be situated outside the 30 m VPZ on the retained lands, lot addition and east lot such that the construction/alteration area will not impact the KHFs on-site. According to the development plan provided by Ecovue Consulting, the lot lines enter the 30 m VPZ's on the property, however, remain outside the actual KHFs. Due to this, Ecovue Planning Consultants will need to address the lot boundaries within the VPZ, to ensure the developments comply with local Planning and Growth Plan requirements. It is our understanding that Ecovue Consulting is providing the Planning Report that will address the Growth Plan and local policies with respect to lot line locations.

Impacts/alterations predominantly occur at the building stage, therefore, some of the mitigation measures in the recommendation section of this NHE are applicable to the building approval stage. The mitigation provided in this NHE should extend/apply to

any future building plans on each lot, provided the severances are approved.

10.2 Avian surveys were conducted during the early morning and nocturnal periods. No Species at Risk avian were identified on the property during these surveys. Although the nocturnal surveys were targeted within the southwestern portion of the property, nocturnal SAR avian such as Owls and Nightjars (Common Nighthawk and Eastern Whip-poor-will) are quite loud/vocal and heard over a significant distance. If any such nocturnal SAR were present, the surveyor would have detected and noted the presence of any such SAR avian either on, or adjacent to the subject property.

ORE staff installed a bat detector on-site during the nocturnal surveys. The bat detector detected the chatter of Little Brown Myotis multiple times on-site. Little Brown Myotis is an Endangered bat species. Considering the majority of the site contains the same woodland habitat, ORE presumes the Little Brown Myotis could also occur within the eastern portion of the property.

Therefore, any/all requirements under the Endangered Species Act (ESA), Official Plans/PPS, or the Growth Plan with respect to this Endangered species would apply.

Although ORE staff did not detect any Special Concern species on the subject property, there is suitable habitat for Western Chorus Frog, Eastern Milksnake, Midland Painted Turtle, Blanding's Turtle, Common Five-Lined Skink, and Snapping Turtle.

The Eastern Milksnake, Midland Painted Turtle, Snapping Turtle and Common Five-Lined Skink are subject to the Significant Wildlife Habitat Mitigation and Support Tool (SWHMiST) guideline as they have a provincial status of Special Concern.

As for the Blanding's Turtle, the habitat is likely a Category 2 type whereby the nesting site is in one of the other wetlands nearby (within a 2 km radius of the on-site wetlands). Therefore, measures should be implemented to avoid alterations directly adjacent to and within the unevaluated wetland/PSW and Big Bald Lake KHF habitats on the property.

The federally Threatened Western Chorus Frog was not detected on-site, however, there is suitable habitat for this species when the water level in the wetlands is elevated in the spring season and ephemeral pools form in the upland environments. The ESA does not have any requirements for Western Chorus Frog. That being said, the wetlands themselves and the ephemeral pool habitats will be indirectly protected via the Growth Plan and Official Plan requirements. Preserving this habitat for potential future inhabitation by Western Chorus Frog.

ORE staff also observed Black Ash on the subject property in the wooded swamp

habitats. Black Ash is not a provincially rare species, therefore, there are no applicable protection measures/provisions under the ESA. However, Black Ash occurs within the KHFs on-site, therefore, is indirectly protected via the Growth Plan and local Official Plan requirements.

10.3 Impacts to fisheries by the proposed development are not perceived provided the shoreline vegetation remains intact. In addition, each residential development will be required to meet the Ontario Building Code (with respect to sewage systems). Effluent from the septic system can introduce nutrients to the lake, if it is not properly constructed and/or the nutrients are not attenuated in the subsurface before the treated groundwater discharges to watercourse.

Therefore, the septic system will need to be located a sufficient distance away from any wetland or watercourse, such that the path length increases the residence time of the effluent in the subsurface, ensuring it is more thoroughly renovated before it reaches these features. Considering a 30 m setback is proposed to occur off the boundary of the unevaluated wetland, it should be possible to maintain a distance greater than 30 m from the wetland on each lot. This is twice the separation distance required under the Ontario Building Code.

Additional recommendations are provided below with respect to sewage disposal on each lot.

10.4 Both the subject site and surrounding neighbouring parcels possess SWH; the list is provided in a previous section and the recommendations (below) should be implemented to mitigate direct and indirect impacts to these habitats, while adhering to the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST).

Mitigation should be in the form of maintaining KHFs that support the overall SWH. Avoidance is key with respect to the maintaining the KHF/SWH habitats on the property. Some of the SWH identified on the subject site are related to the upland woodland habitats such as the Special Concern - Common Five-Lined Skink and Woodland Area-Sensitive Breeding Bird habitat. Therefore, avoidance may not be possible. Subsequently, the SWHMiST recommends locating the residential development/footprint along the edge of the SWH to avoid the core SWH.

Recommendations are provided below that comply with the SWHMiST.

10.5 It has been determined that Big Bald Lake represents a Significant Fisheries Habitat and would be subject to the provisions outlined in the OP and Growth Plan

requirements for this Key Natural Heritage Feature (KNHF).

11.0 Recommendations

11.1 The Growth Plan protects KHFs and the corresponding 30 metre VPZ from development, with exceptions made for specific uses, including but not limited to small recreational structures and water access. As previously noted, we understand that a portion of the proposed lot lines extend into a VPZ on the site. However, impacts to these protected areas on the subject lands from the lot lines can be prevented, provided a series of mitigation measures is applied to prohibit any site alterations and/or physical fragmentation (e.g., fencing) from occurring within the VPZ.

To ensure future property owners do not impact the vegetation along the property boundary within the 30 m VPZ, a condition should be included in either the Mitigation Measures Agreement or Development Agreement, whereby the property owner cannot erect any fences, barriers or remove vegetation along the property boundary in the VPZ.

The only alterations to the vegetation within the VPZ allowed along the lot lines would be trimming by an Ontario Land Surveyor (OLS) for the purpose of defining/demarcating the property limits and corners within the VPZ.

Provided the above-mentioned restrictions are adhered to, there will be no negative impacts to the KHF as a result of establishing lot lines within the 30 m VPZ. As for the area between the lot lines in the VPZ, absolutely no development or vegetation removal shall be allowed to prevent impacts to significant features.

Only permissible uses will be allowed within the 30 m VPZ (for instance passive use trails to access the KHFs, as per the Growth Plan and Official Plan policies). However, even these can be routed around trees or be allowed through an area by minimally trimming the trees/vegetation in the VPZ.

11.2 ORE staff detected one (1) Endangered Bat species onsite - Little Brown Myotis, however, the Ministry of Environment, Conservation and Parks (MECP) was not contacted to determine if there are any permitting requirements with respect to this SAR as there is ample information regarding protection measures for this species.

The following mitigation measures are recommended with respect to the Little Brown Myotis:

- A bat snag survey should be completed in the leaf-off season according to the MNDMNRF Guelph District Protocol for bats. Although the survey

protocols were established for wind energy developments, the bat snag criteria would be applicable. Once the good quality snag trees are identified, the data would be used to site the residential envelope on the proposed lot as part of the Building Permit application process. The residential envelope on each lot (not including the southwestern lot as the construction of the residence is already underway and the proposed lot addition) would be sited such that it avoids good quality snags, thereby avoiding the bat maternity colony habitats. In areas where good quality snags cannot be avoided, bat houses would be erected as a means of offsetting those losses. This compensatory measure is discussed further below.

- ORE staff did not observe any caves on the property, therefore, hibernaculum surveys would not be necessary.

- It is recommended that the proposed new dwelling envelopes be reduced in size to maintain the vegetation in the area. The residential development on each lot should demonstrate through a mitigation measures agreement or development agreement that they minimize the yard space to only what is necessary. Large openings or clearings should not be an acceptable practice on the new lots, nor should this practice occur on the retained lands parcel.

- To compensate for bat roosting habitat loss in the upland woodland, the proponent shall construct (or have constructed) three (3) communal bat houses and install one house on each lot overlooking the waterways.[3] The bat houses should be constructed of materials that will survive the elements and last for many years. The property owners can replace them, by choice. Bat house layouts are provided on-line and they can be purchased at certain retail stores.

  The property owner shall provide the Municipality with photos of the bat houses installed in their proposed location as part of a mitigation measures agreement or development agreement.

The above-mentioned mitigation should be sufficient to address the Little Brown Myotis occurrences on the property and retain the majority of the habitat of this species.

[3]The bat snag survey recommendation in the first bullet shall dictate whether more than three (3) communal bat houses are to be installed on-site.

11.3 Although Blanding's Turtle, Eastern Milksnake (periphery of wetlands), Western Chorus Frog, Midland Painted Turtle and Snapping Turtle were not observed/detected within the local waterways on the property, there is suitable habitat for herptile species on-site within the LIO mapped unevaluated wetland and PSW.

Avoiding the habitats is key with respect to maintaining the habitat for these herptile SAR. Therefore, the following recommendations would apply:

- A 30 m Vegetation Protection Zone (VPZ) shall apply to the LIO unevaluated wetlands, the PSW and Big Bald Lake. The upland VPZ is meant to protect the shoreline/riparian vegetation and maintain a vegetated buffer between the development area and the watercourses themselves.

  The setback is meant to be a contiguous untouched vegetation tract along the shoreline. The proponent or any future property owners may not remove the vegetation within the VPZ, other than to establish recreational structures (e.g. docks, trails, etc.) as permitted under the Growth Plan.

- ORE notes that some of the vegetation has already been removed within the 30 m VPZ in reference to the proposed southwest lot. Therefore, once the final grades are achieved and topsoil applied to the residential footprint, the 30 m VPZ off the Big Bald Lake should be rehabilitated to compensate for the vegetation loss in this area.

  This area should either be allowed to regenerate naturally, or conversely, be planted with native trees and shrubs by the proponent/property owner. If the proponent/property owner chooses to rehabilitate the impacted areas by planting within the VPZ, they should provide a detailed Planting Plan to agencies for their review and approval. The 30 m VPZ should be demarcated on the southwest lot to define the limit the chosen rehabilitation is to be applied.

11.4 Although ORE staff did not identify either Eastern Milksnake or Common Five-Lined Skink on the subject property, there is suitable habitat for both these reptile species on-site. This snake and lizard species is very cryptic and is rarely detected.

ORE staff recommends the following measures to ensure the SWH for this lizard species is retained on-site:

- If a dwelling is proposed to be constructed on the retained lot or the

proposed lot addition (southwest lot already has a dwelling which is currently under construction), the building envelope should be located proximal to the existing roadway. The existing roadway represents the edge of the SWH, therefore, would comply with the 2nd SWHMiST requirement. The dwelling on the east lot should be located south of the low-lying bedrock dominated swale (formerly identified as an isolated wetland by LIO) to avoid overfilling this feature in order to locate the residential envelope closer to County Road 36.

- The third bullet under section 11.1 would apply. By reducing the overall yard area to the minimum required by the municipality, it should be possible to maximize retention of the woodland and rock barren habitats on the lots for this SAR.

The above-mentioned recommendations would also apply to the Reptile Hibernaculum (Turtles assessed separately), as the Eastern Milksnake and Common Five-Lined Skink are reptiles that would likely utilize the fractured bedrock to hibernate within.

11.5 ORE staff identified several SWH on the subject parcel. The majority of the SWH are associated with the unevaluated wetland/PSW and Big Bald Lake water bodies, while a few are associated with the upland woodland environments on-site.

Some of the recommendations already applied above would mitigate the remaining SWH not yet discussed:

- The 30 m VPZ appended to the wetlands and lake goes above and beyond the avoidance measures outlined in the SWHMiST, which makes this development compliant with the SWHMiST.

- The 30 m VPZ will not only protect the KHF SWH it will protect the surrounding upland vegetation and connective corridors between the water bodies due to the overlapping nature of the VPZs.

- In regards to the upland woodland SWH associated with the Special Concern - Common Five- Lined Skink, this has been addressed in the previous section of the report.

- The only remaining SWH associated with the woodland are the bat maternity colonies SWH, Bald Eagle and Osprey Nesting, Foraging and Perching SWH, and Woodland Raptor Nesting SWH.

  The recommendations provided herein should be sufficient to protect the

maternity roost SWH for all bat species. Provided the roosting snags are identified, the majority are avoided and the communal bat houses are erected, the SWHMiST requirements would be satisfied.

As for the Bald Eagle and Osprey Nesting, Foraging and Perching SWH, and Woodland Raptor Nesting SWH, the 30 m VPZ off the shoreline of the watercourses should capture the prime nesting, foraging and perching trees that overlook the KHFs. No additional mitigation is necessary in this regard.

11.6 ORE staff identified three (3) small unevaluated wetland areas on the subject property in addition to the LIO mapped wetland features. ORE staff delineated the boundary of these features according to the Ontario Wetland Evaluation System's (OWES - for Southern Ontario) 50/50 rule. The boundaries of the ORE wetlands are provided on Figure 7. The Municipality of Trent Lakes Official Plan and Growth Plan requires a 30 m setback be applied to any/all KHFs. According to the current lot layout submitted by the property owner, it should be possible to maintain the recommended 30 m VPZ to the on-site KHFs. Figure 7 illustrates the constraints that would be associated with the new residential lots (if approved).

ORE staff also removed some of the LIO mapped wetlands in the eastern portion of the property. These are illustrated in red on Figure 7. No VPZ has been applied to these features as they do not exist.

Provided the proposed new lots meet all of the remaining municipal Planning requirements, it should be possible to move forward with the application.

11.7 Considering a 30 m setback is proposed to occur off the boundary of the ORE wetlands, the unevaluated wetland/PSW and Big Bald Lake, it should be possible to maintain a distance greater than 30 m from these watercourses on the southwest lot, east lot, lot addition and retained lot. This is twice the distance, the Ontario Building Code for Sewage Disposal Systems requires.

The septic systems should be situated/installed toward the downgradient side of the lots. It is possible that each lot may require the construction of a raised bed system, depending on the soil and water table conditions. If the local approval authority will authorize the installation of filter bed units to service the new lots, ORE would recommend utilizing that type of system given their smaller footprint and filtering capacity. The smaller footprint is also advantageous with respect to retaining the upland woodland SWH. However, installation of a filter bed unit is voluntary and is not a requirement.

11.8 Proper erosion/sedimentation controls (ESC) will be required at all times while heavy equipment is in operation at this site. Light-duty silt fencing (double-row) must be installed to identify the boundaries of the approved development envelopes (i.e., work areas) and to serve as barriers to prevent construction activities from imposing on the 30 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. Both rows should be maintained on a regular basis. The 2nd row is meant to be a secondary barrier in the event of a catastrophe. If eroded materials are able to bypass either row of silt fence, the materials should be removed manually (without equipment) and reestablished in the construction zone.

A single row of heavy-duty silt fence can be installed instead of the double-row of light-duty silt fence.

Construction should not continue during heavy precipitation events. After any such events, the fence and bales should be checked to ensure their effectiveness.

The silt fence is considered the minimum ESC. A qualified individual shall provide an ESC plan as part of the Building Application package submitted to the Municipality of Trent Lakes for each lot. The ESC plan should illustrate any/all additional controls necessary to prevent sediment from leaving the work area and potentially impacting the waterways or another property. The ESC plan should be approved by the Building Department prior to any work being conducted on-site, which includes vegetation clearing/removal.

If filling is necessary, the volume and areas should be illustrated on a Site Plan/Grading Plan. The fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species that could out-compete native species in the woodland. If imported topsoil is required, then screened topsoil should be the only material applied as top dressing on-site.

The recommendations above will also prevent impacts to Big Bald Lake which also represents significant fisheries habitat. The proposed lots and development footprints will be situated more than 30 m from any/all KHFs on-site. Provided this distance is maintained and the prescribed ESC are installed during the construction period, none of the KHF will be impacted.

11.9 Big Bald Lake is a Significant Fisheries habitat and therefore the following recommendations shall apply to this feature:

- A 30 m VPZ shall apply from the highwater mark of the lake.

- No in-water works shall be conducted without consent/permitting from the appropriate authorities.

- Provided the construction is completed outside the 30 m VPZ, the development does not have to adhere to any in-water works fisheries windows.

Provided the above mentioned recommendations are adhered to, fisheries will not be impacted by the construction of the residence adjacent to Big Bald Lake.

11.10 There is the potential for bird species to be impacted during their nesting, breeding and fledging stages by land clearing/vegetation removal. To mitigate the potential for impacts resulting from vegetation removal during these sensitive avian life cycle stages, the property owner must not conduct any vegetation removal between April 1st and August 31st, corresponding to the main Breeding Bird period in the Migratory Bird Convention Act. This is a standard requirement across the board for all construction. Provided the vegetation is removed prior to this period, the remainder of the construction within the building envelopes can proceed within Migratory bird/breeding bird period.

This no construction/tree removal period will also mitigate impacts to the Area Sensitive bird species in the general vicinity of the proposed lots.

11.11 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, the erosion/sedimentation controls can be removed.

11.12 Provided the recommendations outlined in this NHE report are adhered to, impacts to the KHF and localized SWH identified on Figure 7 should be undetectable. Given, that all of the sensitive features identified on-site will not be impacted, and provided the mitigation measures are applied, then it should be possible to create three (3) new lots on the subject parcel (2 new residential lots and 1 lot addition to an existing lot of record).

Although the retained lot is not considered new development, the property owner will likely want to construct a new residence on this parcel, as there is no existing dwelling on this parcel. To be consistent, the proposed new dwelling would be subject to the same recommendations/provisions outlined in this NHE.

The recommendations in this NHE should form the basis of a Mitigation Measures Agreement (MMA) between the lot owner and the Municipality/County, prior to the severances being created. The Mitigation Measures Agreement should be registered with each lot to ensure no matter who owns the lot, the natural heritage requirements outlined in this report will be respected.

* end of report *

Yours truly,
Oakridge Environmental Limited

Rob West, HBSc. CSEB.
Senior Environmental Scientist

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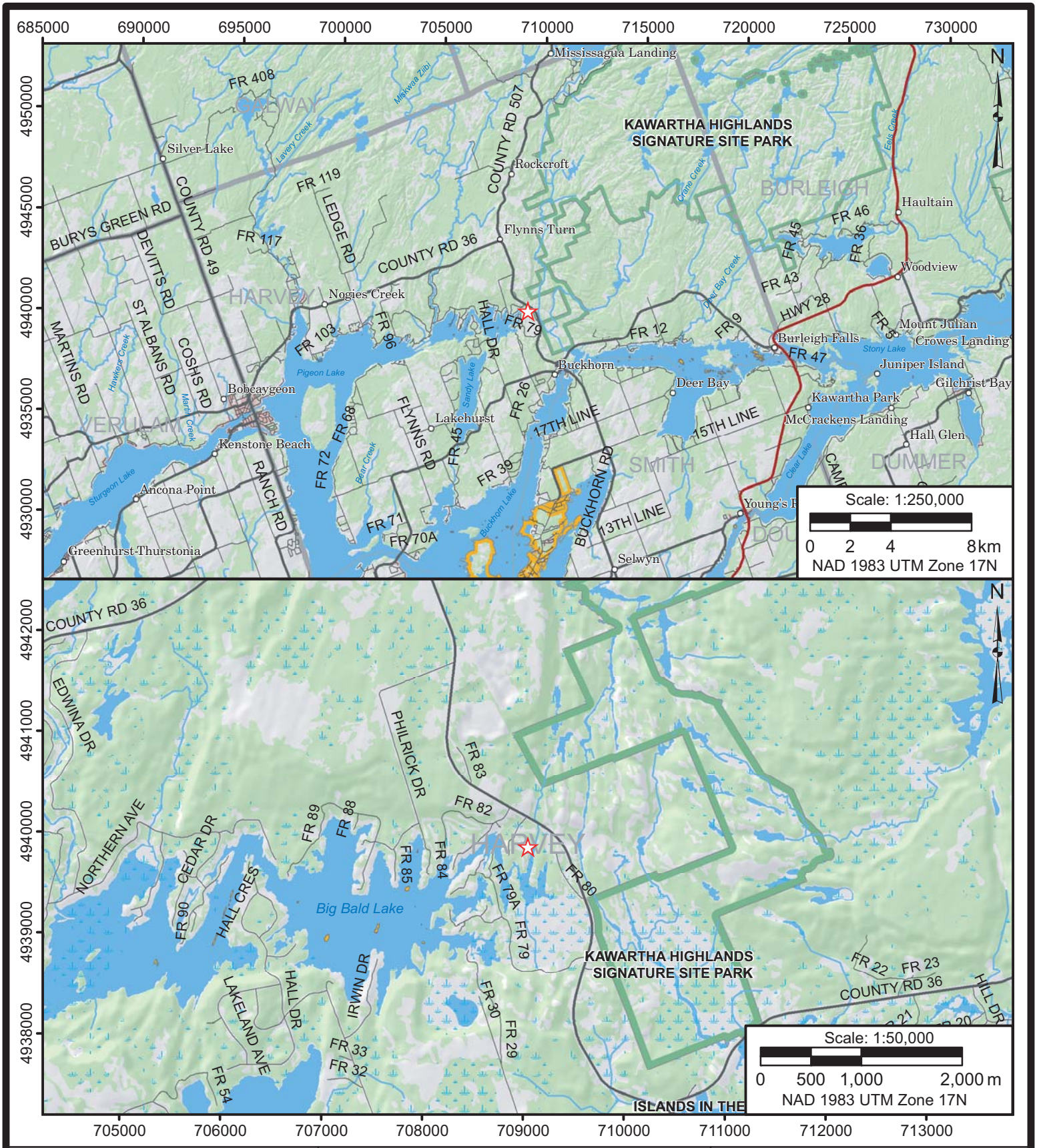
Figures



☆ Approximate Site Location

Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15,
Concession 9 (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)

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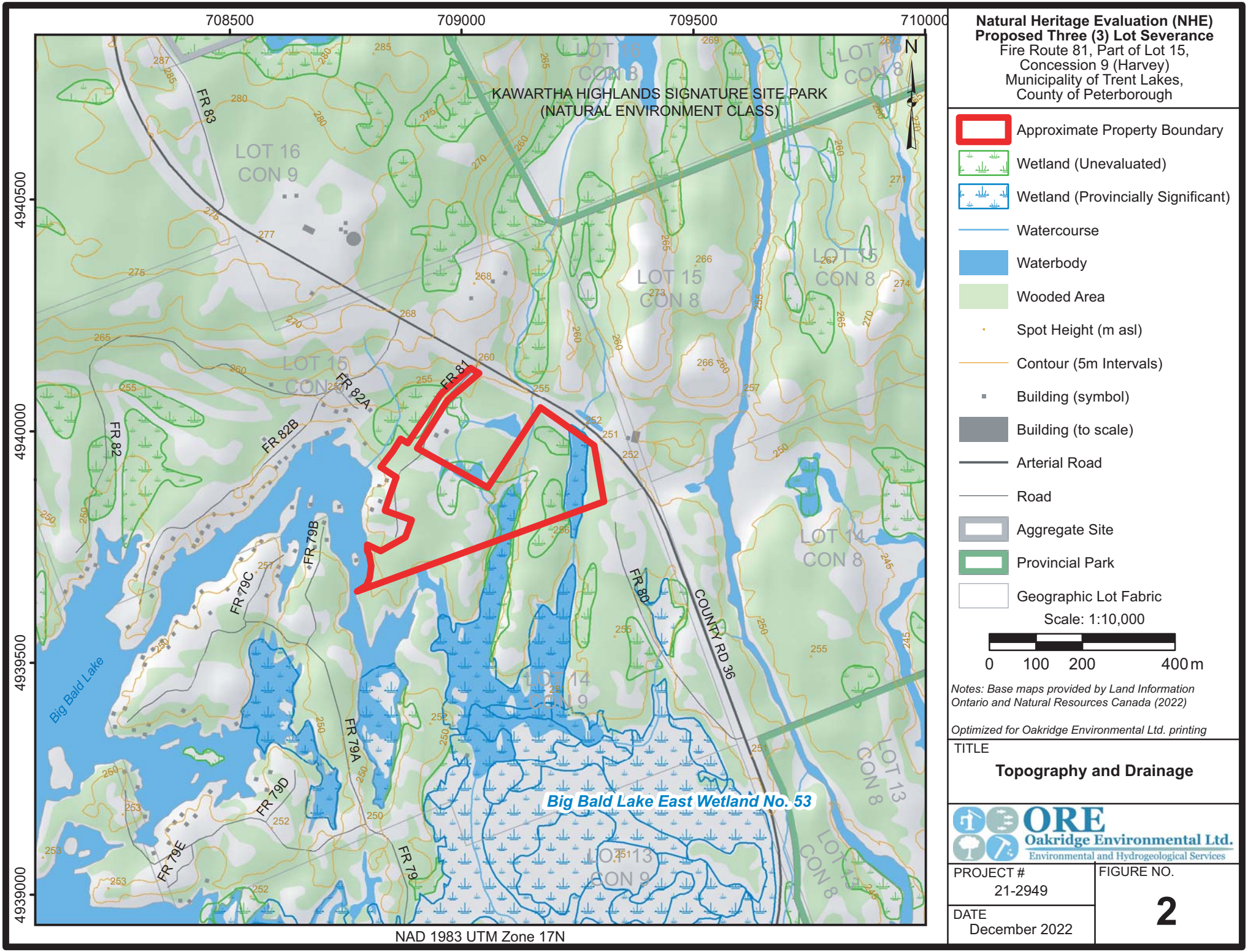
ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT # 21-2949

DATE December 2022

FIGURE NO. **1**



Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15,
Concession 9 (Harvey)
Municipality of Trent Lakes,
County of Peterborough

- Approximate Property Boundary
- Wetland (Unevaluated)
- Wetland (Provincially Significant)
- Watercourse
- Waterbody
- Wooded Area
- Spot Height (m asl)
- Contour (5m Intervals)
- Building (symbol)
- Building (to scale)
- Arterial Road
- Road
- Aggregate Site
- Provincial Park
- Geographic Lot Fabric

Scale: 1:10,000

0 100 200 400 m

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

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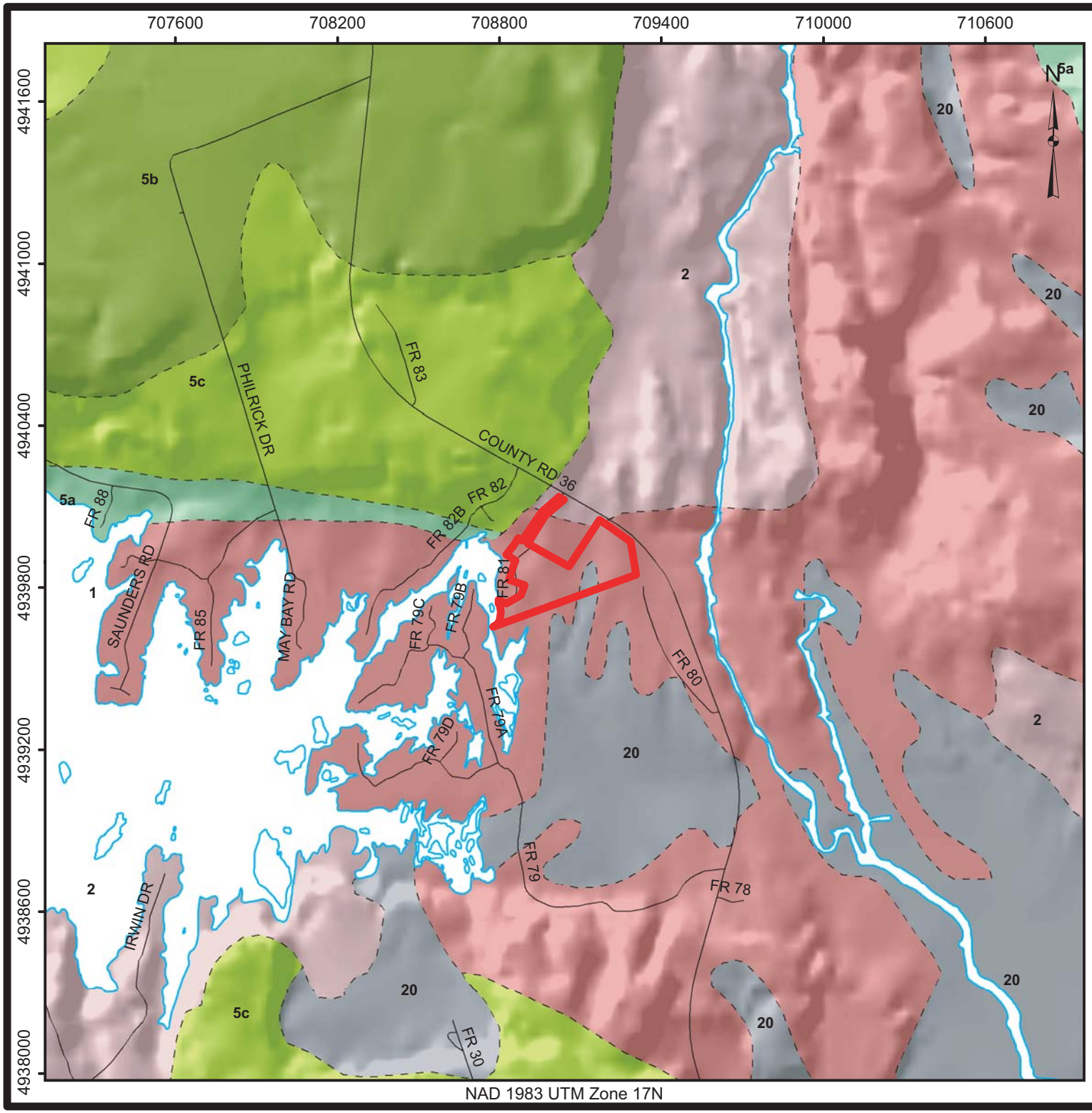
TITLE

Topography and Drainage

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
21-2949	**2**
DATE	
December 2022	



NAD 1983 UTM Zone 17N

Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15,
Concession 9 (Harvey)
Municipality of Trent Lakes,
County of Peterborough

- Approximate Property Boundary
- Contact (approximate/assumed)
- Lake
- 1 — Precambrian bedrock
- 2 — Precambrian bedrock-drift complex
- 5a — Shield-derived silty to sandy till
- 5b — Stone-poor, carbonate-derived silty to sandy till
- 5c — Stony, carbonate-derived silty to sandy till
- 20 — Organic deposits

Scale: 1:20,000

0 200 400 800 m

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

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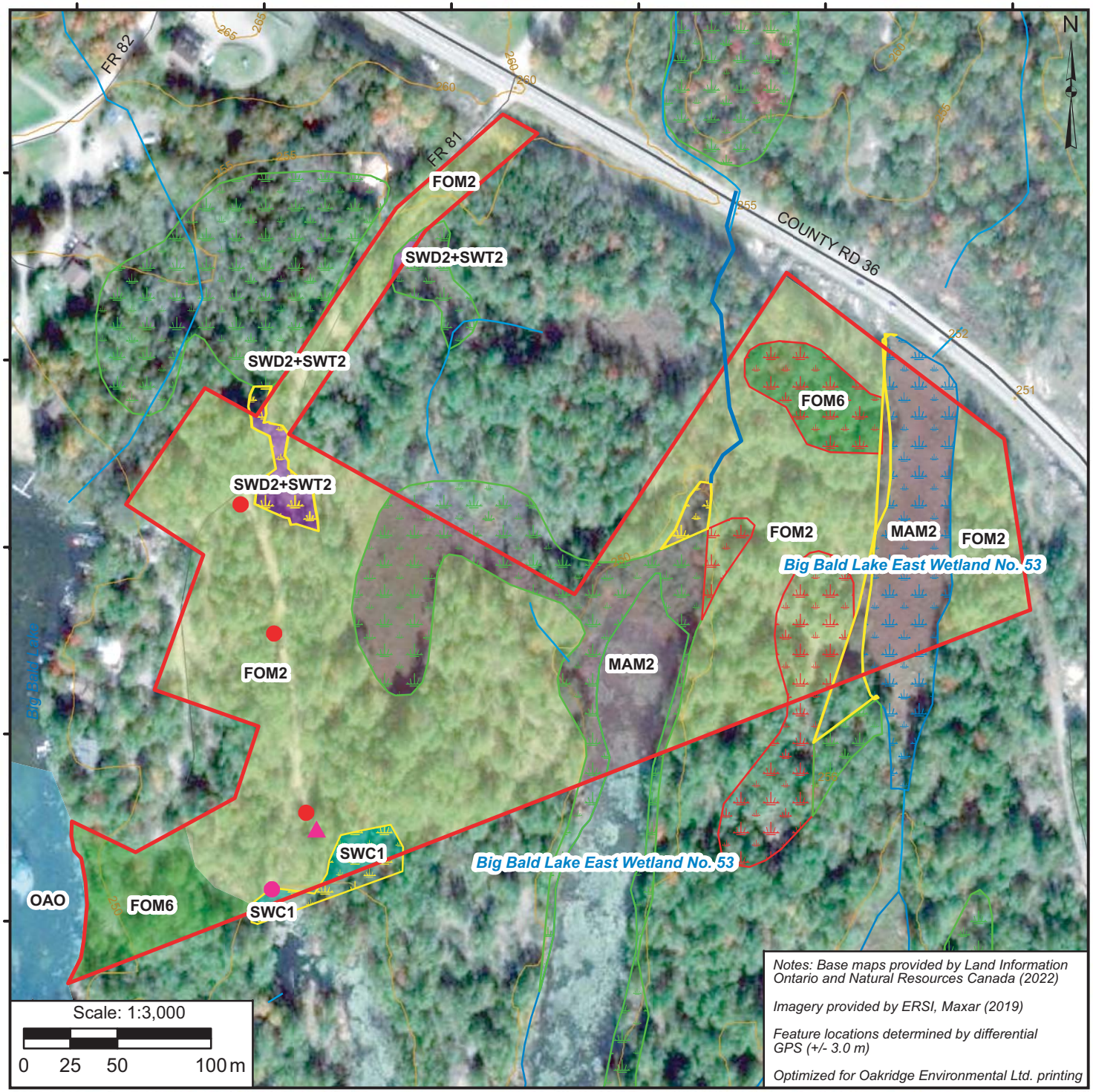
TITLE

Surficial Geology

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
21-2949	**3**
DATE	
December 2022	



Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15,
Concession 9 (Harvey)
Municipality of Trent Lakes,
County of Peterborough

- Approximate Property Boundary
- Wetland (Unevaluated)
- Wetland (Provincially Significant)
- Non-Wetland
- Wetland (ORE)
- Watercourse
- Watercourse (ORE)
- Contour (5 m Intervals)
- Spot Height (m asl)
- Dry – Fresh White Pine – Hardwood Mixed Forest (FOM2)
- Fresh – Moist Hemlock - Hardwood Mixed Forest Ecosite (FOM6)
- Ash Mineral Deciduous Swamp Ecosite (SWD2) and Alder Mineral Deciduous Thicket Swamp Ecosite (SWT2)
- Graminoid Mineral Meadow Marsh Ecosite (MAM2)
- White Cedar Mineral Coniferous Swamp Ecosite (SWC1)
- Open Aquatic (OAO)
- Bat Detector
- Amphibian Survey Location
- Bird Survey Location

TITLE

Vegetation

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
21-2949	4
DATE	
December 2022	

Photo A (Above): This photo was taken looking southwest alongside the access road in the vicinity of where the retained lands dwelling is being proposed.

Photo B (Above): This photo was taken looking south into the PSW/Big Bald Lake arm.

Photos Taken: July 28 2021 August 4, 2022	**Natural Heritage Evaluation (NHE)** **Proposed Three (3) Lot Severance** Fire Route 81, Part of Lot 15, Concession 9 (Harvey) Municipality of Trent Lakes, County of Peterborough	TITLE **Site Photos**
Optimized for Oakridge Environmental Ltd. printing	ORE Oakridge Environmental Ltd. Environmental and Hydrogeological Services	PROJECT # 21-2949 DATE December 2022 FIGURE NO. **5**

Photo A (Above): This photo was taken in the proposed lot in the southwest corner of the property that has a building permit to construct a single dwelling in this location. It is this lot that abuts Big Bald Lake.

Photo B (Above): This photo was taken looking north within the small ORE unevaluated wetland near the access road in the northern portion of the property.

Photo C (Above): This photo was taken of the upland bedrock dome dominated area on proposed east lot.

Photo D (Above): This photo was taken looking west towards the west arm of the PSW. It is dominated by emergent floating-leaved vegetation.

Photos Taken:
July 28 2021
August 4, 2022

Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15,
Concession 9 (Harvey)
Municipality of Trent Lakes,
County of Peterborough

TITLE
Site Photos

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT # 21-2949

FIGURE NO. **6**

DATE December 2022

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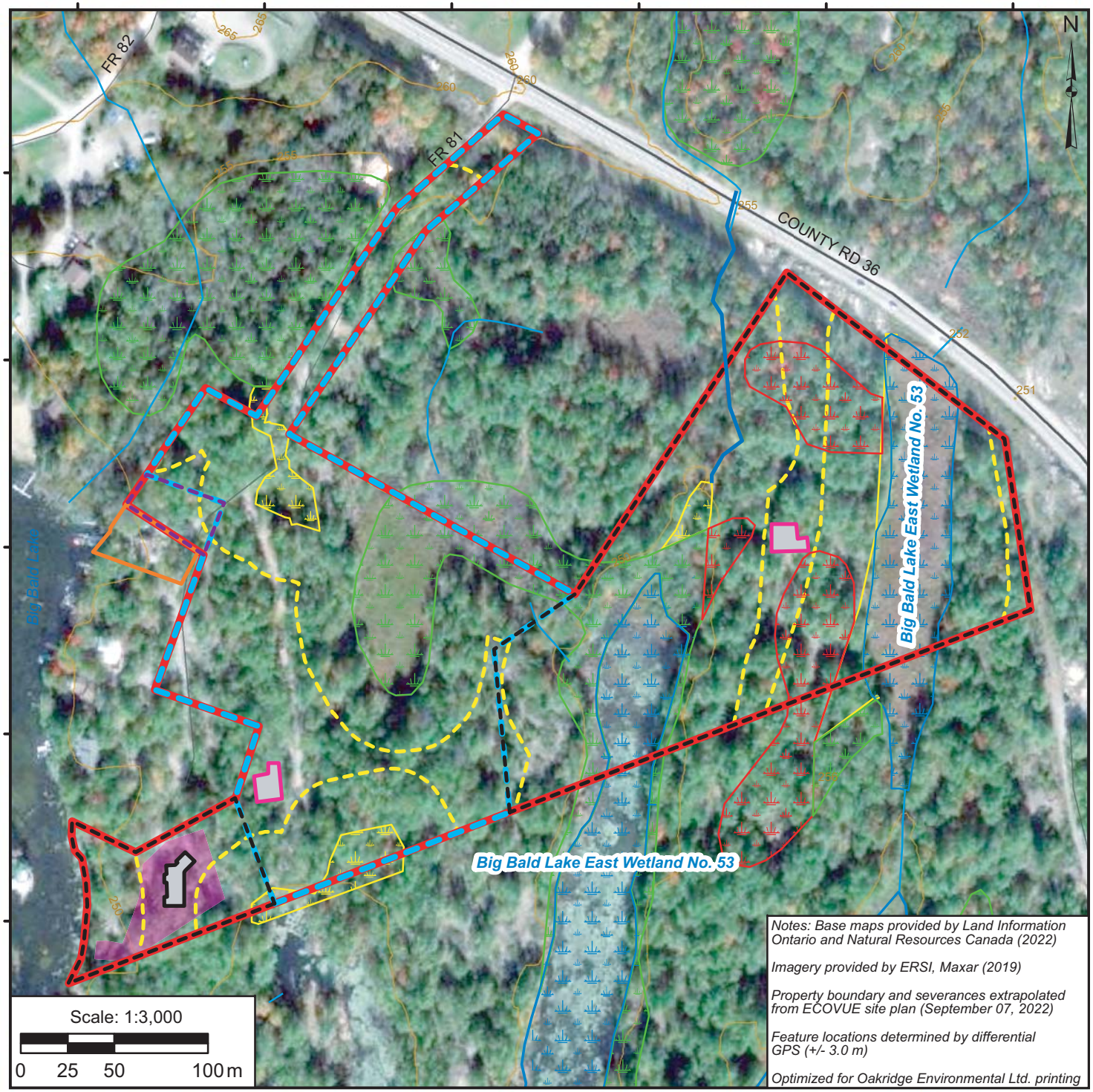


NAD 1983 UTM Zone 17N

Natural Heritage Evaluation (NHE)
Proposed Three (3) Lot Severance
Fire Route 81, Part of Lot 15,
Concession 9 (Harvey)
Municipality of Trent Lakes,
County of Peterborough

- Approximate Property Boundary
- Benefiting Lands
- Proposed Severance (Lot Addition)
- Retained Land
- Proposed Severance
- Existing Alteration Area (Under Permit)
- Building Currently Being Constructed
- Proposed Two Storey Dwelling
- Wetland (Unevaluated)
- Wetland (Provincially Significant)
- Non-Wetland
- Wetland (ORE)
- Watercourse
- Watercourse (ORE)
- VPZ (30 m)
- Contour (5 m Intervals)
- Spot Height (m asl)

TITLE

Constraints

ORE Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

PROJECT #	FIGURE NO.
21-2949	7
DATE: December 2022	

Appendix A

Consent Sketch

TOURIST COMMERCIAL

RURAL

COUNTY ROAD 36

FIRE ROUTE 81

±21.43m

±76.86m

±81.05m

±133.27m

±129.05m

LANDS TO BE SEVERED AND ADDED TO BENEFITING ALNDS
AREA = ±1142.94m²

Big Bald Lake

BENEFITING LANDS
EX. AREA = ±1180.18m²
PR. AREA = ±2323.11m²

±19.25m

±44.20m

±29.97m

±29.97m

PROPOSED ACCESS

RURAL

±364.4m

±174.48m

POTENTIAL 2 STOREY RESIDENTIAL
GROUND FLOOR AREA = ±229.40m²

±205.83m

±147.82m

SHORELINE RESIDENTIAL - PRIVATE ACCESS

TRAVELED ROAD

EXISTING GRAVEL DRIVEWAY

±75.62m

FIRE ROUTE 81

±59.60m

LOT 3
LANDS TO BE RETAINED
AREA = ±3.84ha

±97.6m

±107.0m

±51.84m

±107.5m

±40.67m

±7.1m

POTENTIAL 2 STOREY RESIDENTIAL
GROUND FLOOR AREA = ±229.40m²

±120.0m

±86.69m

LOT 2
LANDS TO BE SEVERED
AREA = ±4.24ha

±71.3m

±92.37m

±37.63m

±55.6m

±60.31m

±87.47m

±38.9m

PORTION OF EXISTING DRIVEWAY TO BE REMOVED

±12.9m

±29.6m

±13.4m

±60.20m

±40.1m

±119.16m

±134.59m

±297.95m

LOT 1
LANDS TO BE SEVERED
AREA = ±0.59ha

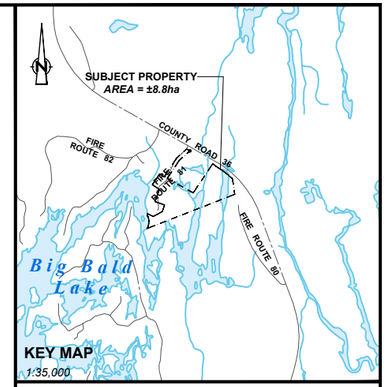
PROPOSED 2 STOREY RESIDENTIAL
GROUND FLOOR AREA = ±286.56m²

PROPOSED PORCH

SHORELINE RESIDENTIAL - PRIVATE ACCESS

RURAL

ENVIRONMENTAL PROTECTION



KEY MAP
1:35,000

LEGEND

- EXISTING PARCEL
- EXISTING STRUCTURES
- EXISTING DRIVEWAY
- EXISTING UNEVALUATED WETLAND *(RETRIEVED FROM LIO)*
- EXISTING PROVINCIALLY SIGNIFICANT WETLAND *(RETRIEVED FROM LIO)*
- EXISTING WETLAND/SHORELINE *(RETRIEVED FROM OAKRIDGE ENVIRONMENTAL LTD. NATURAL HERITAGE EVALUATION)*
- VEGETATED PROTECTION ZONE *(30m)*
- EXISTING WATERBODY *(RETRIEVED FROM LIO)*
- EXISTING WATERCOURSE *(RETRIEVED FROM LIO)*
- LANDS TO BE RETAINED
- LANDS TO BE SEVERED

NOTES:

1. PROPERTY BOUNDARIES ARE APPROXIMATE.

EcoVue Consulting Services Inc.

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DRAWN BY: MC	PROJECT No.: 21-2195
APPROVED BY:	HORIZ. SCALE: 1:1700
REVISION DATE: SEPTEMBER 07, 2022	PLOT DATE: SEPTEMBER 07, 2022

BIG BALD LAKE SEVERANCE

DAN BARNES

0 FIRE ROUTE 81
PART OF LOT 15, CONCESSION 09
GEOG. TWP. OF HARVEY
NOW IN THE MUNICIPALITY OF TRENT LAKES
COUNTY OF PETERBOROUGH

CONSENT SKETCH | **CS1**

Appendix B

Excerpt from the Provincial Policy Statement (PPS)

The following has been copied from the 2014 Provincial Policy Statement (PPS):

"2.1 Natural Heritage

2.1.1 Natural features and areas shall be protected for the long term.

2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

2.1.3 Natural heritage systems shall be identified in Ecoregions 6E & 7E1, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.

2.1.4 Development and site alteration shall not be permitted in:
a) significant wetlands in Ecoregions 5E, 6E and 7E1; and
b) significant coastal wetlands.

2.1.5 Development and site alteration shall not be permitted in:
a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E1;
b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
d) significant wildlife habitat;
e) significant areas of natural and scientific interest; and
f) coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. Ecoregions 5E, 6E and 7E are shown on Figure 1.

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

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

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

2.1.9 Nothing in policy 2.1 is intended to limit the ability of agricultural uses to continue."

Appendix C

Excerpt from the County of Peterborough Official Plan (OP)

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

- *"a description of the proposal and statement of rationale for the undertaking;*
- *a description of the existing land use(s) on site and adjacent lands;*
- *the land use designation on site and adjacent lands, as identified by the County and local municipal Official Plans;*
- *a description of alternative development proposals for the site as well as the environmental impacts of the alternatives;*
- *a comprehensive description of the proposal including its direct and indirect effect on the environment and considering both the advantages and disadvantages of the proposal;*
- *an identification of environmental constraint areas;*
- *an environmental inventory of the area under development consideration (plant life, land-based and aquatic wildlife, wetlands, natural landforms, surface waters, hydrogeological features);*
- *a statement of environmental and ecological significance of the area affected by the proposed development;*
- *a statement on how the development will establish or facilitate the establishment of linkages between natural areas within the watershed and adjacent watersheds and how these linkages will contribute to the preservation and enhancement of the natural areas;*
- *a detailed description of mitigating effects;*
- *any additional information requested by the local municipality;*
- *an assessment of options for servicing the development with full municipal or communal water and sewage services as well as the environmental impacts of the servicing options.*

An environmental impact assessment for proposed development within or adjacent to a significant natural heritage feature will include as its study area the natural heritage feature plus the area surrounding that feature as follows:

- *significant wetlands - all lands within 120 metres;*
- *significant portions of the habitat of endangered and threatened species - all lands within 50 metres;*
- *fish habitat - all lands within 30 metres of the high water mark of all watercourses;*
- *significant wildlife habitat - all lands within 50 metres;*
- *significant woodlands south of the southern limit of the Canadian Shield - all lands within 50 metres;*
- *significant valleylands south of the southern limit of the Canadian Shield - all lands within 50 metres;*
- *significant areas of natural and scientific interest (ANSI) - all lands within 50 metres.*"

Appendix D

County of Peterborough Preliminary Severance Review

Preliminary Severance Review

Prepared by the Peterborough County Planning Department

Date: April 30, 2021

Name: Art Davidson
2419013 Ontario Inc.

Agent: Dan Barns

Email: O: art.davidson@sympatico.ca;
A: dan@ruralwave.ca

Phone: O: 226-932-7034;
A: 705-432-8468 x 201

Municipality: Trent Lakes, Harvey Ward

Lot: Part Lot 15 **Concession:** 9 **Roll No.:** 1542-01030221401

Municipal Address: N/A

Type of Severance: residential lot(s) and right-of-way or easement

	Severed	Retained
County Official Plan	Shoreland Area	Rural
Municipal Official Plan	Lot 1: Recreational Dwelling Area & Rural Lot 2: Rural	Rural, Environmental Protection, Provincially Significant Wetland
Municipal Zoning	Lot 1: Rural Exception 45 (RU-45) Lot 2: Rural Exception 45 (RU-45)	Rural Exception 45 (RU-45) & Environmental Protection (EP)
Area and Frontage	Lot 1: ±0.57 hectares, ±173.69 metres frontage (Big Bald Lake) Lot 2: ± 1.78 hectares, ±21.35 metres frontage on County Road 36	± 6.41 hectares, ± 288.01 metres frontage on County Road 36
Existing Use/Buildings	Vacant	Vacant

Conforms to Provincial policies? ☐ Yes ☒ No

Severances are not permitted in key hydrologic features, including wetlands and watercoures, or within the 30-metre vegetative protection zone (VPZ) surrounding the feature (Growth Plan S 4.2.3.1; S. 4.2.4.3).

Conforms to County Official Plan policies? ☐ Yes ☒ No

Severances cannot be recommended for approval where the proposed severances are contrary to the local Official Plan (S 2.6.3.1).

Conforms to Township Official Plan policies? ☐ Yes ☒ No

Development must demonstrate no impact on the habitat of endangered and threatened species (S 5.1.10.12) and provincially significant wetlands (S 5.9.8.1). Road frontage/access and zoning issues.

Conforms to Township Zoning By-Law?

Severed parcel meets Zoning requirements: ☐ Yes ☒ No

Retained parcel meets Zoning requirements: ☐ Yes ☒ No

Rezoning appears to be required.

Studies required to support the application? ☒ Yes ☐ No

- Environmental Impact Study / Natural Heritage Evaluation
- Species at Risk Assessment
- Archaeological Assessment

Provincial Policy Review:

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

☒ Wetlands	☐ Significant Wildlife Habitat	☐ Area of Natural and Scientific Interest (ANSI)
☒ Fish habitat	☐ Significant Woodlands	☒ Other key hydrologic feature (stream, pond, lake)
☒ Species at Risk	☒ Habitat of Endangered or Threatened Species	

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

☒ Yes ☐ No

Sections 4.2.3 and 4.2.4.1(c) of the Growth Plan (2019) state that development and site alteration, including lot creation, is not permitted in key hydrologic features or the minimum 30 metre vegetation protection zone (VPZ) surrounding the feature. In addition, Section 4.2.4.1 of the Growth Plan (2019) states that development within 120 metres of a key hydrologic feature will require a natural heritage evaluation/hydrologic evaluation.

Given the proximity of the severed parcel 2 to the unevaluated wetlands on the property, the lot lines will be required to be adjusted to ensure that the severed parcel is located outside the key hydrologic feature and its associated VPZ in order to comply with Growth Plan policy. If the lots lines are adjusted, but the severed parcel remains within the 120 metre buffer surrounding the feature, a natural heritage evaluation and/or hydrologic evaluation is required. Evaluations undertaken in accordance with these policies will identify the boundaries of the key natural heritage feature, vegetation protection zones, and 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.

The Provincial Policy Statement prohibits development and site alteration, including lot creation, within habitat of endangered species and threatened species, except in accordance with provincial and federal requirements (S 2.1.7). Species at Risk (SAR) data available to the County has identified a possible species at risk on or adjacent to

the proposed severed lots, therefore, a SAR assessment is required as part of the natural heritage evaluation, referenced above.

Policy 2.6.2 of the Provincial Policy Statement states that "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved". Using the Criteria for Evaluating Archaeological Potential Checklist, provided by the Province, it has been determined that there is high archaeological potential on the property since it is located within 300 metres of a major watercourse (Big Bald Lake), an Archaeological Assessment may be required. It is recommended that the applicants contact Curve Lake First Nation regarding study requirements.

Does the proposal meet Minimum Distance Separation requirements?
☐ Yes ☐ No ☒ Not Applicable
No livestock facilities identified within 1,500 m of subject property.

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)).

Section 2.6.3.1 of the Plan states that "under no circumstances shall severances be recommended for approval where proposed severances are contrary to this Plan and/or the respective local Official Plan."

Municipal Official Plan Policy Review:

Land uses permitted in the Rural and Recreational Dwelling Area designations include limited permanent and recreational residential dwellings (S 5.2.1; S 5.4.1). 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."

On a property with more than one land use designation, the maximum number of lots that may be created by consent per land holding shall be three (3) 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. 6.2.1.1.1). A search of County Land Division records indicates that the subject lands have not received any consents (severances) for new lot creation within the past 15 years and therefore appears eligible for consent.

The Environmental Protection designation also includes natural hazard areas and features, which may pose a threat to life and property due to inherent characteristics such as floodplains, erosion and dynamic beach hazards, and steep slopes. Section 5.9

states that lands designated as Environmental Protection are primarily intended for preservation and conservation of the natural land and/or environment, and should be managed in such a fashion as to complement adjacent land uses and protect such uses from physical hazards.

Section 6.2.1.4.1 states that severances that create new lots shall only be considered when both the newly created lot and the retained lot front on an assumed public road that is currently maintained on a year-round basis by a public authority. In the Recreational Dwelling Area severances may be granted where access is from a private road, where the proposal involves limited extension of a private road. Only Severed Lot 1 is within the Recreational Dwelling Area and may be provided this exception provided a deeded right of way is created to access the parcel.

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 Public Works will be consulted to ensure that the requirements of their entrance by-law are met. See attached comments from the County's Infrastructure Services Department (formerly Public Works Department).

Section 6.2.1.12 states, in part, that severances will be discouraged in low lying areas and shall not be granted on parcels subject to flooding or other physical hazard. The Municipality may require an Environmental Impact Study (EIS) as part of any proposal for development, including lot creation, or site alteration, where potential exists for a negative impact on the natural environmental features, functions and/or adjacent lands (S. 5.1.10.3 (b)). The retained parcel appears to be severely constrained by wetland features. There does not appear to be a suitable building envelope or access route that would not intersect a wetland and will be required to be addressed as part of the Environmental Impact Study/Natural Heritage Evaluation referenced above.

As applicable, all consents must meet road frontage & access, Zoning By-law and Health Unit requirements (S. 6.2.1.4.1, 6.2.1.5 & 6.2.1.6). The subject lands are zoned Rural Exception 45 (RU-45) Zone which permits a minimum lot area of 8 ha (20 acres) and recognizes the existing lot frontage. Rezoning of the parcels will be required to a more appropriate zone given the irregularity of the lots and limited frontage for the two severed parcels. The applicant should discuss the proposal with the Township to determine if a rezoning of the severed and retained parcels would be supported.

***Reviewed By*: Amanda Warren**

Additional Notes

Agencies to be contacted by landowner or agent (marked with an X):	
☒ Township	☒ Peterborough Public Health
☐ Conservation Authority	☐ Trent-Severn Waterway
☐ Source Water Risk Management Officer	☒ First Nations
☒ Ministry of Environment, Conservation and Parks	☐ 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 By-law.

* 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:

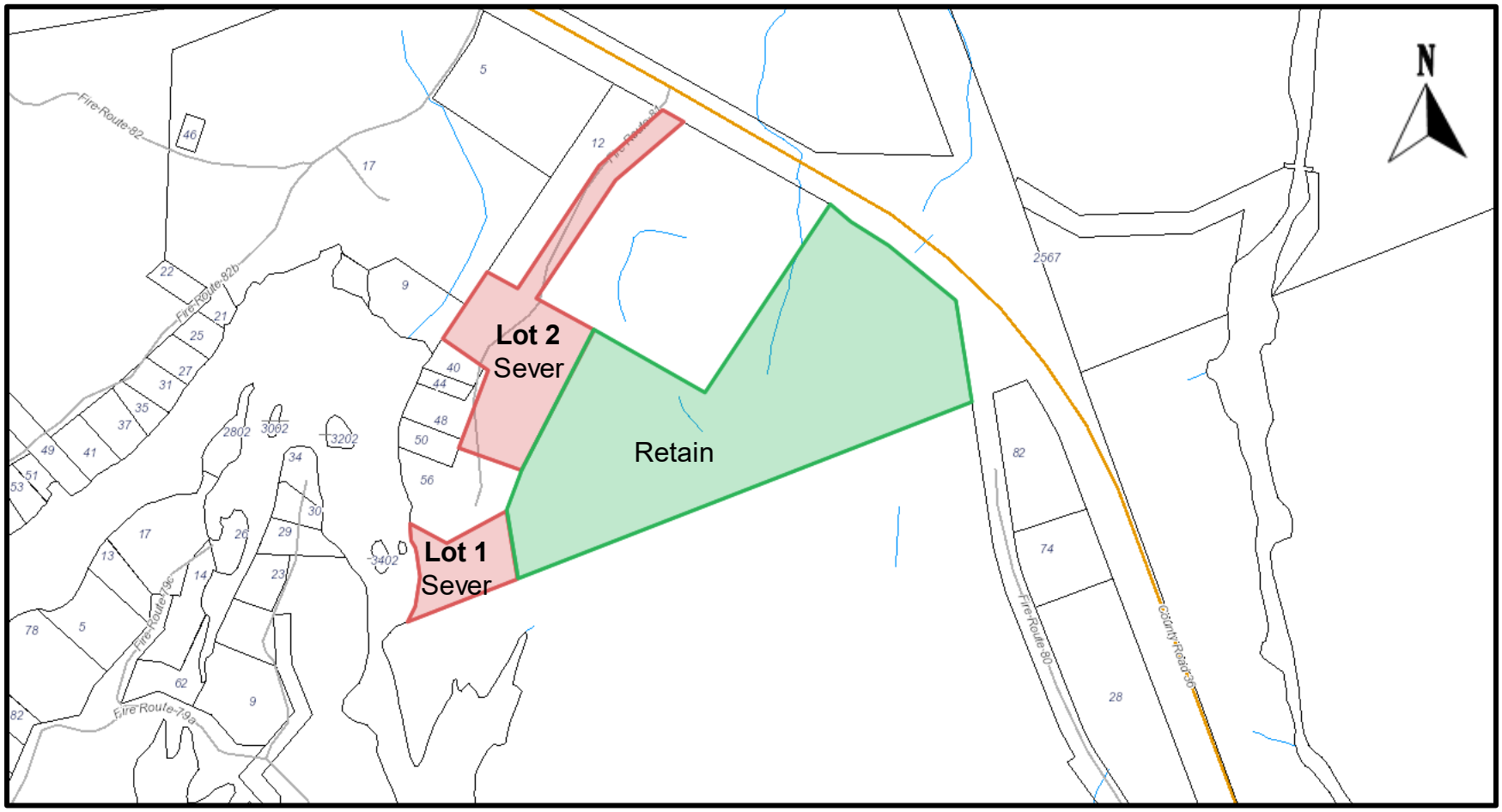
- ☒ No Conservation Authority in the area
- ☐ Otonabee Region Conservation Authority (ORCA), (705) 745-5791
- ☐ Crowe Valley Conservation Authority (CVCA), (613) 472-3137
- ☐ Kawartha Region Conservation Authority (KRCA), (705) 328-227

* 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

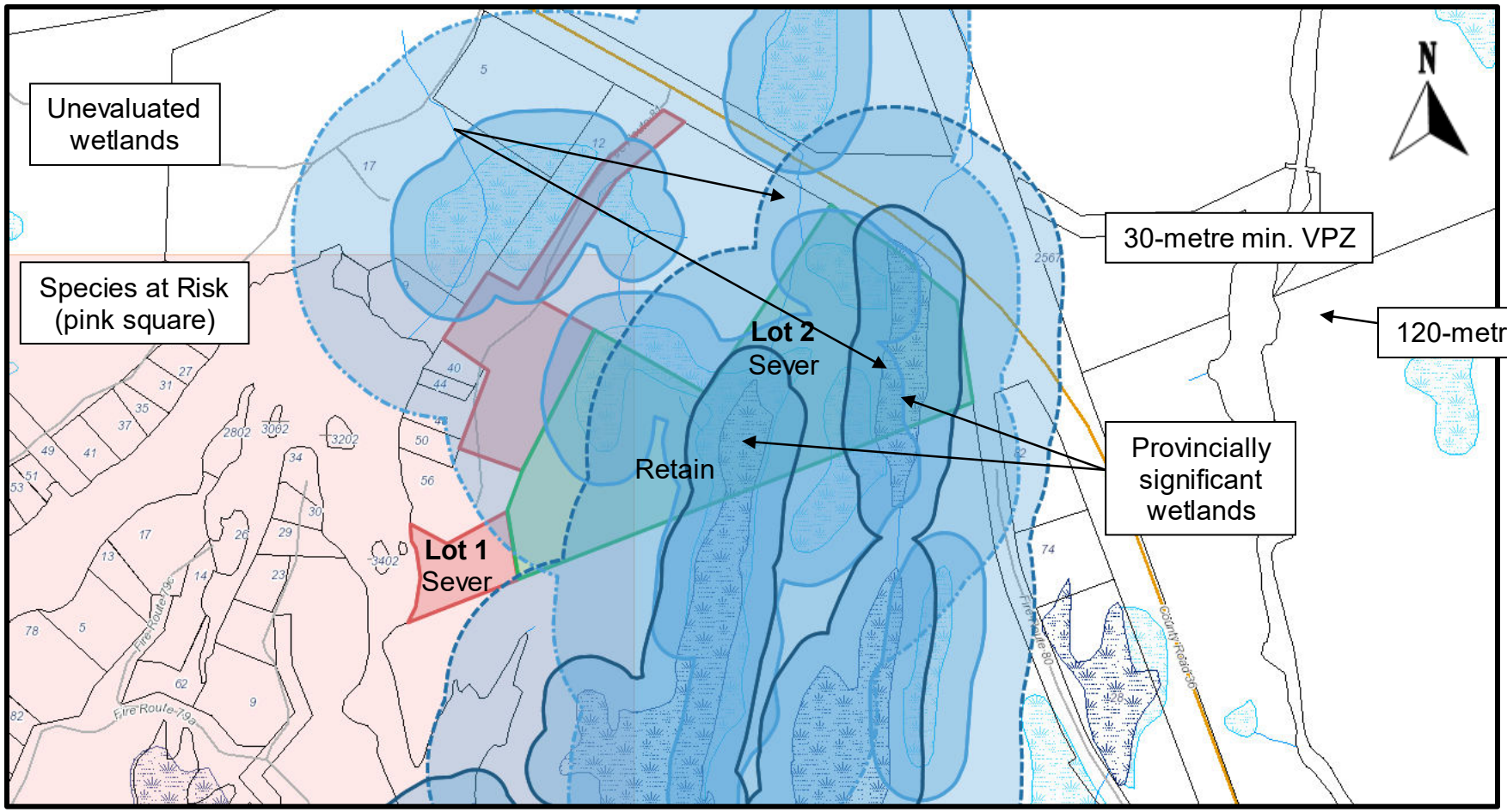
Our position on the overall conformity of the proposal is based on information available at the time of review. Subsequent information from commenting agencies can change our comments relating to any formal application for severance which is subsequently filed. The above-noted comments should not be 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 # 154201030221401
Part Lot 15, Concession 9, Harvey
(Davidson-Barns)
Severance Sketch



Scale (metric)
1:3942

Roll # 154201030221401
Part Lot 15, Concession 9, Harvey
(Davidson-Barns)
Constraints Sketch



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).

Scale (metric)
1:3942

Peterborough County
Our History. Your Future

Infrastructure Services
Engineering & Design

Daniel Ilkiewicz
Engineering Technician

Location:
310 Armour Road
Peterborough, Ontario
K9H 1Y6

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

Ph: (705) 743-0380
Ext 3205
Fax: (705) 749-2551

dilkiewicz@ptbocounty.ca

www.ptbocounty.ca

Severance Review Form

Applicant: Art Davidson **File No.:**

Date: 2021-01-18

County Road: 36

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

Conditions:

	Yes	No
Traffic Study required	☐	☒
Road Widening required	☐	☒

Length/Width/Location of Widening: N/A

Permits:	Yes	No
Single Entrance Permit required for Severed No.1	☐	☒
Single Entrance Permit required for Severed No.2	☐	☒
Single Entrance Permit required for Retained	☒	☐
Mutual Drive Entrance Permit required	☐	☒

Notes / further comments:

The existing Fire Route (Fire Route 81) access from County Road 36 onto the proposed severed parcel No. 1 meets the County of Peterborough Entrance By-Law #2012-26 (entrance permit is not required).

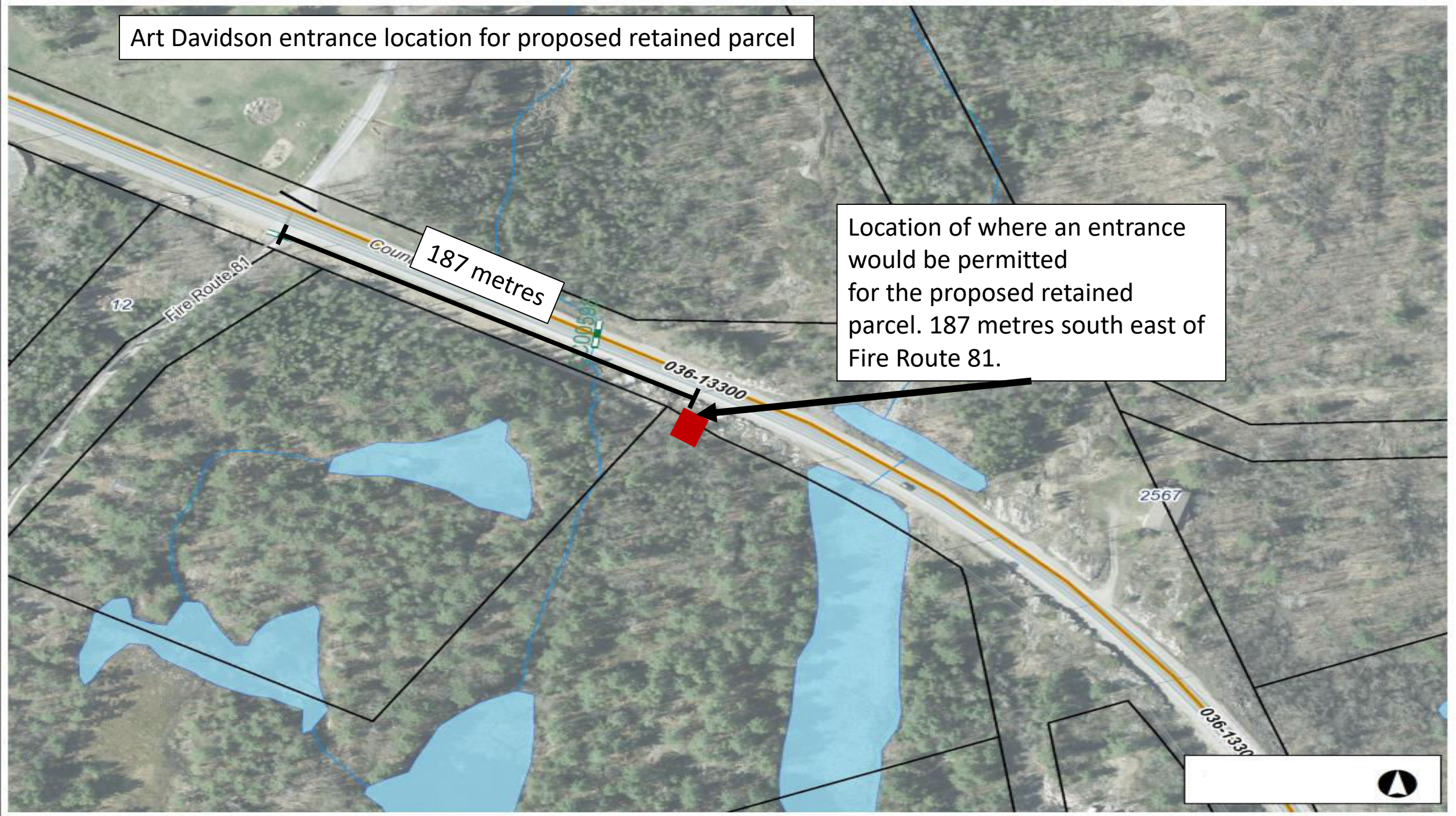
Access to the proposed severed parcel No. 2 shall be via a right-of-way on title over the existing Fire Route (Fire Route 81) of the proposed severed parcel No. 1 from County Road 36, and shall be via a right-of-way on title over the proposed retained parcel.

An entrance from County Road 36 onto the proposed retained parcel will be permitted as it meets the requirements for an entrance under the County of Peterborough's Entrance By-Law #2012-26. Please note that the entrance shall meet the minimum spacing requirement of 150 metres between adjacent entrances as described in the County Peterborough Entrance By-Law #2012-26. Please find attached, a pdf of a map that illustrates the location of where a residential entrance would be permitted.

Please find attached, a pdf that illustrates where the parcels are located and the the names of the proposed parcels.

If you have any questions/concerns please contact Daniel Ilkiewicz at 705-743-0380 Ext 3205.

Daniel Ilkiewicz
Engineering Technician
Engineering & Design Division,
Infrastructure Services Department


Art Davidson entrance location for proposed retained parcel
187 metres
Location of where an entrance would be permitted for the proposed retained parcel. 187 metres south east of Fire Route 81.
Fire Route 81
12
036-13300
2567

Appendix E

Species Descriptions

Birds

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

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.

Black Tern (*Chlidonias niger*) is listed as "Special Concern" by SARO, and is not protected under the ESA. The Black Tern prefers shallow, freshwater cattail marshes, wetlands, lake edges and sewage ponds with emergent vegetation. Nesting occurs on dead plant material piled upon aquatic floating vegetation. The Black Tern hunts small insects and minnows along the surface of lakes and ponds.

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.

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

insects.

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

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

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

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.

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

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

Olive-sided Flylcatcher (*Contopus cooperi*) is listed as "Special Concern" by SARO and is not protected under the ESA. This species is typically found within natural

forest edges and openings. Its preferred habitat is within coniferous or mixed forests adjacent to rivers or wetlands. It likes to inhabit conifers such as White/Black Spruce, Jack Pine, and Balsam Fir.

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

Blanding's Turtle (*Emydoidea blandingii*) is listed as "Threatened" by SARO and is protected under the ESA. It tends to inhabit shallow waters within large wetlands or shallow lakes that have lots of aquatic plants. However, they have been known to travel hundreds of metres from a main body of water for nesting or mating. This species is most easily identified by its bright yellow throat and chin.

Common Five-lined Skink (Southern Shield Population) (*Plestiodon fasciatus*) is listed as "Special Concern" by SARO and is not protected under the ESA. This species of lizard basks on sunny rocks and logs to maintain a preferred body temperature (28 - 36°C). During the winter, they hibernate in crevices among rocks or buried in the soil. The Southern Shield population can be found underneath rocks on open bedrock in forests.

Eastern Hog-nosed Snake (*Heterodon platirhinos*) is listed as "Threatened" by SARO and is protected under the ESA. This snake species like most are generalists, however it tends to occur between waterbodies, where warm sandy substrates occur and where there is fractured rock which allows for them to hibernate from year to year. It may be found alongside roadways within short to tall grass sandy substrate areas. It will bask in the sunlight in these areas to raise its temperature on cool mornings and evenings. It will also utilize shade in woodlands and swamps to thermoregulate its body temperature.

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

Midland Painted Turtle (*Chrysemys picta marginata*) is listed as "Special Concern" by COSEWIC and is currently under review by COSSARO. Midland Painted Turtles spend the majority of their lives in water. They prefer shallow water with aquatic

vegetation, soft mud, and leaf litter at the bottom. Typically found basking on logs, rocks, and shorelines in sunlight. Midland Painted Turtles nest between mid-spring and early summer. They tend to choose gravely, sandy and loam soils for nesting.

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-ee-eek" 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 to 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

American Bumble Bee (*Bombus pensylvanicus*) is listed as "Special Concern" by COSEWIC and not SARO. It is not protected under the ESA. The American Bumble Bee is a medium sized bee with dark wings and the yellow and black striping of typical bumble bees. The head and tongue are longer than most bees in Canada. They prefer farmlands, meadows and grasslands. American Bumble Bees nest above ground in grass mats, or abandoned rodent/bird nests. Queens overwinter underground in decomposing organic material.

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

Plants

Black Ash (*Fraxinus nigra*): is listed as "Threatened" by COSEWIC and is currently under review by COSSARO. Black Ash is a shade tolerant species that prefers moist alkaline soil. Black Ash occurs in and around swamp type environments, areas which have seasonal flooding, and moist upland forests.

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 F

NHIC Database

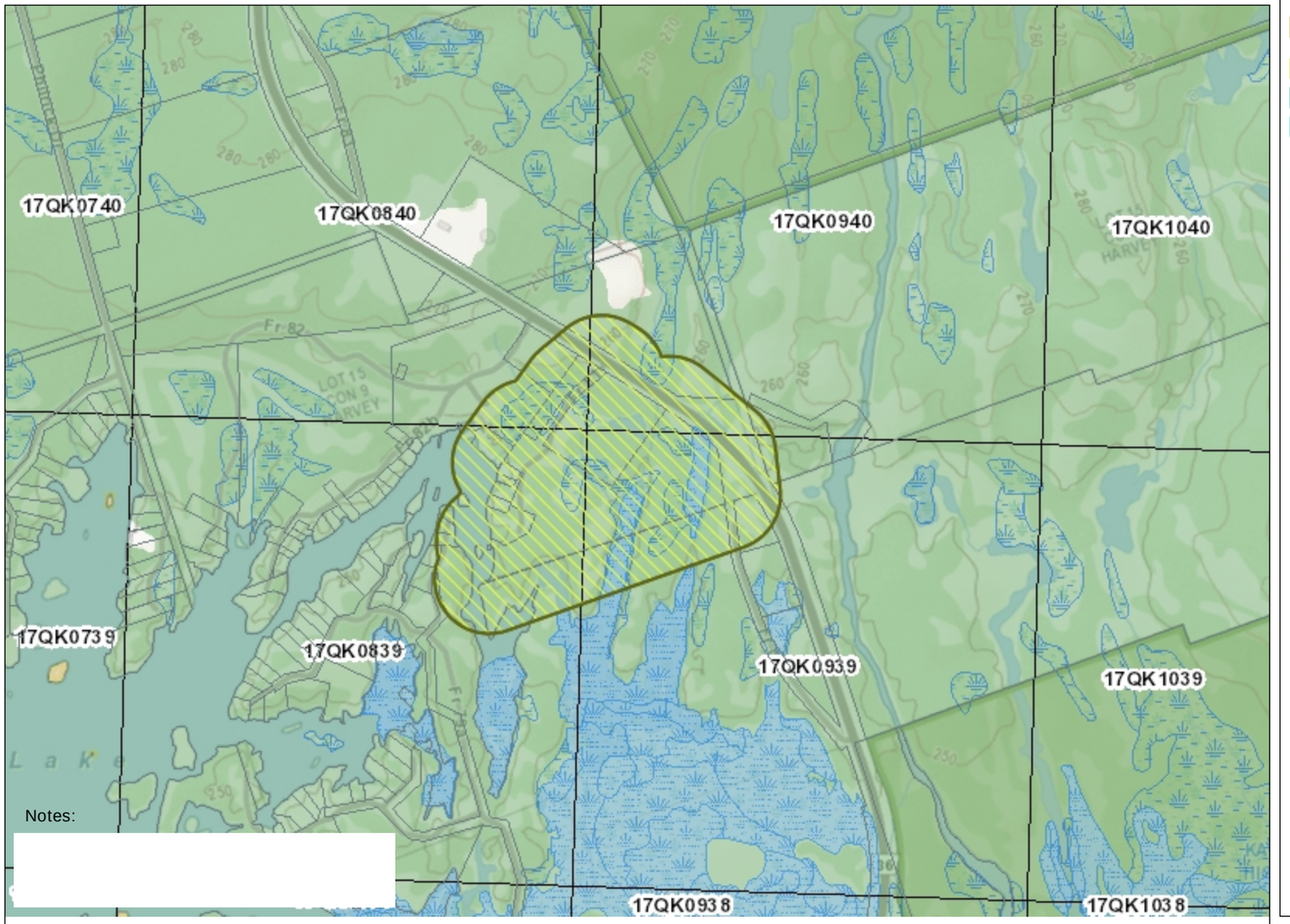
Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

NHIC Map

Map created:10/12/2022



Notes:

Legend

- Assessment Parcel
- 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
- Conservation Reserve
- Provincial Park
- Natural Heritage System

0.7 0 0.33 0.7 Kilometres

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

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
1056324	NATURAL AREA	Big Bald Lake East Wetland No. 53					17QK0940	
1056324	NATURAL AREA	KAWARTHA HIGHLANDS SIGNATURE SITE PARK (NATURAL ENVIRONMENT CLASS)					17QK0940	
1056314	NATURAL AREA	KAWARTHA HIGHLANDS SIGNATURE SITE PARK (NATURAL ENVIRONMENT CLASS)					17QK0840	
1056223	NATURAL AREA	Big Bald Lake East Wetland No. 53					17QK0839	
1056223	SPECIES	Midland Painted Turtle	Chrysemys picta marginata			SC	17QK0839	
1056223	SPECIES	Blanding's Turtle	Emydoidea blandingii		THR	END	17QK0839	
1056223	RESTRICTED SPECIES	Restricted Species	Restricted Species				17QK0839	
1056223	RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES		THR	THR	17QK0839	
1056233	NATURAL AREA	Big Bald Lake East Wetland No. 53					17QK0939	
1056233	NATURAL AREA	KAWARTHA HIGHLANDS SIGNATURE SITE PARK (NATURAL ENVIRONMENT CLASS)					17QK0939	
1056233	SPECIES	Eastern Milksnake	Lampropeltis triangulum		NAR	SC	17QK0939	
1056233	SPECIES	Midland Painted Turtle	Chrysemys picta marginata			SC	17QK0939	
1056233	SPECIES	Western Chorus Frog - Great Lakes - St. Lawrence - Canadian Shield populati	Pseudacris maculata pop. 1		NAR	THR	17QK0939	
1056233	SPECIES	Common Five-lined Skink (Southern Shield population)	Plestiodon fasciatus pop. 2		SC	SC	17QK0939	

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1056233	SPECIES	Snapping Turtle	Chelydra serpentina		SC	SC	17QK0939	
1056233	SPECIES	Blanding's Turtle	Emydoidea blandingii		THR	END	17QK0939	

Appendix G

OBBA Database

BIRDS CANADA
OISEAUX CANADA

Square Summary (17TQK03) [change]

	#species				#hours		#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	45	32	15	92	51.3	23.7	20	16
Prev.	26	38	51	115	116.1	—	72	

Region summary (#16: Peterborough, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
60	57	186	60	5
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 2, Mixed Forest in 2, Wetland in 1). 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:** [02, 06, 09, 16, 31]

SPECIES	Prev.	Code	%
Canada Goose	FY	FY	71
Mute Swan ‡			3
Trumpeter Swan		P	19
Wood Duck	FY	P	71
Blue-winged Teal ‡	H		12
Northern Shoveler ‡			3
Gadwall ‡			0
American Wigeon ‡			0
Mallard	FY	FY	68
American Black Duck			3
Northern Pintail ‡			0
Green-winged Teal ‡	P		3
Redhead †			0
Ring-necked Duck			19

Lesser Scaup ‡			0
Hooded Merganser	FY	H	45
Common Merganser ‡	P	H	21
Ruddy Duck ‡			0
Wild Turkey	P	FY	66
Ruffed Grouse	T	S	73
Ring-necked Pheasant ‡			0
Pied-billed Grebe			7
Rock Pigeon (Feral Pigeon)	V	H	40
Mourning Dove	FY	T	71
Yellow-billed Cuckoo		P	45
Black-billed Cuckoo	FY	T	66
Coccyzus sp. ‡	S		0
Common Nighthawk §	D		21
Eastern Whip-poor-will §	T	S	33
Chimney Swift ‡			8
Ruby-throated Hummingbird	P	T	56
Virginia Rail	S		42
Sora	S		14

SPECIES	**Prev.**	**Code**	**%**
Common Gallinule ‡			10
American Coot ‡			3
Sandhill Crane ‡			22
Killdeer §	H	H	47
Upland Sandpiper †	H		7
American Woodcock	T		40
Wilson's Snipe			40
Spotted Sandpiper	P	H	31
Ring-billed Gull § ‡			7
Herring Gull §			19
Caspian Tern ‡			0
Black Tern †	H		1
Common Tern § ‡			0
Common Loon	P	AE	61
Double-crested Cormorant § ‡			12
American Bittern	H		38
Least Bittern ‡			22

Least Bittern †			22
Great Blue Heron §	AE	H	50
Green Heron §	H	H	36
Turkey Vulture	H	H	71
Osprey	AE	H	47
Northern Harrier	H		22
Sharp-shinned Hawk	H		7
Cooper's Hawk		H	14
Northern Goshawk ‡			1
Bald Eagle ‡			5
Red-shouldered Hawk	P		17
Broad-winged Hawk	P	H	63
Red-tailed Hawk	H	AE	42
Eastern Screech-Owl			8
Great Horned Owl ‡	P		12
Barred Owl	T	D	33
Long-eared Owl ‡			3

SPECIES	**Prev.**	**Code**	**%**
Short-eared Owl †			0
Northern Saw-whet Owl	S		1
Belted Kingfisher	NY	T	78
Yellow-bellied Sapsucker	NY	P	89
Red-headed Woodpecker †			5
Red-bellied Woodpecker		D	33
Black-backed Woodpecker ‡			1
Downy Woodpecker	P	S	71
Hairy Woodpecker	CF	S	78
Pileated Woodpecker	AE	S	78
Northern Flicker	CF	S	78
American Kestrel §	H		40
Merlin	AE		31
Peregrine Falcon ‡			0
Olive-sided Flycatcher ‡			8
Eastern Wood-Pewee §	T	S	78
Yellow-bellied Flycatcher ‡			0
Alder Flycatcher	T		78

Willow Flycatcher			31

Least Flycatcher	S		68
Eastern Phoebe	AE	NY	84
Great Crested Flycatcher	FY	T	82
Eastern Kingbird	AE	AE	77
Yellow-throated Vireo	S		22
Blue-headed Vireo		S	45
Philadelphia Vireo ‡			1
Warbling Vireo	CF	S	57
Red-eyed Vireo	FY	T	92
Loggerhead Shrike †			0
Canada Jay ‡			0
Blue Jay	CF	T	94
American Crow	FY	S	84
Common Raven		FY	91

SPECIES	Prev.	Code	%
Black-capped Chickadee	CF	T	98
Boreal Chickadee ‡			0
Horned Lark ‡			5
Northern Rough-winged Swallow	P		15
Purple Martin ‡			0
Tree Swallow	AE		59
Bank Swallow §			10
Barn Swallow §	FY		63
Cliff Swallow §			14
Ruby-crowned Kinglet ‡	S		1
Golden-crowned Kinglet			19
Red-breasted Nuthatch		S	82
White-breasted Nuthatch	P	T	73
Brown Creeper	T	H	42
Blue-gray Gnatcatcher ‡			3
House Wren	CF	AE	59
Winter Wren	FY	S	77
Sedge Wren ‡			8
Marsh Wren	T	S	40
Carolina Wren ‡			3
European Starling	FY	P	70
Gray Catbird	FY	A	73
Brown Thrasher	FY	CF	61
Northern Mockingbird ‡			0
Eastern Bluebird	AE	P	40
Veery	A	S	89
Swainson's Thrush	S	H	7
Hermit Thrush	T	S	57
Wood Thrush §	S	S	66
American Robin	NY	NY	98
Cedar Waxwing	CF	S	66
House Sparrow	FY		33
Evening Grosbeak ‡			0

SPECIES	Prev.	Code	%

House Finch			15
Purple Finch	FY	H	73
Red Crossbill ‡			7
White-winged Crossbill ‡			3
Pine Siskin ‡	P		5
American Goldfinch	D	S	78
Grasshopper Sparrow §	S		21
Chipping Sparrow	CF	CF	82
Clay-colored Sparrow ‡	CF		15
Field Sparrow §	FY	T	57
Dark-eyed Junco ‡			5
White-throated Sparrow	T	S	80
Vesper Sparrow			17
Savannah Sparrow	T	S	52
Song Sparrow	CF	T	96
Lincoln's Sparrow ‡			5
Swamp Sparrow	CF	S	87
Eastern Towhee §	S	S	43
Bobolink §	D		45
Eastern Meadowlark §	D	S	50
Orchard Oriole ‡			3
Baltimore Oriole	D	T	64
Red-winged Blackbird	CF	T	94
Brown-headed Cowbird	FY	S	47
Common Grackle	FS	CF	92
Ovenbird	T	T	87
Northern Waterthrush	T	T	73
Golden-winged Warbler †	H	S	15
Blue-winged Warbler ‡			8
Black-and-white Warbler	T	S	80
Tennessee Warbler ‡			0
Nashville Warbler	CF	H	73
Mourning Warbler	S		50

SPECIES	**Prev.**	**Code**	**%**
Common Yellowthroat	T	A	89
Hooded Warbler ‡			0
American Redstart	AE	T	82

Cape May Warbler ‡			0
Cerulean Warbler †			3
Northern Parula ‡	S		10
Magnolia Warbler		S	57
Bay-breasted Warbler ‡			0
Blackburnian Warbler	S	S	35
Yellow Warbler	CF	S	78
Chestnut-sided Warbler	CF	T	73
Black-throated Blue Warbler	T	S	40
Pine Warbler	CF	FY	82
Yellow-rumped Warbler	CF	T	64
Prairie Warbler †			0
Black-throated Green Warbler	CF	T	68
Canada Warbler §			40
Scarlet Tanager	P	CF	75
Northern Cardinal	CF	T	42
Rose-breasted Grosbeak	D	T	82
Indigo Bunting	CF	T	73

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 (17TQK03). 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 17TQK03 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TQK03 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://www.birdscanada.org/birdmon/atlas/summaryform.jsp?squareID=17TQK03&lang=EN
Data current as of **6/12/2021 07:03**.

BIRDS CANADA
OISEAUX CANADA

Square Summary (17TQK04) [change]

	#species				#hours		#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	21	46	30	97	26.9	18.1	20	1
Prev.	42	40	30	112	30.2	—	27	

Region summary (#16: Peterborough, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
60	57	186	60	5
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 2, Mixed Forest in 3). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.**Predef. completed:** [02, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23]

SPECIES	Prev.	Code	%
Canada Goose		P	71
Mute Swan ‡			3
Trumpeter Swan			19
Wood Duck	FY	NU	71
Blue-winged Teal ‡			12
Northern Shoveler ‡			3
Gadwall ‡			0
American Wigeon ‡			0
Mallard	P	T	68
American Black Duck			3
Northern Pintail ‡			0
Green-winged Teal ‡		NE	3
Redhead †			0
Ring-necked Duck	H		19

Lesser Scaup ‡			0
Hooded Merganser	P	H	45
Common Merganser ‡	H		21
Ruddy Duck ‡			0
Wild Turkey	D	FY	66
Ruffed Grouse	S	FY	73
Ring-necked Pheasant ‡			0
Pied-billed Grebe		H	7
Rock Pigeon (Feral Pigeon)	P	M	40
Mourning Dove	FY	S	71
Yellow-billed Cuckoo		T	45
Black-billed Cuckoo	P	T	66
Coccyzus sp. ‡	S		0
Common Nighthawk §		H	21
Eastern Whip-poor-will §	S	T	33
Chimney Swift ‡			8
Ruby-throated Hummingbird	D	D	56
Virginia Rail	T	S	42
Sora			14

SPECIES	**Prev.**	**Code**	**%**
Common Gallinule ‡			10
American Coot ‡			3
Sandhill Crane ‡			22
Killdeer §	H	H	47
Upland Sandpiper †			7
American Woodcock	H		40
Wilson's Snipe	S	S	40
Spotted Sandpiper	H		31
Ring-billed Gull § ‡			7
Herring Gull §			19
Caspian Tern ‡			0
Black Tern †			1
Common Tern § ‡			0
Common Loon	FY	FY	61
Double-crested Cormorant § ‡			12
American Bittern	S	S	38
Least Bittern ‡			22

Least Bittern †			22
Great Blue Heron §	NE	H	50
Green Heron §			36
Turkey Vulture	H	T	71
Osprey	H		47
Northern Harrier	H		22
Sharp-shinned Hawk	H		7
Cooper's Hawk			14
Northern Goshawk ‡			1
Bald Eagle ‡			5
Red-shouldered Hawk	S	S	17
Broad-winged Hawk	T	P	63
Red-tailed Hawk	H		42
Eastern Screech-Owl			8
Great Horned Owl ‡	AE		12
Barred Owl			33
Long-eared Owl ‡			3

SPECIES	Prev.	Code	%
Short-eared Owl †			0
Northern Saw-whet Owl			1
Belted Kingfisher	T	H	78
Yellow-bellied Sapsucker	AE	NY	89
Red-headed Woodpecker †			5
Red-bellied Woodpecker		S	33
Black-backed Woodpecker ‡			1
Downy Woodpecker	S	T	71
Hairy Woodpecker	T	T	78
Pileated Woodpecker	S	T	78
Northern Flicker	NU	T	78
American Kestrel §		H	40
Merlin	H		31
Peregrine Falcon ‡			0
Olive-sided Flycatcher ‡			8
Eastern Wood-Pewee §	T	M	78
Yellow-bellied Flycatcher ‡			0
Alder Flycatcher	P	S	78

Willow Flycatcher			31

Least Flycatcher	T	T	68
Eastern Phoebe	NY	T	84
Great Crested Flycatcher	S	T	82
Eastern Kingbird	FY	FY	77
Yellow-throated Vireo	A	T	22
Blue-headed Vireo	S	NB	45
Philadelphia Vireo ‡			1
Warbling Vireo	T	S	57
Red-eyed Vireo	NY	A	92
Loggerhead Shrike †			0
Canada Jay ‡	P		0
Blue Jay	P	CF	94
American Crow	FY	FY	84
Common Raven	S	FY	91

SPECIES	Prev.	Code	%
Black-capped Chickadee	FY	FY	98
Boreal Chickadee ‡			0
Horned Lark ‡			5
Northern Rough-winged Swallow			15
Purple Martin ‡			0
Tree Swallow	H	H	59
Bank Swallow §			10
Barn Swallow §	FY	AE	63
Cliff Swallow §			14
Ruby-crowned Kinglet ‡			1
Golden-crowned Kinglet	S	S	19
Red-breasted Nuthatch	S	FY	82
White-breasted Nuthatch	T	P	73
Brown Creeper	S	CF	42
Blue-gray Gnatcatcher ‡			3
House Wren	S	T	59
Winter Wren	T	A	77
Sedge Wren ‡			8
Marsh Wren	S		40
Carolina Wren ‡			3
European Starling	FY	FY	70
Gray Catbird	T	T	73
Brown Thrasher	P	CF	61
Northern Mockingbird ‡			0
Eastern Bluebird	CF	S	40
Veery	T	CF	89
Swainson's Thrush	S		7
Hermit Thrush	T	T	57
Wood Thrush §	T	A	66
American Robin	FY	FY	98
Cedar Waxwing	H	M	66
House Sparrow			33
Evening Grosbeak ‡	H		0

SPECIES	Prev.	Code	%

House Finch			15
Purple Finch	FY	P	73
Red Crossbill ‡			7
White-winged Crossbill ‡			3
Pine Siskin ‡	H		5
American Goldfinch	P	D	78
Grasshopper Sparrow §			21
Chipping Sparrow	NY	FY	82
Clay-colored Sparrow ‡			15
Field Sparrow §	T	CF	57
Dark-eyed Junco ‡	S		5
White-throated Sparrow	T	A	80
Vesper Sparrow	S		17
Savannah Sparrow	S		52
Song Sparrow	FY	CF	96
Lincoln's Sparrow ‡			5
Swamp Sparrow	T	D	87
Eastern Towhee §	T	A	43
Bobolink §	S		45
Eastern Meadowlark §	T	T	50
Orchard Oriole ‡			3
Baltimore Oriole	T	S	64
Red-winged Blackbird	FY	D	94
Brown-headed Cowbird	P	S	47
Common Grackle	CF	FY	92
Ovenbird	T	CF	87
Northern Waterthrush	A	CF	73
Golden-winged Warbler †	CF	A	15
Blue-winged Warbler ‡		FY	8
Brewster's Warbler (hybrid) ‡	CF		0
Golden-winged/Blue-winged Warbler ‡	S		0
Black-and-white Warbler	FY	CF	80
Tennessee Warbler ‡			0

SPECIES	**Prev.**	**Code**	**%**
Nashville Warbler	CF	T	73
Mourning Warbler	S	A	50
Common Yellowthroat	CF	CF	89

Hooded Warbler ‡			0
American Redstart	D	A	82
Cape May Warbler ‡			0
Cerulean Warbler †	S		3
Northern Parula ‡			10
Magnolia Warbler	T	T	57
Bay-breasted Warbler ‡			0
Blackburnian Warbler	P	D	35
Yellow Warbler	FY	A	78
Chestnut-sided Warbler	FY	CF	73
Black-throated Blue Warbler	T	A	40
Pine Warbler	H	T	82
Yellow-rumped Warbler	CF	S	64
Prairie Warbler †			0
Black-throated Green Warbler	T	CF	68
Canada Warbler §	S	A	40
Scarlet Tanager	S	T	75
Northern Cardinal			42
Rose-breasted Grosbeak	FY	T	82
Indigo Bunting	P	A	73

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 (17TQK04). 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 17TQK04 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TQK04 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://www.birdscanada.org/birdmon/atlas/summaryform.jsp?squareID=17TQK04&lang=EN
Data current as of **6/12/2021 07:03**.

Appendix H

eBird Database

Kawartha Highlands Signature Site Provincial Park--Mississaugua Trail

Peterborough County (/region/CA-ON-PB?yr=all&m=), Ontario (/region/CA-ON?yr=all&m=), CA (/region/CA?yr=all&m=)

Map(/hotspots?hs=L4574787&yr=all&m=)

Directions(https://www.google.com/maps/search/?api=1&query=44.5769071,-78.3590024)

Hotspot navigation

Overview (/hotspot/L4574787?yr=all&m=)

Illustrated Checklist (/hotspot/L4574787/media?yr=all&m=)

VIEW MY...

My eBird (/myebird/L4574787)

Life List (/lifelist/L4574787)

Target Species (/targets?r1=L4574787&bmo=1&emo=12)

Checklists (/mychecklists/L4574787)

EXPLORE...

Hotspot Map (/hotspots?hs=L4574787&yr=all&m=)

Bar Charts (/barchart?r=L4574787&yr=all&m=)

Media (https://ebird.org/media/catalog?regionCode=L4574787)

Printable Checklist (/printableList?regionCode=L4574787&yr=all&m=)

104
Species observed
(/hotspot/L4574787?yr=all&m=)

77
Complete checklists
(/hotspot/L4574787/activity?yr=all&m=)

Sightings

Updated 7 sec ago.

Last seen (/hotspot/L4574787?yr=all&m=&rank=mrec) **First seen (/hotspot/L4574787?yr=all&m=&rank=lrec)**
High counts (/hotspot/L4574787?yr=all&m=&rank=hc)

Show all details Sort by

SPECIES NAME (/HOTSPOT/L4574787?YR=ALL&M=&RANK=MREC&HS_SORTBY=TAXON_ORDER&HS_O=ASC)
COUNT (/HOTSPOT/L4574787?YR=ALL&M=&RANK=MREC&HS_SORTBY=COUNT&HS_O=DESC) DATE (/HOTSPOT/L4574787?YR=ALL&M=&RANK=MREC&HS_SORTBY=DATE&HS_O=ASC) OBSERVER

1. **Hooded Merganser(/species/hoomer/L4574787)**
   # 1 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
2. **Hairy Woodpecker(/species/haiwoo/L4574787)**
   # 1 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
3. **Blue Jay(/species/blujay/L4574787)**
   # 1 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
4. **Common Raven(/species/comrav/L4574787)**

1 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan

5. **Black-capped Chickadee(/species/bkcchi/L4574787)**
   # 3 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
6. **Common Redpoll(/species/comred/L4574787)**
   # 1 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
7. **Pine Siskin(/species/pinsis/L4574787)**
   # 1 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
8. **American Goldfinch(/species/amegfi/L4574787)**
   # 3 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
9. **Snow Bunting(/species/snobun/L4574787)**
   # 2 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
10. **Dark-eyed Junco(/species/daejun/L4574787)**
    # 5 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan

    blackbird sp.
    # 4 | 8 Nov 2021 (/checklist/S97311418) | Tim Haan
11. **Canada Goose(/species/cangoo/L4574787)**
    # 10 | 31 Oct 2021 (/checklist/S96932720) | Marilyn Hubley

12. **Red-breasted Nuthatch(/species/rebnut/L4574787)**
    # 1 | 31 Oct 2021 (/checklist/S96932720) | Marilyn Hubley
13. **White-breasted Nuthatch(/species/whbnut/L4574787)**
    # 1 | 31 Oct 2021 (/checklist/S96932720) | Marilyn Hubley
14. **Belted Kingfisher(/species/belkin1/L4574787)**
    # 1 | 28 Oct 2021 (/checklist/S96815302) | Adam Holder
15. **Downy Woodpecker(/species/dowwoo/L4574787)**
    # 1 | 28 Oct 2021 (/checklist/S96815302) | Adam Holder
16. **Ruby-crowned Kinglet(/species/ruckin/L4574787)**
    # 2 | 28 Oct 2021 (/checklist/S96815302) | Adam Holder
17. **American Robin(/species/amerob/L4574787)**
    # 4 | 28 Oct 2021 (/checklist/S96815302) | Adam Holder
18. **Rock Pigeon(/species/rocpig/L4574787)**
    # 1 | 8 Oct 2021 (/checklist/S95774673) | Vanessa and Stephen
19. **Blue-headed Vireo(/species/buhvir/L4574787)**
    # 1 | 8 Oct 2021 (/checklist/S95774673) | Vanessa and Stephen
20. **Chipping Sparrow(/species/chispa/L4574787)**
    # 1 | 8 Oct 2021 (/checklist/S95774673) | Vanessa and Stephen
21. **White-throated Sparrow(/species/whtspa/L4574787)**
    # 1 | 8 Oct 2021 (/checklist/S95774673) | Vanessa and Stephen
22. **Northern Flicker(/species/norfli/L4574787)**
    # 1 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing
23. **Eastern Phoebe(/species/easpho/L4574787)**

1 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

24. **American Crow(/species/amecro/L4574787)**
1 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

25. **Gray Catbird(/species/grycat/L4574787)**
1 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

26. **Hermit Thrush(/species/herthr/L4574787)**
1 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

27. **Yellow-rumped Warbler(/species/yerwar/L4574787)**
3 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

28. **Black-throated Green Warbler(/species/btnwar/L4574787)**
2 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

29. **Northern Cardinal(/species/norcar/L4574787)**
1 | 18 Sep 2021 (/checklist/S94815286) | Paige Wearing

30. **Mallard(/species/mallar3/L4574787)**
5 | 18 Sep 2021 (/checklist/S94816108) | Xavier Tuson

31. **White-crowned Sparrow(/species/whcspa/L4574787)**
2 | 18 Sep 2021 (/checklist/S94816108) | Xavier Tuson

32. **Black-and-white Warbler(/species/bawwar/L4574787)**
2 | 18 Sep 2021 (/checklist/S94816108) | Xavier Tuson

33. **Ruby-throated Hummingbird(/species/rthhum/L4574787)**
1 | 30 Jul 2021 (/checklist/S92523886) | Vanessa and Stephen

34. **Great Blue Heron(/species/grbher3/L4574787)**
1 | 30 Jul 2021 (/checklist/S92523886) | Vanessa and Stephen

35. **Common Yellowthroat(/species/comyel/L4574787)**
1 | 30 Jul 2021 (/checklist/S92523886) | Vanessa and Stephen

36. **Scarlet Tanager(/species/scatan/L4574787)**
1 | 30 Jul 2021 (/checklist/S92523886) | Vanessa and Stephen

37. **Broad-winged Hawk(/species/brwhaw/L4574787)**
1 | 25 Jul 2021 (/checklist/S92290634) | Andrea Kingsley

38. **Common Nighthawk(/species/comnig/L4574787)**
1 | 7 Jul 2021 (/checklist/S91419761) | Oscar Azaria

39. **Red-eyed Vireo(/species/reevir1/L4574787)**
1 | 1 Jul 2021 (/checklist/S91065477) | Vanessa and Stephen

40. **Veery(/species/veery/L4574787)**
1 | 1 Jul 2021 (/checklist/S91065477) | Vanessa and Stephen

41. **Mourning Dove(/species/moudov/L4574787)**
2 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

42. **Red-bellied Woodpecker(/species/rebwoo/L4574787)**
1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

43. **Eastern Wood-Pewee(/species/eawpew/L4574787)**
1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

44. **Least Flycatcher(/species/leafly/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

45. **Eastern Kingbird(/species/easkin/L4574787)**
    # 2 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

46. **Cedar Waxwing(/species/cedwax/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

47. **Song Sparrow(/species/sonspa/L4574787)**
    # 2 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

48. **Red-winged Blackbird(/species/rewbla/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

49. **Common Grackle(/species/comgra/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

50. **Nashville Warbler(/species/naswar/L4574787)**
    # 2 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

51. **American Redstart(/species/amered/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

52. **Yellow Warbler(/species/yelwar/L4574787)**
    # 3 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

53. **Chestnut-sided Warbler(/species/chswar/L4574787)**
    # 4 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

54. **Pine Warbler(/species/pinwar/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

55. **Indigo Bunting(/species/indbun/L4574787)**
    # 1 | 1 Jul 2021 (/checklist/S91084638) | Tim Haan

56. **Ruffed Grouse(/species/rufgro/L4574787)**
    # 1 | 30 Jun 2021 (/checklist/S91018852) | paula sheppard

    flycatcher sp. (Tyrannidae sp.)
    # 1 | 30 Jun 2021 (/checklist/S91018852) | paula sheppard

57. **Rose-breasted Grosbeak(/species/robgro/L4574787)**
    # 1 | 30 Jun 2021 (/checklist/S91018852) | paula sheppard

58. **Turkey Vulture(/species/turvul/L4574787)**
    # 2 | 22 Jun 2021 (/checklist/S90597405) | Derek Neumann and/or Michael Schmidt

59. **Great Crested Flycatcher(/species/grcfly/L4574787)**
    # 1 | 22 Jun 2021 (/checklist/S90597405) | Derek Neumann and/or Michael Schmidt

60. **Warbling Vireo(/species/warvir/L4574787)**
    # 1 | 22 Jun 2021 (/checklist/S90597405) | Derek Neumann and/or Michael Schmidt

61. **Ovenbird(/species/ovenbi1/L4574787)**
    # 1 | 22 Jun 2021 (/checklist/S90597405) | Derek Neumann and/or Michael Schmidt

62. **Wild Turkey(/species/wiltur/L4574787)**
    # 2 | 16 May 2021 (/checklist/S88333995) | Rachael Peckham

63. **Evening Grosbeak(/species/evegro/L4574787)**

	# 2	19 Apr 2021 (/checklist/S85881665)	Donald A. Sutherland
64.	**Swamp Sparrow(/species/swaspa/L4574787)**		
	# 2	19 Apr 2021 (/checklist/S85881665)	Donald A. Sutherland
65.	**Brown Creeper(/species/brncre/L4574787)**		
	# 1	24 Feb 2021 (/checklist/S82268472)	Donald A. Sutherland
66.	**Pileated Woodpecker(/species/pilwoo/L4574787)**		
	# 1	2 Jan 2021 (/checklist/S78486937)	Tim Haan
67.	**Bohemian Waxwing(/species/bohwax/L4574787)**		
	# 3	2 Jan 2021 (/checklist/S78486937)	Tim Haan
68.	**Pine Grosbeak(/species/pingro/L4574787)**		
	# 1	2 Jan 2021 (/checklist/S78486937)	Tim Haan
69.	**Palm Warbler(/species/palwar/L4574787)**		
	# 1	16 Sep 2020 (/checklist/S73662663)	Wendy Hogan
70.	**Ring-billed Gull(/species/ribgul/L4574787)**		
	# 1	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
71.	**Yellow-bellied Sapsucker(/species/yebsap/L4574787)**		
	# 1	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
72.	**Tree Swallow(/species/treswa/L4574787)**		
	# 1	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
73.	**Barn Swallow(/species/barswa/L4574787)**		
	# 1	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
74.	**House Wren(/species/houwre/L4574787)**		
	# 1	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
75.	**European Starling(/species/eursta/L4574787)**		
	# 2	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
76.	**Baltimore Oriole(/species/balori/L4574787)**		
	# 2	15 Jun 2020 (/checklist/S70473731)	Dave Milsom
77.	**Alder Flycatcher(/species/aldfly/L4574787)**		
	# 2	13 Jun 2020 (/checklist/S70387624)	Connor Thompson
78.	**Brown Thrasher(/species/brnthr/L4574787)**		
	# 1	13 Jun 2020 (/checklist/S70387624)	Connor Thompson
79.	**Purple Finch(/species/purfin/L4574787)**		
	# 1	13 Jun 2020 (/checklist/S70387624)	Connor Thompson
80.	**Herring Gull(/species/hergul/L4574787)**		
	# X	13 Jun 2020 (/checklist/S70433255)	James Boccia
81.	**Northern Harrier(/species/norhar2/L4574787)**		
	# X	13 Jun 2020 (/checklist/S70433255)	James Boccia
82.	**Olive-sided Flycatcher(/species/olsfly/L4574787)**		
	# X	13 Jun 2020 (/checklist/S70433255)	James Boccia
83.	**Common Merganser(/species/commer/L4574787)**		
	# 6	16 May 2020 (/checklist/S69199647)	Chris Risley

84. **Merlin(/species/merlin/L4574787)**
    # 1 | 16 May 2020 (/checklist/S69199647) | Chris Risley

85. **Winter Wren(/species/winwre3/L4574787)**
    # 1 | 16 May 2020 (/checklist/S69199647) | Chris Risley

86. **Red-tailed Hawk(/species/rethaw/L4574787)**
    # 1 | 5 Oct 2019 (/checklist/S60369012) | Dan Chronowic

87. **Blackburnian Warbler(/species/bkbwar/L4574787)**
    # 1 | 2 Jun 2019 (/checklist/S56999085) | Wendy Hogan

88. **Common Loon(/species/comloo/L4574787)**
    # 1 | 25 May 2019 (/checklist/S56715146) | Tim Haan

89. **Blackpoll Warbler(/species/bkpwar/L4574787)**
    # 4 | 25 May 2019 (/checklist/S56715146) | Tim Haan

90. **Bald Eagle(/species/baleag/L4574787)**
    # 1 | 27 Apr 2019 (/checklist/S68982819) | Xavier Tuson

91. **Golden-crowned Kinglet(/species/gockin/L4574787)**
    # 1 | 25 Apr 2019 (/checklist/S55422298) | Ben Taylor

92. **American Woodcock(/species/amewoo/L4574787)**
    # 1 | 19 Sep 2018 (/checklist/S68982795) | Xavier Tuson

93. **Wood Thrush(/species/woothr/L4574787)**
    # 1 | 8 Jun 2018 (/checklist/S46392441) | Brooke Michell

94. **Green Heron(/species/grnher/L4574787)**
    # 1 | 28 May 2018 (/checklist/S46092365) | Wendy Hogan

95. **Northern Waterthrush(/species/norwat/L4574787)**
    # 2 | 15 May 2018 (/checklist/S45708664) | Ben Taylor

96. **Wood Duck(/species/wooduc/L4574787)**
    # 2 | 8 Apr 2018 (/checklist/S44379524) | Tim Haan

97. **Bufflehead(/species/buffle/L4574787)**
    # 10 | 8 Apr 2018 (/checklist/S44379524) | Tim Haan

    vireo sp.
    # 1 | 28 Aug 2017 (/checklist/S38884207) | Susan Paradisis

    nuthatch sp.
    # 1 | 28 Aug 2017 (/checklist/S38884207) | Susan Paradisis

    warbler sp. (Parulidae sp.)
    # 10 | 28 Aug 2017 (/checklist/S38884207) | Susan Paradisis

98. **Fox Sparrow(/species/foxspa/L4574787)**
    # 1 | 9 Apr 2017 (/checklist/S35857521) | Tim Haan

99. **Swainson's Thrush(/species/swathr/L4574787)**
    # X | 2 Sep 2016 (/checklist/S31405759) | Mike V.A. Burrell

100. **Sandhill Crane(/species/sancra/L4574787)**
    # 4 | 8 May 2016 (/checklist/S29486149) | Paul Frost

101. **Eastern Whip-poor-will(/species/easwpw1/L4574787)**

	# 1	4 Jun 2015 (/checklist/S23784177)	Travis Cameron

102. **Purple Martin(/species/purmar/L4574787)**

# 3	24 May 2013 (/checklist/S14255307)	Travis Cameron

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Adam Holder	28 Oct 2021 (/checklist/S96815302)	8
Julia Marshall	28 Oct 2021 (/checklist/S96815303)	8
Vanessa and Stephen	8 Oct 2021 (/checklist/S95774673)	5
Paige Wearing	18 Sep 2021 (/checklist/S94815286)	14
Michelle Young	18 Sep 2021 (/checklist/S94815490)	13
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7	Travis Cameron	24
9	Erica Nol	23
10	Susan Paradisis	22

Appendix I

Species List, Bat Summary and Amphibian Data

Observed Species List

KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia				
	American Bittern	Botaurus lentiginosus		
	American Bullfrog	Lithobates catesbeianus		
	American Bumble Bee	Bombus pensylvanicus		
	American Crow	Corvus brachyrhynchos		
	American Goldfinch	Spinus tristis		
	American Mink	Neovison vison		
	American Redstart	Setophaga ruticilla		
	American Robin	Turdus migratorius		
	American Woodcock	Scolopax minor		
	Baltimore Oriole	Icterus galbula		
	Beaver	Castor canadensis		
	Belted Kingfisher	Megaceryle alcyon		
	Black-capped Chickadee	Poecile atricapillus		
	Black-throated Green Warbler	Setophaga virens		
	Blue Jay	Cyanocitta cristata		
	Bluegill	Lepomis macrochirus		
	Blue-gray Gnatcatcher	Polioptila caerulea		
	Broad-winged Hawk	Buteo platypterus		
	Brown Bullhead	Ameiurus nebulosus		
	Brown Thrasher	Toxostoma rufum		
	Brown-headed Cowbird	Molothrus ater		
	Canada Goose	Branta canadensis		
	Caspian Tern	Hydroprogne caspia	NAR	
	Cattle Egret	Bubulcus ibis		
	Cedar Waxwing	Bombycilla cedrorum		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Chipping Sparrow	Spizella passerina		
	Common Baskettail	Epitheca cynosura		
	Common Carp	Cyprinus carpio		
	Common Eastern Bumble Bee	Bombus impatiens		
	Common Gartersnake	Thamnophis sirtalis		
	Common Green Darner	Anax junius		
	Common Merganser	Mergus merganser		
	Common Watersnake	Nerodia sipedon		
	Coyote	Canis latrans		
	Creeper	Strophitus undulatus		
	Dark-eyed Junco	Junco hyemalis		
	Downy Woodpecker	Dryobates pubescens		
	Eastern American Toad	Anaxyrus americanus americanus		
	Eastern Chipmunk	Tamias striatus		
	Eastern Cottontail	Sylvilagus floridanus		
	Eastern Elliptio	Elliptio complanata		
	Eastern Gartersnake	Thamnophis sirtalis sirtalis		
	Eastern Kingbird	Tyrannus tyrannus		
	Eastern Phoebe	Sayornis phoebe		
	Eastern Pondhawk	Erythemis simplicicollis		
	Eastern Red-backed Salamander	Plethodon cinereus		
	Ebony Jewelwing	Calopteryx maculata		
	European Starling	Sturnus vulgaris		
	Four-spotted Skimmer	Libellula quadrimaculata		
	Gray Catbird	Dumetella carolinensis		
	Gray Treefrog	Dryophytes versicolor		
	Great Blue Heron	Ardea herodias		
	Great Horned Owl	Bubo virginianus		
	Green Frog	Lithobates clamitans		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Herring Gull	Larus argentatus		
	Hooded Merganser	Lophodytes cucullatus		
	Indian Skipper	Hesperia sassacus		
	Killdeer	Charadrius vociferus		
	Largemouth Bass	Micropterus salmoides		
	Little Brown Myotis	Myotis lucifugus	END	Endangered/En voie de disparition
	Logperch	Percina caprodes		
	Magnolia Warbler	Setophaga magnolia		
	Mallard	Anas platyrhynchos		
	Marsh Wren	Cistothorus palustris		
	Merlin	Falco columbarius	NAR	
	Mourning Cloak	Nymphalis antiopa		
	Mourning Dove	Zenaida macroura		
	Muskellunge	Esox masquinongy		
	Muskrat	Ondatra zibethicus		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		
	Northern Leopard Frog	Lithobates pipiens	NAR	
	Northern Pearly-Eye	Lethe anthedon		
	Northern Raccoon	Procyon lotor		
	Northern Ring-necked Snake	Diadophis punctatus edwardsii		
	Northern Saw-whet Owl	Aegolius acadicus		
	Northern Spreadwing	Lestes disjunctus		
	Ovenbird	Seiurus aurocapilla		
	Painted Turtle	Chrysemys picta		
	Pickerel Frog	Lithobates palustris	NAR	
	Pileated Woodpecker	Dryocopus pileatus		
	Pumpkinseed	Lepomis gibbosus		
	Purple Finch	Haemorhous purpureus		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Red Admiral	Vanessa atalanta		
	Red Fox	Vulpes vulpes		
	Red Squirrel	Tamiasciurus hudsonicus		
	Red-bellied Snake	Storeria occipitomaculata		
	Red-breasted Nuthatch	Sitta canadensis		
	Red-eyed Vireo	Vireo olivaceus		
	Red-shouldered Hawk	Buteo lineatus	NAR	
	Red-winged Blackbird	Agelaius phoeniceus		
	Ring-billed Gull	Larus delawarensis		
	Ring-necked Duck	Aythya collaris		
	Rose-breasted Grosbeak	Pheucticus ludovicianus		
	Ruby-crowned Kinglet	Regulus calendula		
	Ruby-throated Hummingbird	Archilochus colubris		
	Ruffed Grouse	Bonasa umbellus		
	Solitary Sandpiper	Tringa solitaria		
	Song Sparrow	Melospiza melodia		
	Spring Peeper	Pseudacris crucifer		
	Striped Skunk	Mephitis mephitis		
	Swainson's Thrush	Catharus ustulatus		
	Swamp Sparrow	Melospiza georgiana		
	Tree Swallow	Tachycineta bicolor		
	Tricoloured Bumble Bee	Bombus ternarius		
	Turkey Vulture	Cathartes aura		
	Veery	Catharus fuscescens		
	Viceroy	Limenitis archippus		
	Wetland Giant Wolf Spider	Tigrosa helluo		
	White-breasted Nuthatch	Sitta carolinensis		
	White-crowned Sparrow	Zonotrichia leucophrys		
	White-faced Meadowhawk	Sympetrum obtrusum		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	White-tailed Deer	Odocoileus virginianus		
	Wild Turkey	Meleagris gallopavo		
	Willow Flycatcher	Empidonax traillii		
	Winter Wren	Troglodytes hiemalis		
	Wood Duck	Aix sponsa		
	Wood Frog	Lithobates sylvaticus		
	Yellow Warbler	Setophaga petechia		
	Yellow-bellied Sapsucker	Sphyrapicus varius		
Fungi				
	Dog Lichen	Peltigera canina		
	Large Map Lichen	Rhizocarpon grande		
	Reindeer Lichen	Cladonia arbuscula		
Plantae				
	Alternate-leaved Dogwood	Cornus alternifolia		
	American Beech	Fagus grandifolia		
	American Eelgrass	Vallisneria americana		
	Annual Fleabane	Erigeron annuus		
	Balsam Fir	Abies balsamea		
	Basswood	Tilia americana		
	Black Ash	Fraxinus nigra		
	Black Cherry	Prunus serotina		
	Black-eyed Susan	Rudbeckia hirta var. hirta		
	Bladder Campion	Silene vulgaris		
	Bladder Sedge	Carex intumescens		
	Blue-stemmed Goldenrod	Solidago caesia		
	Bog Goldenrod	Solidago uliginosa		
	Bracken Fern	Pteridium aquilinum		
	Bull Thistle	Cirsium vulgare		
	Butter-and-eggs	Linaria vulgaris		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Calico Aster	Symphyotrichum lateriflorum		
	Canada Anemone	Anemonastrum canadense		
	Canada Goldenrod	Solidago canadensis		
	Canada Gooseberry	Ribes oxyacanthoides		
	Canada Rush	Juncus canadensis		
	Chokecherry	Prunus virginiana		
	Coltsfoot	Tussilago farfara		
	Common Boneset	Eupatorium perfoliatum		
	Common Bugloss	Anchusa officinalis		
	Common Burdock	Arctium minus		
	Common Buttercup	Ranunculus acris		
	Common Dandelion	Taraxacum officinale		
	Common Juniper	Juniperus communis		
	Common Milkweed	Asclepias syriaca		
	Common Mullein	Verbascum thapsus		
	Common Plantain	Plantago major		
	Common Ragweed	Ambrosia artemisiifolia		
	Common Self-heal	Prunella vulgaris		
	Common St. John's-wort	Hypericum perforatum		
	Common Timothy	Phleum pratense		
	Common Viper's Bugloss	Echium vulgare		
	Common Winterberry	Ilex verticillata		
	Common Yarrow	Achillea millefolium		
	Deptford Pink	Dianthus armeria		
	Early Saxifrage	Micranthes virginiensis		
	Eastern Hemlock	Tsuga canadensis		
	Eastern Hop-hornbeam	Ostrya virginiana		
	Eastern Red Maple	Acer rubrum var. rubrum		
	Eastern White Cedar	Thuja occidentalis		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Eastern White Pine	Pinus strobus		
	Field Pussytoes	Antennaria neglecta		
	Field Sow-thistle	Sonchus arvensis		
	Fireweed	Chamaenerion angustifolium		
	Flat-top White Aster	Doellingeria umbellata		
	Fox Sedge	Carex vulpinoidea		
	Fragrant Water-lily	Nymphaea odorata		
	Goldthread	Coptis trifolia		
	Herb-Robert	Geranium robertianum		
	Jack Pine	Pinus banksiana		
	Jack-in-the-pulpit	Arisaema triphyllum		
	Leatherleaf	Chamaedaphne calyculata		
	Meadow Goatsbeard	Tragopogon pratensis		
	Meadow Willow	Salix petiolaris		
	Mexican Muhly	Muhlenbergia mexicana		
	Mossy Stonecrop	Sedum acre		
	Mountain Maple	Acer spicatum		
	Nannyberry	Viburnum lentago		
	Narrow-leaved Bird's-foot Trefoil	Lotus tenuis		
	Narrow-leaved Cattail	Typha angustifolia		
	New York Aster	Symphyotrichum novi-belgii		
	Northern Bedstraw	Galium boreale		
	Northern Dewberry	Rubus flagellaris		
	Northern Red Oak	Quercus rubra		
	Northern Rough-stemmed Goldenrod	Solidago rugosa ssp. rugosa		
	Northern Water-plantain	Alisma triviale		
	Northern Willowherb	Epilobium ciliatum		
	Norway Maple	Acer platanoides		
	Norway Spruce	Picea abies		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Orange Hawkweed	Pilosella aurantiaca		
	Orchard Grass	Dactylis glomerata		
	Panicled Aster	Symphyotrichum lanceolatum		
	Paper Birch	Betula papyrifera		
	Partridgeberry	Mitchella repens		
	Path Rush	Juncus tenuis		
	Pearly Everlasting	Anaphalis margaritacea		
	Perennial Ragweed	Ambrosia psilostachya		
	Pickerelweed	Pontederia cordata		
	Poison Ivy	Toxicodendron radicans		
	Purple Loosestrife	Lythrum salicaria		
	Purple-flowering Raspberry	Rubus odoratus		
	Pussy Willow	Salix discolor		
	Red Ash	Fraxinus pennsylvanica		
	Red Clover	Trifolium pratense		
	Red Columbine	Aquilegia canadensis		
	Red Elderberry	Sambucus racemosa		
	Red Maple	Acer rubrum		
	Red Raspberry	Rubus idaeus		
	Red Trillium	Trillium erectum		
	Red-osier Dogwood	Cornus sericea		
	Reed Canarygrass	Phalaris arundinacea		
	Riverbank Grape	Vitis riparia		
	Sensitive Fern	Onoclea sensibilis		
	Silver Maple	Acer saccharinum		
	Small White Aster	Symphyotrichum racemosum		
	Smooth Serviceberry	Amelanchier laevis		
	Soft Rush	Juncus effusus		
	Southern Wildrice	Zizania aquatica		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Speckled Alder	Alnus incana ssp. rugosa		
	Spotted Jewelweed	Impatiens capensis		
	Spotted Joe Pye Weed	Eutrochium maculatum var. maculatum		
	Spotted Lady's-thumb	Persicaria maculosa		
	Spotted St. John's-wort	Hypericum punctatum		
	Staghorn Sumac	Rhus typhina		
	Star-flowered False Solomon's Seal	Maianthemum stellatum		
	Striped Maple	Acer pensylvanicum		
	Sugar Maple	Acer saccharum		
	Swamp Milkweed	Asclepias incarnata		
	Swamp Yellow Loosestrife	Lysimachia terrestris		
	Sweet-fern	Comptonia peregrina		
	Tall Meadow-rue	Thalictrum pubescens		
	Tamarack	Larix laricina		
	Trembling Aspen	Populus tremuloides		
	Tufted Yellow Loosestrife	Lysimachia thyrsiflora		
	Tussock Cottongrass	Eriophorum vaginatum		
	Tussock Sedge	Carex stricta		
	Upright Brome	Bromus erectus		
	Virginia Creeper	Parthenocissus quinquefolia		
	Water Horsetail	Equisetum fluviatile		
	Water Sedge	Carex aquatilis		
	Water Speedwell	Veronica anagallis-aquatica		
	Watershield	Brasenia schreberi		
	White Amaranth	Amaranthus albus		
	White Ash	Fraxinus americana		
	White Elm	Ulmus americana		
	White Heath Aster	Symphyotrichum ericoides		
	White Meadowsweet	Spiraea alba		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	White Oak	Quercus alba		
	White Spruce	Picea glauca		
	White Trillium	Trillium grandiflorum		
	Wild Lily-of-the-valley	Maianthemum canadense		
	Wild Raisin	Viburnum cassinoides		
	Wild Sarsaparilla	Aralia nudicaulis		
	Wild Strawberry	Fragaria virginiana		
	Winged Loosestrife	Lythrum alatum		
	Wood Bedstraw	Galium sylvaticum		
	Yellow Violet	Viola pubescens		
	Zigzag Goldenrod	Solidago flexicaulis		

Bat Detection Summary Brief				
	Location ID:	**BD5**		**Occurrence**
Common Name	**Scientific Name**	**Detected**	**Probable**	**% of Identifiable Calls**
Eastern Small-Footed Myotis	*Myotis leibii*	0	1	0.28%
Northern Long-eared Myotis	*Myotis septentrionalis*	0	1	0.28%
Little Brown Myotis (Bat)	*Myotis lucifugus*	82	30	31.02%
Tri-coloured Bat	*Perimyotis subflavus*	1	0	0.28%
Eastern Red Bat	*Lasiurus borealis*	1	2	0.83%
Big Brown Bat	*Eptesicus fuscus*	170	19	52.35%
Silver-haired Bat	*Lasionycteris noctivagans*	23	7	8.31%
Hoary Bat	*Lasiurus cinereus*	6	5	3.05%
	Number of Files:	968		
	Files with Identifiable Calls:	361		
	High Frequency:	124		
	Low Frequency:	224		
	High/Low Frequency	13		

Location	Date	Species	Code	Individuals	Direction	Distance	Notes
A-PCL1-21	28-Jul-21	Pickerel Frog	1	2	South	50 m	-
		Bullfrog	1	1	South	50 m	-
	06-Aug-21	-	N/A	N/A	N/A	N/A	-
	17-Aug-21	-	N/A	N/A	N/A	N/A	-

Appendix J

Significant Wildlife Habitat (SWH)

Significant Wildlife Habitat Screening					
Signficant 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 Present
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	YES	YES	Big Bald Lake
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	YES	NO	No bars, seasonally flooded, muddy and unvegetated shorelines.
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 Present
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	SWH Present
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	YES	YES	Big Bald Lake and PSW
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	Rock Barrent Habitat - SWH Present
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 Present
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.	YES	NO	Low percentage of Dead/Live standing trees in wetlands.
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	YES	NO	No Island or Peninisula
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 Present
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	NO	No deer habitat mapped nearby
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	NO	No deer habitat mapped nearby
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	Trees are younger small diameters except for White Pine Secondary Succession Previously Harvested Woodland
Savannah	TPS1, TPS2, TPW1, TPW2, CUS2	Any tallgrass prairie habitat that has tree cover between 25 - 60%	NO	NO	ELC Not Present
Tallgrass Prairie	TPO1, TPO2	Dominated by prairie grasses with < 25% tree cover	NO	NO	ELC Not Present
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 Present
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	YES	YES	SWH Present
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	YES	SWH Present
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	SWH Present
Turtle Nesting Areas	Exposed minteral 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 Present
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	ELC Not Present

Significant Wildlife Habitat Screening					
Signficant 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	YES	SWH Present
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	YES	YES	SWH Present
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	SWH Present
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	YES	YES	SWH Present
Open Country Bird Breeding Habitat	CUM1, CUM2	Large grassland areas (including natural and cultural field and meadows) >30 ha	NO	NO	ELC Not Present
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 Present
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	YES	NO	Site not in Central Ontario
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	No Special Concern or Provincially Rare Species
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	YES	YES	SWH Present
Deer Movement Corridors	All forested Ecosites	All proposals within Stratum II Deer Wintering Area have potential for corridors	YES	NO	No deer habitat mapped nearby
General Comments:					