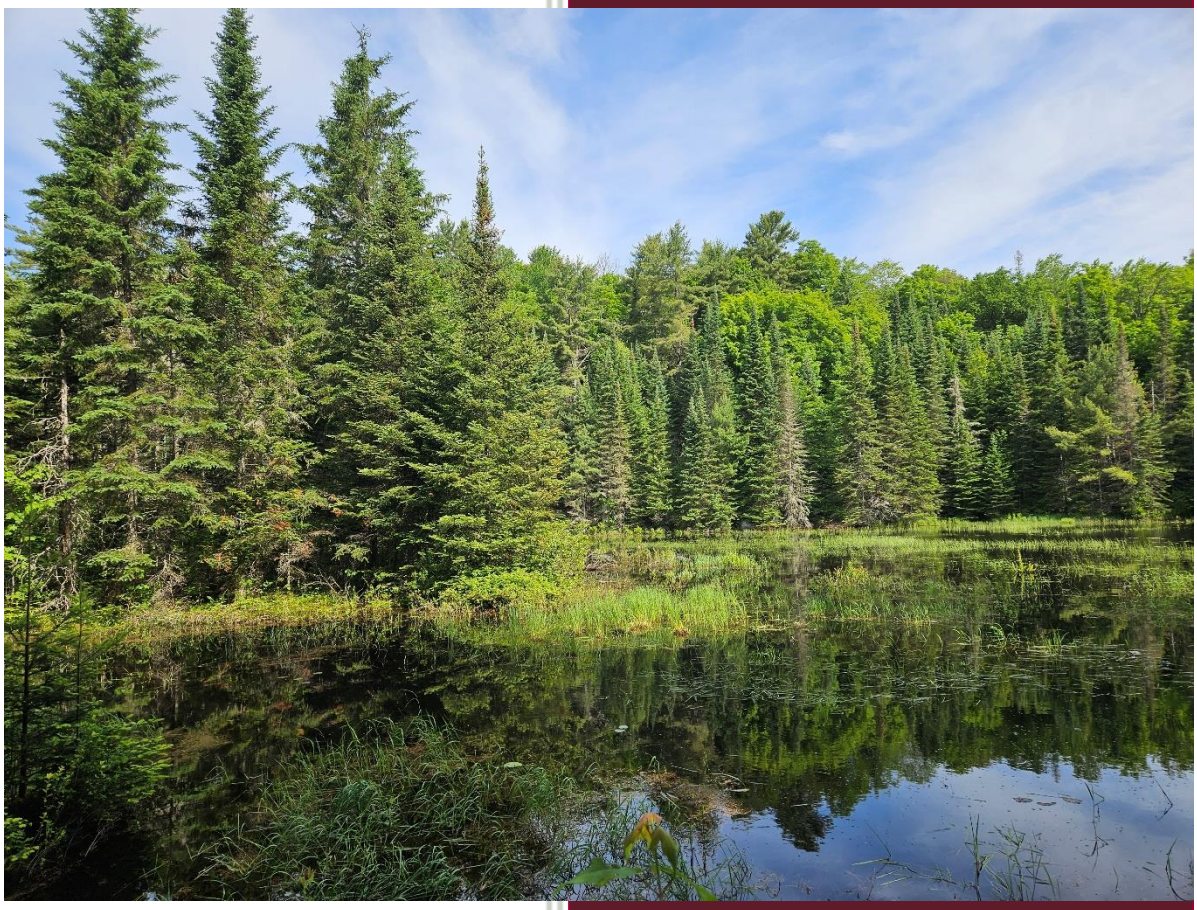
Version 1.2

752 Peterson Road, Maynooth

September 2024

Environmental Impact Study



Sumac
ENVIRONMENTAL CONSULTING

Prepared For:
Shahram Rashvand

Prepared By:
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September 9, 2024 SEC 23-072

Sent by e-mail to:
Shahram Rashvand
shahram@rashvand.ca

Re: **Environmental Impact Study at 752 Peterson Road, Maynooth**

Dear Mr. Rashvand,

Thank you for retaining Sumac Environmental Consulting to prepare an Environmental Impact Study at 752 Peterson Road, Maynooth. The following report identifies the form and function of natural heritage on the subject property and assesses the potential impacts to said features with respect to a proposed development. Recommendations and mitigation strategies have been included. This report has been prepared for Shahram Rashvand and the undersigned accepts no responsibility for future use by other parties.

We thank you for the opportunity to be part of this project and should you have any questions, please do not hesitate to contact the undersigned.

Sumac Environmental Consulting

Cassandra Fligg, M.Sc.
Environmental Consultant

Nathan Fligg, M.Sc.
Environmental Consultant/GIS Technician

Report Summary

Sumac Environmental Consulting has prepared an Environmental Impact Study at 752 Peterson Road, Maynooth. It is our understanding that an Environmental Impact Study has been requested by the Municipality of Hastings Highlands in response to a development application that supports the construction of a campground on the subject property. Site visits were carried out in 2024 to examine natural features that have the potential of being impacted by the proposed development. A Species at Risk Habitat Assessment was completed to screen for absent, candidate and confirmed habitat of endangered and threatened species (HETS). A Significant Wildlife Habitat (SWH) Assessment was completed to screen for absent, candidate and confirmed SWH. Fish habitat, HETS, wetland and SWH were identified on or near the subject property. Significant impacts to the identified natural heritage are not anticipated, should the proponent adhere to the prescribed recommendations provided herein.

The recommendations provided in Section 8.2 are summarized as follows:

- We recommend the use of warm-colored and low lumen lighting directed away from the remaining treed communities in the design of the proposed cabins to limit light spill and pollution.
- Incorporate supplemental plantings within the existing treed communities located directly adjacent to the disturbance, where feasible.
- Tree preservation hoarding should be installed along the dripline of trees, at a minimum. Native shrubs and groundcover should be left intact wherever possible.
- Stumped trees located within 5 m of the ‘new’ edge should not be grubbed, where feasible.
- Some of the trees removed as part of the proposed development should be chipped and used as mulch for individual plantings. The remaining trees should be felled and strategically placed on-site within the existing natural heritage system in an effort of maintaining the sites biomass.
- Replant fast-growing and shade tolerant trees and shrubs along the ‘new’ edge, where feasible.
- Pruning shallow rooted trees (if present) along the ‘new’ edge such that they can be retained. This may include tree topping at the discretion of the certified arborist, where appropriate.
- All disturbed portions of the subject property remaining post-construction should be re-seeded and planted with native non-invasive vegetation immediately following the completion of site works.
- Tree preservation hoarding should be used to protect the remaining treed communities.
- Silt fence should be used to protect aquatic features.

- An emergency response plan should be prepared for all works involving machinery in case of fluid leaks.
- All machinery should be kept in a clean condition and free of fluid leaks.
- Washing, fueling and servicing machinery should not occur within 30 m of aquatic features.
- Stockpiling of fill and/or construction material should not occur within 30 m of aquatic features.
- Vegetation clearing should not occur between April 10 and August 28 of any given year unless otherwise directed by a qualified biologist at the time of site works.
- Tree clearing should not occur between April 1 and September 30 unless otherwise directed by a qualified biologist at the time of site works.
- Supplemental deer feeding is strongly discouraged as this practice may negatively impact deer migration, increase risk of localized traffic hazards and contribute to disease transmission.
- Encountered wildlife should be allowed to exit the site on their own, via safe routes, or be removed/relocated by qualified wildlife service providers working in accordance with applicable laws.

Key Staff

Environmental Consultant – Cassandra Fligg, M.Sc.

Mrs. Fligg received a master's degree in science from Lakehead University in 2018. She is proficient in the preparation of natural heritage reports in southern and central Ontario, particularly those that include policy of the Lake Simcoe Protection Plan, Greenbelt Plan, Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan. Mrs. Fligg has prepared species at risk screenings to the satisfaction of the Ministry of Environment, Conservation and Parks and assisted proponents in demonstrating avoidance to the harm and/or destruction of species at risk and their habitat, and navigated proponents through the overall benefit permit process where complete avoidance was not possible. Mrs. Fligg is a certified arborist as recognized by the International Society of Arboriculture, certified butternut health assessor as recognized by the Ministry of Natural Resources and Forestry, certified level 2 backpack electrofisher (crew leader) and has completed a fish identification workshop, turtle identification and handling workshop, and diatom algae culture and isolation workshop.

Environmental Consultant – Nathan Fligg, M.Sc.

Mr. Fligg is a well-versed ecologist with more than 15 years experience in both plant and wildlife identification. He is actively building on his identification skills and knowledge through the review of relevant flora literature and the undertaking of field studies for Sumac's natural heritage reports and species at risk screenings in southern and central Ontario. Mr. Fligg has performed various habitat and species-specific studies across southern and central Ontario to the satisfaction of municipalities, conservation authorities, environmental associations, land trust organizations, Niagara Escarpment Commission, Department of Fisheries and Oceans Canada, Ministry of Natural Resources and Forestry, as well as, the Ministry of Environment, Conservation and Parks. Mr. Fligg completed an undergraduate degree in Environmental Sustainability and further went on to receive a master's degree in science from Lakehead University. He is a provincially certified wetland evaluator, certified butternut health assessor, certified level 2 backpack electrofisher (crew leader) and is experienced in the safe handling and release of small mammals, birds, fish, amphibians and reptiles.

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1.0 Introduction

Sumac Environmental Consulting (Sumac) was retained to prepare an Environmental Impact Study (EIS) at 752 Peterson Road, Maynooth (hereinafter referred to as the 'subject property'). It is our understanding that the proponent wishes to develop the subject property with a campground.

The subject property is approximately 5.1 ha in size and contains a detached garage, amenity space and natural cover (Figure 1). According to Schedule A to the Hastings County Official Plan (office consolidation 2018), the subject property is located in lands designated as 'Environmental Protection' and 'Rural/Waterfront'. Background mapping suggests the presence of watercourse and pond at the rear of the subject property (Appendix A). Cannon Lake is located approximately 40 m south of the subject property (Appendix A). The surrounding area is predominantly composed of natural cover.

2.0 Planning Context

2.1. Federal

2.1.1. Fisheries Act

The fish and fish habitat protection provisions of the *Fisheries Act* include two (2) core prohibitions against persons carrying on works, undertaking or activities that result in the following:

- the death of fish, by means other than fishing; and
- the harmful alteration, disruption, or destruction of fish habitat.

2.2. Provincial

2.2.1. Endangered Species Act

Ontario's *Endangered Species Act* (ESA) provides protection, designation, recovery and other relevant aspects of conservation for species at risk, including habitat protection in the Province.

As per Section 9 (1) of the ESA, no person shall

a. kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
b. possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,
   (i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,
   (ii) any part of a living or dead member of a species referred to in subclause (i),
   (iii) anything derived from a living or dead member of a species referred to in subclause (i); or

c. sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii). 2007, c. 6, s. 9 (1).

As per Section 10 (1) of the ESA, no person shall damage or destroy the habitat of,

a. a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species; or
b. a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause. 2007, c. 6, s. 10 (1).

2.2.2. Provincial Policy Statement

The Provincial Policy Statement (MMAH, 2020) states that decisions affecting planning matters shall be consistent with policy statements issued under the *Planning Act*.

As per Section 2.1.4 of the PPS, development and site alteration shall not be permitted in:

a. significant wetlands in Ecoregions 5E, 6E and 7E; and
b. significant coastal wetlands.

As per Section 2.1.5 of the PPS, development and site alteration shall not be permitted in:

a. significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
b. significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
c. significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
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.

As per Section 2.1.6 of the PPS, development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

As per Section 2.1.7 of the PPS, development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

As per Section 2.1.8 of the PPS, 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.

2.2.3. Provincial Planning Statement

The Provincial Planning Statement was issued under section 3 of the *Planning Act* and comes into effect on October 20, 2024. It replaces the PPS that came into effect on May 1, 2020.

As per Section 4.1.4 of the Provincial Planning Statement, development and site alteration shall not be permitted in:

a) significant wetlands in Ecoregions 5E, 6E and 7E[1]; and
b) significant coastal wetlands.

As per Section 4.1.5 of the Provincial Planning Statement, development and site alteration shall not be permitted in:

a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E[1];
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 7E[1] that are not subject to policy 4.1.4.b),

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

As per Section 4.1.6 of the Provincial Planning Statement, development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

As per Section 4.1.7 of the Provincial Planning Statement, development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

As per Section 4.1.8 of the Provincial Planning Statement, development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

2.3. Municipal

2.3.1. Hastings County Official Plan

The Hastings County Official Plan (office consolidation 2018) identifies the following land use designations and/or features on the subject property:

- Rural/Waterfront (Schedule A-North);
- Environmental Protection (Schedule A-North); and
- Deer Wintering Area (Stratum 2) (Schedule B-North).

As per Section 4.2.4.3 of the Hastings County Official Plan (office consolidation 2018), new development and/or site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

As per Section 4.2.4.4 of the Hastings County Official Plan (office consolidation 2018), a minimum 30 metre setback along watercourses to protect fish habitat shall be required to remain undisturbed and naturally vegetated.

As per Section 4.3.1.2 of the Hastings County Official Plan (office consolidation 2018), the County's Natural Heritage System is comprised of Areas of Natural and Scientific Interest (ANSIs), Significant Wildlife Habitat, Floodplains, Parks and Conservation Reserves and Areas, Local and Provincially Significant Wetlands, Significant Valleylands, and Significant Woodlands. These features are all shown on Appendix 6 – Natural Heritage System. The linkages shown on Appendix 6 – Natural Heritage System are conceptual; however, the County encourages the maintenance, restoration, or improvements of these linkage areas to promote them as natural connections between the features of the Natural Heritage System.

As per Section 4.3.2.1 of the Hastings County Official Plan (office consolidation 2018), new development and/or site alteration shall not be permitted in habitat of endangered or threatened species, except in accordance with provincial and federal requirements.

As per Section 4.3.3.7 of the Hastings County Official Plan (office consolidation 2018), the removal of vegetation shall be minimized within significant wildlife habitat areas and adjacent

lands. Development and/or site alteration shall not be permitted in significant wildlife habitat and within 120 metres of significant wildlife habitat unless it has been determined in an approved Environmental Impact Statement (EIS) pursuant to Part A - Section 7.8.6 of this Plan that there will be no negative impacts on the natural features or associated ecological functions.

As per Section 4.3.3.10 of the Hastings County Official Plan (office consolidation 2018), notwithstanding Part A - Section 4.3.3.7, the following requirements shall apply to development and/or site alterations proposed within or adjacent to winter deer habitat:

a) Site alteration shall not be permitted in Stratum 1 winter deer habitat;
b) Development and site alteration in Stratum 2 habitat shall conserve valuable conifer stands, feeding areas and movement corridors;
c) Habitat assessment, by a qualified person, will be required in and within 1.5 km of Stratum 1 and Stratum 2 winter deer habitats to clarify the fine-scale boundaries and to map areas of conifer thermal cover, deciduous browse and movement corridors;
d) The habitat assessment required in c) above shall be used to appropriately locate new development and site alteration including the location of buildings and driveways to ensure that no negative impacts occur;
e) New lot creation shall restrict construction/development to a single detached dwelling(s) and lots having a minimum lot size of 90 metres width by 90 metres depth – for shoreline lots this shall include a minimum 90 metre shoreline width;
f) Notwithstanding e) above, where winter deer habitat is restricted to a narrow fringe along the lakeshore, a minimum of 120 metres of shoreline width shall be required for new shoreline lots;
g) Conifer thermal cover and deciduous browse within 30 to 50 metres of the conifer cover shall be protected within the Member Municipality's comprehensive zoning by-law by a non-development zoning such as an Environmental Protection (EP) Zone and shall not be used for access roads and driveways; and,
h) Site plan approval pursuant to Section 7.5 of this Plan may provide another means to implement some of the requirements of this Section as it pertains to protecting winter deer habitat and providing sensitive development in relation thereto.

As per Section 4.5.1.2 of the Hastings County Official Plan (office consolidation 2018), the Environmental Protection (EP) designation may also include natural hazard lands that may pose a threat to life and property because of inherent physiographic characteristics such as floodways, erosion hazards, poor drainage/seasonal inundation, organic soil, unstable slopes, unstable bedrock karst formations or other similar physical limitations.

As per Section 4.5.1.3 of the Hastings County Official Plan (office consolidation 2018), lands designated on Schedule OP-A as follows shall be placed in a corresponding zone in Member Municipality comprehensive zoning by-laws implementing this Plan:

> 'EP' = Locally and regionally significant wetlands, coastal wetlands, floodplains, water bodies, water courses, escarpments and other natural hazard lands as per Section 4.5.1.2
>
> 'EP-W' = Provincially Significant Wetlands & Provincially Significant Coastal Wetlands

As per Section 4.5.2.1 of the Hastings County Official Plan (office consolidation 2018), the uses permitted on lands designated 'EP' or 'EP-W' are limited to existing agricultural uses, managed forestry, conservation uses which improve the ecological functions of the natural features, wildlife management, uses of a scientific or educational nature and appropriate passive recreational uses that will not have a negative impact on the natural features.

As per Section 4.5.4.6 of the Hastings County Official Plan (office consolidation 2018), development and/or site alteration shall not be permitted in locally or provincially significant wetland areas designated Environmental Protection or Environmental Protection 'EP-W', save and except buildings, structures or works associated with public education, flood or erosion control, watercourse protection or bank stabilization permitted by the local Conservation Authority and/or the MNRF.

As per Section 4.5.4.10 of the Hastings County Official Plan (office consolidation 2018), development and/or site alteration adjacent to wetlands within 30m of areas designated Environmental Protection or within 120 m of Environmental Protection 'EP-W' may be permitted provided is has been demonstrated through an approved EIS in accordance with Section 7.8.6 of this Plan that there will be no negative impacts on the wetland feature or its associated ecological function.

3.0 Background Review

Given the relevant planning jurisdiction, the following features are being considered in the EIS, where applicable to the subject property and adjacent lands (i.e., up to 120 m):

- Area of Natural and Scientific Interest;
- Fish Habitat;
- Habitat of Endangered and Threatened Species;
- Significant Wildlife Habitat; and
- Wetland.

The following resources were reviewed to gain a deeper understanding of natural heritage with the potential of occurring on the subject property and adjacent lands (i.e., up to 120 m):

- Atlas Square No. 18TR61 of the Ontario Butterfly Atlas;
- Atlas Square No. 18TR61 of the Ontario Reptile and Amphibian Atlas;
- Atlas Square No. 18TR6511 and 18TR6611 of the Natural Heritage Information Centre;
- Atlas Square No. 18TTR61 of the Ontario Breeding Bird Atlas;
- eBird;
- Hastings County Official Plan (office consolidation 2018);
- iNaturalist; and
- Land Information Ontario.

4.0 Characterizing the Natural Environment: Approach and Methodology

The terms a reference was submitted to the County of Hastings for review to better define the purpose and structure of the EIS (Appendix B).

4.1. Vegetation

4.1.1. Botanical Inventory

A vascular plant inventory was completed on the subject property on June 12, 2024 with particular regard for Species at Risk (SAR) plants known to occur in the local area (e.g., butternut, black ash).

4.1.2. Vegetation Communities

Orthographic imagery of the subject property and adjacent lands was used for the basis of Ecological Land Classification (ELC) and further refined through a ground-truthing exercise on June 12, 2024. Vegetation communities were classified following protocol of the Ecological Land Classification (ELC) for Southern Ontario (Lee, H. et al., 1998) and associated Vegetation Type List (Lee, H., 2008), where applicable.

4.2. Area of Natural and Scientific Interest

The nearest life science Area of Natural and Scientific Interest is mapped approximately 20 km southeast of the subject property (Appendix A). No further analysis required.

4.3. Fish Habitat

Fish habitat is defined in subsection 2(1) of the *Fisheries Act* to include all waters frequented by fish and any other areas upon which fish depend directly or indirectly to carry out their life processes. The subject property was screened for watercourses and evidence of other surface

water features (e.g., ephemeral/intermittent streams, vernal pools, inland lakes) on April 27, 2024. Identified surface water features were mapped, characterized and assessed for their potential to function as fish habitat.

4.4. Habitat of Endangered and Threatened Species

For the purpose of this study, we have defined "Species at Risk" (SAR) to include species designated special concern, threatened and endangered under O. Reg. 230/08 in accordance with the ESA. Species occurrence data from sources outlined in Section 3.0 of this report was used to determine which species at risk are known to occur in the local area. An Ecological Land Classification (ELC) exercise was completed to identify potential habitat opportunities for the listed species at risk. A SAR Habitat Assessment was completed to identify candidate, confirmed and absent SAR habitat on the subject property.

4.4.1. Birds

Two (2) dawn breeding bird surveys were completed in general accordance with dawn breeding bird survey protocol (OBBA, 2001). Surveys were completed within the first five (5) hours after dawn between May 24 and July 10. The first survey was completed on or before June 15. The second survey was completed on or after June 15. Surveys were not completed during events of precipitation, fog or high winds (i.e., up to 3 on the Beaufort wind scale). Four (4) point count stations were used to carry out the surveys (Figure 2).

The survey conditions were as follows:

Date	Surveyor	Time	Temp.	Cloud Cover	Wind	Precip.
June 12, 202	Nathan Fligg	0740-0830	13°C	20%	B2	Nil.
July 8, 2024	Nathan Fligg	0920-1000	23°C	50%	B1	Nil.

4.4.2. Mammals

Plot-based surveys of snag/cavity trees was completed in the upland forested communities on the subject property on January 24, 2024 in general accordance with the protocol described in the Treed Habitats - Maternity Root Surveys guidance document. Data collected from this exercise was used to calculate snag density in efforts of identifying high quality potential maternity roost habitat for endangered bat species.

4.5. Wetland

The subject property was screened for wetland feature(s) following the appropriate protocol (e.g., 50% vegetation rule) as described in the Ontario Wetland Evaluation System Southern Manual (4th Edition) on June 12, 2024. Orthographic imagery and digital terrain models were reviewed to assess for the presence of candidate wetland feature(s) on the adjacent lands.

4.6. Wildlife Habitat

Incidental observations of wildlife, wildlife signs (e.g., scat, tracks, remains of food, claw marks on trees or shrubs, trails or corridors, stunted vegetation, stick nests, turned stones) and habitat opportunities were noted during field investigations.

The potential for Significant Wildlife Habitat (SWH) on the subject property was assessed following criteria and thresholds outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015).

Three (3) spring frog surveys were completed in general accordance with Marsh Monitoring Protocol Participant's Handbook for Surveying Amphibians (BSC, 2009) to better evaluate the function of candidate amphibian breeding habitat. Two (2) point count station were used to carry out the surveys (Figure 2). The first survey was completed between April 15 and April 30 when temperature was ≥5◦C. The second survey was completed between May 15 and May 31 when temperature was ≥10◦C. The third survey was completed between June 15 and June 30 when temperature was ≥15◦C. Surveys were completed between one half hour after sunset and midnight during periods of low wind (Beaufort Wind Scale ≤3) with little to no precipitation.

5.0 Data Analysis

5.1. Vegetation

5.1.1. Botanical Inventory

A list of vascular plant species for the vegetation communities that extend onto the subject property has been provided for reference (Table 1).

5.1.2. Vegetation Communities

The subject property contained four (4) distinct vegetation communities (Figure 2):

1. G011Tt Very Shallow, Dry to Fresh: Red Pine - White Pine Conifer: Approximately 6,355 m^2 of coniferous forest occurred along a steep slope at the north end of the subject property. The canopy was dominated by mature to old growth Eastern white pine with mixed coniferous and deciduous associates (i.e. Eastern hemlock, white spruce, red maple, and sugar maple). The mid layer was well vegetated with younger balsam fir and tall shrubs (e.g., chokecherry, hobblebush, beaked hazel, and mountain maple). The ground level was moderately vegetated with forbs (e.g., wild sarsaparilla, yellow clintonia, Northern star flower and goldthread). This community occurred along a ridge with occasional rock outcrops exhibiting sparse vegetation (i.e., rock polypody).
2. G052Tt Dry to Fresh, Course: Spruce - Fir Conifer: Approximately 2.7 ha of coniferous forest occurred throughout the subject property and extended into the adjacent lands. The

canopy was dominated by balsam fir and to a lesser extent, hardwood species (i.e., sugar maple, white ash and basswood). The mid layer was well vegetated with young balsam fir and white ash. The forest floor was sparse to moderately vegetated with forbs (e.g., wild sarsaparilla, intermediate wood fern, hairy Solomon's seal and large- leaved aster).

3. G058Tt Dry to Fresh, Course: Maple Hardwood: Approximately 1.3 ha of deciduous occurred along a central portion of the subject property, extending west into the adjacent lands. The community was dominated by mature sugar maple with a mixedwood understory (e.g., balsam fir, white ash and basswood). The forest floor was moderately vegetated with graminoids and forbs (e.g., graceful sedge, long-stalked sedge, red baneberry and yellow trout-lily).
4. G148H Mineral Shallow Marsh: Approximately 3,465 m^2 of shallow marsh occurred along the northern edge of the subject property. The community exhibited a variety of emergent and floating-leaved vegetation (e.g., marsh calla, variegated yellow pond-lily, fringed sedge, bulblet bladder fern, Canada bluejoint and cinnamon fern) in water depths of approximately 1 m and mineral substrate.

The portion of the subject property that included an accessory building, gravel driveway and young meadow is characteristic of a more cultural and anthropogenic community and has been given the descriptor of 'Disturbed Area'.

5.2. Fish Habitat

A watercourse traverses the rear of the subject property through marsh. No records on this feature were obtained through the Ministry of Natural Resources and Forestry (MNRF) Aquatic Resource Area database. The identified watercourse drains towards Burke Lake located approximately 800 m downstream and appears to have direct connectivity to known fish habitat. Burke Lake has a warmwater thermal regime and is known to provide habitat to a variety of fish species (e.g., Northern pike and largemouth bass).

5.3. Habitat of Endangered and Threatened Species

No endangered or threatened plants were encountered on the subject property (Table 1). No endangered or threatened birds were observed on the subject property (Table 2). The SAR Habitat Assessment identified candidate habitat of endangered species (Table 3).

5.3.1. Mammals

Little Brown Myotis, Northern Myotis and Tri-colored Bat: The G011Tt community has the potential to contain >10 snags per hectare. The G052Tt was assessed as having 20 snags per hectare. The G058Tt community was assessed as having 16 snags per hectare. As such, said communities have the potential to function as roosting habitat for little brown myotis, Northern

myotis and tri-colored bat. Foraging habitat may include forest edge and wetland, should these species be present.

5.3.2. Reptiles

Blanding's Turtle: The G148H community has the potential to function as suitable aquatic habitat for Blanding's turtle.

5.4. Wetland

Background mapping suggests the presence of unevaluated wetlands in the adjacent lands, northeast of the subject property (Appendix A). Field investigations identified a shallow water marsh occurring at low elevations along the northern edge of the subject property (Figure 3). The community appears riverine in nature, occurring throughout and along the edges of a permanent watercourse. Approximately 3,465 m2 of wetland was identified on the subject property and extended to the west and east in the adjacent lands along the mapped watercourse.

5.5. Wildlife Habitat

The following observations were noted during field investigations:

- Beaver (*Castor canadensis*);
- Eastern chipmunk (*Tamias striatus*);
- Northern raccoon (*Procyon lotor*);
- Red squirrel (*Tamiasciurus hudsonicus*); and
- White-tailed deer (*Odocoileus virginianus*).

The SWH Assessment identified six (6) candidate and confirmed SWH as occurring on the subject property (Table 4).

5.5.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: The G058Tt community was assessed as having more than 10 snags per hectare and as such, may function as the SWH, Bat Maternity Colonies.

Turtle Wintering Areas: The G148H community has the potential to function as the SWH, Turtle Wintering Area.

Deer Yarding Areas: White-tailed Deer Wintering Area (Stratum 2) extends across the entire subject property.

5.5.2. Specialized Habitats of Wildlife Considered SWH

Amphibian Breeding Habitat (Woodland): The G148H and adjoining G011Tt community contained sufficient numbers of the appropriate species to be considered as the SWH, Amphibian Breeding Habitat (Woodland). Refer to Appendix C for more details. The SWH includes the G148H community and up to 230 m of contiguous woodland.

Amphibian Breeding Habitat (Wetland): The G148H community contained sufficient numbers of the appropriate species to be considered as the SWH, Amphibian Breeding Habitat (Wetland). Refer to Appendix C for more details. The SWH includes the G148H community and associated shoreline area.

5.5.3. Habitats of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: Special concern species have the potential to occur on the subject property (Table 3). No provincially rare plant or bird species were observed on the subject property (Table 1 and 2).

Snapping Turtle: The G148H community has the potential to function as suitable aquatic habitat for snapping turtle.

6.0 Project Description

The proponent wishes to develop the subject property with a campground. The proposed development supports the construction of a driveway, parking area, amenity space, septic systems, 16 detached cabins and management building. The impact assessment below reviews impacts associated with a development contained within the Area of Work, as depicted on Figure 3.

7.0 Impact Assessment

7.1. Vegetation

The proposed development will disturb up to 10,500 m^2 and 5,655 m^2 of the G052Tt community and G058Tt community, respectively. The proponent is encouraged to re-vegetate the portion of disturbed areas remaining post-construction with non-invasive native trees, shrubs and groundcover (Section 8.2.3). An edge management plan is recommended to protect remaining treed communities (Section 8.2.2). Bird-friendly design should be considered for the proposed development (Section 8.2.1).

7.2. Fish Habitat

The proposed development is not located in the identified watercourse and as such, no direct impacts to fish habitat are anticipated. A 30 m setback is generally recommended to protect fish habitat. The proposed development is not located in the prescribed fish habitat buffer (Figure 3).

Site specific measures are recommended to avoid sediment deposition and deposition of deleterious or other harmful substances to aquatic features (Section 8.2.4 and 8.2.5).

7.3. Habitat of Endangered and Threatened Species

7.3.1. Mammals

Little Brown Myotis, Northern Myotis and Tri-colored Bat: Although tree removal is required to facilitate the proposed developments, this amount of removal would be considered as proportionally small relative to the amount of remaining woodland and available maternity or day roost trees that likely exists across the greater landscape. Moreover, the proposed developments will not result in fragmentation of available bat habitat or function as a barrier to bat movement. To avoid impacts to endangered bats, tree clearing should be avoided between April 1 and September 30 of any given year (Section 8.2.6).

7.3.2. Reptiles

Blanding's Turtle: The proposed development is not located in the G148H community and as such, no direct impacts to aquatic habitat for Blanding's turtle are anticipated. Indirect impacts to Blanding's turtle are addressed in Section 7.5 below.

7.4. Wetland

The proposed development is not located in the G148H community and as such, no direct impacts to wetland are anticipated. A 30 m setback is generally recommended to protect wetland. The proposed development is not located in the prescribed wetland buffer (Figure 3). Site specific measures are recommended to avoid sediment deposition and deposition of deleterious or other harmful substances to aquatic features (Section 8.2.4 and 8.2.5).

7.5. Wildlife Habitat

7.5.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: Although tree removal is required in the G058Tt community to facilitate the proposed development, this amount of removal would be considered as proportionally small relative to the amount of remaining woodland and available maternity roost trees that likely exists across the greater landscape. Moreover, the proposed developments will not result in fragmentation of available bat habitat or function as a barrier to bat movement. To avoid impacts to bats, tree clearing should be avoided between April 1 and September 30 of any given year (Section 8.2.6).

Turtle Wintering Areas: The proposed development is not located in the G148H community and as such, no significant impacts to the SWH, Turtle Wintering Area, are anticipated.

Deer Yarding Areas: Deer Yarding and Winter Congregation Areas: Development is proposed in Stratum II White-tailed Deer Wintering Area. When assessing the potential impacts of a development on deer wintering areas, the following factors are considered:

1. Amount of core yarding area disturbed: No core yarding area for deer will be disturbed to facilitate the proposed development.
2. Amount of woodlot disturbed: A proportionally small amount (<1%) of woodland relative to its total size that extends across the greater landscape may be disturbed to facilitate the proposed development.
3. Restriction of movement along shorelines or other critical areas: No restriction of movement along shorelines or other critical areas is anticipated as a result of the proposed development. Although the proposed development is located in coniferous forest, deer are still anticipated to move freely in accessing winter food
4. Residual effects (i.e., human activities and their pets): Human activities on the subject property post-development are anticipated to be limited to passive recreation. The likelihood of roaming domestic dogs on the subject property is anticipated to be low.
5. Single-lot development vs. subdivision: The proposed development is for a single-lot development.
6. Disturbance to food sources: No agricultural field or abundance of deciduous browse will be disturbed to facilitate the proposed development.
7. Amount of disturbed/converted habitat relative to the amount of undisturbed habitat: <1% of Stratum II White-tailed Deer Wintering Area will be disturbed to facilitate the proposed development.
8. Size and location of the proposed development: The proposed cabins appear minor in size and have been located in close proximity to Peterson Road.

In considering all of the abovenoted factors, it is in our opinion that the proposed developments will not significantly impact the Stratum II White-tailed Deer Wintering Area.

7.5.1. Specialized Habitats of Wildlife Considered SWH

Amphibian Breeding Habitat (Woodland): The proposed development is not located in the G148H and adjoining G011Tt community and as such, no significant impacts to the SWH, Amphibian Breeding Habitat (Woodland) are anticipated. Although tree removal will occur within the 230 m of contiguous woodland that extends from the G148H community, this removal is not anticipated to eliminate or impair the anuran breeding.

Amphibian Breeding Habitat (Wetland): The proposed development is not located in the G148H community and associated shoreline area and as such, significant impacts to the SWH, Amphibian Breeding Habitat (Wetland), are not anticipated.

7.5.2. Habitats of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: The proposed development is not located in the G148H community and as such, no direct impacts to aquatic habitat for snapping turtle anticipated. Indirect impacts to aquatic habitat for snapping turtle is discussed in Section 7.5 above.

8.0 Conclusion and Recommendations

8.1. Conclusion

Should the proponent adhere to the proposed development plan and follow the prescribed recommendations as noted below (Section 8.2), negative impacts to the overall form and function of the identified natural heritage on the subject property will be appropriately mitigated. Furthermore, it is our understanding that the proposed development as described herein would not contravene applicable environmental policy and regulations as described in Section 2.0 of this report.

8.2. Recommendations

8.2.1. Bird-friendly Design

We recommend the use of warm-colored and low lumen lighting directed away from the remaining treed communities in the design of the proposed cabins to limit light spill and pollution.

8.2.2. Edge Management Plan

Tree removal has the potential to create a ‘new’ edge and incur negative impacts to the remaining treed communities including, but not limited to:

- Trees along the ‘new’ edge may be susceptible to windthrow;
- Some trees with thinner bark and located along the ‘new’ edge may be susceptible to sunscald and frost cracking due to the loss of canopy cover/shade;
- Trees along the ‘new’ edge may succumb to desiccation as a result of changes in microclimates (e.g., increased temperatures, decreased soil moisture); and
- Exposed areas along the ‘new’ edge may be more susceptible to invasion by non-native vegetation.

We recommend the following strategies be carried out as part of an Edge Management Plan to mitigate the abovenoted negative impacts to the remaining treed communities:

- Incorporate supplemental plantings within the existing treed communities located directly adjacent to the disturbance, where feasible.

- Tree preservation hoarding should be installed along the dripline of trees, at a minimum. Native shrubs and groundcover should be left intact wherever possible.
- Stumped trees located within 5 m of the 'new' edge should not be grubbed, where feasible.
- Some of the trees removed as part of the proposed development should be chipped and used as mulch for individual plantings. The remaining trees should be felled and strategically placed on-site within the existing natural heritage system in an effort of maintaining the sites biomass.
- Replant fast-growing and shade tolerant trees and shrubs along the 'new' edge, where feasible.
- Pruning shallow rooted trees (if present) along the 'new' edge such that they can be retained. This may include tree topping at the discretion of the certified arborist, where appropriate.

8.2.3. Native Plantings

Disturbed areas should be re-seeded and planted with native non-invasive vegetation following construction. The proponent should consult with the associated landscape professional supplying and/or planting the trees, shrubs and groundcover to discuss the appropriate fertilizing, watering and/or mulching schedule. Deciduous trees should be planted in the spring, following thaw, or in the fall, during leaf-off until freeze-up. Conifers should be planted in the spring until four weeks after deciduous trees have opened their leaves, or in the fall until freeze-up. Shrubs and ground cover can be planted in spring (e.g., April 15 to mid-June) and/or fall (e.g., September 1 to October 15. All conifers should be inspected for girdling roots before planting. Conifers that have extensive girdling should not be used. Nursery stock trees should be planted as soon as possible after delivery.

8.2.4. Perimeter Control

Tree preservation hoarding is recommended to protect the remaining treed communities. The fence should be erected prior to the onset of siteworks and must remain in place for the duration of all construction activity. The recommended location of the fence is depicted on Figure 3, however, is subject to change at the time that a more detailed site plan is prepared. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

A silt fence consisting of non-woven geotextile material wire looped to wooden/metal stakes installed at 2-m intervals for support should be erected prior to the onset of siteworks to protect wetland. The proposed location of silt fence has been depicted on Figure 3 but is subject to change at the time that a site plan has been prepared. The silt fence should remain in place for the duration of all construction activity. The silt fence should be buried into the ground a minimum

30 cm and compacted with native materials. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

8.2.5. Preventing Entry of Deleterious Substances in Aquatic Feature(s)

Deleterious substances should never be deposited and/or enter aquatic features. A response plan should be prepared prior to the onset of site works and an emergency spill kit should be kept on-site during site activities. All machinery should be kept in a clean condition and free of fluid leaks. Washing, fueling and servicing machinery should not occur within 30 m of aquatic features. Stockpiling of fill and/or construction material should not occur within 30 m of aquatic features.

8.2.6. Sensitive Timing Window

As a precaution to protect breeding migratory birds, vegetation clearing should not occur between April 10 and August 28 of any given year unless otherwise directed by a qualified biologist at the time of site works.

As a precaution to protect bats, tree clearing should not occur between April 1 and September 30 unless otherwise directed by a qualified biologist at the time of site works.

8.2.7. Wildlife Encounters

Any wildlife encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes. Construction staff should not attempt to capture or handle most kinds of wildlife, unless an animal is in imminent peril or is injured and cannot wait for rescue by qualified personnel. Improper handling can result in injuries to both workers and wildlife, and may in some cases contravene provincial or federal legislation. Removal and relocation of mammals, in particular, should only be done by qualified wildlife service providers working in accordance with applicable laws (i.e., *Fish and Wildlife Conservation Act*). Observation records should include the observer's name, date and time, species, location (descriptive and georeferenced), photographs, and action taken.

9.0 References

Banton, Erin, J. Johnson, H. Lee, G. Racey, P. Uhlig, and M. Wester, 2009 (Banton *et al*, 2009). Ecosites of Ontario, Operational Draft, April 20th, 2009. Ontario Ministry of Natural Resources, Ecological Classification Working Group.

Hastings County Official Plan (office consolidation 2018).

Ministry of Natural Resources and Forestry, 2015 (MNRF, 2015). Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E.

R.S.C., 1985. c. F-14. Fisheries Act.

R.S.O. 1990, c. P.13. Planning Act.

S.O. 1997, c. 41. Fish and Wildlife Conservation Act.
S.O. 2007, c. 6. Endangered Species Act.

Limitations:

This report was prepared using the most current site plan provided to Sumac's office. The conclusion and recommendations provided herein may no longer be applicable should changes be made to the site plan following submission of this report. The assessment provided herein is valid at the time of inspection.

Disclaimer:

Legend

- Subject Property
- Adjacent Lands

0 30 60 90 120 150 m

1:3,500

Figure 1: Subject Property

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Date: 09/06/2024
Project: SEC 23-072

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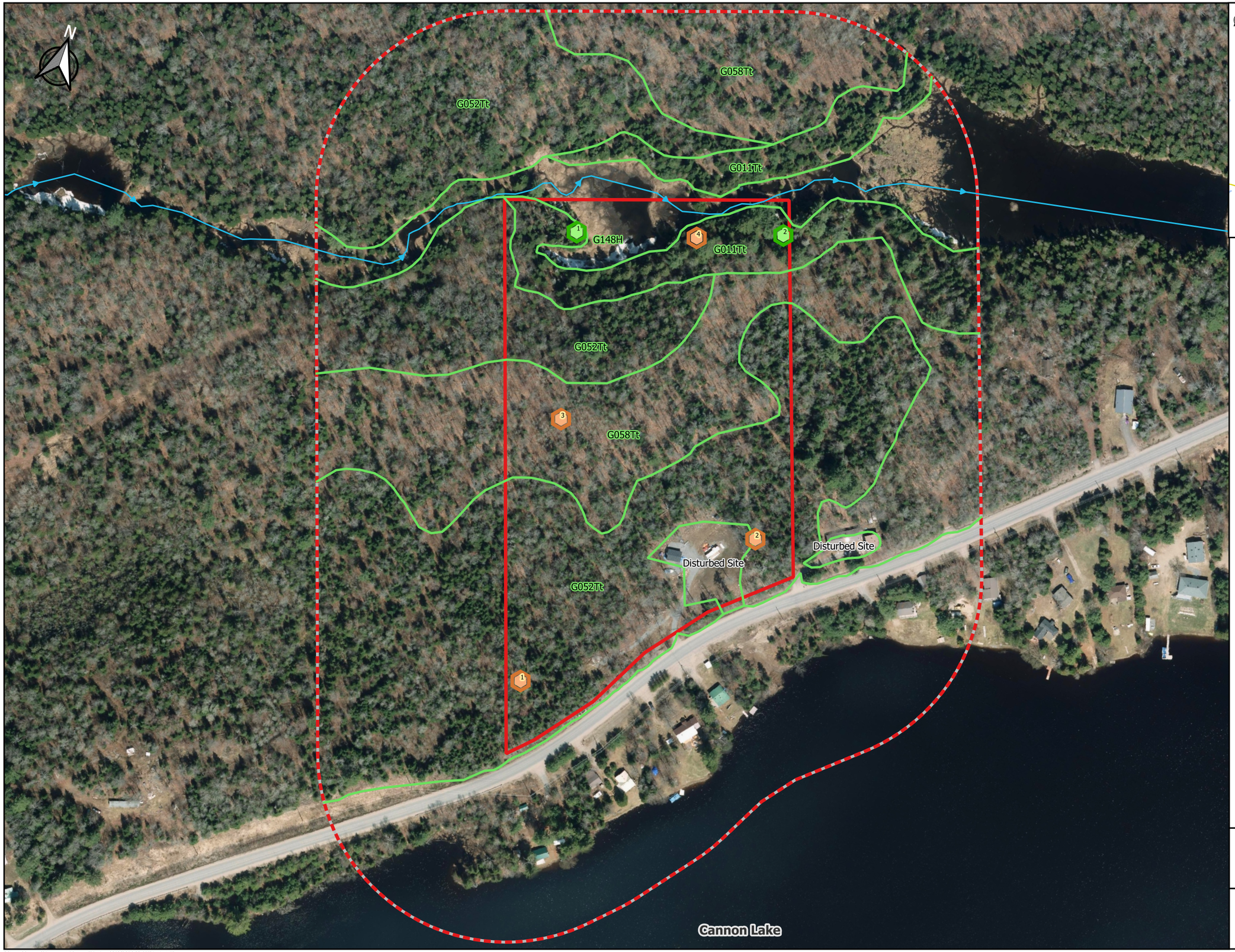

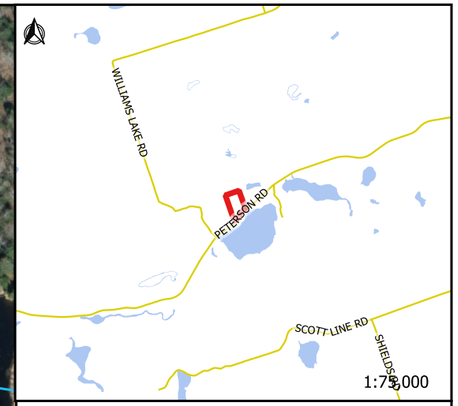

Legend

- Adjacent Lands
- Subject Property
- Watercourse
- Frog Monitoring Station
- Dawn Breeding Bird Monitoring Station
- ELC Vegetation Communities

G011Tt	Very Shallow, Dry to Fresh: Red Pine - White Pine Conifer
G052Tt	Dry to Fresh, Course: Spruce - Fir Conifer
G058Tt	Dry to Fresh, Course: Maple Hardwood
G148H	Mineral Shallow Marsh

0 20 40 60 80 100 120 m

1:2,250

Figure 2: Existing Conditions

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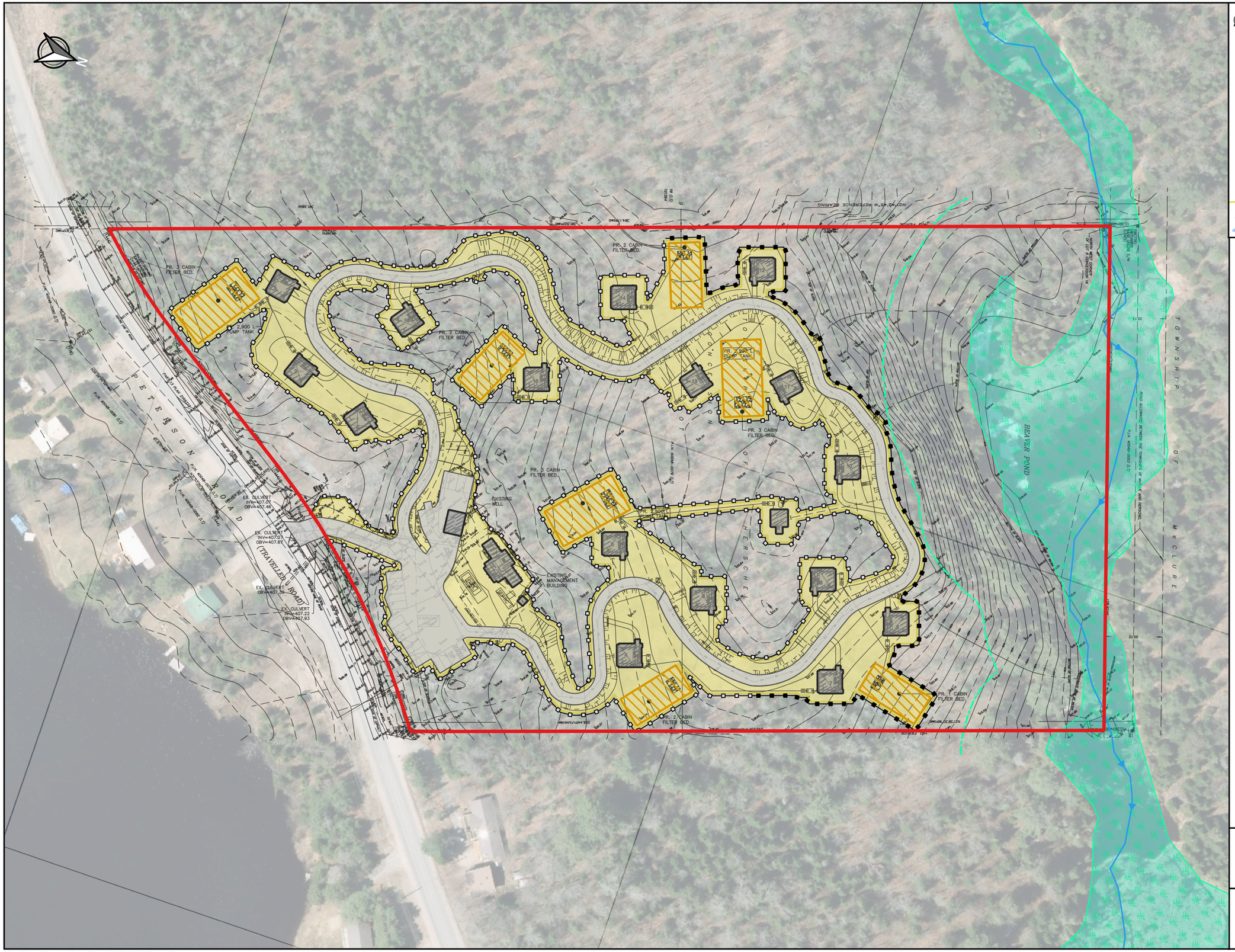

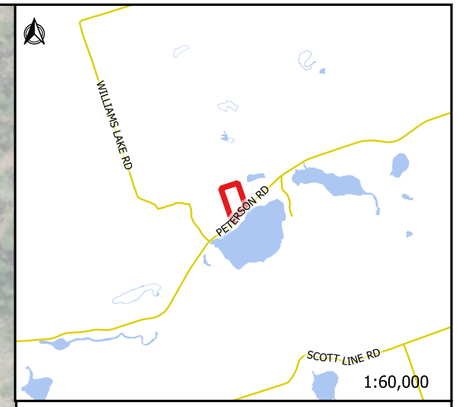

Legend

- Subject Property
- Watercourse
- Wetland
- Wetland Buffer (30 m)
- Area of Work
- Proposed Building
- Proposed Driveway
- Proposed Septic
- Silt Fence / Tree Preservation Hoarding
- Tree Preservation Hoarding

0 15 30 45 60 m

1:1,250

Figure 3: Proposed Development

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Project: SEC 23-072

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Table 1: Vascular Plant Inventory **SEC 23-072 752/8 Peterson Road**

Scientific Name	Common Name	Vegetation Community[A]					S-Rank[B]	G-Rank[C]	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		Disturbed Site	G011Tt	G052Tt	G058Tt	G148H				Provincial[D]	Federal[E]		
Abies balsamea	Balsam Fir		✓	✓	✓		S5	G5	N				-3
Acer pensylvanicum	Striped Maple		✓			✓	S4	G5	N				3
Acer rubrum	Red Maple		✓	✓	✓		S5	G5	N				0
Acer saccharum	Sugar Maple	✓		✓	✓		S5	G5	N				3
Acer spicatum	Mountain Maple		✓	✓	✓		S5	G5	N				3
Actaea rubra	Red Baneberry			✓	✓		S5	G5	N				3
Adiantum pedatum	Northern Maidenhair Fern			✓	✓		S5	G5	N				3
Ageratina altissima	White Snakeroot			✓	✓		S5	G5	N				3
Alnus incana ssp. rugosa	Speckled Alder					✓	S5	G5T5	N				-3
Anaphalis margaritacea	Pearly Everlasting	✓					S5	G5	N				3
Aralia nudicaulis	Wild Sarsaparilla	✓	✓	✓	✓		S5	G5	N				3
Athyrium filix-femina var. angustum	Northeastern Lady fern			✓	✓		S5	G5T5	N				0
Betula papyrifera	Paper Birch	✓					S5	G5	N				3
Calamagrostis canadensis	Bluejoint Reedgrass					✓	S5	G5	N				-5
Calla palustris	Wild Calla					✓	S5	G5	N				-5
Carex arctata	Drooping Woodland Sedge			✓	✓		S5	G5	N				5
Carex communis	Fibrous-root Sedge	✓		✓	✓		S5	G5	N				5
Carex crinita	Fringed Sedge					✓	S5	G5	N				-5
Carex deweyana	Dewey's Sedge				✓		S5	G5	N				3
Carex gracillima	Graceful Sedge	✓		✓	✓		S5	G5	N				3
Carex intumescens	Bladder Sedge	✓					S5	G5	N				-3
Carex pedunculata	Long-stalked Sedge		✓	✓	✓		S5	G5	N				3
Centaurea montana	Mountain Cornflower	✓					SNA	GNR	N			SE1	5
Cerastium fontanum	Common Mouse-ear Chickweed	✓					SNA	GNR	N			SE5	3
Cirsium vulgare	Bull Thistle	✓					SNA	GNR	N			SE5	3
Clintonia borealis	Yellow Clintonia		✓	✓	✓		S5	G5	N				0
Coptis trifolia	Goldthread		✓				S5	G5	N				-3
Corallorhiza trifida	Early Coralroot			✓	✓		S5	G5	N				-3
Cornus alternifolia	Alternate-leaved Dogwood	✓			✓		S5	G5	N				3
Cornus canadensis	Bunchberry		✓				S5	G5	N				0
Corylus cornuta	Beaked Hazelnut		✓	✓	✓		S5	G5	N				3
Cystopteris bulbifera	Bulblet Bladder Fern					✓	S5	G5	N				-3
Dendrolycopodium dendroideum	Round-branched Tree-clubmoss			✓	✓		S5	G5	N				3
Diervilla lonicera	Northern Bush-honeysuckle		✓				S5	G5	N				5
Dryopteris intermedia	Evergreen Wood Fern			✓	✓		S5	G5	N				0
Elymus virginicus	Virginia Wildrye	✓					S5	G5	N				-3
Equisetum arvense	Field Horsetail	✓			✓		S5	G5	N				0
Equisetum sylvaticum	Woodland Horsetail					✓	S5	G5	N				-3
Erigeron philadelphicus	Philadelphia Fleabane	✓					S5	G5	P				-3
Erythronium americanum	Yellow Trout-lily			✓	✓		S5	G5	N				5
Eurybia macrophylla	Large-leaved Aster			✓	✓		S5	G5	N				5

Scientific Name	Common Name	Vegetation Community[A]					S-Rank[B]	G-Rank[C]	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		Disturbed Site	G011Tt	G052Tt	G058Tt	G148H				Provincial[D]	Federal[E]		
Eutrochium maculatum	Spotted Joe Pye Weed					✓	S5	G5	N				-5
Fagus grandifolia	American Beech			✓	✓		S4	G5	N				3
Fragaria virginiana	Wild Strawberry	✓					S5	G5	N				3
Fraxinus americana	White Ash	✓		✓	✓		S4	G4	N				3
Galium Palustre	Common Marsh Bedstraw					✓	S5	G5	N				-5
Galium triflorum	Three-flowered Bedstraw	✓			✓		S5	G5	N				3
Gymnocarpium dryopteris	Common Oak Fern		✓				S5	G5	N				3
Hypericum perforatum	Common St. John's-wort	✓					SNA	GNR	N			SE5	5
Impatiens capensis	Spotted Jewelweed					✓	S5	G5	N				-3
Lactuca biennis	Tall Blue Lettuce	✓			✓		S5	G5	N				0
Larix laricina	Tamarack		✓				S5	G5	N				-3
Leucanthemum vulgare	Oxeye daisy	✓					SNA	GNR	N			SE5	5
Lonicera canadensis	Canada Fly Honeysuckle			✓	✓		S5	G5	N				3
Lysimachia borealis	Northern Starflower		✓	✓	✓		S5	G5	N				0
Maianthemum canadense	Wild Lily-of-the-valley		✓	✓	✓		S5	G5	N				3
Maianthemum stellatum	Star-flowered False Solomon's Seal			✓	✓		S5	G5	N				0
Matteuccia struthiopteris	Ostrich Fern			✓	✓		S5	G5	N				0
Medeola virginiana	Indian Cucumber-root		✓				S5	G5	N				3
Mitchella repens	Partridgeberry			✓	✓		S5	G5	N				3
Nuphar variegata	Variegated Pond-lily					✓	S5	G5T5	N				-5
Oenothera biennis	Common Evening-Primrose	✓					S5	G5	N				3
Onoclea sensibilis	Sensitive Fern			✓	✓		S5	G5	N				-3
Oryzopsis asperifolia	Rough-leaved Mountain Rice			✓	✓		S5	G5	N				5
Osmundastrum cinnamomeum	Cinnamon Fern					✓	S5	G5	N				-3
Ostrya virginiana	Eastern Hop-hornbeam			✓	✓		S5	G5	N				3
Oxalis montana	White Wood-sorrel		✓			✓	S5	G5	N				3
Parathelypteris noveboracensis	New York Fern		✓	✓	✓	✓	S4S5	G5	N				0
Phegopteris connectilis	Northern Beech Fern		✓	✓	✓	✓	S5	G5	N				3
Picea glauca	White Spruce		✓				S5	G5	N				3
Pilosella aurantiaca	Orange Hawkweed	✓					SNA	GNR	N			SE5	5
Pilosella caespitosa	Meadow Hawkweed	✓					SNA	GNR	N			SE5	5
Pinus strobus	Eastern White Pine		✓	✓	✓		S5	G5	N				3
Poa palustris	Fowl Bluegrass	✓					S5	G5	N				-3
Poa pratensis	Kentucky Bluegrass	✓					S5	G5	P				3
Polygonatum pubescens	Hairy Solomon's Seal		✓	✓	✓		S5	G5	N				5
Polypodium virginianum	Rock Polypody		✓				S5	G5	N				5
Populus grandidentata	Large-toothed Aspen	✓		✓	✓		S5	G5	N				5
Populus tremuloides	Trembling Aspen	✓					S5	G5	N				0
Potentilla norvegica	Rough Cinquefoil	✓					S5	G5	N				0
Prunella vulgaris	Common Self-heal	✓					S5	G5	N				0
Prunus pensylvanica	Pin Cherry	✓					S5	G5	N				3

Scientific Name	Common Name	Vegetation Community[A]					S-Rank[B]	G-Rank[C]	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		Disturbed Site	G011Tt	G052Tt	G058Tt	G148H				Provincial[D]	Federal[E]		
Prunus serotina	Black Cherry			✓	✓		S5	G5	N				3
Prunus virginiana	Chokecherry		✓				S5	G5	N				3
Pteridium aquilinum	Bracken Fern	✓		✓	✓		S5	G5	N				3
Ribes americanum	American Black Currant		✓			✓	S5	G5	N				-3
Ribes cynosbati	Eastern Prickly Gooseberry			✓	✓		S5	G5	N				3
Rubus allegheniensis	Allegheny Blackberry	✓					S5	G5	N				3
Rubus idaeus ssp. strigosus	North American Red Raspberry	✓		✓	✓		S5	G5T5	N				3
Rubus pubescens	Dwarf Raspberry					✓	S5	G5	N				-3
Rudbeckia laciniata	Cut-leaved Coneflower	✓					S5	G5	N				-3
Sagittaria latifolia	Broad-leaved Arrowhead					✓	S5	G5	N				-5
Salix discolor	Pussy Willow	✓					S5	G5	N				-3
Salix Humilis	Prairie Willow	✓					S5	G5	N				3
Sambucus racemosa	Red Elderberry	✓					S5	G5	N				3
Silene latifolia	White Campion	✓					SNA	GNR	N			SE5	5
Silene vulgaris	Bladder Campion	✓					SNA	GNR	N			SE5	5
Solidago canadensis	Canada Goldenrod	✓					S5	G5	N				3
Solidago rugosa	Rough-stemmed Goldenrod	✓		✓	✓		S5	G5	N				0
Spiraea alba	White Meadowsweet		✓			✓	S5	G5	N				-3
Streptopus lanceolatus	Rose Twisted-stalk		✓				S5	G5	N				3
Symphyotrichum cordifolium	Heart-leaved Aster	✓					S5	G5	N				5
Symphyotrichum lanceolatum	Panicled Aster	✓					S5	G5	P				-3
Symphyotrichum puniceum	Purple-stemmed Aster	✓					S5	G5	N				-5
Taraxacum officinale	Common Dandelion	✓					SNA	G5	N			SE5	3
Thalictrum dioicum	Early Meadow-rue		✓			✓	S5	G5	N				3
Thelypteris palustris var. pubescens	Eastern Marsh Fern					✓	S5	G5T5	N				-3
Thuja occidentalis	Eastern White Cedar		✓				S5	G5	N				-3
Tiarella stolonifera	Heart-leaved Foamflower		✓	✓	✓		S5	GNR	N				3
Tilia americana	Basswood			✓	✓		S5	G5	N				3
Trifolium pratense	Red Clover	✓					SNA	GNR	N			SE5	3
Trillium grandiflorum	White Trillium			✓	✓		S5	G5	N				3
Tsuga canadensis	Eastern Hemlock		✓	✓	✓		S5	G4G5	N				3
Viburnum cassinoides	Wild Raisin			✓	✓		S5	G5T5	N				-3
Viburnum lantanoides	Hobblebush		✓	✓	✓		S5	G5	N				0
Viola sororia	Woolly Blue Violet	✓			✓		S5	G5	N				0

[A]Refer to Figure 2 for Ecological Land Classification descriptors.

[B]Provincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRank.htm.

[C]Global Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRank.htm.

[D]Species at Risk status as per the O. Reg. 230/08.

[E]Species at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)* .

Scientific Name	Common Name	Point Count Station								Incidental	Location	Breeding[A]	Non-native Status	S-Rank[B]	G-Rank[C]	Species at Risk Status	
		1		2		3		4								Provincial[D]	Federal[E]
		06/12/2024	07/08/2024	06/12/2024	07/08/2024	06/12/2024	07/08/2024	06/12/2024	07/08/2024								
Bonasa umbellus	Ruffed Grouse									✓	Subject Property	Possible		S5	G5		
Buteo platypterus	Broad-winged Hawk								A(1)		Adjacent Lands	Probable		S5B	G5		
Catharus fuscescens	Veery						S(1)				Adjacent Lands	Possible		S5B	G5		
Certhia americana	Brown Creeper									✓	Subject Property	Possible		S5	G5		
Colaptes auratus	Northern Flicker								S(1)		Adjacent Lands	Possible		S5	G5		
Corvus brachyrhynchos	American Crow							S(2)	T(1)		Subject Property	Probable		S5	G5		
Cyanocitta cristata	Blue Jay		S(1)								Adjacent Lands	Possible		S5	G5		
Dumetella carolinensis	Gray Catbird			S(1)							Subject Property	Possible		S5B,S3N	G5		
Geothlypis trichas	Common Yellowthroat							S(1)			Subject Property	Possible		S5B,S3N	G5		
Melospiza melodia	Song Sparrow	S(1)							S(1)		Subject Property	Possible		S5	G5		
Mniotilta varia	Black-and-white Warbler			S(1)							Subject Property	Possible		S5B	G5		
Parkesia noveboracensis	Northern Waterthrush								S(1)		Subject Property	Possible		S5B	G5		
Piranga olivacea	Scarlet Tanager			S(2)							Subject Property	Possible		S5B	G5		
Poecile atricapillus	Black-capped Chickadee				S(1)	S(3)			S(2)		Subject Property	Possible		S5	G5		
Seiurus aurocapilla	Ovenbird						S(1)				Subject Property	Possible		S5B	G5		
Setophaga americana	Northern Parula							S(2)			Subject Property	Possible		S5B	G5		
Setophaga caerulescens	Black-throated Blue Warbler						S(1)		S(1)		Subject Property	Possible		S5B	G5		
Setophaga coronata	Yellow-rumped Warbler		S(2)			S(1)	T(1), S(1)				Subject Property	Probable		S5B,S4N	G5		
Setophaga fusca	Blackburnian Warbler							S(2)	T(2)		Subject Property	Probable		S5B	G5		
Setophaga magnolia	Magnolia Warbler			S(1)							Subject Property	Possible		S5B	G5		
Setophaga pensylvanica	Chestnut-sided Warbler							S(1)			Subject Property	Possible		S5B	G5		
Setophaga ruticilla	American Redstart		S(2)								Subject Property	Possible		S5B	G5		
Setophaga virens	Black-throated Green Warbler										Subject Property	Possible		S5B	G5		
Sitta canadensis	Red-breasted Nuthatch	S(1)						S(1)			Subject Property	Possible		S5	G5		
Sitta carolinensis	White-breasted Nuthatch					S(1)					Subject Property	Possible		S5	G5		
Sphyrapicus varius	Yellow-bellied Sapsucker	S(1)									Subject Property	Possible		S5B,S3N	G5		
Spinus tristis	American Goldfinch									✓	Subject Property	Possible		S5	G5		
Troglodytes hiemalis	Winter Wren								S(1)		Adjacent Lands	Possible		S5B,S4N	G5		
Turdus migratorius	American Robin		S(1)								Subject Property	Possible		S5	G5		
Tyrannus tyrannus	Eastern Kingbird								S(1)		Adjacent Lands	Possible		S4B	G5		
Vireo olivaceus	Red-eyed Vireo						S(1)				Subject Property	Possible		S5B	G5		
Zonotrichia albicollis	White-throated Sparrow	S(1)									Subject Property	Possible		S5	G5		

[A]Breeding Evidence as per Ontario Breeding Bird Atlas: Guide for Participants (March 2001)

[B]Provincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRank.htm.

[C]Global Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRank.htm.

[D]Species at Risk status as per the O. Reg. 230/08.

[E]Species at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)*.

[F]Breeding Code as per Ontario Breeding Bird Atlas: Guide for Participants (March 2001)

[G]Number of individuals observed

Species Grouping	Common Name	Scientific Name	Provincial Status[A]	Federal Status[B]	SAR Habitat Assessment
Birds	Bank Swallow	*Riparia riparia*	Threatened	Threatened	Absent. No suitable nesting sites for bank swallow identified on the subject property nor anticipated to occur in up to 500 m of the adjacent lands.
Birds	Barn Swallow	*Hirundo rustica*	Special Concern	Threatened	Absent. No barn swallow nests observed on the subject property.
Birds	Black Tern	*Chlidonias niger*	Special Concern	Not Listed	Absent. No suitable wetland habitat for black tern identified on the subject property.
Birds	Bobolink	*Dolichonyx oryzivorus*	Threatened	Threatened	Absent. No suitable open habitat for bobolink identified on the subject property.
Birds	Canada Warbler	*Cardellina canadensis*	Special Concern	Threatened	Absent. Canada warbler was not observed during the dawn breeding bird surveys nor through incidental occurrence.
Birds	Cerulean Warbler	*Setophaga cerulea*	Threatened	Endangered	Absent. Cerulean warbler was not observed during the dawn breeding bird surveys nor through incidental occurrence.
Birds	Chimney Swift	*Chaetura pelagica*	Threatened	Threatened	Absent. No nesting site for chimney swift identified on the subject property.
Birds	Common Nighthawk	*Chordeiles minor*	Special Concern	Special Concern	Absent. No suitable open habitat for common nighthawk identified on the subject property.
Birds	Eastern Meadowlark	*Sturnella magna*	Threatened	Threatened	Absent. No suitable open habitat for Eastern meadowlark identified on the subject property.
Birds	Eastern Whip-poor-will	*Antrostomus vociferus*	Threatened	Threatened	Absent. No suitable open/treed habitat for Eastern whip-poor-will identified on the subject property.
Birds	Eastern Wood-Pewee	*Contopus virens*	Special Concern	Special Concern	Absent. Eastern wood-pewee was not observed during the dawn breeding bird surveys nor through incidental occurrence.
Birds	Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern	Special Concern	Absent. Evening grosbeak was not observed during the dawn breeding bird surveys nor through incidental occurrence.
Birds	Golden-winged Warbler	*Vermivora chrysoptera*	Special Concern	Threatened	Absent. No suitable open habitat for golden-winged warbler identified on the subject property.
Birds	Grasshopper Sparrow	*Ammodramus savannarum pratensis*	Special Concern	Special Concern	Absent. No suitable open habitat for grasshopper sparrow identified on the subject property.
Birds	Kirtland's Warbler	*Setophaga kirtlandii*	Endangered	Endangered	Absent. No suitable forest habitat for Kirtland's warbler identified on the subject property.
Birds	Least Bittern	*Ixobrychus exilis*	Threatened	Threatened	Absent. No suitable wetland habitat for least bittern identified on the subject property.
Birds	Loggerhead Shrike	*Lanius ludovicianus*	Endangered	Endangered	Absent. No suitable open habitat for loggerhead shrike identified on the subject property.
Birds	Olive-sided Flycatcher	*Contopus cooperi*	Special Concern	Special Concern	Absent. No suitable forest opening/edge habitat for olive-sided flycatcher identified on the subject property.
Birds	Peregrine Falcon	*Falco peregrinus*	Special Concern	Not Listed	Absent. No suitable cliff or ledges for peregrine falcon identified on the subject property nor anticipated to occur in proximity to the subject property.
Birds	Red-headed Woodpecker	*Melanerpes erythrocephalus*	Endangered	Endangered	Absent. No suitable treed habitat with an abundance of dead/dying trees for red-headed woodpecker identified on the subject property. Moreover, no red-headed woodpeckers cavities encountered on the subject property.
Birds	Rusty Blackbird	*Euphagus carolinus*	Special Concern	Special Concern	Absent. Rusty blackbird was not observed during the dawn breeding surveys nor through incidental occurrence.
Birds	Wood Thrush	*Hylocichla mustelina*	Special Concern	Threatened	Absent. Wood thrush was not observed during the dawn breeding bird surveys nor through incidental occurrence.
Insects	Monarch	*Danaus plexippus*	Special Concern	Endangered	Absent. No milkweed for breeding monarch encountered on the subject property. No natural cover area with an abundance of favorable nectar sources for monarch identified on the subject property.

Species Grouping	Common Name	Scientific Name	Provincial Status[A]	Federal Status[B]	SAR Habitat Assessment
Mammals	Eastern Small-footed Myotis	*Myotis leibii*	Endangered	Not Listed	Absent. No rock or similar features with the potential of functioning as roosting habitat for Eastern small-footed myotis encountered on the subject property.
Mammals	Little Brown Myotis	*Myotis lucifugus*	Endangered	Endangered	Candidate. The G011Tt, G052Tt and G058Tt communities have the potential to function as roosting habitat for little brown myotis. Foraging habitat may include forest edge and wetland, should this species be present.
Mammals	Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	Candidate. The G011Tt, G052Tt and G058Tt communities have the potential to function as roosting habitat for Northern myotis. Foraging habitat may include forest edge and wetland, should this species be present.
Mammals	Tri-colored Bat	*Perimyotis subflavus*	Endangered	Endangered	Candidate. The G011Tt, G052Tt and G058Tt communities have the potential to function as roosting habitat for tri-colored bat. Foraging habitat may include forest edge and wetland, should this species be present.
Reptiles	Blanding's Turtle	*Emydoidea blandingii*	Threatened	Endangered	Candidate. The G148H community has the potential to function as suitable aquatic habitat for Blanding's turtle.
Reptiles	Snapping Turtle	*Chelydra serpentina*	Special Concern	Special Concern	Candidate. The G148H community has the potential to function as suitable aquatic habitat for snapping turtle.
Vascular Plants	Black Ash	*Fraxinus nigra*	Endangered	Not Listed	Absent. No black ash encountered on the subject property.
Vascular Plants	Butternut	*Juglans cinerea*	Endangered	Endangered	Absent. No butternut encountered on the subject property.

[A]Classification of species as they are anticipated to appear on the updated O. Reg. 230/08 Species at Risk Ontario (SARO) list on January 25, 2023.

[B]Classification of species as they appear on Schedule 1 of the Species at Risk Act.

Wildlife Category	Wildlife Habitat	SWH Assessment
Seasonal Concentration Areas of Animals	**Waterfowl Stopover and Staging Areas (Terrestrial)** Rationale: Habitat important to migrating waterfowl.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 100 m of the adjacent lands.
Seasonal Concentration Areas of Animals	**Waterfowl Stopover and Staging Areas (Aquatic)** Rationale: Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.	Absent. None of the appropriate species were observed during the dawn breeding bird surveys nor through incidental occurrence.
Seasonal Concentration Areas of Animals	**Shorebird Migratory Stopover Area** Rationale: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Seasonal Concentration Areas of Animals	**Raptor Wintering Area** Rationale: Sites used by multiple species, a high number of individuals and used annually are most significant.	Absent. The appropriate meadow/field and forest/woodland combination is not anticipated to extend onto the subject property.
Seasonal Concentration Areas of Animals	**Bat Hibernacula** Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.	Absent. None of the listed ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 400 m of the adjacent lands.
Seasonal Concentration Areas of Animals	**Bat Maternity Colonies** Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Candidate. The G058Tt community was assessed as having more than 10 snags per hectare and as such, may function as the SWH, Bat Maternity Colonies.
Seasonal Concentration Areas of Animals	**Turtle Wintering Areas** Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Candidate. The G148H community has the potential to function as the SWH, Turtle Wintering Area.
Seasonal Concentration Areas of Animals	**Reptile Hibernaculum** Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Absent. No candidate reptile hibernaculum encountered on the subject property.
Seasonal Concentration Areas of Animals	**Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)** Rationale: Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 50 m of the adjacent lands.
Seasonal Concentration Areas of Animals	**Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)** Rationale: Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Absent. None of the appropriate ELC Ecosite Codes have been identified on the subject property.

Wildlife Category	Wildlife Habitat	SWH Assessment
Seasonal Concentration Areas of Animals	**Colonially - Nesting Bird Breeding Habitat (Ground)** Rationale: Colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Absent. The subject property is not located on a rocky island or peninsula within a lake or large river.
Seasonal Concentration Areas of Animals	**Deer Yarding Areas** Rationale: Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in “yards” to survive severe winter conditions. Deer yards typically have a long history of annual use by deer. Sites identified are typically the only known sites in the area.	Confirmed. White-tailed Deer Wintering Area (Stratum 2) extends onto the subject property (Figure 3).
Rare Vegetation Communities	**Beach/ Beach Ridge/Bar/ Sand Dunes** Rationale: Uncommon to rare in Ecoregion, some of the best examples are in the North Channel (e.g. Mississagi River delta).	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Rare Vegetation Communities	**Shallow Atlantic Coastal Marsh** Rationale: Provincially rare communities almost entirely restricted to Ecoregion 5E.	Absent. None of the indicator species or other asssociated species were encountered on the subject property.
Rare Vegetation Communities	**Cliffs and Talus Slopes** Rationale: Uncommon to rare in Ecoregion 5E, Calcium rich, marble cliffs are a much rarer feature.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Rare Vegetation Communities	**Rock Barren** Rationale: Uncommon to rare in Ecoregion.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Rare Vegetation Communities	**Sand Barren** Rationale: Uncommon to rare in Ecoregion.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Rare Vegetation Communities	**Alvar** Rationale: Alvars are extremely rare habitats in Ecoregion 5E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 5E are small and highly localized just north of the Palaeozoic-Precambiran contact.	Absent. No alvars were observed on the subject property.
Rare Vegetation Communities	**Old Growth Forest** Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.	Absent. No indication of old-growth forest on the subject property.
Rare Vegetation Communities	**Bog** Rationale: Bogs are a fairly rare vegetation community in Ecoregion 5E.	Absent. No bogs identified on the subject property.
Rare Vegetation Communities	**Tallgrass Prairie** Rationale: In Ecoregion 5E, there are few if any tallgrass prairie remnants. Tallgrass plant species occur, often together, primarily along shorelines.	Absent. No tallgrass prairies identified on the subject property.

Wildlife Category	Wildlife Habitat	SWH Assessment
Rare Vegetation Communities	**Savannah** Rationale: Savannahs are extremely rare habitats in Ontario.	Absent. No savannahs identified on the subject property.
Rare Vegetation Communities	**Rare Forest Type: Red Spruce** Rationale: Stands containing red spruce trees are rare in Ecoregion 5E.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Rare Vegetation Communities	**Rare Forest Type: White Oak** Rationale: Stands containing white oak trees are rare in Ecoregion 5E.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Specialized Habitats of Wildlife considered SWH	**Waterfowl Nesting Area** Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	Absent. No suitable upland habitat anticipated to occur in connectivity to the G148H community on the subject property.
Specialized Habitats of Wildlife considered SWH	**Bald Eagle and Osprey Nesting, Foraging and Perching Habitat** Rationale: Nest sites are fairly uncommon in Eco-region 5E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Absent. No nests of the appropriate species were observed on the subject property. Data extracted from Land Information Ontario does not identify nests of the appropriate species in close proximity (i.e., <500 m) to the subject property.
Specialized Habitats of Wildlife considered SWH	**Woodland Raptor Nesting Habitat** Rationale: Nests sites for these species are rarely identified; these area sensitive habitats are often used annually by these species.	Absent. No nests of the listed species were observed on the subject property. Data extracted from Land Information Ontario does not identify nests of the appropriate species in close proximity (i.e., <500 m) to the subject property.
Specialized Habitats of Wildlife considered SWH	**Turtle and Lizard Nesting Areas** Rationale: These habitats are rare and when identified will often be the only breeding site for local populations of turtles.	Absent. No area with exposed mineral soils for turtle nesting encountered on the subject property. Moreover, five-lined skink is not anticipated to occur on the subject property.
Specialized Habitats of Wildlife considered SWH	**Seeps and Springs** Rationale: Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Absent. No seeps or springs identified on the subject property.
Specialized Habitats of Wildlife considered SWH	**Aquatic Feeding Habitat** Rationale: Aquatic Feeding Habitats are an extremely important habitat component for moose and other wildlife as they supply important nutrients.	Absent. Aquatic Feeding Habitat has not been mapped on the subject property.
Specialized Habitats of Wildlife considered SWH	**Mineral Licks** Rationale: Mineral licks are a valuable habitat component but are also very rare on the landscape.	Absent. No mineral licks identified on the subject property nor anticipated to occur in up to 200 m of the adjacent lands.
Specialized Habitats of Wildlife considered SWH	**Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf** Rationale: Species are important fur bearing mammals and specific denning habitat is becoming increasingly scarcer due to development pressures.	Absent. None of the appropriate species were observed on the subject property. Moreover, no evidence of denning site for the appropriate species encountered on the subject property.

Wildlife Category	Wildlife Habitat	SWH Assessment
Specialized Habitats of Wildlife considered SWH	**Amphibian Breeding Habitat (Woodland)** Rationale: These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations.	Confirmed. The G148H and adjoining G011Tt community contained sufficient numbers of the appropriate species to be considered as the SWH, Amphibian Breeding Habitat (Woodland). Refer to Appendix C for more details. The SWH includes the G148H community and up to 230 m of contiguous woodland.
Specialized Habitats of Wildlife considered SWH	**Amphibian Breeding Habitat (Wetlands)** Rationale: Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	Confirmed. The G148H community contained sufficient numbers of the appropriate species to be considered as the SWH, Amphibian Breeding Habitat (Wetland). Refer to Appendix C for more details. The SWH includes the G148H community and associated shoreline area.
Specialized Habitats of Wildlife considered SWH	**Mast Producing Areas** Rationale: Mast is a very important food requirement for many wildlife species.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Habitats of Species of Conservation Concern considered SWH	**Marsh Breeding Bird Habitat** Rationale: Wetlands for these bird species are very productive and rare in Central Ontario landscapes.	Absent. None of the appropriate species were observed during the dawn breeding bird surveys nor through incidental occurrence.
Habitats of Species of Conservation Concern considered SWH	**Open Country Bird Breeding Habitat** Rationale: This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Habitats of Species of Conservation Concern considered SWH	**Shrub/Early Successional Bird Breeding Habitat** Rationale: This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Habitats of Species of Conservation Concern considered SWH	**Special Concern and Rare Wildlife Species** Rationale: These species are Provincially Rare or have experienced significant population declines in Ontario.	Candidate. Special concern species have the potential to occur on the subject property (Table 3). No provincially rare plant or bird species were observed on the subject property (Table 1 and 2).
Animal Movement Corridors	**Amphibian Movement Corridors** Rationale: Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Absent. No amphibian breeding corridor extending from confirmed SWH identified on the subject property.
Animal Movement Corridors	**Cervid Movement Corridors** Rationale: Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.	Absent. Deer Wintering Habitat extends across the subject property. Corridors generally occur between Deer Wintering Habitat sites.
Animal Movement Corridors	**Furbearer Movement Corridor** Rationale: The identification of denning sites is rare, corridors to and from the habitat must be maintained as this habitat is extremely important for local populations.	Absent. The SWH, Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf, was not identified on the subject property.

Table 4: Significant Wildlife Habitat Assessment **SEC 23-072 752/8 Peterson Road**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	SWH Assessment
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 5E	**5E-11**	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 5E	**5E-13**	Absent. The subject property is not located in EcoDistrict 5E-13.

List of Appendices

Appendix A: Natural Heritage Areas Mapping

Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

Appendix A: Natural Heritage Areas Mapping

Map created:9/6/2024

Notes:

Legend

- Assessment Parcel
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland

0.3 0 0.16 0.3 Kilometres

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

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

Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

Appendix A: Natural Heritage Areas Mapping

Map created:9/6/2024

Notes:

Legend

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

10.3 0 5.17 10.3 Kilometres

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

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

Appendix B: Hastings County Consultation

Gmail

Cassandra Fligg <sumacenvironmental@gmail.com>

752/8 Peterson Road, Maynooth - EIS

John Jardine <jjardine@hastingshighlands.ca> Tue, Sep 19, 2023 at 12:15 PM
To: Cassandra Fligg <sumacenvironmental@gmail.com>
Cc: Cathy Bujas <cbujas@hastingshighlands.ca>

Hi Cassandra,

Thank you for reaching out to the Municipality to review the Terms of Reference.

The Terms of Reference satisfactory to the Municipality.

Kind regards,

John Jardine

Municipal Planner

The Municipality of Hastings Highlands

Hastings Highlands
Beautiful By Nature

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W: www.hastingshighlands.ca | E: jjardine@hastingshighlands.ca

Please Note: That it is the Municipality's service target to respond to emails with an initial response within two (2) business days.

Submit a Customer Service Request

From: Cassandra Fligg <sumacenvironmental@gmail.com>
Sent: Wednesday, September 13, 2023 2:56 PM
To: John Jardine <jjardine@hastingshighlands.ca>
Subject: 752/8 Peterson Road, Maynooth - EIS

Good afternoon,

Sumac Environmental Consulting (Sumac) has been retained to complete an Environmental Impact Study (EIS) at 752/8 Peterson Road, Maynooth (Roll No. 12-90-278-010-48900-0000). It is our understanding that the landowner wishes to construct a campground/resort facility on the subject property.

Sumac anticipates the following tasks to the be required for the EIS:

- Complete a background review of documented occurrences of Species at Risk (SAR) in the local area.
- Complete the following field studies on the subject property:

1. Complete bat snag surveys in the forested communities that have the potential to function as bat maternity roosting habitat during leaf-off conditions (~November to April) in 2023/2024.
2. Map and characterize surface water features following spring freshet of 2024.
3. Complete a spring frog survey in general accordance with the Marsh Monitoring Protocol (Bird Studies Canada, 2008) and search for amphibian egg masses in April, May and June of 2024.
4. Complete two (2) dawn breeding bird surveys in general accordance with the Ontario Breeding Bird Atlas protocol (OBBA, 2001) in May, June and/or July of 2024.
5. Complete a vascular plant inventory in spring of 2024.
6. Classify vegetation communities following protocol of the Ecological Land Classification of Ontario - Operational Draft (Banton et al. 2009) in spring of 2024.

- Prepare a report that includes the following:

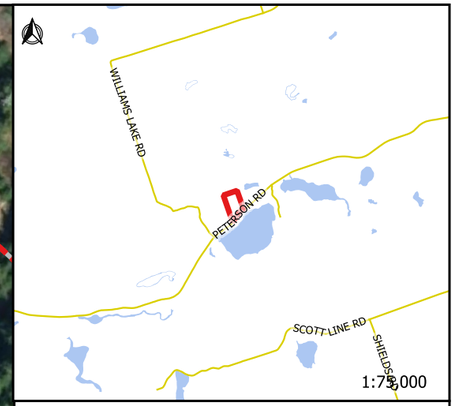
1. A review of natural heritage policies and regulations applicable to the proposed development.
2. A description of the form and function of natural heritage features identified on the subject property and adjacent lands (i.e., up to 120 m).
3. A Species at Risk Habitat Assessment.
4. A Significant Wildlife Habitat Assessment.
5. Impact assessment that identifies potential impacts to natural heritage features resulting from the proposed development.

6. Mapping that depicts natural heritage features, buffer areas, proposed development footprint, etc. where applicable.

7. Conclusion and recommendations (e.g., sensitive timing windows, mitigation measures).

At this time, I ask that you please provide review for the proposed terms of reference for the EIS as outlined above.
[Quoted text hidden]

Appendix C: Spring Frog Survey



Legend

- Adjacent Lands
- Subject Property
- Watercourse
- Frog Monitoring Station
- Survey 1 (04-27-2024) (Temp: 9c, Wind: 1, precip.: Nil.)
- Survey 2 (05-17-2024) (Temp: 16c, Wind: 0, Precip.: Nil.)
- Survey 3 (06-25-2024) (Temp: 19c, Wind: 2, precip.: Nil.)
- ELC Vegetation Communities

G011Tt	Very Shallow, Dry to Fresh: Red Pine - White Pine Conifer
G052Tt	Dry to Fresh, Course: Spruce - Fir Conifer
G058Tt	Dry to Fresh, Course: Maple Hardwood
G148H	Mineral Shallow Marsh

0 10 20 30 40 50 m

1:1,000

Appendix C: Spring Frog Survey

Sumac ENVIRONMENTAL CONSULTING LTD.

Designed by: N.F.
Date: 09/06/2024
Project: SEC 23-072

C:\Users\Sumac 2\Documents\Sumac 2\Projects\2023\SEC 23-072\Project Files