Version 1.1

2357 Lakeside Road in the
Township of Douro-Dummer

October 2024

Environmental Impact Study

Sumac
ENVIRONMENTAL CONSULTING

Prepared For:
Laura Stratton

Prepared By:
Sumac Environmental Consulting

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October 28, 2024 SEC 24-082

Sent by e-mail to:
Laura Stratton
[redacted]

Re: **Environmental Impact Study at 2357 Lakeside Road in the Township of Douro-Dummer**

Dear Ms. Stratton,

Thank you for retaining Sumac Environmental Consulting to prepare an Environmental Impact Study at 2357 Lakeside Road in the Township of Douro-Dummer. 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 Laura Stratton 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

[redacted]

Cassandra Fligg, M.Sc.
Environmental Consultant

[redacted]

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

Report Summary

Sumac Environmental Consulting has prepared an Environmental Impact Study at 2357 Lakeside Road in the Township of Douro-Dummer. It is our understanding that this report has been requested by the County of Peterborough and Otonabee Conservation in response to a development application that supports the construction of a single-family dwelling in the approximate location of the existing cottage. 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 features are not anticipated, should the proponent follow the recommendations provided herein.

The recommendations provided in Section 8.2 are summarized as follows:

- All disturbed portions of the subject property should be re-seeded and planted with native non-invasive vegetation immediately following the completion of site works.
- The proponent is encouraged to re-vegetate all disturbed portions of wetland/fish habitat buffer remaining post-development with non-invasive native trees, shrubs and groundcover, where feasible.
- A silt fence should be used during construction to protect aquatic features (Figure 3).
- To protect roosting Eastern small-footed myotis, there should be no disturbance (e.g., construction access, digging, trenching, compaction, changes in grade or other soil disturbance) beyond the limits of silt fence.
- 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.
- The proposed design should direct rainwater runoff from the proposed rooftop to a permeable surface by directing downspouts to a softscape area that will allow for infiltration during high-flow conditions.
- To protect breeding migratory birds, vegetation removal should not occur between April 5 and August 28 of any given year unless otherwise directed by a qualified biologist at the time of site works.

- To protect roosting bats, tree clearing should not occur between April 1 and September 30 of any given year unless otherwise directed by a qualified biologist at the time of site works.
- 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 2357 Lakeside Road in the Township of Douro-Dummer (hereinafter referred to as the 'subject property'). It is our understanding that this report has been requested by the County of Peterborough and Otonabee Conservation in response to a development application that supports the construction of a single-family dwelling in the approximate location of the existing cottage.

The subject property is approximately 0.18 ha in size and consists of a cottage, amenity space and natural cover (Figure 1). The subject property is situated on the shoreline of South Bay, a bay of Stony Lake. Schedule A4-2 to the County of Peterborough Official Plan (office consolidation 2022) shows the 'Lakeshore Residential' land use designation as occurring on the subject property. A portion of the Provincially Significant Wetland, Hull South Bay Wetland, has been mapped on the subject property (Appendix A). The surrounding area is predominantly composed of shoreline residential properties and 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 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 Provincial Policy Statement, 2020 and A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019.

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.

2.2.3. Conservation Authorities Act

Regulated lands of the Otonabee Region Conservation Authority (ORCA) have been mapped on the subject property (Appendix B). Conservation Authorities are empowered by the *Conservation Authorities Act* to regulate development and activities in or adjacent to river or stream valleys, Great Lakes and inland lakes' shorelines, watercourses, hazardous lands and wetlands.

2.3. Municipal

2.3.1. County of Peterborough Official Plan

The County of Peterborough Official Plan (office consolidation 2022) identifies the following land use designations and/or features on the subject property:

- Lakeshore Residential (Schedule A4-2);
- Provincially Significant Wetlands (Schedule A4-2); and,
- Environmental Constraint (Peterborough GIS).

As per Section 4.1.3.1 of the County of Peterborough Official Plan (office consolidation 2022), development and site alterations within provincially significant wetlands and in significant portions of the habitat of endangered and threatened species is not permitted.

Moreover, where a feature is of more than one type, or the adjacent lands of nearby features overlap, the most restrictive provisions apply.

Moreover, development and site alteration will not be permitted in fish habitat except in accordance with provincial and federal requirements.

Moreover, development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas listed above unless the ecological function of the adjacent lands has been evaluated in accordance with an environmental impact assessment as described in Section 4.1.3.1 and it has been determined that there will be no new negative impacts on the natural features or on their ecological functions.

Moreover, notwithstanding any other policy of Section 4.4.3, local plans and zoning by-laws will require that all new development and leaching beds be set back at least 30 metres from the ordinary high water marks of all waterbodies.

Moreover, local municipalities may authorize minor variances from the 30 metre setback requirement, without the variance being considered to be inconsistent with the general intent and purpose of the local plan, in the following situations:

- on a lot existing on the date this Official Plan Amendment No. 3 comes into effect;
- the addition to an existing building.

As per Section 6.2.6.3 c. of the County of Peterborough Official Plan (office consolidation 2022), the preservation of naturally-vegetated shoreline is encouraged in order to minimize destruction to the shoreline and wet beach habitat, minimize visual impact on the waterbody, maintain wildlife habitats and corridors and improve water quality.

As per Section 6.2.15.1 of the County of Peterborough Official Plan (office consolidation 2022), the Environmental Constraint Area designation includes those lands having inherent environmental hazards such as flood or erosion susceptibility, poor drainage, organic soils, instability or any other similar physical characteristic or limitation and includes other non provincially-significant wetlands which, if developed upon, could result in the deterioration or degradation of the environment and cause property damage or loss of life.

As per Section 6.2.16.3 d. of the County of Peterborough Official Plan (office consolidation 2022), if any development or site alteration is to be considered on lands adjacent to a Provincially Significant Wetland (within 120 metres), an Environmental Impact Assessment shall be required to evaluate the ecological function of the adjacent lands and to determine if there will be negative impact on the wetland or its ecological functions, and recommend measures to mitigate such impacts.

As per Section 6.2.16.3 f. of the County of Peterborough Official Plan (office consolidation 2022), the Environmental Impact Assessment must address to the satisfaction of the Township and/or the County as appropriate that the development or site alteration shall not result in a loss of wetland

functions, not create a subsequent demand for future development which will negatively impact on existing wetland functions, not conflict with existing site-specific wetland management practices, and, not result in a loss of contiguous Wetland area.

2.3.2. Township of Douro-Dummer

The Township of Douro-Dummer Official Plan is located in sections 6 and 7 of the County of Peterborough Official Plan (office consolidation 2022).

3.0 Background Review

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. 17QK33 of the Ontario Butterfly Atlas;
- Atlas Square No. 17QK33 of the Ontario Reptile and Amphibian Atlas;
- Atlas Square No. 17QK3639 of the Natural Heritage Information Centre;
- Atlas Square No. 17TQK33 of the Ontario Breeding Bird Atlas;
- County of Peterborough Official Plan (office consolidation 2022);
- eBird;
- iNaturalist; and
- Land Information Ontario.

Given the relevant planning jurisdiction, the following features are being considered in the EIS, where applicable to the subject property and adjacent lands:

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

4.0 Characterizing the Natural Environment: Approach and Methodology

Sumac staff, Nathan Fligg, carried out field studies on the subject property on August 26, 2024.

4.1. Vegetation

4.1.1. Botanical Inventory

A vascular plant inventory was completed for the vegetation communities that occur on or extend onto the subject property.

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. 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

Background mapping from the MNRF was reviewed to identify the nearest Area of Natural and Scientific Interest.

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 evidence of surface water features (e.g., watercourse, seeps, spring, vernal pool, inland lakes). Identified surface water feature(s) were mapped, characterized and assessed for the 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 proximity to the subject property. An 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.

4.5. Wetland

The subject property was screened for wetland feature(s) by a qualified wetland evaluator and if present, delineated following the appropriate method (e.g., 50% vegetation rule) as described in the Ontario Wetland Evaluation System: Southern Manual 4th Edition. Digital terrain models and orthographic imagery were used to identify candidate wetland 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 Sumac's field investigation.

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).

5.0 Data Analysis

5.1. Vegetation

5.1.1. Botanical Inventory

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

5.1.2. Vegetation Communities

The subject property contained three (3) distinct communities (Figure 2):

1. G015oTt Very Shallow, Dry to Fresh Red Pine - White Pine Mixedwood: Approximately 236 m^2 of open woodland occurred along the northern edge of the subject property and extended into the adjacent lands. The canopy consisted mostly of mid-aged white pine with hardwood associates (e.g., Northern red oak, white oak, etc.). A well vegetated mid-layer consisted of successional tree species (e.g., balsam fir, white ash, Eastern white cedar) and shrubs (e.g., staghorn sumac and European buckthorn). The ground level was well vegetated with a mixture of forbs (e.g., wild sarsaparilla, European lily-of-the-valley, large-leaved aster, common speedwell, etc.). Multiple woodland patches with similar vegetation characteristics occurred throughout the adjacent lands. Substrates consisted of shallow mineral substrates with inclusions of exposed bedrock.
2. G150H Open Water Marsh: Floating-leaved: This aquatic community occurred along the eastern edge of the subject property within Stony Lake. The community consisted of floating leaved vegetation (i.e., white water-lily, variegated pond-lily, watershield and lesser duckweed), submergent vegetation (i.e., American eelgrass, Canada waterweed, Eurasian water-milfoil and Richardson's pondweed) and to a lesser extent, emergent vegetation (i.e., Northern water-horehound, broad-leaved cattail, sensitive fern, and Eastern marsh fern). The community exhibited average water depths of less than 2 m and mineral dominated substrates.
3. G151H Open Water Marsh – Mineral: This aquatic community occurred along the northeastern edge of the subject property within Stony Lake. The community consisted of

submergent vegetation (i.e., American eelgrass, Canada waterweed, Eurasian Water-milfoil and Richardson's pondweed) and to a lesser extent, floating leaved vegetation (i.e., white water-lily, variegated pond-lily, watershield and lesser duckweed). The community exhibited average water depths of less than 2 m and mineral dominated substrates.

The portion of the subject property that includes a single family-dwelling, gravel driveway, accessory buildings, decks, walkways and other amenity space is characteristic of a more cultural and anthropogenic community and therefore, has been given the descriptor of 'Maintained Area'. This area contained some exposed bedrock and measured approximately 1,239 m^2 in size.

5.2. Area of Natural and Scientific Interest

The nearest life science Area of Natural and Scientific Interest is mapped approximately 1.5 km southwest of the subject property. No further analysis required.

5.3. Fish Habitat

The subject property is situated on the shoreline of South Bay, a bay of Stony Lake. Data extracted from the Aquatic Resource Area Polygon Segment of the Land Information Ontario (accessed October 8, 2024) identified Stony Lake as having a warmwater thermal regime. Fish species known to occur in Stony Lake include cisco, lake whitefish, largemouth bass, muskellunge, pumpkinseed, rainbow smelt, rock bass, sauger, smallmouth bass, trout-perch, walleye, white sucker and yellow perch among others. The Ministry of Natural Resources and Forestry Fish Activity Area dataset identifies Muskellunge Spawning Area along the shoreline of the subject property.

5.4. Habitat of Endangered and Threatened Species

The SAR Habitat Assessment identified candidate habitat of endangered and threatened species on the subject property (Table 2).

5.4.1. Mammals

Eastern Small-footed Myotis: Rock features with the potential of functioning as roosting habitat for Eastern small-footed myotis were encountered on the subject property (Figure 3). Foraging habitat may include forest edge and wetland, should this species be present.

Little Brown Myotis: The G015oTt community has the potential of functioning as roost habitat for little brown myotis. Foraging habitat may include forest edge and wetland, should this species be present.

5.4.2. Reptiles

Blanding's Turtle: Blanding's turtle may occur in the Hull South Bay Wetland. No turtle nesting habitat identified on the subject property.

5.5. Wetland

The Provincially Significant Wetland, Hull South Bay Wetland Complex, has been mapped along the eastern boundary of the subject property. The limits of said wetland feature that occurs on and near the subject property was refined during Sumac's site visit and generally consistent with background mapping (Figure 3). The wetland feature can be described as lacustrine and was comprised of open-water marsh dominated by floating and submergent vegetation.

5.6. Wildlife Habitat

The following wildlife were observed during Sumac's field investigations:

- American goldfinch (*Spinus tristis*);
- Black-capped chickadee (*Poecile atricapillus*);
- Eastern chipmunk (*Tamias striatus*);
- Gray treefrog (*Hyla versicolor*);
- Midland painted turtle (*Chrysemys picta marginata*);
- Mourning dove (*Zenaida macroura*);
- Pumpkinseed (*Lepomis gibbosus*); and
- Smallmouth bass (*Micropterus dolomieu*).

The SWH Assessment identified six (6) candidate SWH as occurring on the subject property (Table 3).

5.6.1. Seasonal Concentration Areas of Animals

Waterfowl Stopover and Staging Areas (Aquatic): The G150H and G151H communities have the potential to function as the SWH, Waterfowl Stopover and Staging Area.

Turtle Wintering Area: The G150H and G151H communities have the potential to function as SWH, Turtle Wintering Area.

5.6.2. Specialized Habitats of Wildlife Considered SWH

Amphibian Breeding Habitat (Woodland): The G150H and G151H communities have the potential to function as the SWH, Amphibian Breeding Habitat (Woodland).

Amphibian Breeding Habitat (Wetland): The G150H and G151H communities have the potential to function as the SWH, Amphibian Breeding Habitat (Wetland).

5.6.3. Habitats of Species of Conservation Concern Considered SWH

Marsh Breeding Bird Habitat: The G150H and G151H communities have the potential to function as the SWH, Marsh Breeding Bird Habitat.

Special Concern and Rare Wildlife Species: Special concern species were identified as having the potential to occur on the subject property (Table 2). No provincially rare vascular plant species were encountered on the subject property (Table 1).

Black Tern: Black tern may occur in the Hull South Bay Wetland.

Monarch: Monarch breeding may occur in the Maintained Area near the existing roadway where common milkweed occurs. Adult monarch are not anticipated to forage on the subject property due to the lack of favorable nectar sources.

Northern Map Turtle: Northern map turtle may occur in the Hull South Bay Wetland. No turtle nesting habitat identified on the subject property.

6.0 Project Description

The proponent wishes to demolish the existing cottage and construct a permanent residential dwelling in its approximate location. 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 245 m^2 of the Maintained Area. The proponent is encouraged to re-vegetate all disturbed areas remaining post-development with non-invasive native trees, shrubs and groundcover (Section 8.2.1).

7.2. Fish Habitat

The proposed development is not located in South Bay and as such, direct impacts to fish habitat are not anticipated. With consideration of the identified Muskellunge Spawning Area along the shoreline of the subject property, a 30 m setback to South Bay is recommended to protect fish habitat. The proposed development is located in the prescribed buffer area, in the approximate location of the existing cottage and portions of the Maintained Area (Figure 3). Areas with low

native species diversity and fewer ecological functions, such as the Maintained Area that comprises a portion of fish habitat buffer, are generally less sensitive to impacts or stressors. The encroachment to fish habitat buffer as outlined above may be considered 'minor' in size (i.e., <1% of buffer area surrounding the bay) and does not appear to require removal of riparian trees or shrubs. Given this information, the proposed development is not anticipated to significantly impact the performance of the remaining portion of fish habitat buffer. Site specific measures are recommended to prevent the deposition of sediments and deleterious substances to fish habitat (Section 8.2.2 and 8.2.3). The proponent is encouraged to re-vegetate all disturbed portions of fish habitat buffer remaining post-development with non-invasive native trees, shrubs and groundcover, where feasible (Section 8.2.1).

7.3. Habitat of Endangered and Threatened Species

7.3.1. Mammals

Eastern Small-footed Myotis: The proposed development is not located in candidate roosting habitat and foraging habitat for Eastern small-footed myotis and as such, direct impacts to Eastern small-footed myotis and its habitat are not anticipated. Site specific measures are recommended to protect candidate roosting habitat for Eastern small-footed myotis (Section 8.2.2).

Little Brown Myotis: The proposed development is not located in the G015oTt community and foraging habitat for little brown myotis and as such, direct impacts to little brown myotis and its habitat are not anticipated. To protect roosting little brown myotis, tree clearing should not occur during the active bat season (Section 8.2.4).

7.3.2. Reptiles

Blanding's Turtle: The proposed development is not located in the Hull South Bay Wetland and turtle nesting habitat and as such, no direct impacts to Blanding's turtle and its habitat are anticipated. Any wildlife, including turtles, encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes (Section 8.2.5).

7.4. Wetland

The proposed development is not located in the Hull South Bay Wetland and as such, no direct impacts to wetland are anticipated. A 30 m buffer to Provincially Significant Wetland is generally recommended to protect said feature and its functions by mitigating impacts of the proposed land use. The proposed development is located in the prescribed buffer area, in the approximate location of the existing cottage and portions of the Maintained Area (Figure 3). Areas with low native species diversity and fewer ecological functions, such as the Maintained Area that comprises a portion of wetland buffer, are generally less sensitive to impacts or stressors. The

encroachment to wetland buffer as outlined above may be considered 'minor' in size (i.e., <1% of buffer area surrounding the wetland feature that extends across the greater landscape) and does not appear to require removal of trees or shrubs. Given this information, the proposed development is not anticipated to significantly impact the performance of the remaining portion of wetland buffer. Site specific measures are recommended to prevent the deposition of sediments and deleterious substances to wetland (Section 8.2.2 and 8.2.3). The proponent is encouraged to re-vegetate all disturbed portions of wetland buffer remaining post-development with non-invasive native trees, shrubs and groundcover, where feasible (Section 8.2.1).

7.5. Wildlife Habitat

7.5.1. Seasonal Concentration Areas of Animals

Waterfowl Stopover and Staging Areas (Aquatic): The proposed development is not located in the G150H and G151H communities and as such, direct impacts to the candidate SWH, Waterfowl Stopover and Staging Area, are not anticipated. Recommendations to protect wetland as described above in Section 7.4 should appropriate mitigate impacts to this SWH.

Turtle Wintering Area: The proposed development is not located in the G150H and G151H communities and as such, direct impacts to the candidate SWH, Turtle Wintering Area, are not anticipated. Recommendations to protect wetland as described above in Section 7.4 should appropriate mitigate impacts to this SWH.

7.5.2. Specialized Habitats of Wildlife Considered SWH

Amphibian Breeding Habitat (Woodland): The proposed development is not located in the G150H and G151H communities and as such, direct impacts to the candidate SWH, Amphibian Breeding Habitat (Woodland), are not anticipated. Recommendations to protect wetland as described above in Section 7.4 should appropriate mitigate impacts to this SWH.

Amphibian Breeding Habitat (Wetland): The proposed development is not located in the G150H and G151H communities and as such, direct impacts to the candidate SWH, Amphibian Breeding Habitat (Wetland), are not anticipated. Recommendations to protect wetland as described above in Section 7.4 should appropriate mitigate impacts to this SWH.

7.5.3. Habitats of Species of Conservation Concern Considered SWH

Marsh Breeding Bird Habitat: The proposed development is not located in the G150H and G151H communities and as such, direct impacts to the candidate SWH, Marsh Breeding Bird Habitat, are not anticipated. Recommendations to protect wetland as described above in Section 7.4 should appropriate mitigate impacts to this SWH.

Special Concern and Rare Wildlife Species: Special concern species were identified as having the potential to occur on the subject property (Table 2). No provincially rare vascular plant species were encountered on the subject property (Table 1).

Black Tern: The proposed development is not located in the Hull South Bay Wetland and as such, direct impacts to black tern and its habitat are not anticipated.

Monarch: No common milkweed is proposed for removal to facilitate the proposed development and as such, no direct impacts to monarch and monarch breeding habitat are anticipated.

Northern Map Turtle: The proposed development is not located in the Hull South Bay Wetland and as such, direct impacts to Northern map turtle and its habitat are not anticipated.

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. Native Plantings

All disturbed portions of the subject property should be re-seeded and planted with native non-invasive vegetation immediately following the completion of site works. The proponent is encouraged to re-vegetate all disturbed portions of wetland/fish habitat buffer remaining post-development with non-invasive native trees, shrubs and groundcover, where feasible.

8.2.2. Perimeter Control

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 in the approximate location as depicted on Figure 3. 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.

To protect roosting Eastern small-footed myotis, there should be no disturbance (e.g., construction access, digging, trenching, compaction, changes in grade or other soil disturbance) beyond the limits of silt fence.

8.2.3. 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.

In an effort of reducing the amount of pollutants from entering the South Bay, the proponent is encouraged to direct rainwater runoff from the proposed rooftop to a permeable surface by directing downspouts to a softscape area that will allow for infiltration during high-flow conditions.

8.2.4. Sensitive Timing Window

To protect breeding migratory birds, vegetation removal should not occur between April 5 and August 28 of any given year unless otherwise directed by a qualified biologist at the time of site works.

To protect roosting bats, tree clearing should not occur between April 1 and September 30 of any given year unless otherwise directed by a qualified biologist at the time of site works.

8.2.5. 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

County of Peterborough Official Plan (office consolidation 2022).
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.
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 C.27. Conservation Authorities Act.
R.S.O. 1990, c. P.13. Planning Act.
S.C. 1994, c. 22. Migratory Birds Convention 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:

Figure 1: Subject Property

Designed by: N.F.
Date: 10/08/2024
Project: SEC 24-082

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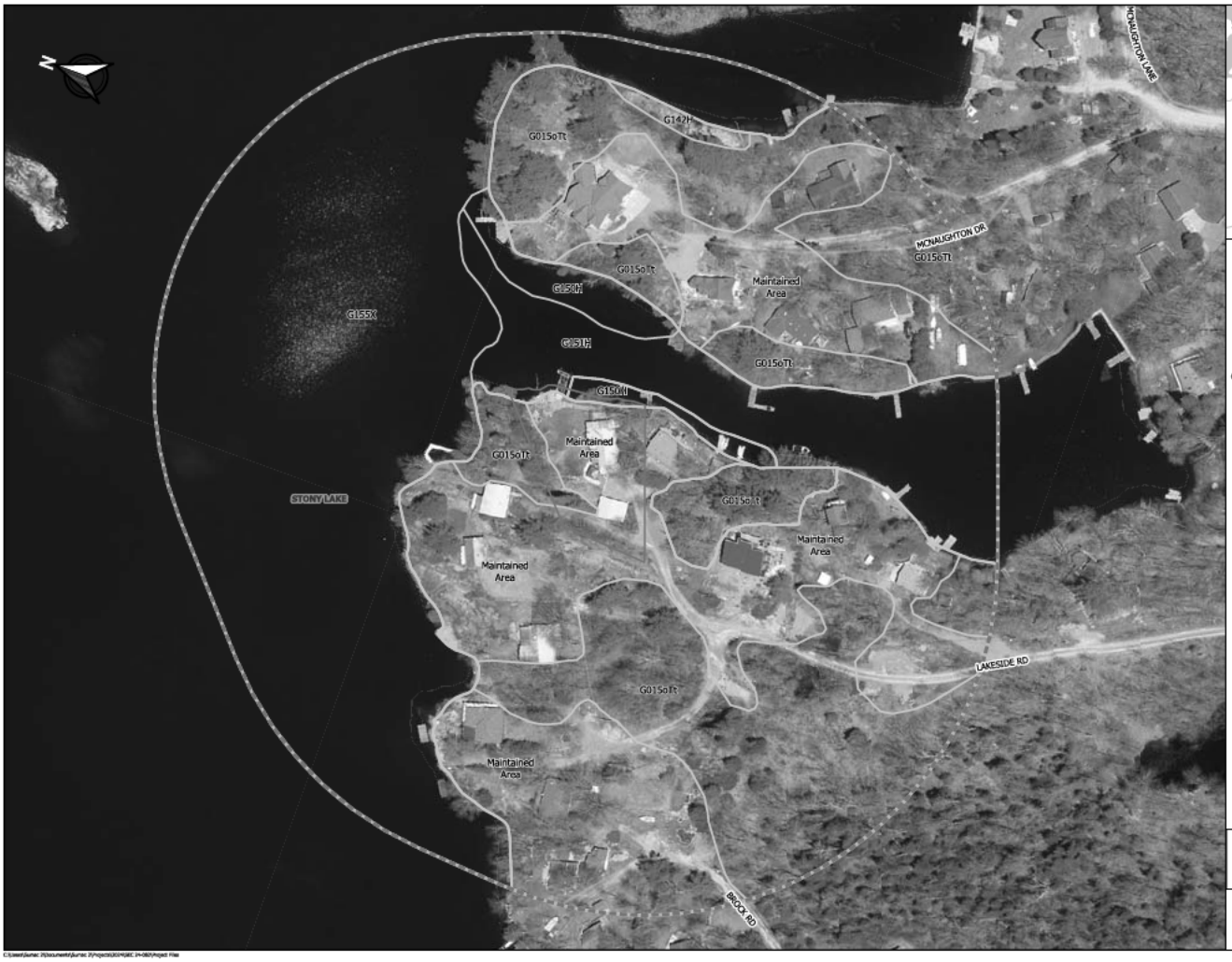

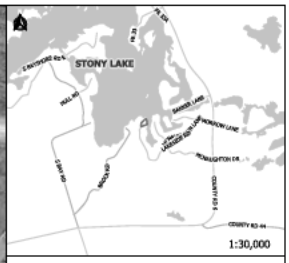

Legend

- Subject Property
- Adjacent Lands
- Watercourse
- ELC Vegetat on Commun t es

G015oTt	Very Shallow, Dry to Fresh Red Pine - White Pine Mixedwood
G142H	Mineral Meadow Marsh
G150H	Open Water Marsh: Floating-leaved
G151H	Open Water Marsh - Mineral
G155X	Active Limnetic Mineral

0 10 20 30 40 50 60 m

1:1,200

Figure 2: Existing Conditions

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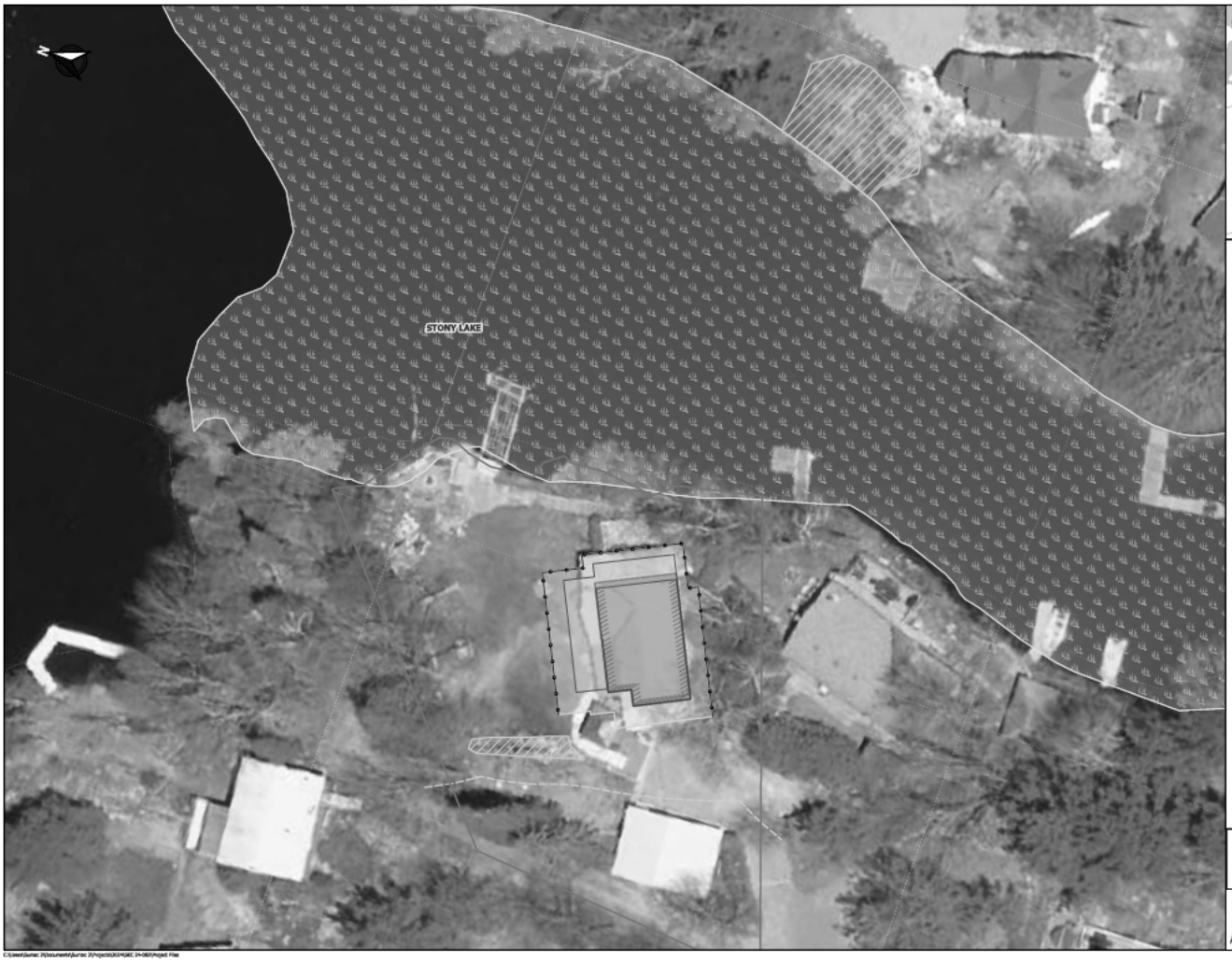

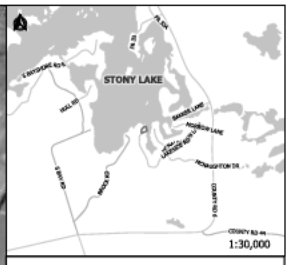

Legend

- Subject Property
- Adjacent Lands
- Proposed Dwe ng on Ex st ng Foundat on
- Proposed Deck ng
- Area of Work
- S t Fence
- Wet and
- F sh Hab tat/Wet and Buffer (30 m)
- Cand date Eastern Sma -footed Myot s Roost ng Hab tat

0 2.5 5 7.5 10 12.5 15 m

1:350

Figure 3: Proposed Development

Sumac ENVIRONMENTAL CONSULTING

Designed by: N.F.
Date: 10/08/2024
Project: SEC 24-082

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Table 1: Vascular Plant Inventory **SEC 24-082 Lakeside 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
		G015OItT	G150H	G151H	Maintained Area				Provincial[D]	Federal[E]		
Abies balsamea	Balsam Fir	✓				S5	G5	N				-3
Acer rubrum	Red Maple	✓				S5	G5	N				0
Aegopodium podagraria	Goutweed	✓			✓	SNA	GNR	N			SE5	0
Amelanchier arborea	Downy Serviceberry	✓				S5	G5	N				3
Aralia nudicaulis	Wild Sarsaparilla	✓				S5	G5	N				3
Asclepias syriaca	Common Milkweed				✓	S5	G5	N				5
Berberis thunbergii	Japanese Barberry	✓				SNA	GNR	N			SE5	3
Betula papyrifera	Paper Birch	✓				S5	G5	N				3
Brasenia schreberi	Watershield		✓	✓		S5	G5	N				-5
Convallaria majalis	European Lily-of-the-valley	✓			✓	SNA	G5	N			SE5	5
Daucus carota	Wild Carrot	✓			✓	SNA	GNR	N			SE5	5
Dianthus armeria	Deptford Pink	✓				SNA	GNR	N			SE5	5
Diervilla lonicera	Northern Bush-honeysuckle	✓				S5	G5	N				5
Dryopteris intermedia	Evergreen Wood Fern	✓				S5	G5	N				0
Elodea canadensis	Canada Waterweed		✓	✓		S5	G5	N				-5
Epipactis helleborine	Broad-leaved Helleborine	✓				SNA	GNR	N			SE5	3
Eurybia macrophylla	Large-leaved Aster	✓				S5	G5	N				5
Fragaria virginiana	Wild Strawberry	✓	✓			S5	G5	N				3
Fraxinus americana	White Ash	✓				S4	G4	N				3
Gentiana andrewsii	Andrews' Bottle Gentian	✓				S4	G5?	N				-3
Hypericum perforatum	Common St. John's-wort		✓			SNA	GNR	N			SE5	5
Ilex verticillata	Common Winterberry		✓			S5	G5	N				-3
Impatiens capensis	Spotted Jewelweed		✓			S5	G5	N				-3
Juniperus communis	Common Juniper	✓			✓	S5	G5	N				3
Lemna minor	Small Duckweed		✓			S5	G5	N				-5
Lycopus uniflorus	Northern Water-horehound		✓			S5	G5	N				-5
Medicago lupulina	Black Medick	✓			✓	SNA	GNR	N			SE5	3
Melilotus albus	White Sweet-clover	✓				SNA	G5	N			SE5	3
Myriophyllum spicatum	Eurasian Water-milfoil		✓	✓		SNA	GNR	N			SE5	-5
Nuphar variegata	Variegated Pond-lily		✓	✓		S5	G5T5	N				-5
Nymphaea odorata	Fragrant Water-lily		✓	✓		S5	G5	N				-5
Onoclea sensibilis	Sensitive Fern		✓			S5	G5	N				-3
Oxalis stricta	Upright Yellow Wood-sorrel	✓			✓	SNA	G5	N			SE5	3
Parthenocissus quinquefolia	Virginia Creeper	✓				S4?	G5	N				3
Phedimus spurius	Two-row Stonecrop	✓			✓	SNA	GNR	N			SE1	5
Philadelphus coronarius	European Mock-orange	✓			✓	SNA	GNR	N			SE1	5
Picea glauca	White Spruce	✓			✓	S5	G5	N				3
Pinus strobus	Eastern White Pine	✓			✓	S5	G5	N				3
Plantago major	Common Plantain	✓			✓	SNA	G5	N			SE5	3
Poa pratensis	Kentucky Bluegrass	✓			✓	S5	G5	P				3
Potamogeton richardsonii	Richardson's Pondweed		✓	✓		S5	G5	N				-5

Table 1: Vascular Plant Inventory **SEC 24-082 Lakeside 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
		G015OItT	G150H	G151H	Maintained Area				Provincial[D]	Federal[E]		
Potentilla recta	Sulphur Cinquefoil	✓			✓	SNA	GNR	N			SE5	5
Prunus pensylvanica	Pin Cherry	✓				S5	G5	N				3
Quercus rubra	Northern Red Oak	✓			✓	S5	G5	N				3
Rhamnus cathartica	European Buckthorn	✓			✓	SNA	GNR	N			SE5	0
Rhus typhina	Staghorn Sumac	✓			✓	S5	G5	N				3
Sambucus racemosa	Red Elderberry	✓			✓	S5	G5	N				3
Solidago canadensis	Canada Goldenrod	✓			✓	S5	G5	N				3
Symphyotrichum ericoides	White Heath Aster	✓			✓	S5	G5	P				3
Syringa vulgaris	Common Lilac	✓			✓	SNA	GNR	N			SE5	5
Taraxacum officinale	Common Dandelion	✓			✓	SNA	G5	N			SE5	3
Thelypteris palustris var. pubescens	Eastern Marsh Fern		✓			S5	G5T5	N				-3
Thuja occidentalis	Eastern White Cedar	✓			✓	S5	G5	N				-3
Toxicodendron radicans var. rydbergii	Western Poison Ivy	✓				S5	G5	N				0
Trifolium repens	White Clover	✓			✓	SNA	GNR	N			SE5	3
Tussilago farfara	Coltsfoot	✓			✓	SNA	GNR	N			SE5	3
Ulmus americana	White Elm	✓				S5	G4	N				-3
Vallisneria americana	American Eelgrass		✓	✓		S5	G5	N				-5
Veronica officinalis	Common Speedwell	✓			✓	SNA	G5	N			SE5	5
Vicia cracca	Tufted Vetch	✓			✓	SNA	GNR	N			SE5	5
Viola sororia	Woolly Blue Violet	✓				S5	G5	N				0
Vitis riparia	Riverbank Grape	✓				S5	G5	N				0
Typha latifolia	Broad-leaved Cattail		✓			S5	G5	N				-5

[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)* .

Table 2: Species at Risk Habitat Assessment **SEC 24-082 Lakeside Road**

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.
Birds	Barn Swallow	*Hirundo rustica*	Special Concern	Threatened	Absent. No barn swallow nests observed on the existing structures.
Birds	Black Tern	*Chlidonias niger*	Special Concern	Not Listed	Candidate. Black tern may occur in the Hull South Bay Wetland.
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. No suitable forest habitat for Canada warbler identified on the subject property.
Birds	Cerulean Warbler	*Setophaga cerulea*	Threatened	Endangered	Absent. No suitable forest habitat for Cerulean warbler identified on the subject property.
Birds	Chimney Swift	*Chaetura pelagica*	Threatened	Threatened	Absent. No suitable nesting site for chimney swift on the existing structure.
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 treed/open habitat for Eastern whip-poor-will identified on the subject property.
Birds	Eastern Wood-Pewee	*Contopus virens*	Special Concern	Special Concern	Absent. No suitable treed habitat for Eastern wood-pewee identified on the subject property.
Birds	Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern	Special Concern	Absent. No suitable forest habitat for evening grosbeak identified on the subject property.
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	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 open/forest habitat for olive-sided flycatcher identified on the subject property.
Birds	Peregrine Falcon	*Falco peregrinus*	Special Concern	Not Listed	Absent. No suitable cliffs or ledges for peregrine falcon identified on 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 woodpecker cavities encountered on the subject property.
Birds	Short-eared Owl	*Asio flammeus*	Threatened	Special Concern	Absent. No suitable open habitat for short-eared owl identified on the subject property.
Birds	Wood Thrush	*Hylocichla mustelina*	Special Concern	Threatened	Absent. No suitable forest habitat for wood thrush identified on the subject property.
Insects	Monarch	*Danaus plexippus*	Special Concern	Endangered	Candidate. Monarch breeding may occur in the Maintained Area near the existing roadway where common milkweed occurs. Adult monarch are not anticipated to forage on the subject property due to the lack of favorable nectar sources.
Mammals	Eastern Small-footed Myotis	*Myotis leibii*	Endangered	Not Listed	Candidate. Rock features with the potential of functioning as roosting habitat for Eastern small-footed myotis were encountered on the subject property (Figure 3). Foraging habitat may include forest edge and wetland, should this species be present.
Mammals	Little Brown Myotis	*Myotis lucifugus*	Endangered	Endangered	Candidate. The G015oTt community has the potential of functioning as roost habitat for little brown myotis. Foraging habitat may include forest edge and wetland, should this species be present.

Table 2: Species at Risk Habitat Assessment **SEC 24-082 Lakeside Road**

Species Grouping	Common Name	Scientific Name	Provincial Status[A]	Federal Status[B]	SAR Habitat Assessment
Mammals	Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	Absent. Northern myotis is generally associated with old growth forests and relies on interior forest habitat with low edge-to-interior ratios. Given the size and maturity of forest that extends onto the subject property, this species and its habitat are not anticipated.
Mammals	Tri-colored Bat	*Perimyotis subflavus*	Endangered	Endangered	Absent. Evidence of a reliance on older forest has been shown for tri-colored bat. Leaf clusters in the canopy of deciduous trees may be used as roosting habitat for tri-colored bat. Given the age and lack of mature deciduous trees in the treed area that extends onto the subject property, this species and its habitat are not anticipated.
Reptiles	Blanding's Turtle	*Emydoidea blandingii*	Threatened	Endangered	Candidate. Blanding's turtle may occur in the Hull South Bay Wetland. No turtle nesting habitat identified on the subject property.
Reptiles	Eastern Hog-nosed Snake	*Heterodon platirhinos*	Threatened	Threatened	Absent. Eastern hog-nosed snake generally occur where American toad can be found and in sandy, well-drained habitats. Although American toad may occur in and near the Hull South Bay Wetland, the subject property does not exhibit favorable habitat features for Eastern hog-nosed snake.
Reptiles	Northern Map Turtle	*Graptemys geographica*	Special Concern	Special Concern	Candidate. Northern map turtle may occur in the Hull South Bay Wetland. No turtle nesting habitat identified on the subject property.
Reptiles	Snapping Turtle	*Chelydra serpentina*	Special Concern	Special Concern	Absent. The portion of Hull South Bay that extends onto the subject property is likely too deep 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.

Table 3: Significant Wildlife Habitat Assessment **SEC 24-082 Lakeside Road**

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

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.	Candidate. The G150H and G151H communities have the potential to function as the SWH, Waterfowl Stopover and Staging Area.
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. No suitable beach areas, bars, unvegetated shoreline with the potential to function as the SWH, Shorebird Migratory Stopover Area, 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 appopriate combination of field/forest required to function as the SWH, Raptor Wintering Area, does not extend onto the subject property.
Seasonal Concentration Areas of Animals	**Bat Hibernacula** Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.	Absent. No candidate bat hibernacula encountered on the subject property.
Seasonal Concentration Areas of Animals	**Bat Maternity Colonies** Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Absent. None of the appropriate ELC Ecosite Codes were identified on the subject property.
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 G150H and G151H communities have the potential to function as 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 hibernacula encountered on the subject property nor anticipated to occur in up to 30 m of the adjacent lands.
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. No suitable banks or cliffs with the potential to function as the SWH, Colonially-Nesting Bird Breeding Habitat (Bank and Cliff) identified on the subject property.
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 Ecosites were identified on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 24-082 Lakeside Road**
Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

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.
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	Absent. According to data extracted from Land Information Ontario (accessed October 8, 2024), no deer yarding areas have been mapped on the subject property.
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 Ecosites were identified on the subject property.
Rare Vegetation Communities	**Shallow Atlantic Coastal Marsh** Rationale: Provincially rare communities almost entirely restricted to Ecoregion 5E.	Absent. The indicator species, Virginia meadowbeauty, for the SWH, Shallow Atlantic Coastal Marsh, was not encountered nor anticipated to occur in the G150H and G151H communities.
Rare Vegetation Communities	**Cliffs and Talus Slopes** Rationale: Uncommon to rare in Ecoregion 5E, Calcium rich, marble cliffs are a much rarer feature.	Absent. No cliffs or talus slops encountered on the subject property.
Rare Vegetation Communities	**Rock Barren** Rationale: Uncommon to rare in Ecoregion.	Absent. No rock barren of adequate size identified on the subject property.
Rare Vegetation Communities	**Sand Barren** Rationale: Uncommon to rare in Ecoregion.	Absent. No sand barren 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-Precambrian contact.	Absent. No alvars were identified 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. The forested communities identified on the subject property did not exhibit the appropriate characteristics to be considered as the SWH, Old Growth Forest.
Rare Vegetation Communities	**Bog** Rationale: Bogs are a fairly rare vegetation community in Ecoregion 5E.	Absent. No bogs identified on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 24-082 Lakeside Road**
Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	SWH Assessment
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.
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 Ecosites 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 Ecosites 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. The available upland habitat adjacent to the appropriate aquatic ecosites do not exhibit the key habitat features and minimum of average width to function as the SWH, Waterfowl Nesting Area.
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 bald eagle or osprey were observed on the subject property. Due to the size and maturity of the G015oTt community that extends onto the subject property, bald eagle and osprey are not anticipated to occur on the subejct 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 encountered on the subject property and no raptors were observed through incidental occurrence. The forested community that extends onto the subject property is likely too small and young to function as the SWH, Woodland Raptor Nesting Habitat.
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 turtle nesting areas identified on the subject property. The appropriate ELC Ecosites for the SWH, Lizard Nesting Areas, were not identified 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 encountered 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. Data extracted from Land Information Ontario (accessed October 8, 2024) does not suggest the presence of Aquatic Feeding Habitat for moose or deer on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 24-082 Lakeside Road**
Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	SWH Assessment
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.
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. No evidence of denning site for mink, otter, marten, fisher and grey wolf observed on the subject property.
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.	Candidate. The G150H and G151H communities have the potential to function as the SWH, Amphibian Breeding Habitat (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.	Candidate. The G150H and G151H communities have the potential to function as the SWH, Amphibian Breeding Habitat (Wetland).
Specialized Habitats of Wildlife considered SWH	**Mast Producing Areas** Rationale: Mast is a very important food requirement for many wildlife species.	Absent. The G015oTt community does not likely exhibit the required amount of mast producing trees of appropriate caliper to function as the SWH, Mast Producing Area.
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.	Candidate. The G150H and G151H communities have the potential to function as the SWH, Marsh Breeding Bird Habitat.
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 Ecosites 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. No suitable shrub/early successional habitat of adequate size to function as the SWH, Shrub/Early Successional Bird Breeding Habitat, 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 were identified as having the potential to occur on the subject property (Table 2). No provincially rare vascular plant species were encountered on the subject property (Table 1).

Table 3: Significant Wildlife Habitat Assessment **SEC 24-082 Lakeside Road**

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

Wildlife Category	Wildlife Habitat	SWH Assessment
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 waterway and adjoining vegetation with the potential of functioning as an amphibian movement corridor 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. No deer movement corridors anticipated to occur on the subject property.
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. No furbearer movement corridor anticipated to occur on the subject property.
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 5E	**5E-11**	Absent. None of the appropriate ELC Ecosites 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

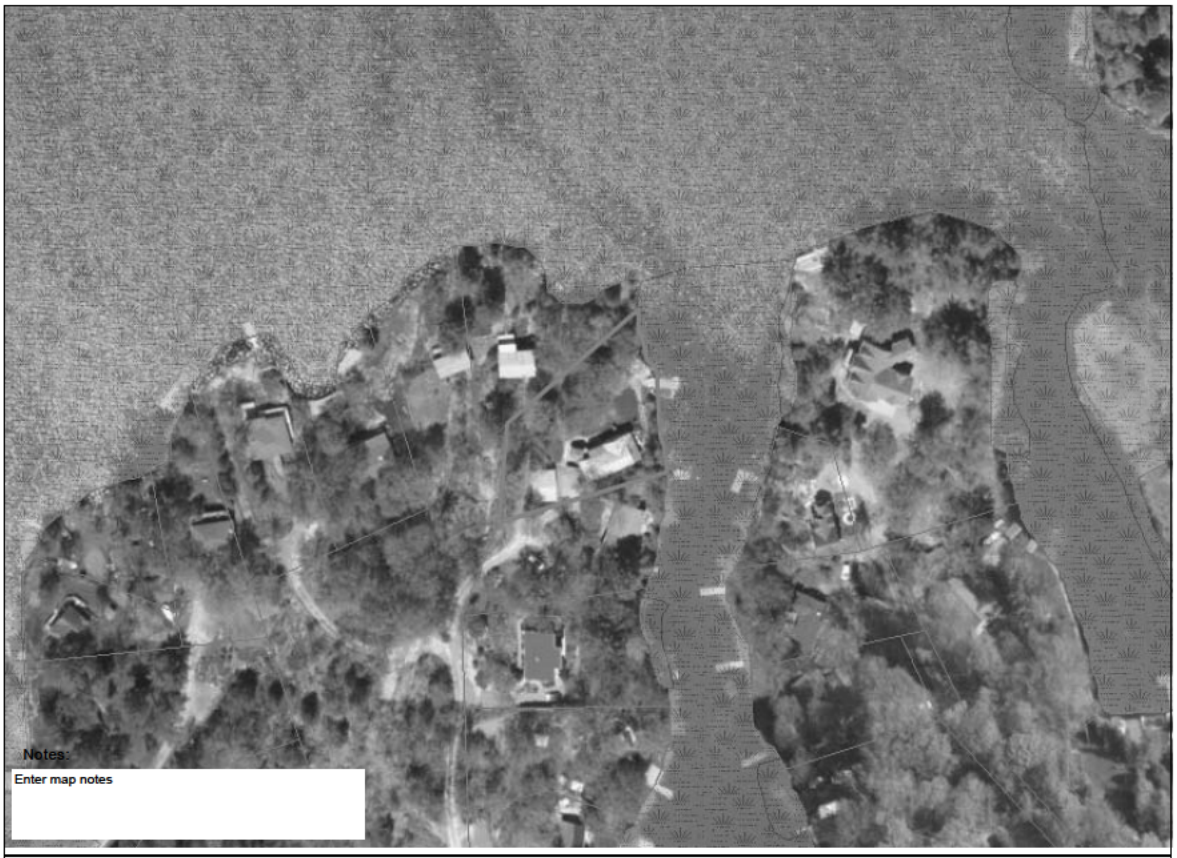
Ontario

Ministry of Natural Resources

Make-a-Map: Natural Heritage Areas

Appendix A

Map created:9/18/2024



Notes:

Enter map notes

Legend

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

0.1 0 0.04 0.1 Kilometres

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

Ontario

Ministry of Natural Resources

Make-a-Map: Natural Heritage Areas

Appendix A - ANSI

Map created:9/18/2024

Legend

- Assessment Parcel
- 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

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.

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(OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

Appendix B: ORCA Regulated Lands Mapping

Appendix B

9/18/2024, 12:54:32 PM

Regulated Area

1:1,128

0 0.01 0.01 0.03 mi

0 0.01 0.03 0.05 km

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Province of Ontario, Esri Canada, Esri, TomTom, Garmin,

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Otonabee Region Conservation Authority