# Natural Heritage Evaluation

## 1794 Appleview Road, Pickering, Ontario

Prepared for

## Apcom Enterprises

October 27, 2025
Project No. P2024-884

Prepared by

**GeoProcess Research Associates Inc.**
133 King Street West
PO Box 65506 DUNDAS
Dundas, ON L9H 6Y6

## List of Tables



## List of Maps

# 1. Introduction

GeoProcess Research Associates Inc. (GeoProcess) has been retained by Apcom Enterprises to complete a scoped Natural Heritage Evaluation (NHE) for the lands located at 1794 Appleview Road in Pickering, Ontario. This is herein referred to as the "Subject Property". The "Study Area" is defined as the Subject Property plus an additional 120 metres (m) of adjacent lands. Refer to Map 1 for these boundaries and property location. It is our understanding that the Subject Property is the proposed site of a residential redevelopment. An abandoned home is located on site and will be removed. Three new homes are proposed to be constructed fronting onto Goldenridge Road.

The Subject Property falls under the City of Pickering Official Plan and contains Natural Areas associated with Dunbarton Creek to the east of the Subject Property. This NHE establishes the extent and function of the Natural Heritage System (NHS) within the Study Area based on field studies and policy conformity of the City of Pickering, Durham Region, the Toronto Region Conservation Authority (TRCA), and the Province of Ontario. It has been prepared to assess potential negative impacts that the proposed development may have on the NHS, recommend mitigation measures, and provide an analysis of the required buffers and developable limit of the Subject Property to protect or enhance existing natural heritage features and functions.

## 1.1. Study Area

The Subject Property is approximately 0.3 hectares (ha) in size and is situated approximately 500 metres north of Highway 401 and 900 m northwest of Frenchman's Bay in the City of Pickering. Located within the Frenchman's Bay Watershed, a watercourse known as Dunbarton Creek is oriented in a north-south direction along the eastern boundary of the Subject Property. Dunbarton Creek converges with Frenchman's Bay and Lake Ontario approximately 900 m to the southeast of the Study Area. Additionally, the Study Area is also located within the jurisdiction of the TRCA and contains TRCA-regulated lands.

# 2. Policy Context

Municipal, provincial, and federal natural heritage policies applicable to the Subject Property have been reviewed and described below.

## 2.1. Migratory Bird Convention Act (1994)

The Migratory Birds Convention Act (1994) serves to protect and conserve migratory birds, their nests and eggs in Canada. It is prohibited under the MBCA to damage, destroy, disturb or remove the nest of a migratory bird that contains a live bird or viable egg. However, a permit may be issued under the MBCA for various activities with conditions for the husbandry, release, scaring, capture, killing or disposal of migratory birds.

The proposed removal of existing trees on the Property will be subject to regulations under the Migratory Birds Convention Act (MBCA).

### 2.1.1. Migratory Bird Regulations (2022)

The Migratory Birds Regulations (2022) protects migratory birds, their eggs, and nests by prohibiting activities that cause them harm. Migratory birds, their nests or eggs can be harmed as a result of many activities including those that do not primarily target a bird but may cause harm such as:

- Clearing trees or other vegetation
- Draining or flooding land
- Using fish gear

Unless authorized under the regulation (MBR 2022), the following activities are prohibited:

- Capture, kill, take, injure, or harass a migratory bird or attempt to do so
- Destroy, take or disturb an egg
- Damage, destroy, remove or disturb a nest shelter, eider duck shelter or duck box unless the following exceptions apply
    a) Nest does not contain a live migratory bird or viable egg
    b) Nest was not built by a species that is listed under schedule 1 of the regulation

The following measures can be undertaken to prevent harming migratory birds, nests, and eggs:

- Understand how migratory birds and their nests are legally protected
- Consult the nesting calendar to plan potentially harmful activities outside of breeding season and migration periods
- Plan activities and determine what measures can be taken to avoid causing harm
- Develop and implement preventative and mitigation measures

## 2.2. Provincial Planning Statement (2024)

The Provincial Planning Statement (PPS) 2024 is administered under Section 3 of the *Planning Act*. It became effective October 20, 2024, and replaces the Provincial Policy Statement 2020. The PPS applies to planning decisions made on or after that date. It provides policy direction for land use and development within the Province of Ontario and provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment. The policies of the PPS may be complemented by provincial and municipal plans and policies.

The PPS defines eight natural heritage features and provides planning polices for each, listed below. The function of natural heritage features and areas is further clarified by the definition of a Natural Heritage System, which is *"a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems."*

- Significant wetlands
- Coastal wetlands
- Fish habitat

- Significant woodlands
- Significant valleylands
- Habitat of endangered species and threatened species
- Significant Wildlife Habitat
- Significant Areas of Natural and Scientific Interest (ANSIs)

Section 4.0 and 5.0 of the PPS deal with development and site alteration and where these activities shall not be permitted. Section 4.0 policies surround the conservation of biodiversity and protection of the health of the Great Lakes, natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits. Section 5.0 directs development away from areas of natural or human-made hazards to mitigate risks to public health or safety, and property damage from natural hazards, including the risks that may be associated with the impacts of a changing climate.

Policies in Section 4.1 are particularly relevant as they surround development and site alteration in and adjacent to natural heritage features. These policies and select others are outlined below in Table 2.

*Table 1. Applicable Policies of the Provincial Planning Statement*

| Policy Number | Policy |
|---|---|
| *(4.1 - Natural Heritage)* 4.1.2 | The diversity and connectivity of natural features in an area and the long-term *ecological functi*on and biodiversity of *natural heritage systems*, should be maintained, restored or where possible, improved, recognizing linkages between and among *natural heritage features and areas*, *surface water features* and *ground water features*. |
| 4.1.3 | *Natural heritage systems* shall be identified in Ecoregions 6E & 7E, recognizing that *natural heritage systems* will vary in size and form in *settlement areas, rural areas*, and *prime agricultural areas*. |
| 4.1.4 | *Development* and site alteration shall not be permitted in: a) *significant wetlands* in Ecoregions 5E, 6E and 7E; and, b) *significant coastal wetlands*. |
| 4.1.5 | 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 woodlan*ds in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); c) *significant valleylands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); d) *significant wildlife habitat*; e) *significant areas of natural and scientific interest*; and f) *coastal wetlands* in Ecoregions 5E, 6E and 7E 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. |
| 4.1.6 | *Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial and federal requirements*. |
| 4.1.7 | *Development and site alteration* shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*. |

| Policy Number | Policy |
|---|---|
| 4.1.8 | *Development* and *site alteration* shall not be permitted on *adjacent lands* to the *natural heritage features and areas* identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*. |
| *(4.2 - Water)* 4.2.2 | *Development* and *site alteration* shall be restricted in or near *sensitive surface water features* and *sensitive ground water features* such that these features and their related *hydrologic functions* will be protected, improved or restored which may require mitigative measures and/or alternative development approaches. |
| *(5.2 - Natural Hazards)* 5.2.1 | Development shall generally be directed to areas outside of: a) *hazardous lands* adjacent to the shorelines of the *Great Lakes - St. Lawrence River System* and *large inland lakes* which are impacted by *flooding hazards, erosion hazards* and/or *dynamic beach hazards*; b) *hazardous lands* adjacent to *river, stream* and *small inland lake systems* which are impacted by *flooding hazards* and/or *erosion hazards*; and c) *hazardous sites*. |
| 5.2.4 | Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards. |

## 2.3. Endangered Species Act (2007)

The Endangered Species Act (ESA) (2007) was amended on June 5, 2025, through the passing of Bill 5 and is to be replaced with the Species Conservation Act, 2025 at a later date. The purpose of the amended ESA (2007) is to provide protection and conservation to species at risk while considering social and economic factors for sustainable economic growth in Ontario. The protected species and their habitat are designated by the Committee on the Status of Species at Risk in Ontario (COSSARO) as endangered, threatened, extirpated, or of special concern and the Government of Ontario adds species to the protection list based on COSSARO recommendations. These designations are defined as:

> **Endangered**: A species shall be classified as an endangered species if it lives in the wild in Ontario but is facing imminent extinction or extirpation.
>
> **Threatened**: A species shall be classified as a threatened species if it lives in the wild in Ontario, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening to lead to its extinction or extirpation.
>
> **Extirpated**: A species shall be classified as an extirpated species if it lives somewhere in the world, lived at one time in the wild in Ontario, but no longer lives in the wild in Ontario.

Under the amended ESA, for the purposes of protection under the Act, habitat does not include places where the species formerly occurred or has the potential to be reintroduced unless existing members of the species depend on that area. The ESA defines habitat as the following:

> **For animal species:** habitat is a dwelling place that is occupied or habitually occupied for breeding, rearing, staging, wintering or hibernating, and the area immediately around a dwelling place.
>
> **For vascular plant species:** habitat is the surrounding critical root zone.

**For all other species:** habitat is an area on which any member of a species directly depends in order to carry on its life processes

The ESA (Subsection 9(1)) outlines the prohibitions regarding harm to protected species and states that:

*"No person shall,*

*(a) kill, harm, 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)."*

Clause 10 (1)(a) of the ESA also states that:

*"No person shall damage or destroy the habitat of*

- a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species.
- 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)."

Prior authorization or issuance of permit from the Ministry of Environment, Conservation and Parks (MECP) and/or the Ministry of Natural Resources (MNR) is required to carry out activities that would otherwise be prohibited or regulated under the ESA unless exempt under Ontario Regulation 242/08. Ontario Regulation 242/08 (current as of April 1, 2024) identifies activities which are exempt from the permitting requirements of the Act, these activities are subject to rigorous controls outside the permit process including registration of the activity and preparation of mitigation plans. Activities that are not exempt require a complete permit application process. The permit application process under the amended ESA remains largely unchanged until the Species Conservation Act (2025) is enacted.

## 2.4. Durham Regional Official Plan (2024)

The Durham Regional Official Plan (ROP), also known as Envision Durham, (2024) describes how to accommodate future growth and development while meeting the needs of existing residents and businesses in the Region. It provides policies for economic, environmental and community planning decisions that will be integrated into Local Municipal Official Plans. Pursuant to Bill 23, as of January 1, 2025, the Region of Durham is defined by the province as an "upper-tier municipality without planning responsibilities".

As per Map 2a of the ROP, the Study Area contains areas designated as Regional Natural Heritage System (RNHS). Section 7.4 of the ROP describes the RNHS as a system of core natural features as well as the land and water thank links these features. It is the objective of the ROP to ensure the identification, protection, restoration and enhancement of the RNHS and its natural heritage and hydrologic features. The ROP allows for refinements to the RNHS to be made through the secondary planning process or approved planning

applications. The RNHS consists of Key Natural Heritage Features (KNHFs) and Key Hydrologic Features (KHFs) including:

- Wetlands
- Significant woodlands
- Significant valleylands
- Habitat of endangered and threatened species
- Fish habitat
- Significant wildlife habitat
- Life science areas and earth science areas of natural and scientific interest
- Sand barrens, savannahs and tallgrass prairies
- Alvars
- Lakes and their littoral zones
- Permanent and intermittent streams
- Kettle lakes
- Seepage areas and springs
- Lake Simcoe Shoreline
- Natural areas abutting Lake Simcoe

Generally, it is the policy of the ROP to prohibit development or site alteration within these features and any associated vegetation protection zone. Section 7.4.5 requires an NHE to be completed for any development or site alteration within 120 metres of the RNHS.

## 2.5. City of Pickering Official Plan Edition 9 (2022)

The City of Pickering Official Plan Edition 9 (OP) sets the vision for the long-term growth and development within the City of Pickering. It also provides protection to the City's natural environment such as the Oak Ridges Moraine and Greenbelt. The City of Pickering's Official Plan was last consolidated in March 2022. As per Schedule 1 of the OP the Subject Property is within the Pickering Urban Area, designated as Low Density Residential, and contains Natural Areas that are contiguous with the greater Natural Heritage System. It is the policy of the City of Pickering to protect, restore, and where possible create contiguous Natural Areas. Natural Areas are considered part of the Open Space System within the OP which includes key natural heritage features in line with those outlined in the ROP. Development with Natural Areas is limited as per Table 3 in Section 3.5 of the OP.

Schedule 3a of the OP shows areas designated as Natural Heritage System (NHS) within the Study Area that are consistent with the ROP's RNHS. Schedule 3b of the OP designates the Subject Property as Significant Woodland and Schedule 3c identifies a stream adjacent to the property as well as its associated stream corridor and/or valleyland. Section 2.3 of the OP outlines the ecological goals of the City of Pickering with a primary objective being the achievement of a *healthy, self-sustaining, connected Natural Heritage System*. Section 2.3 also recognizes that the NHS shown in Schedule 3a may include areas which are not significant natural features. Table 18 of the OP outlines the minimum areas of influence and vegetation protection zones for key natural heritage features and key hydrologic features outside of the Oak Ridges Moraine and these are outlined in Table 3 below.

*Table 2: Pickering OP Minimum Buffer/Vegetation Protection Zone*

| Feature | Minimum Area of Influence | Minimum Buffer/VPZ |
|---|---|---|
| Wetlands | 120m | 30m |
| Habitat of endangered, rare or threatened species. | 120m | Determined by natural heritage evaluation. |
| Fish Habitat | 120m | 30m |
| Significant Valleylands | 120m | 30m of stable top of bank. |
| Significant Woodlands | 120m | 10m from the dripline outside the Greenbelt. |
| Significant Wildlife Habitat | 120m | Determined by natural heritage evaluation. |
| Permanent and Intermittent Streams Outside the Pickering Urban Area | 120m | 30m of the floodplain limits or hazard lands defined by the conservation authority. |
| Permanent and Intermittent Streams Inside the Pickering Urban Area | 50m | 10m of the stable top of bank or limit of the floodplain, whichever is greater. |
| Seepage Areas and Springs | 120m | 30m |
| Shoreline Along Lake Ontario | 120m | 30m of the shoreline. |
| Former Lake Iroquois Shoreline | 120m | Determine by natural heritage evaluation. |
| Areas of Natural and Scientific Interest (ANSI's). | 120m | Determined by natural heritage evaluation. |
| Rouge-Duffins Wildlife Corridor | 120m | Determined by natural heritage evaluation. |

As per Section 16.51 of the OP, development or site alteration proposed within the minimum area of influence of the features outlined above will trigger the requirement of Natural Heritage Evaluation. As identified under the schedules of OP, the Subject Property contains areas designated as Significant Woodland and is adjacent to Dunbarton Creek designated a Permanent/Intermittent Stream, and its associated valley land/stream corridor. Due to the presence of these designated natural heritage features on and immediately adjacent to the Subject Property, an NHE is required to be completed.

## 2.6. City of Pickering Tree Removal and Compensation

The Subject Property contains trees that are proposed for removal outside of the natural heritage features and may require compensation as per the various City of Pickering policy on tree removal and compensation. The City's requirements on tree removals and compensation are outside the scope of this EIS.

### 2.6.1. City of Pickering By-law No. 8073/24

The City of Pickering By-law No. 8073/24 serves to prohibit and regulate the injuring, destruction or removal of trees in the city within the specified tree protection areas to protect and preserve the environment. The Subject Property is a designated Tree Protection Area and the policies of this by-law are applicable.

Issuance of permit is required to remove any tree in designated Tree Protection Areas except where the following apply:

- Trees are not located in the designated protection area.
- Trees are located in the designated protection area but is less than 2.5 centimetres in diameter measured at a height of 1.5 meters above grade.
- Land owned by, regulated by or to activities or matters undertaken by the Toronto and Region Conservation Authority or the Central Lake Ontario Conservation Authority.
- Tree is identified by a Certified Arborist as a threat to health or safety.
- Injuring, destruction, or removal of trees imposed as a condition to the approval of a site plan, a plan of subdivision or a consent under Section 41, 51 or 53 of the Planning Act.

The by-law prohibits injury, destruction, or removal of a tree measuring 2.5 centimetres DBH or larger in the Tree Protection Area unless a permit is issued or the aforementioned exceptions apply.

## 2.7. O. Reg. 41/24 Prohibited Activities, Exemptions and Permits (2024)

Ontario Regulation 41/24 (effective April 1, 2024), issued under the *Conservation Authorities Act* (CA Act), replaced all 36 individual Conservation Authority regulations with a single, province-wide regulation. This regulation emphasizes public safety and removes the "pollution" and "conservation of land" tests for permitting. Conservation Authorities may grant permission for development if, in their opinion, the proposal will not affect flood control, erosion, dynamic beaches, or unstable soil/bedrock, and will not create conditions that could jeopardize health, safety, or property in the event of a natural hazard.

Section 28(1) of the CA Act prohibits the following activities within a Conservation Authority's jurisdiction:

> (1) the alteration of watercourses or wetlands, and
>
> (2) development within hazardous lands, wetlands, river/stream valleys, Great Lakes/inland lake shorelines subject to flooding/erosion/dynamic beach hazards, and other areas designated by regulation.

### 2.7.1. Toronto Region Conservation Authority

The Subject Property is partially situated within the jurisdiction of the TRCA. The eastern section of the Subject Property contains TRCA-regulated areas associated with Dunbarton Creek and development activities within these areas are subject to TRCA approval. The TRCA's Living City Policies provide detailed information on TRCA requirements for development or site alterations within TRCA-regulated areas. In accordance with

recent legislative changes, TRCA policies will apply where they concern development within features identified within their jurisdiction, Dunbarton Creek, its associated valley/stream corridor, and the applicable buffer. Applicable setbacks for the Study Area our outlined in Table 4.

*Table 3:. TRCA Development Setbacks*

| Feature | Minimum Buffer/VPZ |
|---|---|
| Wetlands | 30 m from provincially significant wetlands and wetlands on the Oak Ridged Moraine or wetlands within the Niagara Escarpment Plan Area, and 10m for all other wetlands. |
| Valley and Stream Corridors | 10 m from the long-term stable top of slope, stable toe of slope, regulatory floodplain, meander belt. |
| Lake Ontario Shoreline | 10 m from the greater of the flood hazard, erosion hazard and/or dynamic beach hazard limit. |

Based on consultation with the TRCA, the more restrictive of either the Long-term stable top of slope or the floodplain elevation will be applied in addition to the associated 10 m buffer to comply with TRCA regulations.

# 3. Methodology

The following provides the methodologies followed to complete the background studies and execute the field program designed to characterize the natural heritage features and their functions within the Study Area.

## 3.1. Background Studies

Literature and data pertaining to the Subject Property were reviewed and evaluated to obtain natural heritage and background planning policy information. A list of documents and information sources consulted to support this study are provided below:

- City of Pickering Official Plan
- Durham Region Official Plan
- Toronto Region Conservation Authority – Data & Online Mapping
- *Endangered Species Act (2007)* and Species at Risk in Ontario List (O. Reg. 230/08)
- Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits
- Natural Heritage Information Centre (NHIC) database information, 1 km x 1 km square 17PJ5254
- Ontario Breeding Bird Atlas (OBBA) and eBird
- Ontario Reptile and Amphibian Atlas

- Ontario Butterfly and Moth Atlases
- iNaturalist- NHIC Rare Species of Ontario
- Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Map

### 3.1.1. Species at Risk Screening and Assessment

An desktop assessment and screening of potential Species at Risk (SAR) was conducted for the Subject Property based on Federal and Provincial status. Following the MECP Client's Guide to Preliminary SAR Screening (2019), this screening was based on a review of the Natural Heritage Information Centre, regional species list, atlases (i.e. OBBA, butterfly, moth, and reptile and amphibian), and citizen science databases (i.e. iNaturalist, eBird). Data sources utilized for the screening are described in Appendix A. The SAR assessment results are further discussed in Section 5.

### 3.1.2. Significant Wildlife Habitat Screening and Assessment

A screening for Significant Wildlife Habitat (SWH) following the Ministry of Natural Resources and Forestry Significant Wildlife Habitat Technical Guide (2000) and Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E (2015) was conducted for the Subject Property. Potential SWH identified was assessed during the complementary field studies. The results of this assessment are found in Section 6 and Appendix B.

# 4. Existing Conditions

This section describes the general conditions existing within the Subject Property determined based on an assessment of desktop and in-field surveys.

## 4.1. General Landscape Position

The Subject Property is located in the Frenchman's Bay subwatershed, adjacent to Dunbarton Creek and approximately 900m northwest of Frenchman's Bay and Lake Ontario. The surrounding landscape is dominated by low density suburban development with a matrix of natural areas that are primarily associated with Dunbarton Creek. Highway 401 and an arterial (Kingston Road) are located approximately 500m south of the Subject Property, along with a major rail corridor. The landscape can be characterized as heavily urbanized with large transportation infrastructure and well-developed residential areas.

## 4.2. Natural Heritage Systems

The natural heritage system (NHS) in the Study Area is centred around Dunbarton Creek which conveys flows in a north-south direction toward Frenchman's Bay and Lake Ontario to the southeast. This system includes a valley component and is mapped as Significant Woodland in the City of Pickering OP. The Natural Areas and NHS designations of the City of Pickering OP are roughly in line with Dunbarton Creek.

# 5. Species at Risk Screening

The Endangered Species Act, 2007, S.O. 2007 was passed to protect the biodiversity of Ontario by using the best available scientific, community, and indigenous traditional knowledge and the precautionary principle as its doctrine. The purpose of the Act is to identify species at risk, protect species at risk and their habitats, and promote the recovery of species at risk and stewardship activities that assist in these goals. The Committee on the Status of Species at Risk in Ontario (COSSARO) functions to maintain an up-to-date database of information pertaining to species in Ontario and their classification. COSSARO advises the Minister of the Environment, Conservation and Parks, who makes and files a regulation that lists all plant and animal species classified by COSSARO as extirpated, endangered, threatened, or of special concern. This regulation is the Species at Risk in Ontario List (Ontario Regulation 230/08). Ontario Regulation 242/08 provides general policies concerning exemptions and habitat specifications for those listed SAR species.

## 5.1. SAR Long List

A Long List of potential SAR was developed for the Study Area based on Provincial and Federal status. Following the MECP Client's Guide to Preliminary SAR Screening (2019), this screening was based on a review of the Natural Heritage Information Centre (NHIC) database (Atlas ID: 17PJ5254), the regional species list, atlases (Ontario Breeding Bird, Butterfly, Moth, Reptile and Amphibian Atlas), citizen science databases (i.e. iNaturalist and eBird), and any additional sources provided by the MECP. Descriptions of the various data sources are included in Appendix A. Observations of SAR within these squares do not necessarily represent observations within the boundaries of the Study Area. The SAR Long List is provided in

*Table 4. Screening Results*

| Species | | Status | | | | |
|---|---|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **S_Rank** | **SARO** | **SARA** | **Possibly Occurring** | **Rationale** |
| | | | **Birds** | | | |
| American White Pelican[2] | *Pelecanus erythrorhynchos* | S3B,S4M | SC | - | No | No suitable habitat. |
| Bank Swallow[2,3] | *Riparia riparia* | S4B | THR | THR | No | No suitable habitat. |
| Barn Swallow[2,3] | *Hirundo rustica* | S4B | SC | THR | No | The abandoned house on the Subejct Property could provide habitat, however it was observed that no suitable entrances to the home or overhangs were present to provide nesting habitat as the house was boarded up. |
| Black Tern[2] | *Chlidonias niger* | S3B,S4M | SC | - | No | No suitable habitat. |
| Bobolink[1,2,3] | *Dolichonyx oryzivorous* | S4B | THR | THR | No | No suitable habitat. |
| Canada Warbler[1] | *Cardellina canadensis* | S5B | SC | THR | No | Requires a well-developed dense shrub layer which is not present on the Subject Property. |
| Chimney Swift[2,3] | *Chaetura pelagica* | S3B | THR | THR | No | No suitable habitat. |
| Eastern Meadowlark[1,2,3] | *Sturnella magna* | S4B.S3N | THR | THR | No | No suitable habitat. |
| Eastern Wood-pewee[1,3] | *Contopus virens* | S4B | SC | THR | Yes | The woodland area along Dunbarton Creek may provide suitable habitat. |
| Horned Grebe[2] | *Podiceps auritus* | S1B,S3N,S4M | SC | - | No | No suitable habitat. |

| Species | | Status | | | | |
|---|---|---|---|---|---|---|
| Common Name | Scientific Name | S_Rank | SARO | SARA | Possibly Occurring | Rationale |
| Hudsonian Godwit[2] | *Limosa haemastica* | S3B,S4M | THR | - | No | No suitable habitat. |
| Least Bittern[1,3] | *Botaurus exilis* | S4B | THR | THR | No | No suitable habitat. |
| Lesser Yellowlegs[2] | *Tringa flavipes* | S3,S4B,S5M | THR | - | No | No suitable habitat. |
| Peregrine Falcon[2] | *Falco peregrinus* | S4 | SC | - | No | No suitable habitat. |
| Red-headed Woodpecker[3] | *Melanerpes erythrocephalus* | S3 | END | END | No | This species requires open woodlands which are not present in the Study Area. |
| Rusty Blackbird[2] | *Euphagus carolinus* | S4B,S3N | SC | SC | No | No suitable habitat. |
| Wood Thrush[1,3] | *Hylocichla mustelina* | S3B | SC | THR | Yes | No suitable habitat based on the size of the woodland. |
| **Amphibians and Reptiles** | | | | | | |
| Blanding's Turtle[6] | *Emydoidea blandingii* | S3 | THR | - | No | No suitable wetland habitat. |
| Eastern Milksnake[6] | *Lampropeltis triangulum* | S4 | NAR | SC | Yes | Eastern milksnake are adapted to a variety of habitats, including anthropogenically impacted areas and could be present in the woodland. |
| Midland Painted Turtle[1,6] | *Chrysemys picta marginata* | S4 | - | SC | No | No suitable wetland habitat. |
| Northern Map Turtle[6] | *Graptemys geographica* | S4 | - | SC | No | No suitable wetland habitat. |

| Species | | Status | | | | |
|---|---|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **S_Rank** | **SARO** | **SARA** | **Possibly Occurring** | **Rationale** |
| Snapping Turtle[1,6] | *Chelydra serpentina* | S4 | SC | SC | No | No suitable wetland habitat. |
| | | | **Insects** | | | |
| Monarch[4] | *Danaus plexippus* | S4B,S2N | SC | END | Yes | Milkweed host plants may be present in the Study Area. |
| | | | **Fish and Molluscs** | | | |
| American Eel[1] | *Anguilla rostrata* | S1S2 | END | - | Yes | Dunbarton Creek may provide suitable habitat. |

Sources: [1] NHIC Database, [2] OBBA, [3] Ontario Reptile and Amphibian Atlas, [4] eBird Database, [5] Ontario Butterfly Atlas, [6] DFO Aquatic SAR Map, [7] iNaturalist

# 6. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) is considered natural heritage and is protected as per Section 2.1 of the Provincial Policy Statement, 2014. The Significant Wildlife Habitat Technical Guide (OMNRF, 2000) aids in land use planning by providing the identification, description, and prioritisation of significant wildlife habitat in Ontario. The associated Ecoregion Criteria Schedules are used to further provide detailed criteria for assessing and confirming SWH within Ontario. This section will provide a screening in the form of a summary table followed and an assessment of the potentially or confirmed occurring SWH.

Significant (and/or sensitive) Wildlife Habitat features and functions as described within the OMNRF Significant Wildlife Habitat Ecoregion Criteria Schedule for Region 6E (OMNRF, 2015) were reviewed and evaluated for the Study Area. The documented groups wildlife habitat into five main categories:

- Seasonal concentration areas of animals
- Rare vegetation communities or specialized habitats for wildlife
- Specialized Habitat for Wildlife
- Habitat for species of conservation concern
- Animal movement corridors

The full screening found in Appendix B consisted of a review of the ELC codes and habitat criteria for candidate SWH. Any SWH on the Subject Property or adjacent lands was noted in Column 4 and a rationale was provided in Column 5. In the case of potential SWH, Confirmed Defining Criteria Studies were reviewed, and applicable mitigation measures (in summary form) were also provided in Column 5.

## 6.1. Screening

The results of the assessment indicated did not indicate the presence of any significant wildlife habitat in the Study Area.

# 7. Proposed Development

The proposed site plan will occupy an approximate area of 0.2 ha to accommodate the construction of three single-family residences fronting onto Goldenridge Road. The proposed development will also include the removal of the abandoned house on the property and decommissioning of the driveway that fronts onto Appleview Road.

## 7.1. Natural Heritage System Buffers

The natural heritage system within the Study Area consists of two features including Dunbarton Creek and its valley/stream corridor, and the significant woodland. Based on our desktop review and field reconnaissance, no other key natural heritage of key hydrologic features are present in the Study Area.

**Long-term Stable Top of Slope**

The TRCA's policies for watercourse setbacks require a 10m setback from the long-term stable top of slope of the watercourse which is the more restrictive of applicable buffers associated with the watercourse. The limit of the long-term stable top of slope staked by TRCA has been confirmed by Soil Engineers Ltd. and a 10m development setback will be applied.

**Significant Woodland**

The Subject Property is occupied by a mix of planted landscape trees and that have grown adjacent to the woodland associated with Dunbarton Creek. Based on aerial imagery these trees appear to have a contiguous canopy, however groundcover beneath the landscape trees and around the abandoned house has been manicured and controlled, limiting its ability to naturalize. This has formed a clear differentiation between the area of planted trees and the natural woodland along Dunbarton Creek.

The City Glossary (Section 15.15 of the OP) describes Significant Woodlands as:

> *Significant Woodlands (off the Oak Ridges Moraine) means an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size, or due to site quality, species composition, or past management history.*

Based on the results of the site reconnaissance, we believe that the landscape trees do not meet the definition of the City's description of a Significant Woodland based on the following:

- The landscape tree area does not provide the same ecological function as the naturalized woodland along Dunbarton Creek since its understory is heavily disturbed with minimal natural growth.
- The trees were planted by previous landowners and include a variety of non-native species such as Scots Pine, Norway Maple, Norway Spruce, and White Mulberry which are likely to be detrimental to the nearby natural woodland.

The woodland dripline follows the estimated limits delineated by GeoProcess. The extent of the landscape tree area has been estimated based on site reconnaissance and aerial imagery to provide an approximation of the limits of the naturalized woodland area. This limit should receive a 10m setback in accordance the City of Pickering OP policies for significant woodlands.

The proposed setbacks and development limits are shown on Map 3.

# 8. Environmental Impact Assessment

Impacts on the various natural heritage features associated within and adjacent to the Subject Property were considered in the impact analysis. Table 6 presents the natural heritage components considered in this assessment, the proposed activity associated with that component, potential short-term and long-term impacts, recommended mitigation measures, and if any residual effects are anticipated. Potential impacts were assessed using secondary source information, including an overlay of the proposed site plan.

## 8.1. Impact Summary Table

*Table 5 Impact Summary Table*

| Feature and Function | Proposed Activity | Potential Impacts | Recommended Mitigation | Residual Effects |
|---|---|---|---|---|
| **Short-Term Impacts** | | | | |
| Natural Heritage System (NHS) | Grading, Servicing & Development | Release of dust as a result of construction activities | Implement dust suppression measures during site grading when conditions are dry or strong winds are anticipated. | Impacts from dust to the surrounding landscape should be minimal through the implementation of dust suppression. No residual effects expected. |
| Breeding Birds | Site Clearing/Tree Removal | Impacts to nests and nesting birds | Vegetation and tree clearing should not occur between April 1-September 30th as per the Migratory Birds Convention Act (1994). If clearing is to occur during the nesting season, a nest survey should be completed by a qualified bird biologist 48 hours prior to the proposed works to identify any nest which are not to be disturbed until the young have fledged. Nests are not to be disturbed until the young have fledged or until the nest is deemed inactive. Education of contractors on wildlife encounters. | Implementation of applicable mitigation measures is expected to reduce or eliminate impacts to migratory and breeding birds during the construction period. |

| | | | | |
|---|---|---|---|---|
| Surrounding Habitat | Grading, Servicing & Development | Release of petroleum products or other contaminants into surrounding habitats. | To prevent contaminant runoff into the nearby natural heritage features, equipment maintenance and refuelling need to be controlled to prevent any discharge of petroleum products. Vehicular maintenance and refuelling should be conducted at least 30m from the woodland and watercourse. Construction material, excess material, construction debris, and empty containers should be stored in one location with proper containment and spill control measures in place. | No residual effects expected if mitigation measures are followed. |
| Adjacent Woodland | Grading, Servicing & Development | Damage to riparian area. Erosion and sedimentation release to the watercourse. | Implement silt fencing along the development limit to ensure construction activities and sediment do not migrate to the adjacent NHS.<br><br>Avoid construction during high-volume rain events or significant snow melts/thaws. Construction should resume once soils have stabilized to avoid the risk of erosion, soil compaction, or the potential for sediment release into nearby natural features/watercourses. | Inspection of the erosion and sediment controls (e.g. silt fences, sediment traps, outlets, vegetation, etc.) by a qualified environmental professional (i.e. CAN-CISEC designation or approved equivalent) with follow-up reports to the governing municipality should ensure proper implementation throughout the development. Fencing should be left in place until after construction works are complete and the site has sufficiently stabilized/re-vegetated. |

| | | | | |
|---|---|---|---|---|
| | | | | No residual effects are expected. |
| Local and Migrating Wildlife | Grading, Servicing & Development | Noise from construction works on local and migrating wildlife. | Limited measures can be employed as a certain level of construction noise will occur. Limit construction activities at sunrise and sunset during the active spring breeding bird season. | It is anticipated that wildlife may avoid the area during construction. Once the construction activities are complete, the noise associated with construction activities will end and wildlife will return. As the wildlife found within the local landscape is tolerant of disturbances, they are anticipated to return to the area once construction activities end. |
| **Long-Term Impacts** | | | | |
| Local and Migrating Wildlife | Development | Light pollution resulting in changes to animal behaviour. | Lights directed downward will reduce the amount of ambient light issuing from the Subject Property. It is recommended that downward-casting lighting is used across the site and lights are not directed towards the NHS. | Based on the location of the proposed development within a stable residential neghbourhood, it is not likely to create additional ambient light pollution. If mitigation measures are implemented and followed by the new residents, the overall impacts of light pollution on wildlife and insects can be reduced. The shielding and downward casting lights and closing window coverings at night are good steps to reducing impacts. This combined with an educational component should help address the concern. It is likely there will be some impact due to night-time lighting as all |

| | | | | |
|---|---|---|---|---|
| | | | | outdoor lighting will not be eliminated. |
| Breeding Birds | Development | Bird Strikes/Deaths | There are several options to reduce bird strikes depending on whether the treatments are before or after the glass has been installed. 1) Pre-installation measures include: Frit and etched patterns; opaque materials and frosted glass; reducing features that create 'fly-through' conditions like glass corners; window muntins; exterior shutters; UV-treated glass. 2) Temporary Solutions: Encourage tenants to install their own deterrent measures on the outside of the windows like decals, ribbon, tape. | Bird-friendly measures are recommended to be considered when designing the residential area. There is the potential for residual negative impact on the local and migrating avian population from bird strikes. For more information on bird strikes and bird-friendly building design, visit Flap Canada's website. |
| Surrounding Habitat | During Construction | Movement of invasive species to and from the site | Machinery is a major vector for spreading terrestrial invasive species into new areas as they may spread seeds or plant parts to other properties. Contractors are to follow the Clean Equipment Protocol for Industry (2013) as laid out by the Ontario Invasive Plants Council. | Minimal residual effects are expected while adhering to the recommended mitigation measures. |

| | | | | |
|---|---|---|---|---|
| Natural Heritage System | Post-Development | Encroachment, dumping and spread of invasive species | Thorn baring plants will be implemented in the vegetated buffer to deter humans and pets from entering the natural heritage system area. Fencing installation along property boundaries to discourage local residential use of the NHS. | The NHS will be maintained by 10m setback. Surrounding land use currently supports residential development, as a result, no long-term residual effects are anticipated from the proposed development. Opportunities for native planting with the vegetated buffer will serve to improve the ecological features and functions associated with the Subject Property. |

# 9. Mitigation Measures and Recommendations

The following mitigation measures are recommended to avoid and minimize impacts. The measures have two distinct intended outcomes: mitigation to reduce the impact on the natural heritage system and mitigation to reduce the impact of active construction.

## 9.1. Natural Heritage System Measures

Before machinery is active on site, a visual search of the work area should be conducted before work commences each day, particularly for the period when most wildlife is active (generally April 1st to October 31st). Visual inspections will aim to locate snakes, turtles, and other ground-dwelling wildlife such as small mammals. Visual searches should also include inspection of machinery and equipment left in the work area overnight before starting equipment to ensure that wildlife is safely out of the work area.

Other natural heritage system measures include:

- Inspection by a qualified person(s) to conduct regular monitoring of all sediment erosion measures implemented to ensure they are in working order. Any deficiencies observed are to be recorded and immediately reported to the site contractor.
- Minimize outdoor lighting and direct it down and away from natural areas.
- Architectural considerations to minimize bird strikes, which could include window glazing, frosting or etching, UV-treated glass, or exterior window coverings (i.e. shutters or muntins), awnings or canopies over entryways.
- Provide native plantings reflective of the local area.

## 9.2. Tree Preservation Measures

The following measures should be implemented to reduce impacts on remaining trees outside of the development area:

- Install tree protection fencing along the perimeter of the development area to prevent encroachment of machinery into the root zones of trees.
- Do not place fill or park machinery in the root zones of trees.
- Fell trees away from the woodland to minimize the risk of collateral damage to retained trees.
- If tree limbs or branches from retained trees must be removed, they should be completed by a certified arborist.

## 9.3. Construction Measures

General construction-related mitigation measures include the following:

- Clearing of vegetation within the Subject Property as part of site preparation should be conducted in late summer or winter months (September to March) so as not to coincide with breeding bird

season. If clearing is to proceed within the breeding bird window, the Subject Property should be screened by a qualified bird biologist to determine if any migratory songbirds are nesting within the work zone. Any identified nests are to be protected until it is confirmed that the young have fledged from the nest.

- Implementation of the erosion and sediment control plan (ESC) is recommended to prevent releases of sediment into the adjacent natural areas. Any deficiencies observed are to be recorded and immediately reported to the site contractor. Gaps in fencing should be repaired immediately. ESC measures should not be removed until the site is deemed sufficiently stabilized by a qualified environmental professional.
- Heavy machinery should be washed prior to entering the Subject Property to prevent the spread of invasive species.
- Topsoil removed during stripping is recommended to be stockpiled for reapplication post-construction.
- A construction work plan should designate specific locations for stockpiling soils and other materials or outline the location of materials trucked offsite.
- Implementation of dust control measures is recommended to reduce dust impacts on the adjacent lands.

## 10. Policy Conformity

The proposed development conforms with the policies of the City of Pickering Official Plan as it relates to Natural Heritage. Specifically, it protects the Significant Woodland feature and watercourse with appropriate buffers. The removal of the existing home, decommissioning of the driveway, and naturalization of the understory on site should enhance the neighbouring NHS. Planning, design, offsetting, and construction measures identified for the Study Area will promote the protection of natural features outlined in this preliminary NHE.

## 11. Closing

This NHE completed a policy review, conducted biophysical surveys to document the existing ecological conditions. From a natural heritage perspective, the proposed plan meets the requirements of the City of Pickering Official Plan and with the implementation of the standard mitigation measures described can proceed without negative impacts to the natural environment.

# 12. References

Alan Macnaughton, Ross Layberry, Rick Cavasin, Bev Edwards and Colin Jones. Ontario Butterfly Atlas. Accessed February 2020.

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds). 2007. Atlas of the Breeding Birds of Ontario 2001- 2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto. 706 pp.

Chapman, L.J. and Putnam, D.F. 1984. The Physiography of Southern Ontario; Ontario Geological Survey, Special Volume 2, 270p. Accompanied by Map P.2715 (coloured), scale 1:600 000.

David Kaposi, Alan Macnaughton and Bev Edwards. Ontario Moth Atlas. Accessed December 2020.

Fisheries and Oceans Canada. Available from https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html. Accessed December 2020.

iNaturalist. Available from https://www.inaturalist.org. Accessed December 2020.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological land classification for Southwestern Ontario: first approximation and its application. Ontario Ministry of Natural Resources, South Central Region, Science Development and Transfer Branch. Technical Manual ELC-005.

MNRF. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp

MMP and BSC. 2000. The Marsh Monitoring Program Quality Assurance Project Plan. Port Rowan, Ontario. Prepared by Marsh Monitoring Program and Bird Studies Canada for U.S. Environmental Protection Agency Great Lakes National Program Office.

Natural Heritage Information Centre (NHIC). NHIC website. Ontario Ministry of Natural Resources.

OMNRF. 2009. Working Draft. Significant Wildlife Habitat Ecoregion 6E Criterion Schedule. Addendum to Significant Wildlife Habitat Technical Guide.

OMNRF. 2013. Southern Ontario Vascular Plant Species List 3rd Edition. Southern Science & Information Section.

Ontario Breeding Bird Atlas. 2001. Guide for Participants. Bird Studies Canada.

Ontario Ministry of Municipal Affairs and Housing. 2024. Provincial Planning Statement, 2024, Under the *Planning Act*. King's Printer for Ontario, 2024.

Ontario Ministry of Natural Resources. 2000. Significant Wildlife Habitat Technical Guide. Fish and Wildlife Branch, Wildlife Section. Science Development and Transfer Branch, Southcentral Sciences Section.

Ontario Ministry of Natural Resources. 2009a. Draft Significant Wildlife Habitat Ecoregion Criteria Schedules. Addendum to Significant Wildlife Habitat Technical Guide.

# Scoped Natural Heritage Evaluation

Prepared for Apcom Enterprises

October 27, 2025

Prepared by:

Ian Roul, M.Sc.
Senior Ecologist

## Disclaimer

We certify that the services performed by GeoProcess Research Associates were conducted in a manner consistent with the level of care, skill and diligence to be reasonably exercised by members of the engineering and science professions.

Information obtained during the site investigations or received from third parties does not exhaustively cover all possible environmental conditions or circumstances that may exist in the study area. If a service is not expressly indicated, it should not be assumed that it was provided. Any discussion of the environmental conditions is based upon information provided and available at the time the conclusions were formulated.

This report was prepared exclusively for Apcom Enterprises by GeoProcess Research Associates. The report may not be relied upon by any other person or entity without our written consent and that of Apcom Enterprises. Any uses of this report or its contents by a third party, or any reliance on decisions made based on it, are the sole responsibility of that party. GeoProcess Research Associates accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

Project Number P2024-889

# Maps


GeoProcess RESEARCH ASSOCIATES

| | | | |
|---|---|---|---|
| CREATED BY: | DH | PROJECT NO.: | P2024-884 |
| CHECKED BY: | IR | DATE: | Sep 05, 2025 |

0 0.25 0.5 km

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Imagery from Google Earth.
[2] Contains information licensed under the Open Government Licence – Ontario.

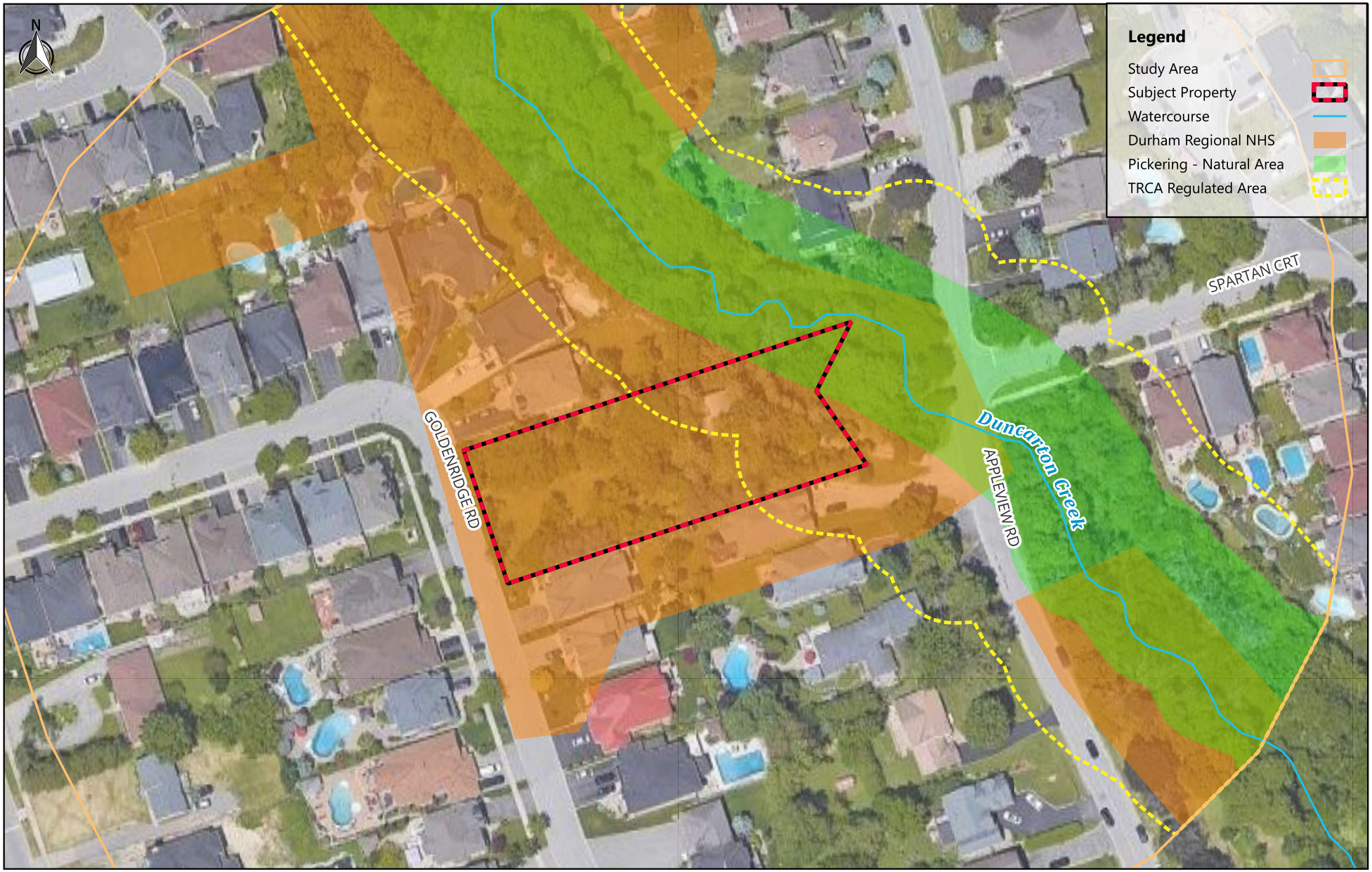
**Map 1.**

Key Map

# 1794 Appleview Road, Pickering

Apcom Enterprises

G:\Shared drives\Projects-2024\P2024-884 1794 Appleview Road Pickering\GIS\Project\NH_1794 Appleview Map_DH_2025-08-22.qgz




GeoProcess RESEARCH ASSOCIATES

| | | | |
|---|---|---|---|
| CREATED BY: | DH | PROJECT NO.: | P2024-884 |
| CHECKED BY: | IR | DATE: | Sep 05, 2025 |

0 25 50 75 100 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Imagery from Google Earth.
[2] Contains information licensed under the Open Government Licence – Ontario.

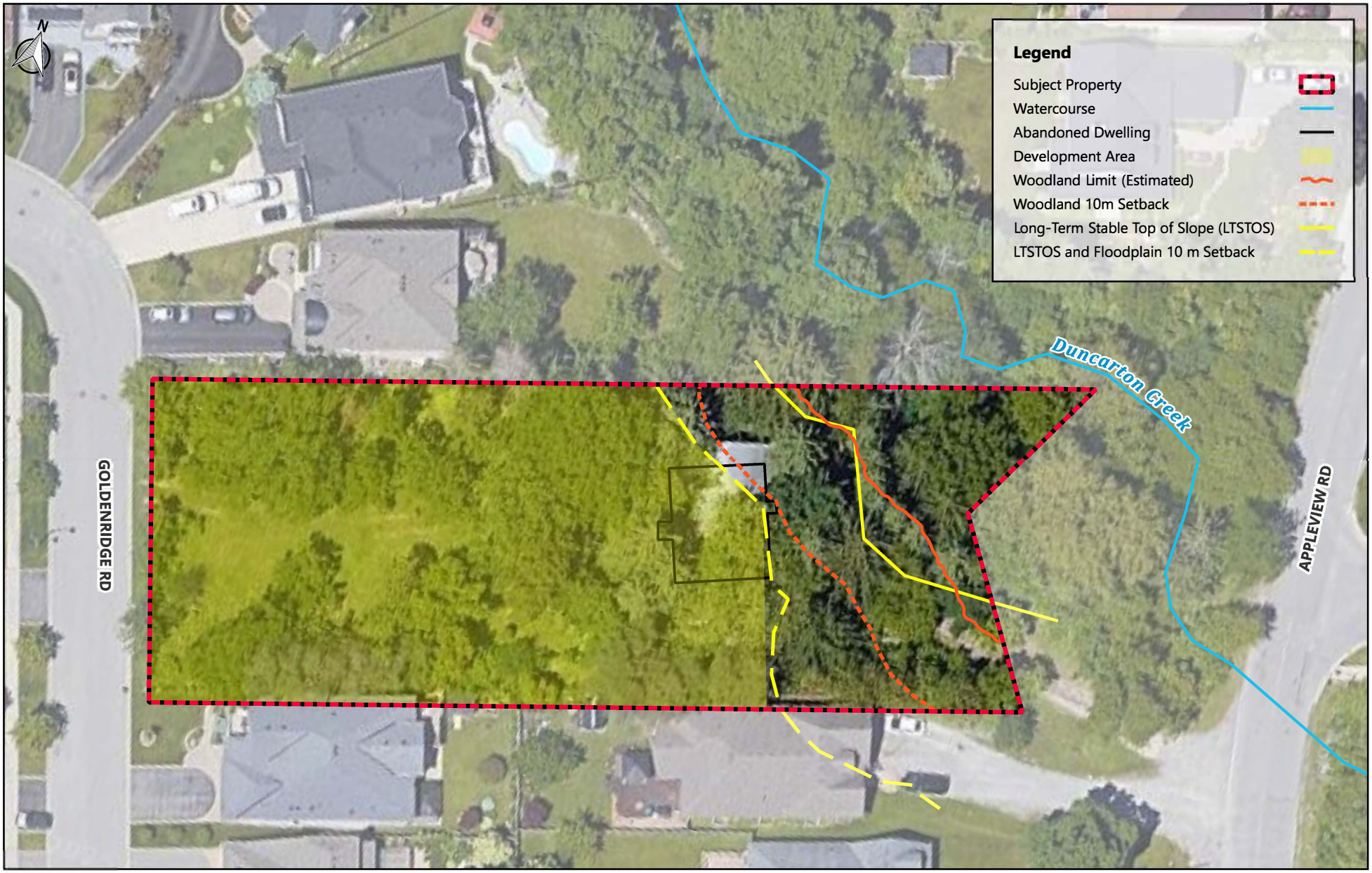
**Map 2.**

Existing Conditions

## 1794 Appleview Road, Pickering

Apcom Enterprises

G:\Shared drives\Projects-2024\P2024-884 1794 Appleview Road Pickering\GIS\Project\NH_1794 Appleview Map_DH_2025-08-22.qgz




GeoProcess RESEARCH ASSOCIATES

| | | | |
|---|---|---|---|
| CREATED BY: | AAJ | PROJECT NO.: | P2024-884 |
| CHECKED BY: | IR | DATE: | Oct 03, 2025 |

0 5 10 15 20 25 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Imagery from Google Earth.
[2] Contains information licensed under the Open Government Licence – Ontario.

**Map 3.**

Proposed Development Limit

## 1794 Appleview Road, Pickering

Apcom Enterprises

G:\Shared drives\Projects-2024\P2024-884 1794 Appleview Road Pickering\GIS\Project\NH_1794 Appleview Map_DH_AJ_2025-10-03.qgz

# Appendix A

# Species at Risk Screening Resources

*Table A 1. SAR screening resources*

| Screening Resource | Description |
|---|---|
| Natural Heritage Information Center (NHIC) | The Natural Heritage Information Center (NHIC), operated by the Ontario Ministry of Natural Resources and Forestry, collects, reviews, manages and distributes information on Ontario's biodiversity. Data distributed by the NHIC is used in conservation and natural resource management decision making and was a primary resource for this report. Through the NHIC Make-a-Map tool, data on species, plant communities, wildlife concentration areas and natural areas is made accessible to the public and professionals using generalized 1-kilometer grid units to protect sensitive information. The mapping interface provides current and historical occurrences of SAR within the specified grid unit. The database also identifies environmental designations which provide insight into habitat potential including wetland, areas of natural and scientific interests and woodlands. |
| Breeding Bird Atlas | The atlas divides the province into 10×10 km squares and then birders find as many breeding species as possible in each square. Atlassers who know birds well by song complete 5-minute "Point Counts", 25 of which are required to provide an index of the abundance of each species in a square. Data from every square are mapped to show the distribution of each species. Point count data from each square show how the relative abundance of each species varies across the province. |
| eBird | eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple, scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing. eBird's free mobile app allows offline data collection anywhere in the world, and the website provides many ways to explore and summarize your data and other observations from the global eBird community. eBird hotspots that are within 1 km of the Study Area are selected for species review. |
| Ontario Moth Atlas | The Ontario Moth Atlas is a project of the Toronto Entomologists' Association. The atlas currently covers about 250 species from 7 of the best-known families. The atlas presently includes 62,000 records. The last update of the atlas was in April 2020. The atlas is updated at least every 3 months. Most atlas data come from iNaturalist records. However, there is some data from Chris Schmidt of Agriculture Canada, the BOLD (Barcode of Life Datasystems) project of the University of Guelph, and from other records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas. |
| Ontario Butterfly Atlas | The Ontario Butterfly Atlas is a project of the Toronto Entomologists' Association (TEA). The TEA has been accumulating records and publishing annual seasonal summaries (Ontario Lepidoptera) for 50 years, with the first edition appearing in 1969. Atlas data comes from eButterfly records, iNaturalist records, BAMONA records, and records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas. |
| i-Naturalist | i-Naturalist is a nature app that helps public identify plants and animals. Using algorithms as well as scientists and taxonomic experts' multiple observations can be identified at a research scale. This data generated by the iNat community can be used in science and conservation. The program actively distributes the data in venues where scientists and land managers can find it. I-Naturalist has a project group for (NHIC) Rare species of Ontario. GeoProcess only records observations with-in 1 km of the Study Area. |
| Fisheries and Ocean Aquatic Species at Risk Maps | The DFO has compiled critical habitat and distribution data for aquatic species listed under the Species at Risk Act (SARA). The interactive map is intended to provide an overview of the distribution of aquatic species at risk and the presence of their critical habitat within Canadian waters. The official source of information is the Species at Risk Public Registry. Using this map, a 1 km radius circle is outlined around aquatic features located within the Study Area. |

# Appendix B

# Significant Wildlife Habitat Screening

# Ecoregion 6E

*Table A 1. Significant Wildlife Habitat Table for Ecoregion 7E*

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | <br>Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| **SEASONAL CONCENTRATION AREAS OF ANIMALS** | | | | | |
| Waterfowl Stopover and Staging Areas (Terrestrial) | American Black Duck, Northern Pintail Gadwall, Blue-winged Teal, Green-winged Teal, American Wigeon, Northern Shoveler, Tundra Swan | CUM, CUT1 - plus evidence of annual spring flooding within these ecosites *Fields with seasonal flooding and waste grains in certain areas are specific to Tundra Swan | Fields with sheet water during Spring (mid-March to May)<br>•agricultural fields with waste grain are not SWH unless they have spring sheet water available. | •Any mixed species aggregations of 100+ individuals<br>• the flooded field plus 100-300m radius, dependant on localized site and adjacent land us<br>• Annual Use of Habitat is documented from information sources or field studies<br>•Specific evaluation methods required | No habitat present. |
| Waterfowl Stopover and Staging Areas (Aquatic) | Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail Northern, Shoveler American, Wigeon Gadwall, Green-winged Teal, Blue-winged Teal, Hooded Merganser, Common Merganser, Lesser Scaup, Greater Scaup, Long-tailed Duck, Surf Scoter, White-winged Scoter, Black Scoter, Ring-necked duck, Common Goldeneye, Bufflehead, Redhead, Ruddy Duck, Red-breasted Merganser, Brant Canvasback, Ruddy Duck | MAS1,MAS2,MAS3,SAS1,SAM1,SAF1, SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7 | Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration.<br>• Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. | •Aggregations of 100 + of species listed for 7 days, results in > 700 waterfowl use days.<br>•Areas with annual staging for ruddyducks, canvasbacks and redheads.<br>•The combined area of the ELC ecosites and a 100m radius area. •Wetland area and shorelines associated with sites identified within the SWHTG, Appendix K, are significant wildlife habitat.<br>•Annual Use of Habitat is documented from information sources or field studies<br>• Specific evaluation methods required | No habitat present. |
| Shorebird Migratory Stopover Area | Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit, Hudsonian Godwit Black-bellied Plover, American Golden-Plover, Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird's Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt sandpiper, Short-billed Dowitcher, Red-necked Phalarope. Whimbrel, Ruddy Turnstone, Sanderling, Dunlin | BBO1,BBO2,BBS1,BBS2,BBT1,BBT2,SDO1,SDS2,SDT1,MAM1,MAM2,MAM3, MAM4,MAM5 | •Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats.<br>•Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores in May to mid-June and early July to October.<br>• No sewage treatment ponds. | •Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period.<br>•Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant.<br>•The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area.<br>•Annual Use of Habitat is documented from information sources or field studies<br>• Specific evaluation methods required | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | <br>Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| Raptor Wintering Area | Rough-legged Hawk, Red-tailed Hawk, Northern Harrier, American Kestrel, Snowy Owl<br><br>SPECIAL CONCERN: Short-eared Owl, Bald Eagle | Combo of one of each Community Series from Forest (FOD,FOM,FOC) and Upland (CUM,CUT,CUS,CUW). Bald Eagle: Forest on shoreline area adjacent to large rivers and lakes. | A combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Need to be > 20 ha. •Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands. • Field area of the habitat is to be wind swept with limited snow depth or accumulation.• Eagle sites have open water and large trees and snags available for roosting . | •One or more Short-eared Owls or; •One of more Bald Eagles or;• At least 10 individuals and two of the listed hawk/owl species. •To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. •for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area.• Specific evaluation methods required | No habitat present. |
| Bat Hibernacula | Big Brown Bat<br>Tri-coloured Bat | CCR1,CCR2,CCA1,CCA2. * buildings are not to be considered SWH | May be found in caves, mine shafts, underground foundations and Karsts. •Active mine sites are not considered SWH. | •All sites with confirmed hibernating bats are SWH.<br>• area includes 200m radius around the entrance of the hibernaculum for most development types and 1000m for wind farms.<br>•Studies are to be conducted during the peak swarming period (Aug. – Sept.).<br>• Specific survey methods required | No habitat present. |
| Bat Maternity Colonies | Big Brown Bat<br>Silver-haired Bat | All Ecosites in: FOD,FOM,SWD,SWM. | Maternity colonies can be found in tree cavities, vegetation and often in building. *Building are not considered SWH.<br>• Not found in caves or mines in ON. •Located in Mature Deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees.<br>•Prefer snags in early stages of decay (class 1-3 or class 1 or class 2).<br>•Silver-haired Bats prefer older mixed or deciduous forests with at least 21 snags/ha. | •Confirmed use by:<br>>10 Big Brown Bats<br>>5 Adult female Silver Haired Bats. •The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies.<br>• Specific evaluation methods required | Potential bat habitat in protected woodland. |
| Turtle Wintering Areas | SPECIAL CONCERN: Midland Painted Turtle, Northern Map Turtle, Snapping Turtle | Snapping and Midland Painted: SW,MA,OA,SA and FEO/BOO Series. Northern Map: Open water areas such as deeper rivers or streams and lakes. | Wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates.<br>•Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. •Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. | •Presence of 5 over-wintering Midland Painted Turtles is significant, •One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant<br>• The mapped ELC ecosite area with the over wintering turtles is the SWH. • If the hibernaculum in the Study Area is within a stream or river, the deep water pool where the turtles are over wintering is the SWH.<br>• Search for congregations in Basking Areas in spring and fall. | No habitat present. |
| Reptile Hibernaculum | SNAKES: Eastern Gartersnake, Northern Watersnake, Northern Red-bellied Snake, Northern Brownsnake, Smooth Green Snake, Northern Ring-necked Snake<br><br>SPECIAL CONCERN: Milksnake, Eastern Ribbonsnake | Any ecosite other that very wet. •Talus, Rock Barren, Crevice, Cave, Alvar may be directly related. •Observations of congregations in spring or fall is good indicator. | Sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH.• Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. •Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock | •Presence of snake hibernacula used by - a minimum of five individuals of a snake sp. or;- individuals of two or more snake spp.. •Congregations of -a minimum of five individuals of a snake sp. or; -individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct).• If there are Special Concern Species present, then site is SWH.<br>•The feature in which the hibernacula is located plus a 30 m radius area is the SWH.• Hibernacula are used annually, often by the same individuals (strong site fidelity) and other life processes often take place near by | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| | | | terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. | | |
| Colonially-Nesting Bird Breeding Habitat (Bank and Cliff) | Cliff Swallow, Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies) | Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. CUM1,CUS1,BLS1,CLO1,CLT1,CUT1,BLO1,BLT1,CLS1. | Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area, *does not include man-made structures or licenced Mineral Aggregate Operation. | •Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season.<br>• A colony identified as SWH will include a 50m radius habitat area from the peripheral nests.<br>•Field surveys to observe and count swallow nests are to be completed during the breeding season.<br>• Specific evaluation methods required | No habitat present. |
| Colonially-Nesting Bird Breeding Habitat (Tree/Shrub) | Great Blue Heron, Black-crowned Night Heron, Great Egret, Green Heron | SWM2,SWM3,SWM5,SWM6,SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7,FET1 | Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used.<br>•Most nests in trees are 11 to 15 m from ground, near the top of the tree. | •Presence of 2 or more active nests of Great Blue Heron or other listed species.<br>•The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH. •Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells. | No habitat present. |
| Colonially-Nesting Bird Breeding Habitat (Ground) | Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird | Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM,CUT,CUS | Nesting colonies on islands or peninsulas associated with open water or in marshy areas. Brewers Blackbird colonies found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands. | •Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. •Presence of 5 or more pairs for Brewer's Blackbird. •Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant.<br>•The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH.<br>•Studies would be done during May/June when actively nesting. • Specfic evaluation methods required | No habitat present. |
| Migratory Butterfly Stopover Areas | Painted Lady, Red Admiral<br>SPECIAL CONCERN: Monarch | Combo of one of each Field (CUM, CUT, CUS) and Forest (FOC, FOD,FOM,CUP). | Minimum 10 ha in size with combo of field and forest located within 5km of Lake Erie or Lake Ontario.<br>•Should not be disturbed.<br>• Field/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat.<br>•Should provide protection from the elements, often spits of land or areas with the shortest distance to cross the Great Lakes. | •Presence of Monarch Use Days (MUD) during Fall migration (Aug/Oct)<br>•Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD.<br>•MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant. | No habitat present. |
| Landbird Migratory Stopover Areas | All migratory songbird and raptor species | All Ecosites within: FOC,FOM,FOD,SWC,SWM,SWD | Woodlots >5ha in size and within 5km of Lake Erie and Lake Ontario.<br>• If woodlands are rare in area, smaller size can be considered.<br>• If multiple woodlands located along shore line, those 2km from shoreline are more significant.<br>• Sites have a variety of habitats; forest, grassland | •Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates.<br>•Studies should be completed during spring (Mar to May) and fall (Aug to Oct) migration using standardized assessment techniques.<br>• Specific evaluation methods required | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| | | | and wetland complexes.<br>•The largest sites are more significant. •Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Erie and Lake Ontario are Candidate SWH. | | |
| Deer Winter Congregation Areas | White-tailed Deer | All forested ecosites within: FOC,FOM,FOD,SWC,SWM,SWD + conifer plantations much smaller than 50 ha may be used. | Woodlots >100 ha in size or if large woodlots are rare in a planning area woodlots >50ha.<br>• Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha.<br>*Woodlots with high densities of deer due to artificial feeding are not significant. | •Will be mapped by MNRF.<br>• All woodlots exceeding the criteria are significant unless determined to be not by the MNRF.<br>•Studies to be completed during winter when >20 cm of snow is on the ground, using aerial survey or pellet count. | No habitat present. |
| **RARE VEGETATION COMMINITIES** | | | | | |
| Cliffs and Talus Slopes | | Any Ecosite within:<br>TAO CLO TAS CLS TAT CLT | A Cliff is vertical to near vertical bedrock >3m in height.<br>A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris. Most cliff and talus slopes occur along the Niagara Escarpment. | •Confirm any ELC Vegetation Type for Cliffs or Talus Slopes | No habitat present. |
| Sand Barren | | SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicketlike (SBS1), or more closed and treed (SBT1). Tree cover always < 60% | A sand barren area >0.5ha in size.<br>• Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah.<br>• Vegetation can vary from patchy and barren to tree covered, but less than 60%. | •Confirm any ELC Vegetation Type for Sand Barrens.<br>•Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp. | No habitat present. |
| Alvar | FIVE ALVAR INDICATOR SPECIES<br>*Carex crawei*<br>*Panicum philadelphicum*<br>*Eleocharis compressa*<br>*Scutellaria parvula*<br>*Trichostema brachiatum*<br><br>These indicator species are very specific to Alvars within Ecoregion 7E | ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2, | An Alvar site > 0.5 ha in size, only known sites are found in the western islands of Lake Erie.<br>• An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought.<br>• Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species.<br>• Vegetation cover varies from patchy to barren with a less than 60% tree cover. | •Studies that identify four of the five *Alvar Indicator Species* at a Candidate Alvar site is Significant.<br>• Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.).<br>•The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses. | No habitat present. |
| Old Growth Forest | | FOD FOC FOM SWD SWC SWM | Woodland area is >0.5ha<br>• Characterized by heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy | •If dominant trees species of the area are >140 years old, then the area containing these trees is Significant Wildlife Habitat.<br>• The forested area containing the old growth characteristics | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| | | | and an abundance of snags and downed woody debris. | will have experienced no recognizable forestry activities<br>• The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH.<br>• Determine ELC vegetation types for the forest forest area containing the old growth characteristics | |
| Savannah | | TPS1 TPS2 TPW1 TPW2 CUS2 | A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%. • No minimum size to site. • Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH. • Remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario) | •Field studies confirm one or more of the Savannah indicator species found in Appendix N, Ecoregion 7E of the SWHTG, OMNR (2000). •Entire area of the ELC Ecosite is SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic species). | No habitat present. |
| Tallgrass Prairie | | TPO1 TPO2 | A Tallgrass Prairie has ground cover dominated by prairie grasses.<br>•An open Tallgrass Prairie habitat has < 25% tree cover.<br>•No minimum size to site.<br>•Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH. | •Field studies confirm one or more of the Prairie indicator species in Appendix N, Ecoregion 7E of The SWHTG, OMNR (2000).<br>•Area of the ELC Ecosite is the SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) | No habitat present. |
| Other Rare Vegetation Communities | | See the Significant Wildlife Habitat Technical Guide (OMNR, 200), Appendix M for Provincially Rare S1,S2 and S3 ELC Vegetation Types. | May include beaches, fens, forest, marsh, barrens, dunes and swamps. See OMNRF/NHIC for up to date list of rare vegetation communities. | •Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG, OMNR (2000). •Area of the ELC Vegetation Type polygon is the SWH. | No habitat present. |
| **SPECIALIZED HABITAT FOR WILDLIFE** | | | | | |
| Waterfowl Nesting Area | American Black Duck, Northern Pintail, Northern Shoveler, Gadwall, Blue-winged Teal, Green-winged Teal, Wood Duck, Hooded Merganser, Mallard | All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4. * Note: includes adjacency to Provincially Significant Wetlands | A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur.<br>•Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites.<br>• Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. | •Presence of 3 or more nesting pairs for listed species excluding Mallards OR<br>•Presence of 10 or more nesting pairs for listed species including Mallards.<br>•Any active nesting site of an American Black Duck is considered significant.<br>•Nesting studies should be completed during the spring breeding season (April - June).<br>•Specific evaluation methods required<br>•A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest. | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | <br>Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| Bald Eagle and Osprey Nesting, Foraging and Perching Habitat | Osprey<br>SPECIAL CONCERN: Bald Eagle | ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands | Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. *Nests located on man-made objects are not to be included as SWH. •Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. | One or more active Osprey or Bald Eagle nests in an area. •Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. •For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH. *with additional requirements•For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. * with additional requirements•To be significant a site must be used annually. •When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. •Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid August. • Specific evaluation methods required | No habitat present. |
| Woodland Raptor Nesting Habitat | Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk | May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3. | All natural or conifer plantation woodland/forest stands >30ha with >4ha of interior habitat.<br>• Interior habitat determined with a 200m buffer.<br>•Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands.<br>• In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. | Presence of 1 or more active nests from species list is considered significant.<br>•Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest)<br>•Barred Owl – A 200m radius around the nest is the SWH.<br>•Broad-winged Hawk and Coopers Hawk,– A 100m radius around the nest is the SWH.<br>•Sharp-Shinned Hawk – A 50m radius around the nest is the SWH.<br>• Conduct field investigations from early March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. | No habitat present. |
| Turtle Nesting Areas | SPECIAL CONCERN: Midland Painted Turtle, Northern Map Turtle, Snapping Turtle | Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1 | Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. •For an area to function as a turtle nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. *Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH.• Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. | Presence of:- 5 or more nesting Midland Painted Turtles OR - One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. •The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH.• Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. •Field investigations should be conducted in prime nesting season typically late spring to early summer. •Observational studies observing the turtles nesting is a recommended method. | No habitat present. |
| Seeps and Springs | Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp. | Where ground water comes to the surface. Often they are found within headwater areas within forested habitats. •Any forested Ecosite within | Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. | Presence of a site with 2 or more seeps/springs should be considered SWH.<br>•The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH.<br>•The protection of the recharge area considering the slope, | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| | | the headwater areas of a stream could have seeps/springs. | | vegetation, height of trees and groundwater condition need to be considered in delineation the habitat. | |
| Amphibian Breeding Habitat (Woodland) | Eastern Newt, Blue-spotted Salamander, Spotted Salamander<br>Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog | All Ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD<br><br>•Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians. | Presence of a wetland, pond or woodland pool (including vernal pools) >500m$^2$ (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size).<br>• Some small wetlands may not be mapped and may be important breeding pools for amphibians.<br>•Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat. | Presence of breeding population of:<br>- 1 or more of the listed newt/salamander species or<br>- 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or<br>- 2 or more of the listed frog species with Call Level Codes of 3.<br>•A combo of observational and call count surveys required during the spring (March-June) .<br>•The habitat is the wetland area plus a 230m radius of woodland area.<br>• If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. | No habitat present. |
| Amphibian Breeding Habitat (Wetlands) | Eastern Newt, American Toad, Spotted Salamander, Four-toed Salamander, Blue-spotted Salamander, Gray Treefrog, Western Chorus Frog, Northern Leopard Frog, Pickerel Frog, Green Frog, Mink Frog, American Bullfrog | ELC Community Classes SW, MA, FE, BO, OA and SA.<br>•Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands. | Wetlands >500m$^2$ (about 25m diameter), supporting high species diversity are significant;<br>•some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats.<br>•Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators.<br>• Bullfrogs require permanent water bodies with abundant emergent vegetation. | Presence of breeding population of:<br>-1 or more of the listed newt/salamander species or<br>-2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or<br>-2 or more of the listed frog/toad species with Call Level Codes of 3. or; -Wetland with confirmed breeding Bullfrogs are significant.<br>•The ELC ecosite wetland area and the shoreline are the SWH.<br>•A combo of observational and call count surveys will be required during the spring (March-June).<br>•If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered. | No habitat present. |
| Woodland Area-Sensitive Bird Breeding Habitat | Red-breasted Nuthatch, Veery, Blue-headed Vireo, Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, Winter Wren, Pileated Woodpecker<br><br>SPECIAL CONCERN: Canada Warbler | All Ecosites withing:<br>FOC FOM FOD SWC SWM SWD | Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha.<br>•Interior forest habitat is at least 200 m from forest edge habitat. | Presence of nesting or breeding pairs of 3 or more of the listed wildlife species.<br>*any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH.<br>• Conduct field investigations in spring and early summer.<br>• Specific evaluation methods required | No habitat present. |
| **HABITATS OF SPECIES OF CONSERVATION CONCERN** | | | | | |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | <br>Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| Marsh Bird Breeding Habitat | American Bittern, Virginia Rail, Sora, Common Gallinule, American Coot, Pied-billed Grebe, Marsh Wren, Sedge Wren, Common Loon, Green Heron, Trumpeter Swan<br>SPECIAL CONCERN: Black Tern, Yellow Rail | MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites | Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present.<br>•For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.. | Presence of:<br>- 5 or more nesting pairs of Sedge Wren or Marsh Wren or -breeding by any combination of 4 or more of the listed species.<br>•any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. •Area of the ELC ecosite is the SWH. •Breeding surveys should be done in May/June.<br>• Specific evaluation methods required | No habitat present. |
| Open Country Bird Breeding Habitat | Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow<br>SPECIAL CONCERN: Short-eared Owl | CUM1 CUM2 | Large grassland areas (includes natural and cultural fields and meadows) >30 ha. •Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years).<br>•Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older.<br>•The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. | Presence of nesting or breeding of:<br>-2 or more of the listed species.<br>• A field with 1 or more breeding Short-eared Owls is to be considered SWH.<br>•The area of SWH is the contiguous ELC ecosite field areas.<br>•Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories.<br>• Specific evaluation methods required. | No habitat present. |
| Shrub/Early Successional Bird Breeding Habitat | INDICATOR SPECIES:<br>Brown Thrasher<br>Clay-coloured Sparrow<br><br>COMMON SPECIES:<br>Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher<br><br>SPECIAL CONCERN:<br>Golden-winged Warbler | CUT1 CUT2 CUS1 CUS2 CUW1 CUW2<br>•Patches of shrub ecosites can be complexed into a larger habitat for some bird species. | Large field areas succeeding to shrub and thicket habitats>10ha in size.<br>•Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no rowcropping, haying or livestock pasturing in the last 5 years).<br>•Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species.<br>•Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. | Presence of nesting or breeding of<br>- 1 of the indicator species and at least 2 of the common species.<br>•A habitat with breeding Yellowbreasted Chat or Golden-winged Warbler is to be considered as SWH.<br>•The area of the SWH is the contiguous ELC ecosite field/thicket area.<br>•Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories.<br>• Specific evaluation methods required | No habitat present. |
| Terrestrial Crayfish | Chimney or Digger Crayfish<br>Devil Crayfish or Meadow Crayfish | MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1-with inclusions of above meadow marsh ecosites can be used by terrestrial crayfish. | Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish.<br>•Usually the soil is not too moist so that the tunnel is well formed.<br>•Can often be found far from water. | Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites.<br>• Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH.<br>•Surveys should be done April to August in temporary or permanent water.<br>• Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult. | No habitat present. |

| Wildlife Habitat | Wildlife Species | Candidate SWH<br>ELC Ecosite Codes | Habitat Criteria | Confirmed SWH<br>Defining Criteria | Presence of Habitat at ADDRESS |
|---|---|---|---|---|---|
| Special Concern and Rare Wildlife Species | All Special Concern and Provincially Rare (S1, S2, S3, SH) plant and animal species. Lists of these species are tracked by the NHIC | All plant and animal element occurrences (EO) within a 1 or 10km grid. | identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites | Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable.<br>•The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat. | Potential for Special Concern species in the protected woodland. |
| **ANIMAL MOVEMENT CORRIDORS** | | | | | |
| Amphibian Movement Corridors | Eastern Newt, American Toad, Spotted Salamander, Four-toed Salamander, Blue-spotted Salamander, Gray Treefrog, Western Chorus Frog, Northern Leopard Frog, Pickerel Frog, Green Frog, Mink Frog, American Bullfrog | Corridors may be found in all ecosites associated with water. | Corridors will be determined based on identifying the significant breeding habitat for these species. Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from this Schedule. | Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant. Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat. | No habitat present. |
| **SIGNIFICANT WILDLIFE HABITAT EXCEPTIONS FOR ECODISTRICT EITHIN ECOREGION 7E** | | | | | |
| Bat Migratory Stopover Area | Hoary Bat<br>Eastern Red Bat<br>Silver-haired Bat | No specific ELC types. | Long distance migratory bats typically migrate during late summer and early fall from summer breeding habitats throughout Ontario to southern wintering areas. Their annual fall migration may concentrate these species of bats at stopover areas. | Only confirmed site is Long Point. Confirmation criteria and habitat areas are still being determined. | No habitat present. |