**FINAL REPORT**

# Scoped Environmental Impact Statement

*Proposed Redevelopment of 415 Legget Drive and 2700 Solandt Road, Ottawa, ON*

Submitted to:

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Access Property Development
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Submitted by:

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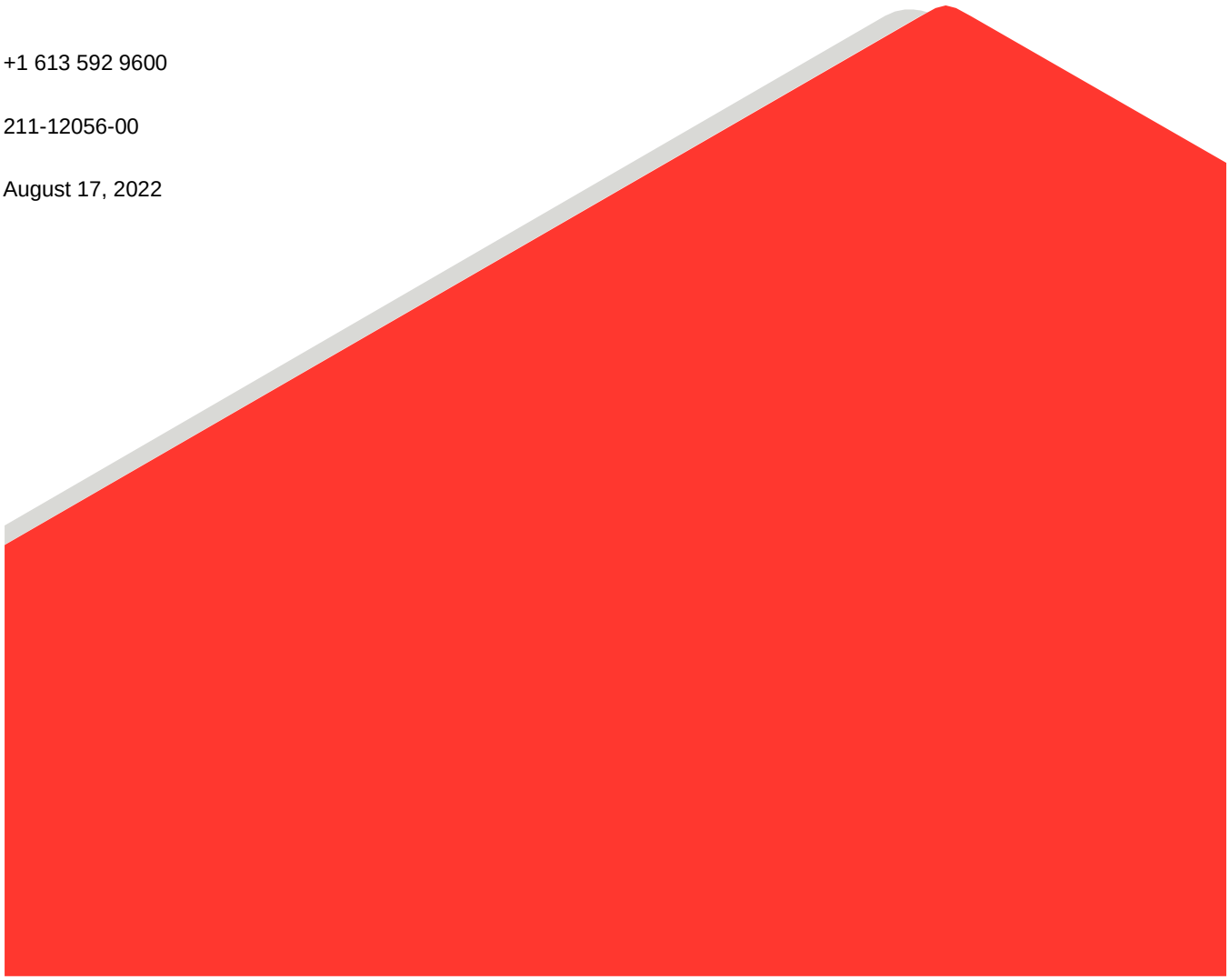

# Distribution List

1 e-copy - Access Property Development

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# 1.0 INTRODUCTION

## 1.1 Purpose

Golder Associates Ltd. (WSP Golder) has been retained by Access Project Developments to conduct environmental studies for a Scoped Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) for the proposed light industrial redevelopment of 415 Legget Drive and 2700 Soldant Road, Ottawa, Ontario (the Site; Figure 1). The lands within 120 m of the Site (Study Area; Figure 1) were included in this assessment to the extent possible, considering land access.

The proposed project consists of the redevelopment of the Site and will be undertaken in two phases. Phase 1 includes the repurposing of the existing two-storey flex/office building into a one-storey self-storage facility and high-bay warehousing. Phase 2 requires site plan approval and includes the construction of two new one-storey warehouse buildings on the existing parking areas on-Site.

This report provides an assessment of potential impacts from the proposed redevelopment and is intended to satisfy the City of Ottawa New Official Plan (Adopted November 24, 2021) (Ottawa 2021) requirements for a Scoped EIS and TCR in accordance with the City of Ottawa EIS Guidelines (2015) and Tree Conservation By-Law No. 2020-340. The focus on this Scoped EIS is on species at risk (SAR), surface water (including fish habitat) and tree cover.

# 2.0 ENVIRONMENTAL POLICY CONTEXT

## 2.1 Fisheries Act

The purpose of the federal *Fisheries Act* (Canada 1985) is to maintain healthy, sustainable, and productive Canadian fisheries through the prevention of pollution and the protection of fish and their habitat. Under the *Fisheries Act* (Canada 1985), work in and near water must comply with the fish and fish habitat protection provisions of the *Fisheries Act* by incorporating measures to avoid (DFO 2019):

- causing the death of fish
- harmful alteration, disruption, or destruction (HADD) of fish habitat in your work, undertaking or activity

All projects where work is being proposed that cannot avoid impacts to fish or fish habitat require a Fisheries and Oceans Canada (DFO) project review (DFO 2019). DFO will review the project to identify potential risks of the project to the conservation and protection of fish and fish habitat. If potential impacts can be avoided, project approval is not required (DFO 2020). However, if it is determined that the project will result in death of fish or HADD of fish habitat, an authorization is required under the *Fisheries Act*. Proponents of projects requiring a *Fisheries Act* authorization may be required to also submit a habitat offsetting plan, which provides details of how the death of fish and/or HADD of fish habitat will be offset, and outlines associated costs and monitoring commitments. Proponents also have a duty to notify DFO of any unforeseen activities during the project that cause harm to fish or fish habitat.

## 2.2 Migratory Birds Convention Act

The *Migratory Birds Convention Act* (MBCA) (Canada 1994) prohibits the killing or capturing of migratory birds, as well as any damage, destruction, removal or disturbance of active nests. It also allows the Canadian government to pass and enforce regulations to protect various species of migratory birds, as well as their habitats.
While Environment and Climate Change Canada (ECCC) can issue permits allowing the destruction of nests for scientific or agricultural purposes, or to prevent damage being caused by birds, it does not typically allow for permits in the case of industrial or construction activities.

## 2.3 Species at Risk

### 2.3.1 Species at Risk Act (SARA)

At the federal level, Species at Risk (SAR) designations for species occurring in Canada are initially determined by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). If approved by the federal Minister of the Environment and Climate Change, species are added to the federal List of Wildlife Species at Risk (Canada, 2002). Species that are included on Schedule 1 as endangered or threatened are afforded protection of critical habitat on federal lands under the *Species at Risk Act* (SARA) (Canada 2002). On private or provincially-owned lands, only aquatic species and migratory birds listed as endangered, threatened or extirpated are protected under SARA, unless ordered by the Governor in Council.

### 2.3.2 Endangered Species Act (ESA)

SAR designations for species in Ontario are initially determined by the Committee on the Status of Species at Risk in Ontario (COSSARO), and if approved by the provincial Minister of Environment, Conservation and Parks, species are added to the provincial *Endangered Species Act* (ESA) which came into effect June 30, 2008 (Ontario 2007). The legislation prohibits the killing or harming of species identified as endangered or threatened in the various schedules to the Act. The ESA also provides habitat protection to all species listed as threatened or endangered. The Species at Risk Ontario (SARO) list is contained in O. Reg. 230/08.

Subsection 9(1) of the ESA prohibits the killing, harming or harassing of species identified as 'endangered' or 'threatened' in the various schedules to the Act. Subsection 10(1)(a) of the ESA states that *"No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario* (*SARO*) *list as an endangered or threatened species"*.

General habitat protection is provided, by the ESA, to all threatened and endangered species listed on O. Reg. 230/08. Species-specific habitat protection is only afforded to those species for which a habitat regulation has been prepared and passed into law as a regulation of the ESA. The ESA has a permitting process to allow alterations to protected species or their habitats as well as a registration process for certain activities and species.

## 2.4 Mississippi Valley Conservation Authority (MVCA)

The Site and Study Area are located within the jurisdiction of the MVCA. The Site does not lie within the MVCA regulation limit and is therefore not regulated under O. Reg. 153/06 - *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* (MVCA 2022).

## 2.5 City of Ottawa

The Site is designated as Urban Employment Area in the City of Ottawa New Official Plan (Adopted November 24, 2021) (Ottawa 2021), and zoned Area C – Suburban; IP6 Subzone – Kanata North Business Park.

# 3.0 METHODS

## 3.1 Background Review

WSP Golder conducted a desktop review of published natural heritage data and information available for the Site and the Study Area. This information served to identify significant natural features as well as species at risk (SAR) known to be present, or having the potential to be present. This included review of the following resources:

- Ministry of Natural Resources and Forestry (MNRF) Natural Heritage Information Centre (NHIC) Make-a-Map geographic explorer for SAR, rare (S1-S3) species reported as occurring in the vicinity of the Site, and natural areas information queries (MNRF 2022a)

- ECCC SAR Public Registry (ECCC 2022) including COSEWIC status reports, assessments, and recovery strategies
- List of SAR in Ontario (O. Reg. 230/08) (MNRF 2022b) including COSSARO species assessment reports
- DFO Aquatic Species at Risk Maps (DFO 2022)
- Breeding Bird Atlas of Ontario (OBBA) (Cadman et al. 2007)
- Atlas of the Mammals of Ontario (Dobbyn 1994)
- Ontario Reptile and Amphibian Atlas (Ontario Nature 2022)
- Bat Conservation International (BCI) range maps (BCI 2022)
- Ontario Butterfly Atlas (Jones et al. 2022)
- eBird species maps (eBird 2022)
- Vascular Plants at Risk (Leslie 2018)
- MNRF Land Information Ontario Aquatic Resources Area Layer (MNRF 2022c);
- Information contained in natural heritage related map layers from Land Information Ontario (LIO; 2022) and the Ontario Land Cover Compilation (MNRF 2022d)
- City of Ottawa New Official Plan (Adopted November 24, 2021) (Ottawa 2021)
- Existing high-resolution aerial imagery and mapping

To develop an understanding of the drainage patterns, ecological communities and potential natural heritage features that may be affected by the proposed project, MNRF LIO data were used to create base layer mapping for the Study Area. A geographic query of the MNRF Make-a-Map database was conducted to identify element occurrences of any natural heritage features, including wetlands, rare vegetation communities and rare species (i.e., S1-S3 species in the NHIC), threatened or endangered species and other natural heritage features within two kilometres of the Site.

## 3.2 SAR Screening

A SAR screening was completed for the Site and Study Area, focusing on the review of records and range maps pertaining to species that are designated as threatened, endangered or special concern under the ESA, and species that are protected under Schedule 1 of the SARA. Species with ranges overlapping the Site or Study Area, or recent occurrence records in the vicinity, were screened by comparing their habitat requirements to habitat conditions at the Site and Study Area.

The potential for the species to occur was determined through a probability of occurrence. A ranking of low indicates no suitable habitat availability for that species in the Site and Study Area and no specimens identified. Moderate probability indicates more potential for the species to occur, as suitable habitat appeared to be present in the Study Area, but no occurrence of the species has been recorded. Alternatively, a moderate probability could indicate an observation of a species, but there is no suitable habitat on the Site or in the Study Area.
High potential indicates a known species record at the Site or in the Study Area (including during field investigations or background data review) and good quality habitat is present.

Searches were conducted during field surveys for suitable habitats and signs of all SAR identified through the desktop screening. The screening was refined based on field surveys (i.e., habitat assessment during the site reconnaissance). Any habitat identified during the site reconnaissance with potential to provide suitable conditions for additional SAR not already identified through the desktop screening was also assessed and recorded.

## 3.3 Field Investigations

### 3.3.1 Site Reconnaissance

A site reconnaissance was completed on October 15, 2021 to document existing conditions at the Site. Information collected during the site reconnaissance included: a preliminary map of the plant communities using Ecological Land Classification (ELC) (Lee et al. 1998); document wildlife species observed; assess the potential for SAR or their associated habitats; prepare a photographic inventory of the Site with a focus on natural areas and habitats. The results of this survey (i.e., potential SAR habitat) directed the scope for future surveys completed in 2022 as described below.

### 3.3.2 Blanding's Turtle Surveys

Visual encounter surveys (VES) for turtle basking were focused around suitable habitat on the Site (i.e., the stormwater management pond), which may provide over-wintering habitat for turtles, specifically Blanding's turtle (*Emydoidea blandingii*). Using the Occurrence Survey Protocol for Blanding's Turtle in Ontario (MNRF 2015) as guidance, WSP Golder completed five survey rounds when water temperatures reached 10°C. These protocols are appropriate for searching for a range of turtle species, since most turtle species have similar ecologies. A WSP Golder biologist scanned (i.e., with binoculars) suitable habitat on sunny days, from mid-morning to mid-afternoon. These surveys were conducted on April 15, April 22, April 28, May 5 and May 11, 2022 under suitable weather conditions.

### 3.3.3 Tree Inventory

An inventory of all trees greater than 10 cm DBH (diameter at breast height) on the Site was undertaken on May 12, 2022. Data collected includes a description of the species composition, size (diameter at breast height [DBH]) and health condition of the trees. Where tree cover was extensive, tree groupings were identified rather than an inventory of each individual tree. Additional information on the environmental value of the trees, such as presence of specimen trees or trees with enhanced wildlife value (e.g., cavities), was documented and marked in the field if observed.

# 4.0 RESULTS

The Site is predominately occupied by parking facilities, existing buildings, and roads. Manicured grass with planted trees of red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), white spruce (*Picea glauca*), and Scotch pine (*Pinus sylvestris*) occur around the perimeter of the parking lots and buildings. There are also small natural areas at the edges of the Site and around the existing stormwater management pond.

The small natural areas on the Site consist of the following vegetation communities:

- Poplar Deciduous Forest (tree groupings)
- Mixed Meadow (Site edges and associated with the existing stormwater management pond)
- Cattail and Purple Loosestrife Meadow Marsh (associated with the existing stormwater management)
- Open Aquatic Pond (existing stormwater management pond)

No significant natural features are present on the Site or in the Study Area with the exception of a small, unnamed tributary of the Kizell Drain southeast of the Site that receives inputs from the stormwater management pond (Figure 2).

Photographs were taken of the Site and are provided in Appendix A.

No butternut or other SAR plants or wildlife were observed on or within 120 m of the Site. No Blanding's turtles were observed using the stormwater management pond during the targeted surveys. Two midland painted turtles (*Chrysemys picta marginata*) were observed over the course of the surveys. Wildlife observed incidentally at the Site included only species common and widespread in Ontario, and non-native species (American robin [*Turdus migratorius*], red-winged blackbird [*Agelaius phoeniceus*], European starling [*Sturnus vulgaris*], brown thrasher [*Toxostoma rufum*], ring-billed gull [*Larus delawarensis*], Canada goose [*Branta canadensis*], rose-breasted grosbeak [*Pheucticus ludovicianus*], house wren [*Troglodytes aedon*], song sparrow [*Melospiza melodia*], American goldfinch [*Spinus tristis*], great blue heron [*Ardea herodias*], white-breasted nuthatch [*Sitta carolinensis*], black-capped chickadee [*Poecile atricapillus*]).

Results of the tree inventory are provided in Appendix B and illustrated on Figure 3.

# 5.0 PROPOSED DEVELOPMENT

The proposed development is shown on Figure 4. There is an existing 18,400 $m^2$ two-storey flex/office building at 415 Legget Drive. Parking for the existing building is located at the north and east sides of the Site. There is an existing stormwater pond at the northeast corner of the Site. The redevelopment of the Site is split into two phases. Phase 1 includes the change of use of the existing building from office and warehousing to self-storage and office occupancies. The building will retain its existing footprint with no expansion. Phase 2 consists of two, one-storey storage warehouse buildings with a proposed total footprint of approximately 18,580 $m^2$ to be located on the existing parking areas north and east of the existing building at 415 Legget Drive. The two warehouse buildings are proposed to contain light industrial warehousing and ancillary office uses.

For this project, stormwater quality control is provided by enhanced grass swales. All runoff from impervious areas will be directed to enhanced grass swales before discharge to the existing stormwater management pond, which have the capacity to meet quality targets on their own. However, the existing stormwater pond provides additional quality treatment using a treatment train approach. The total wet pond storage volume required to meet enhanced quality requirements for the proposed project is less than what is currently provided in the existing stormwater pond. Therefore, the pond is not part of the overall stormwater management strategy to meet the water quantity or quality criteria for the proposed project. All water quantity control is provided via roof storage (up to and including the 100-yr event), and all water quality control is provided in the proposed enhanced grass swales. Water quality and quantity exiting the existing stormwater management pond will remain unchanged post-development.

# 6.0 IMPACT ASSESSMENT

## 6.1 Surface Water Features

The existing stormwater management pond is connected to the Kizell Drain by a small, unnamed tributary. Kizell Drain is fish habitat, and it is conservatively assumed that the tributary and stormwater management pond also provide fish habitat given their direct connection to Kizell Drain. No work is proposed within the regulated area associated with the small tributary of the Kizell Drain or Kizell drain. The tributary receives inputs from the existing stormwater management pond on the Site, which is not proposed for modification. No changes to the water quality or quantity leaving the stormwater management pond and entering the tributary are expected, and

no modifications to the stormwater management pond are proposed. Based on this, no impacts to fish habitat are anticipated to result from the proposed development and no further analysis is warranted. Standard mitigation for work around the existing stormwater management pond must be implemented (see Section 7.0).

## 6.2 Species at Risk

The following is a discussion of those species identified in the screening as having a moderate or high potential to be present on the Site (Appendix C). Species identified as having a low potential, based on an absence of suitable habitat and no known records, and those listed as special concern under the SARA only, are included in Appendix C but are not discussed further in this report.

### 6.2.1 Provincially Endangered and Threatened Species

Based on the background review, no endangered or threatened species and/or their defined habitat were identified as having moderate or high potential to be present on the Site (Appendix C), and none were observed during targeted surveys. Any potential turtle habitat will not be affected by the proposed development as the stormwater management pond and surrounding natural areas will remain intact, with only minor temporary disturbance associated with upgrades to the grassed stormwater swales in this area (Figure 5). The remainder of the Site (buildings, parking lots and manicured areas within a built-up setting) do not provide suitable habitat for turtles (including movement habitat). An Information Gathering Form (IGF) has been submitted to the Ministry of the Environment, Conservation and Parks (MECP) to confirm this conclusion. At the time of authoring this report, no response has been received.

Additional endangered and threatened species considered to have a low likelihood of being present on the Site or in the Study Area are presented in Appendix C but are not discussed further in this report.

### 6.2.2 Species of Conservation Concern

Habitat for species of conservation concern (SOCC) includes habitat for three groups of species:

- Species that are rare, those whose populations are significantly declining, or have a high percentage of their global population in Ontario;
- Species listed as special concern under the ESA; and,
- Species listed as threatened or endangered under SARA.

SOCC are not provided protection of individuals or habitat. SOCC identified as present or having a moderate or high likelihood of being present at the Site, are discussed below.

#### Monarch

Monarch butterfly (*Danaus plexippus*) is designated special concern under the ESA and SARA and was identified as having moderate potential to be found on the Site. This species utilizes open and edge areas where flowering plants offer foraging opportunities, and milkweeds (*Asclepias* spp.) provide food for their larval stage. Suitable habitat for this species will continue to be present on the Site post-development in the undisturbed portions of the Site as illustrated on Figure 5. No further analysis is warranted.

#### Western Chorus Frog

Western chorus frog (*Pseudacris triseriata*) is designated as threatened under the SARA only. This species breeds in wetlands with a shrub component. Suitable habitat for this species (i.e., the stormwater management pond) will remain in its current state post-development as illustrated in Figure 5. No further analysis is warranted.

Standard mitigation to prevent mortality to wildlife and unnecessary damage to habitats is presented in Section 7.0.

## 6.3 Tree Cover

Impacts to tree cover are presented on Figure 5. Impacts to tree cover will be limited to the removal of individual trees and small areas of tree groupings as detailed in Appendix B. Mitigation measures to prevent damage to trees being retained are presented in Section 7.0.

# 7.0 RECOMMENDATIONS AND CONCLUSION

Based on the results of this preliminary review, no negative impacts to significant natural features are expected to result from the proposed development, and the proposed development satisfies all relevant federal, provincial and municipal laws, regulations and policies. This conclusion must be confirmed following a response from MECP regarding the submitted IGF. This conclusion is based on the following recommendations:

- Clearly demarcate and maintain the development envelope using temporary fencing.
- If construction will take place during the active period for turtles (April – October), install turtle exclusion fencing along the edge of the work area prior to May 1 of the development year, and maintain the fencing in-place until construction is completed. Fencing should be in accordance with MNRF (2021; https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing).
- If the MECP identifies the need for approvals under the ESA, they must be obtained prior to commencing work in regulated habitats of species listed as endangered or threatened under the ESA.
- To comply with the MBCA (Canada 1994), avoid removal of vegetation or ground disturbance during the active season for breeding birds (April 1 – August 15) unless preceded by a nesting survey, completed by a qualified biologist. If an active nest is observed, it must be buffered and avoided until it is no longer active.
- If a SAR is observed on the Site during construction, contact the MECP immediately ([613] 549-4000).
- Comply with the City of Ottawa Protocol for Wildlife Protection during Construction (Ottawa 2015) by:
  - i) Avoiding disturbing active mammal burrows during the hibernation and natal period (October to June).
  - i) Leave gaps in construction fencing to allow wildlife to leave the Site.
  - ii) Do not harm, feed or unnecessarily harass wildlife; keep the Site tidy and free of garbage.
  - iii) Check the work area daily for presence of wildlife. If any are observed, allow them to leave of their own accord, or contact a professional wildlife removal service.
- Do not include any invasive species in landscaping plans and prioritize locally-adapted native species wherever possible.
- Implement Best Management Practices, including sediment and erosion controls, spill prevention, etc. during the construction phase of the project.
- In accordance with the City of Ottawa's updated Tree Protection (By-law No. 2020-340), recommended tree protection measures for trees > 10 cm DBH adjacent to the proposed development envelope include the following:

a) Under the guidance of a landscape architect, erect tree protection fencing at the critical root zone (CRZ) of off-Site trees along the southern boundary of the Site and maintain the fencing until work is complete. The CRZ is calculated as DBH x 10 cm.

b) Tree protection fencing shall be at least 1.2 m in height and installed in such a way that the fence cannot be altered.

c) Within the CRZ of a tree to be retained, no person shall:

iv) place any material or equipment, including outhouses;

v) raise or lower the existing grade; or

vi) extend any hard surface or significantly change landscaping;

vii) attach any signs, notices or posters to a tree;

viii) damage the root system, trunk or branches of a tree; or

ix) direct exhaust fumes from equipment toward a tree canopy.

d) When trees to be removed overlap with the CRZ of trees to be preserved: cut roots at the edge of the CRZ and grind down stumps after tree removals; do not pull out stumps. Ensure there is no root pulling or disturbance of the ground within the CRZ.

e) If roots must be cut, roots 20 millimetres (mm) or larger should be cut at right angles with clean, sharp horticultural tools without tearing, crushing, or pulling. Refer to City of Ottawa Specification S.P. F-8011 Tree Protection, Excavation of Root Zone.

f) If reductions to the fenced tree protection area are required to facilitation construction, or any of the above mitigation measures must be deviated from, approval from the City of Ottawa General Manager must be sought.

# 8.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the exclusive use of Access Project Developments. The report, which specifically includes all tables, figures and attachments, is based on data and information collected by WSP Golder and is based solely on the conditions of the properties at the time of the work, supplemented by historical information and data obtained by WSP Golder as described in this report.

WSP Golder has relied in good faith on all information provided and does not accept responsibility for any deficiency, misstatements, or inaccuracies contained in the report as a result of omissions, misinterpretation, or fraudulent acts of the persons contacted or errors or omissions in the reviewed documentation.

The services performed, as described in this report, were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

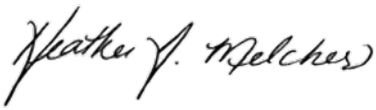
The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings, or other studies, WSP Golder should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

# 9.0 CLOSURE

We trust this report meets your current requirements. If you have any questions regarding this report, please contact the undersigned.

**Golder Associates Ltd.**

Gwendolyn Weeks, H.B.Sc.Env.
*Lead Ecologist*



Heather Melcher, M.Sc.
*Director, Ecology - Earth and Environment Ontario*

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https://wsponline.sharepoint.com/sites/ca-211-12056-00/14tech_profservices/ecology/report/eis tcr/legget and soldant_scoped eis and tcr_august 17 2022.docx

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Study Area

Subject Property


# ACCESS STORAGE DEVELOPMENT

***415 Legget Drive and 2700 Solandt Road***

***415 Legget Drive and 2700 Solandt Road, Ottawa, Ontario***

**Figure 1**
**Study Area**

**Sources:**
*Bing Maps, 2021*
*City of Ottawa, 2021*
*LIO, 2020*

0 50 100 M

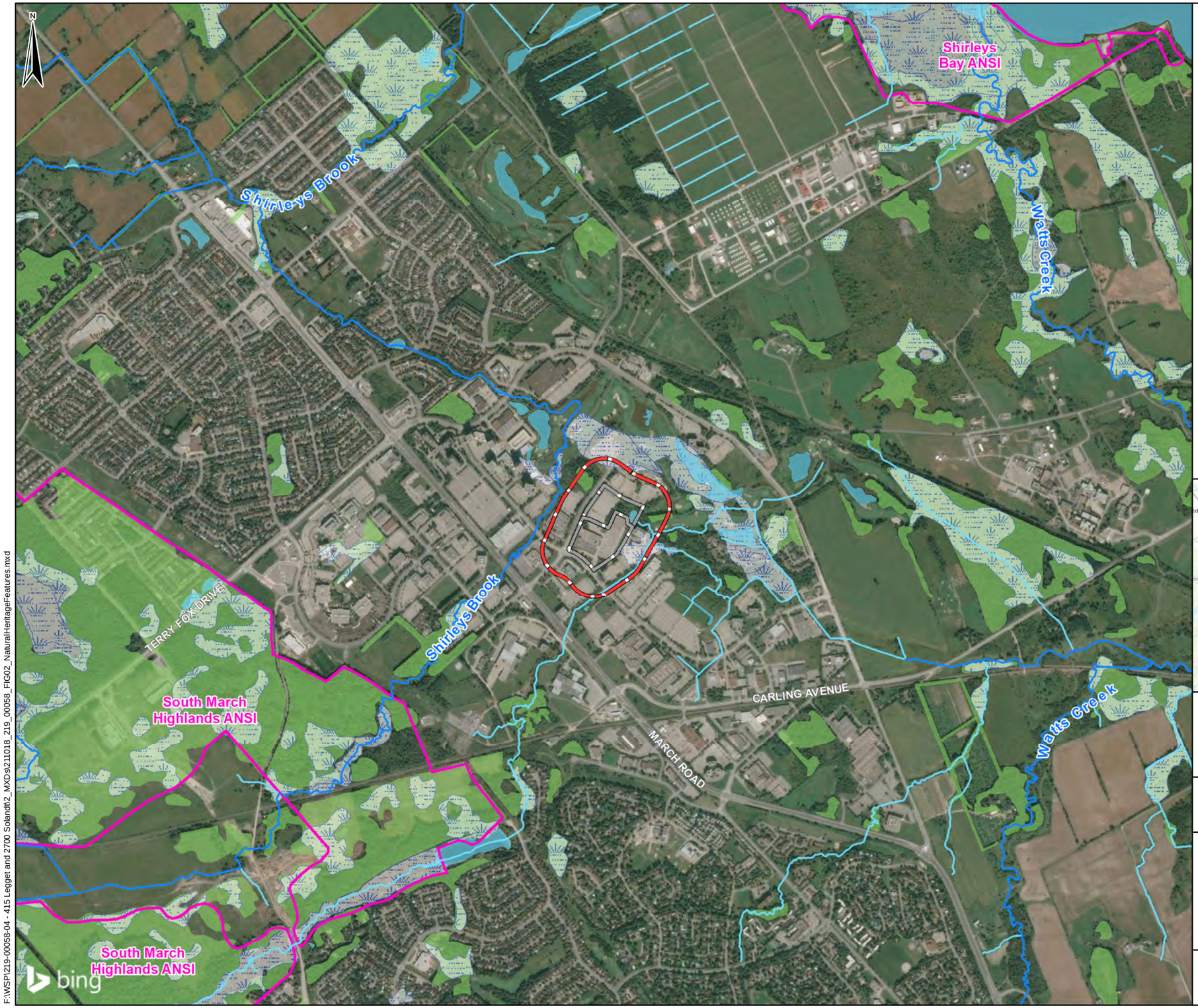
NAD 1983 UTM Zone 18N

**22 October 2021**

*Prepared: C. Pytlak*
*Reviewed: A. Orr*
*Project no: 219-00058-04*

wsp

F:\WSP\219-00058-04 - 415 Legget and 2700 Solandt\2_MXDs\211018_219_00058_FIG01_StudyArea.mxd




- Study Area
- Subject Property
- Area of Natural and Scientific Interest (MNRF, 2021)
- Wooded Area (MNRF, 2020)
- Wetland (MNRF, 2021)
- Waterbody (MNRF, 2021)
- Watercourse (MNRF, 2021)
- Fish Habitat (MNRF, 2019)


# ACCESS PROPERTY DEVELOPMENT

***415 Legget Drive and 2700 Solandt Road***

***415 Legget Drive and 2700 Solandt Road, Ottawa, Ontario***

**Figure 2**
**Natural Heritage Features**

**Sources:**
*Bing Maps, 2021*
*City of Ottawa, 2021*
*LIO, 2021*
*MNRF, 2021*

0 400 800 M

NAD 1983 UTM Zone 18N

**22 October 2021**

*Prepared: C. Pytlak*
*Reviewed: A. Orr*
*Project no: 219-00058-04*

wsp

F:\WSP\219-00058-04 - 415 Legget and 2700 Solandt\2_MXDs\211018_219_00058_FIG02_NaturalHeritageFeatures.mxd

Prepared By: Tanya.Peterson

N

2700 Solandt Road

415 Legget Drive

SOLANDT ROAD

LEGGET DRIVE

TG #1 TG #2 TG #3 TG #4 TG #5 TG #6 TG #7 TG #8 TG #9 TG #10

0 15 30 60 90 Metres

LEGEND:

- SUBJECT PROPERTY
- TREE GROUPING
- TREE LOCATION

TITLE:

TREE INVENTORY

PROJECT:

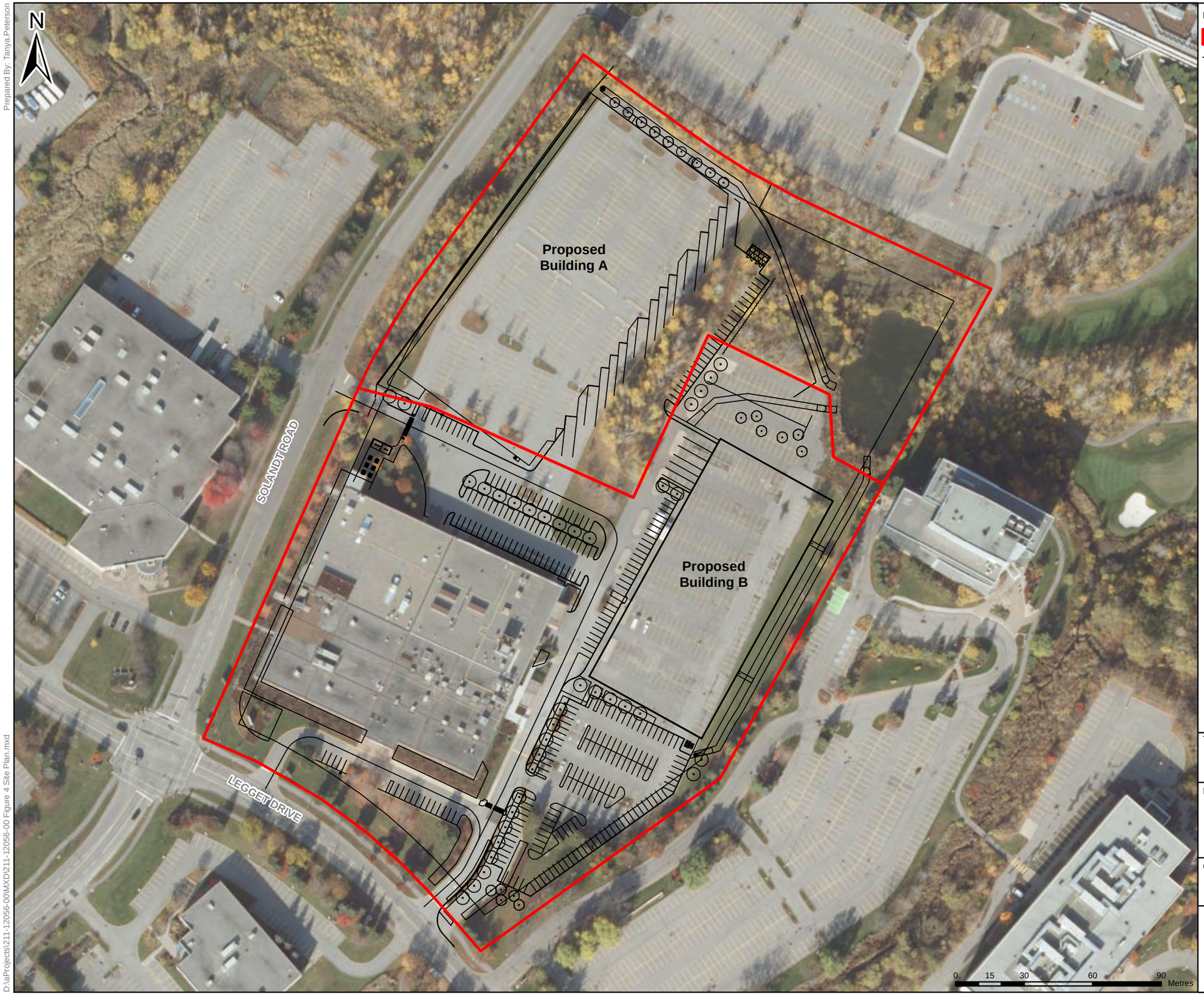
ENVIRONMENTAL IMPACT STUDY
415 LEGGET DRIVE AND 2700 SOLANDT ROAD
OTTAWA, ONTARIO

CLIENT:

ACCESS PROPERTY DEVELOPMENT INC.

| PROJECT NO.: | REVIEWED BY: |
|---|---|
| 211-12056-00 | AR |
| DATE: JULY 2022 | FIGURE: 3 |

D:\taProjects\211-12056-00\MXD\211-12056-00 Figure 3 Tree Inventory.mxd




LEGEND:

SUBJECT PROPERTY

PROPOSED SITE PLAN

TITLE:

SITE PLAN

PROJECT:

ENVIRONMENTAL IMPACT STUDY
415 LEGGET DRIVE AND 2700 SOLANDT ROAD
OTTAWA, ONTARIO

CLIENT:

ACCESS PROPERTY DEVELOPMENT INC.

| PROJECT NO.: | REVIEWED BY: |
|---|---|
| 211-12056-00 | AR |
| DATE: | FIGURE: |
| JULY 2022 | 4 |

Prepared By: Tanya.Peterson

D:\a\Projects\211-12056-00\MXD\211-12056-00 Figure 4 Site Plan.mxd

Prepared By: Tanya.Peterson

N

2700 Solandt Road

415 Legget Drive

SOLANDT ROAD

LEGGET DRIVE

TG #1
TG #2
TG #3
TG #4
TG #5
TG #6
TG #7
TG #8
TG #9
TG #10

0 15 30 60 90 Metres

LEGEND:

- SUBJECT PROPERTY
- PROPOSED SITE PLAN
- TREE GROUPING
- TREE LOCATION
- AREAS WITH IMPACTS TO TREE COVER:
  TREES - 14- 21, 81, 86-98
  TREE GROUPS - #1, #5
  PARTIAL TREE GROUPS - #3, #4, #6

TITLE:
ENVIRONMENTAL IMPACTS

PROJECT:
ENVIRONMENTAL IMPACT STUDY
415 LEGGET DRIVE AND 2700 SOLANDT ROAD
OTTAWA, ONTARIO

CLIENT:
ACCESS PROPERTY DEVELOPMENT INC.

| PROJECT NO.: | REVIEWED BY: |
|---|---|
| 211-12056-00 | AR |
| DATE: AUGUST 2022 | FIGURE: 5 |

D:\aProjects\211-12056-00\MXD\211-12056-00 Figure 5 Impacts to Tree Cover.mxd

**APPENDIX A**

# Photographic Log

Photo 1

Photo 2

**Photo 3**

**Photo 4**

**Photo 5**

**APPENDIX B**

# Tree Survey Data

**Tree Survey Data**

| Tree / Grouping ID | Species | DBH | Health Condition | Notes | Planned Action |
|---|---|---|---|---|---|
| 1 | White spruce | 30 | | | Retain |
| 2 | White spruce | | | | Retain |
| 3 | White spruce | 30 | | | Retain |
| 4 | Freemans maple | 32 | | | Retain |
| 5 | White elm | 45 | | | Retain |
| 6 | White elm | 26 | | | Retain |
| 7 | White elm | 36 | | | Retain |
| 8 | White elm | 43 | | | Retain |
| 9 | White elm | 40 | | | Retain |
| 10 | White elm | 50 | | | Retain |
| 11 | Norway spruce | 22 | | | Retain |
| 12 | White elm | 30 | | | Retain |
| 13 | Norway spruce | 26 | | | Retain |
| 14 | Norway spruce | 32 | | | **Remove** |
| 15 | Norway spruce | 46 | | | **Remove** |
| 16 | Norway spruce | 27 | | | **Remove** |
| 17 | Norway spruce | 47 | | | **Remove** |
| 18 | Norway spruce | 36 | | | **Remove** |
| 19 | Norway spruce | 29 | | | **Remove** |
| 20 | Scots pine | 41 | | | **Remove** |
| 21 | Norway spruce | 31 | | | **Remove** |
| 22 | Manitoba maple | | | Multi stemmed. 3 stems. 17,11,28 dbh | Retain |
| 23 | Norway spruce | 15 | | | Retain |
| 24 | White elm | 20 | | | Retain |
| 25 | Manitoba maple | | | Multi-stemmed. 4 stems. 14,11,10,11 dbh. | Retain |
| 26 | Norway map | 18 | | | Retain |
| 27 | White elm | 23 | | | Retain |
| 28 | White cedar | 20 | | Multi stemmed. 8 stems. | Retain |
| 29 | White elm | 26 | | | Retain |
| 30 | Manitoba maple | | | Multi stemmed. 4 stems. 14,13,12,10 Dbh | Retain |
| 31 | White elm | 30 | | | Retain |
| 32 | Manitoba maple | | | Multi stemmed. 3 stems. 27,12,24 Dbh | Retain |
| 33 | Norway spruce | 17 | | | Retain |
| 34 | Sugar maple | 17 | | | Retain |
| 35 | White cedar | | | Multi stemmed. 8 stems. Dbh 10-12 | Retain |
| 36 | White cedar | | | Multi stemmed. 5 stems. Dbh 10-15 | Retain |
| 37 | Amur maple | | | Multi stemmed. 4 stems. 16,16,18,11 Dbh | Retain |
| 38 | White spruce | 21 | | | Retain |
| 39 | White elm | 25 | | | Retain |
| 40 | White spruce | 20 | | | Retain |
| 41 | White spruce | 20 | | | Retain |
| 42 | White spruce | 28 | | | Retain |
| 43 | White spruce | 32 | | | Retain |
| 44 | White spruce | 32 | | | Retain |
| 45 | Ash | 37 | Damaged | | Retain |
| 46 | White spruce | 27 | | | Retain |
| 47 | White elm | 32 | | | Retain |
| 48 | White spruce | 28 | | | Retain |
| 49 | White spruce | 23 | | | Retain |
| 50 | White spruce | 24 | | | Retain |
| 51 | White spruce | 22 | | | Retain |
| 52 | White spruce | 19 | | | Retain |
| 53 | White cedar | | | Multi stemmed. 6 stems. 10-15 Dbh | Retain |
| 54 | White elm | 25 | | | Retain |
| 55 | White elm | 28 | | | Retain |
| 56 | White spruce | 28 | | | Retain |
| 57 | White cedar | | | Multi stemmed. 7 stems. 10-15 Dbh | Retain |
| 58 | White elm | 28 | | | Retain |
| 59 | Red oak | 42 | | | Retain |
| 60 | White spruce | 28 | | | Retain |
| 61 | White elm | 29 | | | Retain |
| 62 | White elm | 18 | | | Retain |
| 63 | White spruce | 18 | | | Retain |
| 64 | White spruce | 25 | | | Retain |
| 65 | Ash | 22 | | | Retain |
| 66 | White spruce | 20 | | | Retain |
| 67 | White elm | 25 | | | Retain |
| 68 | Manitoba maple | 24 | | | Retain |
| 69 | White birch | 12 | | | Retain |
| 70 | White birch | 20 | | | Retain |
| 71 | White birch | 22 | | | Retain |
| 72 | White birch | 15 | | | Retain |
| 73 | Cottonwood | 42 | | | Retain |
| 74 | Balsam poplar | 24 | | | Retain |
| 75 | Balsam poplar | 33 | | | Retain |
| 76 | Balsam poplar | 56 | | | Retain |

| Tree / Grouping ID | Species | DBH | Health Condition | Notes | Planned Action |
|---|---|---|---|---|---|
| 77 | Balsam poplar | 31 | | | Retain |
| 78 | Manitoba maple | | | Multi stemmed. 2 stems. 27 Dbh | Retain |
| 79 | Manitoba maple | 41 | | | Retain |
| 80 | Balsam poplar | 31 | | | Retain |
| 81 | Cottonwood | 52 | | | **Remove** |
| 82 | Manitoba maple | 34 | | | Retain |
| 83 | Manitoba maple | 31 | | | **Remove** |
| 84 | Balsam poplar | 30 | | | Retain |
| 85 | White spruce | 18 | | | **Remove** |
| 86 | Cottonwood | 70 | | | **Remove** |
| 87 | Maple sp | 21 | | | **Remove** |
| 88 | Ash | 30 | | | **Remove** |
| 89 | Freemans maple | 31 | | | **Remove** |
| 90 | Freemans maple | 15 | | | **Remove** |
| 91 | Freemans maple | 11 | | | **Remove** |
| 92 | Freemans maple | 11 | | | **Remove** |
| 93 | Freemans maple | 19 | | | **Remove** |
| 94 | Freemans maple | 15 | | | **Remove** |
| 95 | Freemans maple | 16 | | | **Remove** |
| 96 | Freemans maple | 16 | | | **Remove** |
| 97 | Freemans maple | 16 | | | **Remove** |
| 98 | Freemans maple | 16 | | | **Remove** |
| 99 | Scots pine | 17 | | | Retain |
| 100 | White spruce | 12 | | | Retain |
| 101 | Red oak | 26 | | | Retain |
| 102 | Manitoba maple | 45 | | | Retain |
| 103 | Red oak | 18 | | | Retain |
| 104 | Red oak | 18 | | | Retain |
| 105 | Green ash | 22 | Damaged | | Retain |
| 106 | Freemans maple | 11 | | | Retain |
| 107 | Freemans maple | 18 | | | Retain |
| 108 | Freemans maple | 12 | | | Retain |
| 109 | Freemans maple | 15 | | | Retain |
| 110 | Freemans maple | 17 | | | Retain |
| 111 | Freemans maple | 17 | | | Retain |
| 112 | Freemans maple | 15 | | | Retain |
| 113 | Freemans maple | 15 | | | Retain |
| 114 | Freemans maple | 16 | | | Retain |
| 115 | Cherry sp | 12 | | | Retain |
| 116 | Cherry sp | 13 | | | Retain |
| 117 | Cherry sp | 10 | | | Retain |
| 118 | Cherry sp | 13 | | | Retain |
| 119 | Cherry sp | 10 | | | Retain |
| 120 | Cherry sp | 11 | | | Retain |
| 121 | Cherry sp | 11 | | | Retain |
| 122 | Cherry sp | 10 | | | Retain |
| 123 | Cherry sp | 11 | | | Retain |
| 124 | Cherry sp | 12 | | | Retain |
| 125 | Cherry sp | 12 | | | Retain |
| 126 | White spruce | 12 | | | Retain |
| 127 | Freemans maple | 14 | | | Retain |
| 128 | White spruce | 15 | | | Retain |
| 129 | Red pine | 16 | | | Retain |
| 130 | White spruce | 12 | | | Retain |
| 131 | Scots pine | 44 | | | Retain |
| 132 | Scots pine | 40 | | | Retain |
| 133 | Scots pine | 32 | | | Retain |
| 134 | Scots pine | 25 | | | Retain |
| 135 | White spruce | 28 | | | Retain |
| 136 | Freemans maple | 22 | | | Retain |
| 137 | Freemans maple | 31 | | | Retain |
| 138 | Freemans maple | 36 | | | Retain |
| 139 | Freemans maple | 18 | | | Retain |
| 140 | Freemans maple | 31 | | | Retain |
| 141 | Freemans maple | 27 | | | Retain |
| 142 | Scots pine | 37 | | | Retain |
| 143 | Scots pine | 39 | | | Retain |
| 144 | Cherry sp | 12 | | | Retain |
| 145 | Cherry sp | 11 | | | Retain |
| 146 | Cherry sp | 10 | | | Retain |
| 147 | Cherry sp | 11 | | | Retain |
| 148 | Scots pine | 30 | | | Retain |
| 149 | Scots pine | 29 | | | Retain |
| 150 | Scots pine | 30 | | | Retain |
| 151 | Maple sp | 23 | | | Retain |
| 152 | Maple sp | 24 | | | Retain |
| 153 | White spruce | 25 | | | Retain |

| Tree / Grouping ID | Species | DBH | Health Condition | Notes | Planned Action |
|---|---|---|---|---|---|
| 154 | Maple sp | 30 | | | Retain |
| 155 | Cherry sp | 10 | | | Retain |
| 156 | Cherry sp | 10 | | | Retain |
| 157 | Cherry sp | 10 | | | Retain |
| 158 | Cherry sp | 11 | | | Retain |
| 159 | Cherry sp | 10 | | | Retain |
| 160 | Cherry sp | 10 | | | Retain |
| 161 | Cherry sp | 10 | | | Retain |
| 162 | Cherry sp | 11 | | | Retain |
| 163 | Cherry sp | 12 | | | **Remove** |
| 164 | White spruce | 12 | | | **Remove** |
| 165 | Willow sp | 61 | | | **Remove** |
| 166 | White spruce | 15 | | | Retain |
| 167 | White spruce | 15 | | | Retain |
| 168 | Willow sp | 40 | | | Retain |
| 169 | Willow sp | 32 | | | Retain |
| 170 | Willow sp | 31 | | | Retain |
| Group 1 | White cedar | | | 26 individuals. Dbh 10-20 | **Remove** |
| Group 2 | Balsam poplar | | | 10 individuals. Dbh 10-15 | Retain |
| Group 3 | Balsam poplar | | | 70 individuals. Dbh 10-30 | **Remove Portion** |
| Group 4 | Balsam poplar | | | 80 individuals Dbh 10-39 | Retain |
| Group 5 | Trembling aspen | | | 105 individuals. Dbh 10-29 | **Remove** |
| Group 6 | Trembling aspen | | | 108 individuals. Dbh 10-29 | **Remove Majority** |
| Group 7 | White Spruce | | | 3 individuals. Dbh 15-20 | Retain |
| Group 8 | White Spruce | | | 3 individuals. Dbh 20-25 | Retain |
| Group 9 | White Spruce | | | 3 individuals. Dbh 20-25 | Retain |
| Group 10 | Trembling aspen | | | 15 individuals. Dbh 10-29 | Retain |

**APPENDIX C**

# Species at Risk Screening

| Taxon | Common Name | Scientific Name | Endangered Species Act, Reg. 230/08 SARO List Status[1] | Species at Risk Act, Schedule 1 List of Wildlife SAR Status[2] | COSEWIC Status [3] | Global Rarity Rank[4] | Provincial Rarity Rank[5] | Source(s)* | Ontario Habitat Descriptions | Probability of Occurrence on Site | ESA Habitat Protection Provisions[6] | SARA Critical Habitat Defined[7] (Yes or No) | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Amphibian | Western chorus frog - Great Lakes St. Lawrence / Canadian Shield population | *Pseudacris triseriata* | — | THR | THR | G5TNR | S3 | ORAA | In Ontario, habitat of this amphibian species typically consists of marshes or wooded wetlands, particularly those with dense shrub layers and grasses, as this species is a poor climber. They will breed in almost any fishless pond including roadside ditches, gravel pits and flooded swales in meadows. This species hibernates in terrestrial habitats under rocks, dead trees or leaves, in loose soil or in animal burrows. During hibernation, this species is tolerant of flooding (Environment Canada 2015). | Moderate - suitable habitat may be present around the pond feature. | | Yes<br>• Suitable wetland habitat (all areas of suitable habitat incorporated): temporary wetlands or shallow portions of permanent wetlands with vegetation structure/composition generally herbaceous with occasional shrubby wildlands, or partially submerged trees forming open/discontinuous canopy (although some pop'n breed in heavily canopied habitat), and an absence of fish and other aquatic predators<br>• Terrestrial habitat (incorporating up to 300 m from boundaries of breeding wetlands) includes same vegetation structure/composition as wetlands, as well as soft substrate with dead leaves, woody debris and burrows for hibernation habitat<br>• Site occupancy: established by selecting point count data from 1992 or later and covering at least two separate years within 20 year period (with at least 1 observation from last 10 years)<br>• Dispersal corridor connects 2 breeding sites that meet habitat occupancy criteria and that are separated by maximum distance of 900 m<br>• 211 critical habitat parcels identified in Ontario<br>• Excludes anthropogenic structures | Environment Canada. 2015. Recovery Strategy for the Western Chorus Frog (Pseudacris triseriata), Great Lakes/ St. Lawrence - Canadian Shield population, in Canada. Species at Risk Act Recovery Strategy Series. Ottawa ON: Environment Canada; [accessed 29 November 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-WesternChorusFrogGLSLBC-v00-2015Dec01_e.pdf. vi + 50 p. |
| Arthropod | Monarch | *Danaus plexippus* | SC | SC | END | G4 | S2N, S4B | OOA | In Ontario, monarch is found throughout the northern and southern regions of the province. This butterfly is found wherever there is milkweed (*Asclepias* spp.) plants for its caterpillars and wildflowers that supply a nectar source for adults. It is often found on abandoned farmland, meadows, open wetlands, prairies and roadsides, but also in city gardens and parks. Important staging areas during migration occur along the north shores of the Great Lakes (COSEWIC 2010). | Moderate - some milkweed observed in limited numbers in the meadow areas of the Site. | | No | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2010. COSEWIC assessment and status report on the Monarch Danaus plexippus in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 22 November 2019]. https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/cosewic/sr_Monarch_0810_e1.pdf. vii + 43 p. |
| Arthropod | Rusty-patched bumble bee | *Bombus affinis* | END | END | END | G1 | S1 | Range | In Ontario, rusty-patched bumble bee is found in areas from the southern Great Lakes – St. Lawrence forest region southwards into the Carolinian forest. It is a habitat generalist, but it is typically found in open habitats, such as mixed farmland, savannah, marshes, sand dunes, urban and lightly wooded areas. It is cold –tolerant and can be found at high elevations. Most recent sightings in Ontario have been in oak savannah habitat with well-drained, sandy soils and moderately open canopy. It requires an abundance of flowering plants for forage. This species most often builds nests underground in old rodent burrows, but also in hollow tree stumps and fallen dead wood (Colla and Taylor-Pindar 2011). The only recent sightings in Ontario are from the Pinery Provincial Park. | Low - no suitable habitat. | Regulated<br>In the geographic areas of: where species occurs south of 45○30'0" north latitude (approximately south of Algonquin Park)<br>Regulated Habitat:<br>• any nesting or hibernation site and surrounding 30 m area<br>• natural areas within 500 m of a rusty-patched bumble bee that provide suitable foraging conditions (i.e. prairie, savannah, woodland, marsh, bog, forest, sand dune, old field or similar areas); and if these areas extend beyond 500 m, those areas protected up to an additional 500 m<br>• natural areas that provide suitable foraging conditions between Apr 1 to May 31 that fall between 500 m and 1000 m of a rusty-patched bumble bee<br>• areas protected until 5 consecutive years of non-use<br>• unsuitable habitat includes open water and built-up areas (e.g. roads, parking lots)<br>• regulation does not apply to areas used in past 12 months for pasture, growing, producing or raising farm animals, producing agricultural crops, or growing a garden or lawn | Yes (proposed)<br>• Area of suitable habitat within 1 km of any occupied record<br>• Occupancy defined as valid sightings since 2005<br>• Suitable habitat includes:<br>o nesting habitat (old rodent burrows, hollow tree stumps, fallen dead wood)<br>o overwintering sites (undergrown burrows, fallen dead wood)<br>o foraging habitat (foraging opportunities in savannah, woodland, forest, prairie, marsh, bog, sand dune or cultural sites)<br>• Anthropogenic structures, open water and manicured lawns within the 1 km zone are not considered critical habitat, except within the 30m critical function zone of any valid record of occupied overwintering or nesting site | Colla SR, Taylor-Pindar A. 2011. Recovery Strategy for the Rusty-patched Bumble Bee (Bombus affinis) in Ontario. Ontario Recovery Strategy Series. Peterborough ON: Ontario Ministry of Natural Resources; [accessed 29 November 2019]. https://www.ontario.ca/page/rusty-patched-bumble-bee-recovery-strategy. vi + 21 p. |
| Arthropod | Yellow-banded bumble bee | *Bombus terricola* | SC | SC | SC | G5 | S2 | Range | Yellow-banded bumblebee is a forage and habitat generalist, occupying open woodlands, meadows, grasslands, farmlands and urban parks, and taking nectar from various flowering plants (COSEWIC 2015). It is an early emerging species, making it likely an important pollinator of early blooming wild flowering plants (e.g. wild blueberry) and agricultural crops (e.g., apple). Nest sites are often in abandoned rodent burrows in old fields and queens overwinter by burrowing into loose soil or rotting trees (COSEWIC 2015). | Low - no suitable habitat. | | No | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2015. COSEWIC assessment and status report on the Yellow-banded Bumble Bee Bombus terricola in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 22 November 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_Yellow-banded%20Bumble%20Bee_2015_e.pdf. ix + 60 p. |

| Taxon | Common Name | Scientific Name | Endangered Species Act, Reg. 230/08 SARO List Status[1] | Species at Risk Act, Schedule 1 List of Wildlife SAR Status[2] | COSEWIC Status [3] | Global Rarity Rank[4] | Provincial Rarity Rank[5] | Source(s)* | Ontario Habitat Descriptions | Probability of Occurrence on Site | ESA Habitat Protection Provisions[6] | SARA Critical Habitat Defined[7] (Yes or No) | References |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bird | Bank swallow | *Riparia riparia* | THR | THR | THR | G5 | S4B | *OBBA* | In Ontario, bank swallow breeds in a variety of natural and anthropogenic habitats, including lake bluffs, stream and riverbanks, sand and gravel pits, and roadcuts. Nests are generally built in a vertical or near-vertical bank. Breeding sites are typically located near open foraging sites such as rivers, lakes, grasslands, agricultural fields, wetlands and riparian woods. Forested areas are generally avoided (Garrison 1999). | Low - no suitable habitat. | General (Draft)<br>Category 1 – Breeding colony, including burrows and substrate between them<br>Category 2 – Area within 50 m of the front of breeding colony face<br>Category 3 – Area of suitable foraging habitat within 500 m of the outer edge of breeding colony | No | Garrison BA. 1999. Bank Swallow (Riparia riparia). The Birds of North America Online (AF Poole and FB Gill, eds). Ithaca NY: Cornell Lab of Ornithology; [accessed 20 November 2019]. https://doi.org/10.2173/bna.414. |
| Bird | Barn swallow | *Hirundo rustica* | THR | THR | SC | G5 | S4B | OBBA | In Ontario, barn swallow breeds in areas that contain a suitable nesting structure, open areas for foraging, and a body of water. This species nests in human made structures including barns, buildings, sheds, bridges, and culverts. Preferred foraging habitat includes grassy fields, pastures, agricultural cropland, lake and river shorelines, cleared rights-of-way, and wetlands (COSEWIC 2011). Mud nests are fastened to vertical walls or built on a ledge underneath an overhang. Suitable nests from previous years are reused (Brown and Brown 2019). | Low - none observed and no nests observed. | General<br>Category 1 – Nest<br>Category 2 – Area within 5 m of the nest<br>Category 3 – Area between 5-200 m of the nest | No, but Residence Description Provided:<br>• During period of occupancy (May-Aug) any barn swallow nest, whether occupied or not, is considered a residence | Brown MB, Brown CR. 2019. Barn Swallow (Hirundo rustica). In The Birds of North America Online (P. G. Rodewald, ed), version 2.0. Ithaca NY: Cornell Lab of Ornithology; [accessed 20 November 2019]. https://doi.org/10.2173/bna.barswa.02.<br><br>COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2011. COSEWIC assessment and status report on the Barn Swallow Hirundo rustica in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 22 November 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_barn_swallow_0911_eng.pdf. ix + 37 p. |
| Bird | Bobolink | *Dolichonyx oryzivorus* | THR | THR | THR | G5 | S4B | NHIC; OBBA | In Ontario, bobolink breeds in grasslands or graminoid dominated hayfields with tall vegetation (Gabhauer 2007). Bobolink prefers grassland habitat with a forb component and a moderate litter layer. They have low tolerance for presence of woody vegetation and are sensitive to frequent mowing within the breeding season. They are most abundant in established, but regularly maintained, hayfields, but also breed in lightly grazed pastures, old or fallow fields, cultural meadows and newly planted hayfields. Their nest is woven from grasses and forbs. It is built on the ground, in dense vegetation, usually under the cover of one or more forbs (Renfrew et al. 2015). | Low - no suitable habitat. | General<br>Category 1 – Nest and area within 10 m of nest<br>Category 2 – Area between 10 – 60 m of the nest or centre of approximated defended territory<br>Category 3 - Area of continuous suitable habitat between 60 – 300 m of the nest or centre of approximated defended territory | No | Gabhauer MA. 2007. Bobolink, pp. 586-587 in Cadman MD, Sutherland DA, Beck GG, Lepage D, Couturier AT, eds. Atlas of the Breeding Birds of Ontario, 2001-2005. Toronto ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources and Ontario Nature. xxii + 706 p.<br><br>Renfrew R, Strong AM, Perlut NG, Martin SG, Gavin TA. 2015. Bobolink (Dolichonyx oryzivorus). In The Birds of North America (PG Rodewald, ed.), version 2.0. Ithaca NY: Cornell Lab of Ornithology; [accessed 29 November 2019]. https://doi.org/10.2173/bna.176. |
| Bird | Canada warbler | *Cardellina canadensis* | SC | THR | THR | G5 | S4B | eBird | In Ontario, breeding habitat for Canada warbler consists of moist mixed forests with a well-developed shrubby understory. This includes low-lying areas such as cedar and alder swamps, and riparian thickets (McLaren 2007). It is also found in densely vegetated regenerating forest openings. Suitable habitat often contains a developed moss layer and an uneven forest floor. Nests are well concealed on or near the ground in dense shrub or fern cover, often in stumps, fallen logs, overhanging stream banks or mossy hummocks (Reitsma et al. 2010). | Low - no suitable habitat. | | No | McLaren P. 2007. Canada Warbler, pp. 528-529 in Cadman MD, Sutherland DA, Beck GG, Lepage D, Couturier AT, eds. Atlas of the Breeding Birds of Ontario, 2001-2005. Toronto ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources and Ontario Nature. xxii + 706 p.<br><br>Reitsma L, Goodnow M, Hallworth MT, Conway CJ. 2009. Canada Warbler (Cardellina canadensis). In The Birds of North America Online (A. Poole, ed.), version 2.0. Ithaca NY: Cornell Lab of Ornithology; [accessed 29 November 2019]. https://doi.org/10.2173/bna.421. |
| Bird | Chimney swift | *Chaetura pelagica* | THR | THR | THR | G4G5 | S3B | eBird | In Ontario, chimney swift breeding habitat is varied and includes urban, suburban, rural and wooded sites. They are most commonly associated with towns and cities with large concentrations of chimneys. Preferred nesting sites are dark, sheltered spots with a vertical surface to which the bird can grip. Unused chimneys are the primary nesting and roosting structure, but other anthropogenic structures and large diameter cavity trees are also used (COSEWIC 2007). | Low - no suitable habitat. | General<br>Category 1 – Human-made nest/roost, or natural nest/roost cavity and area within 90 m of natural cavity | No | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2007. COSEWIC assessment and status report on the Chimney Swift Chaetura pelagica in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 22 November 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_chaetura_pelagica_e.pdf. vii + 49 p. |
| Bird | Common nighthawk | *Chordeiles minor* | SC | THR | SC | G5 | S4B | eBird | In Ontario, these aerial foragers require areas with large open habitat. This includes farmland, open woodlands, clearcuts, burns, rock outcrops, alvars, bogs, fens, prairies, gravel pits and gravel rooftops in cities (Sandilands 2007) | Low - no suitable habitat. | | No | Sandilands A. 2007. Common Nighthawk, pp. 308-309 in Cadman, MD, Sutherland DA, Beck GG, Lepage D, Couturier AR, eds. Atlas of the Breeding Birds of Ontario, 2001-2005. Toronto ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources and Ontario Nature. xxii + 706 p. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bird | Eastern meadowlark | *Sturnella magna* | THR | THR | THR | G5 | S4B | NHIC; OBBA | In Ontario, eastern meadowlark breeds in pastures, hayfields, meadows and old fields. Eastern meadowlark prefers moderately tall grasslands with abundant litter cover, high grass proportion, and a forb component (Hull 2019). They prefer well drained sites or slopes, and sites with different cover layers (Roseberry and Klimstra 1970). | Low - no suitable habitat. | General<br>Category 1 – Nest and area within 10 m of the nest<br>Category 2 – Area between 10 – 100 m of the nest or centre of approximated defended territory<br>Category 3 – Area of continuous suitable habitat between 100 – 300 m of the nest or centre of approximated defended territory | No | Hull SD, Shaffer JA, Lawrence DI. 2019. The effects of management practices on grassland birds: Eastern Meadowlark (Sturnella magna). Jamestown ND: US Geological Survey; [accessed 02 December 2019]. https://pubs.usgs.gov/pp/1842/mm/pp1842MM.pdf.<br><br>Roseberry JL, Klimstra WD. 1970. The nesting ecology and reproductive performance of the Eastern Meadowlark. The Wilson Bulletin 82(3): 243-267. |
| Bird | Eastern whip-poor-will | *Antrostomus vociferus* | THR | THR | THR | G5 | S4B | OBBA | In Ontario, whip-poor-will breeds in semi-open forests with little ground cover. Breeding habitat is dependent on forest structure rather than species composition, and is found on rock and sand barrens, open conifer plantations and post-disturbance regenerating forest. Territory size ranges from 3 to 11 ha (COSEWIC 2009). No nest is constructed, and eggs are laid directly on the leaf litter (Mills 2007). | Low - no suitable habitat. | General<br>Category 1 – Nest and area within 20 m of nest<br>Category 2 – Area between 20-170 m from nest or centre of approximated defended territory<br>Category 3 – Area of suitable habitat within 170-500 m of the nest, or centre of approximated defended territory | Yes<br>• Occupancy defined as atlas square where records from 2001 breeding season consist of at least:<br>o 1 confirmed breeding record OR<br>o 2 records where a minimum of 1 record is probably breeding OR<br>o 2 possible breeding records in a single year + at least one possible breeding record from another year OR<br>o 5 possible breeding records (single or different years)<br>• Suitable habitat for nesting and foraging includes all corresponding areas of 3 ha or more within a 10 km x 10 km atlas square:<br>o forests with sparse to moderate tree cover or open habitats + sparse to moderate shrub and herbaceous cover + well-drained soils<br>• Suitable habitat for nesting only includes all corresponding areas up to 30 m on the interior side of the forest edge within a 10 km x 10 km atlas square:<br>o forests with dense tree cover + sparse to moderate shrub and herbaceous cover + well-drained soils<br>• Suitable habitat for foraging only includes all corresponding areas up to 1,250 m from the edge of suitable nesting habitat within a 10 km x 10 km atlas square:<br>o forests with sparse tree cover or open habitats + dense shrub cover + soil drainage is deficient OR<br>o agricultural land with scattered shrubs or trees (e.g. hedgerows) that can be used as perches | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2009. COSEWIC assessment and status report on the Whip-poor-will Caprimulgus vociferus in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_whip-poor-will_0809_e.pdf. vi + 28 p.<br><br>Mills A. 2007. Whip-poor-will, pp. 312-313 in Cadman MD, Sutherland DA, Beck GG, Lepage D, Couturier AR, eds. Atlas of the Breeding Birds of Ontario, 2001-2005. Toronto ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources and Ontario Nature. xxii + 706 p. |
| Bird | Eastern wood-pewee | *Contopus virens* | SC | SC | SC | G5 | S4B | *OBBA* | In Ontario, eastern wood-pewee inhabits a wide variety of wooded upland and lowland habitats, including deciduous, coniferous, or mixed forests. It occurs most frequently in forests with some degree of openness. Intermediate-aged forests with a relatively sparse midstory are preferred. In younger forests with a relatively dense midstory, it tends to inhabit the edges. Also occurs in anthropogenic habitats providing an open forested aspect such as parks and suburban neighborhoods. Nest is constructed atop a horizontal branch, 1-2 m above the ground, in a wide variety of deciduous and coniferous trees (COSEWIC 2012). | Low - no suitable habitat. | | No | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2012. COSEWIC assessment and status report on the Eastern Wood-pewee Contopus virensin Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_Eastern%20Wood-pewee_2013_e.pdf. x + 39 p. |
| Bird | Evening grosbeak | *Coccothraustes vespertinus* | SC | SC | SC | G5 | S4B | OBBA | In Ontario, evening grosbeak breeds across northern Ontario, as far south as southern Georgian Bay, in open mature coniferous or mixed forests dominated by fir species, white spruce and/or trembling aspen (MECP 2019). | Low - no suitable habitat. | | No | MECP (Ministry of Environment, Conservation and Parks). 2019. Evening Grosbeak. [updated 04 November 2019; accessed 02 December 2019]. https://www.ontario.ca/page/evening-grosbeak. |
| Bird | Olive-sided flycatcher | *Contopus cooperi* | SC | THR | SC | G4 | S4B | eBird | In Ontario, olive-sided flycatcher breeding habitat consists of natural openings in coniferous or mixed forests, including bogs, burns, riparian zones, and cutover areas. They are also found in semi-open forest stands and early successional forest when tall snags and residual live trees are present. In the boreal forest it is often associated with muskeg, bogs, fens and swamps dominated by spruce and tamarack. Open areas with tall trees or snags for perching are used for foraging (COSEWIC 2007). Nests are usually built on horizontal branches of conifers (Peck and James 1987). | Low - no suitable habitat. | | No | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2007. COSEWIC assessment and status report on the Olive-sided Flycatcher Contopus cooperi in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/srOlive-sidedFlycatcher2018e.pdf. vii + 25 p.<br><br>Peck GK, James RD. 1987. The breeding birds of Ontario: nidiology and distribution. Vol. 2: Passerines. Toronto ON: Royal Ontario Museum. 397 p. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bird | Red-headed woodpecker | *Melanerpes erythrocephalus* | END | END | END | G5 | S4B | eBird | In Ontario, red-headed woodpecker breeds in open, deciduous woodlands or woodland edges and are often found in parks, cemeteries, golf courses, orchards and savannahs (Woodliffe 2007). They may also breed in forest clearings or open agricultural areas provided that large trees are available for nesting. They prefer forests with little or no understory vegetation. They are often associated with beech or oak forests, beaver ponds and swamp forests where snags are numerous. Nests are excavated in the trunks of large dead trees (Frei et al. 2017). | Low - no suitable habitat. | General (as of Jan 27, 2022) | No | Frei B, Smith KG, Withgott JH, Rodewald PG, Pyle P, Patten MA. 2017. Red-headed Woodpecker (Melanerpes erythrocephalus). In The Birds of North America (PG Rodewald, ed), version 2.1. Ithaca, NY: Cornell Lab of Ornithology; [accessed 02 December 2019]. https://doi.org/10.2173/bna.rehwoo.02.1.<br><br>Woodliffe PA. 2007. Red-headed Woodpecker, pp. 320-321 in Cadman MD, Sutherland DA, Beck GG, Lepage D, Couturier AR, eds. Atlas of the Breeding Birds of Ontario, 2001-2005. Toronto ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources and Ontario Nature. xxii + 706 p. |
| Bird | Wood thrush | *Hylocichla mustelina* | SC | THR | THR | G4 | S4B | NHIC; OBBA | In Ontario, wood thrush breeds in moist, deciduous hardwood or mixed stands that are often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches. This species selects nesting sites with the following characteristics: lower elevations with trees less than 16 m in height, a closed canopy cover (>70 %), a high variety of deciduous tree species, moderate subcanopy and shrub density, shade, fairly open forest floor, moist soil, and decaying leaf litter (COSEWIC 2012). | Low - no suitable habitat. | | No | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2012. COSEWIC assessment and status report on the Wood Thrush Hylocichla mustelina in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_Wood%20Thrush_2013_e.pdf. ix + 46 p. |
| Fish | American Eel | *Anguilla rostrata* | END | — | THR | G4 | S1? | NHIC | In Ontario, American eel is native to the Lake Ontario, St. Lawrence River and Ottawa River watersheds. Their current distribution includes lakes Huron, Erie, and Superior and their tributaries. The Ottawa River population is considered extirpated. The preferred habitat of the American eel is cool water of lakes and streams with muddy or silty substrates in water temperatures between 16 and 19°C. The American eel is a catadromous fish that lives in fresh water until sexual maturity then migrates to the Sargasso Sea to spawn (Burridge et al. 2010; Eakins 2016). | Low - no suitable habitat. | General (as of June 30, 2013) | | Burridge ME, Holm E, Mandrak NE. 2010. The ROM Field Guide to Freshwater Fishes of Ontario. Toronto, ON: Royal Ontario Museum. 464 p.<br><br>Eakins RJ. 2016. Ontario Freshwater Fishes Life History Database. [1999-current; accessed 02 December 2019]. http://www.ontariofishes.ca. |
| Lichen | Flooded jellyskin | *Leptogium rivulare* | — | SC | SC | G3G5 | S3 | Range | In Ontario, flooded jellyskin is found in the eastern region of the province. This lobed, leaf-like lichen grows on the lower trunks of trees in hardwood swamps where flooding occurs in the spring. The most common tree host is black ash, but it has also been recorded on silver maple, trembling aspen, bur oak and white cedar. Trees must be live to support the lichen. These seasonal pond habitats typically occur over top of calcareous bedrock, such as limestone. There is unlikely to be a minimum size requirement for the area of flooded forest habitat available to the lichen, as long as adequate flooding is present (Environment Canada 2013; COSEWIC 2015). | Low - no suitable habitat. | General (as of June 30, 2013) | Yes<br>Suitable habitat for all extant populations.<br>Suitable habitat:<br>• Seasonal ponds – area encompassed by high watermark of seasonal ponds known to support extant population, plus a 30 m distance beyond the high watermark.<br>• Seasonally flooded stream/riverbeds – rock surfaces and treed areas within the floodplain, up to 30 m downstream and upstream of extant occurrences. | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2015. COSEWIC assessment and status report on the flooded jellyskin Leptogium rivulare in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_Flooded%20Jellyskin_2015_e.pdf. xii + 48 p.<br><br>Environment Canada. 2013. Recovery Strategy for the Flooded Jellyskin Lichen (Leptogium rivulare) in Canada. Species at Risk Act Recovery Strategy Series. Ottawa ON: Environment Canada; [accessed 02 December 2019]. http://publications.gc.ca/collections/collection_2013/ec/En3-4-147-2013-eng.pdf. 23 p. |
| Lichen | Pale-bellied frost lichen | *Physconia subpallida* | END | END | END | GNR | S2S3 | Range | In Ontario, pale-bellied frost lichen grows on trees in mature, deciduous forests with relatively open understory, but moderate to high canopy cover. Common host trees include ash, black walnut, hop-hornbeam, and elm, although in Ontario, it is most often found on hop-hornbream. This lichen has also been found growing on fence rails and rocks (Lewis 2011). | Low - no suitable habitat. | Regulated<br>In the geographic areas of: Algonquin Provincial Park, counties of Haliburton, Hastings, Lanark, Lennox and Addington, Peterborough and Renfrew; townships of Central Frontenac, North Frontenac, and South Frontenac within County of Frontenac, townships of Athens, Elizabethtown-Kitley, Merrickville-Wolford and Rideau Lakes within County of Leeds and Grenville, and township of South Algonquin in District of Nipissing; Municipalities of Central Frontenac, Northern Frontenac, Lanark Highlands, Addington Highlands and Greater Madawaska<br>Regulated Habitat:<br>• host tree on which the lichen exists and area within 50 m of trunk<br>• area within 100 m of lichen that falls within water body, watercourse, or area belonging to ELC community and that is (i) suitable for natural colonization from existing population of lichen or (ii) contributes to maintenance of suitable microsite characteristics for the lichen to exist | Yes<br>Critical Habitat is same as Provincial Habitat Regulation | Lewis CL. 2011. Recovery Strategy for the Pale-bellied Frost Lichen (Physconia subpallida) in Ontario. Ontario Recovery Strategy Series. Peterborough ON: Ontario Ministry of Natural Resources; [accessed 02 December 2019]. https://www.ontario.ca/page/pale-bellied-frost-lichen-recovery-strategy. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammal | Eastern small-footed myotis | *Myotis leibii* | END | — | — | G4 | S2S3 | BCI | In Ontario, eastern small-footed myotis is not known to roost in trees, but there is very little known about its roosting habits. The species generally roosts on the ground under rocks, in rock crevices, talus slopes and rock piles, but it occasionally inhabits buildings. Entrances of caves or abandoned mines where humidity is low, and temperatures are cool and sometimes subfreezing may be used as hibernacula (Humphrey 2017). | Low - no suitable habitat. | General | n/a | Humphrey C. 2017. Recovery Strategy for the Eastern Small-footed Myotis (Myotis leibii) in Ontario. Ontario Recovery Strategy Series. Peterborough ON: Ontario Ministry of Natural Resources; [accessed 02 December 2019]. https://files.ontario.ca/mnrf_sar_rs_esfm_final_accessible.pdf vii + 76 p. |
| Mammal | Little brown myotis | *Myotis lucifugus* | END | END | END | G3 | S3 | BCI | In Ontario, this species' range is extensive and covers much of the province. It will roost in both natural and man-made structures. Roosting colonies require a number of large dead trees, in specific stages of decay and that project above the canopy in relatively open areas. May form nursery colonies in the attics of buildings within 1 km of water. Caves or abandoned mines may be used as hibernacula, but high humidity and stable above freezing temperatures are required (ECCC 2018). | Low - no suitable habitat. | General | Yes<br>• Critical habitat partially identified as:<br>o Any site where little brown myotis has been observed hibernating during the winter at least once since 1995 | ECCC (Environment and Climate Change Canada). 2018. Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), the Northern Myotis (Myotis septentrionalis), and the Tri-colored Bat (Perimyotis subflavus) in Canada. Species at Risk Act Recovery Strategy Series. Ottawa ON: Environment and Climate Change Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-TroisChauveSourisThreeBats-v01-2019Nov-Eng.pdf. ix + 172 p. |
| Mammal | Northern myotis | *Myotis septentrionalis* | END | END | END | G1G2 | S3 | BCI | In Ontario, this species' range is extensive and covers much of the province. It will usually roost in hollows, crevices, and under loose bark of mature trees. Roosts may be established in the main trunk or a large branch of either living or dead trees. Caves or abandoned mines may be used as hibernacula, but high humidity and stable above freezing temperatures are required (ECCC 2018). | Low - no suitable habitat. | General | Yes<br>• Critical habitat partially identified as:<br>o Any site where northern myotis has been observed hibernating during the winter at least once since 1995 | ECCC (Environment and Climate Change Canada). 2018. Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), the Northern Myotis (Myotis septentrionalis), and the Tri-colored Bat (Perimyotis subflavus) in Canada. Species at Risk Act Recovery Strategy Series. Ottawa ON: Environment and Climate Change Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-TroisChauveSourisThreeBats-v01-2019Nov-Eng.pdf. ix + 172 p. |
| Mammal | Tri-colored bat | *Perimyotis subflavus* | END | END | END | G2G3 | S3? | BCI | In Ontario, tri-colored bat may roost in foliage, in clumps of old leaves, hanging moss or squirrel nests. They are occasionally found in buildings although there are no records of this in Canada. They typically feed over aquatic areas with an affinity to large-bodied water and will likely roost in close proximity to these. Hibernation sites are found deep within caves or mines in areas of relatively warm temperatures. These bats have strong roost fidelity to their winter hibernation sites and may choose the exact same spot in a cave or mine from year to year (ECCC 2018). | Low - no suitable habitat. | General | Yes<br>• Critical habitat partially identified as:<br>o Any site where tri-colored bat has been observed hibernating during the winter at least once since 1995 | ECCC (Environment and Climate Change Canada). 2018. Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), the Northern Myotis (Myotis septentrionalis), and the Tri-colored Bat (Perimyotis subflavus) in Canada. Species at Risk Act Recovery Strategy Series. Ottawa ON: Environment and Climate Change Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-TroisChauveSourisThreeBats-v01-2019Nov-Eng.pdf. ix + 172 p. |
| Reptile | Blanding's turtle - Great Lakes / St.Lawrence population | *Emydoidea blandingii* | THR | END | END | G4 | S3 | NHIC; ORAA | In Ontario, Blanding's turtle will use a range of aquatic habitats, but favor those with shallow, standing or slow-moving water, rich nutrient levels, organic substrates and abundant aquatic vegetation. They will use rivers but prefer slow-moving currents and are likely only transients in this type of habitat. This species is known to travel great distances over land in the spring in order to reach nesting sites, which can include dry conifer or mixed forests, partially vegetated fields, and roadsides. Suitable nesting substrates include organic soils, sands, gravel and cobble. They hibernate underwater and infrequently under debris close to water bodies (COSEWIC 2016). | Low - none observed during targeted surveys. | General<br>Category 1 – Nest and area within 30 m or overwintering sites and area within 30 m<br>Category 2 – Wetland complex (i.e. all suitable wetlands or waterbodies within 500 m of each other) that extends up to 2 km from occurrence, and the area within 30 m around those suitable wetlands or waterbodies<br>Category 3 – Area between 30 – 250 m around suitable wetlands/waterbodies identified in category 2, within 2 km of an occurrence | Yes<br>• Critical habitat identified as suitable habitat occupied by Blanding's turtle<br>• Occupancy defined as:<br>o Min 2 individuals observed in any single year in the past 40 years; OR<br>o Single individual observed in 2+ years in the past 40 years<br>• Suitable habitat defined as:<br>o Aquatic habitat (marshes, swamps, bogs, streams, rivers and lakes)<br>o Overwintering habitat (permanent or seasonal wetlands, channels or pooled water with unfrozen water and soft organic substrates)<br>o Nesting habitat of bare ground and sparsely vegetated areas for nesting<br>o Terrestrial habitat (shrubland, grassland and upland forest) | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2016. COSEWIC assessment and update status report on the Blanding's Turtle Emydoidea blandingii (Nova Scotia population and Great Lakes/St. Lawrence population) in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_Blanding%E2%80%99s%20Turtle_2016_e.pdf. xix + 110 p. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reptile | Snapping turtle | *Chelydra serpentina* | SC | SC | SC | G5 | S4 | NHIC; ORAA | In Ontario, snapping turtle uses a wide range of waterbodies, but shows preference for areas with shallow, slow-moving water, soft substrates and dense aquatic vegetation. Hibernation takes place in soft substrates under water. Nesting sites consist of sand or gravel banks along waterways or roadways (COSEWIC 2008). | Low - none observed during targeted surveys. | | No<br>Management Plan Available | COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2008. COSEWIC assessment and status report on the Snapping Turtle Chelydra serpentina in Canada. Ottawa ON: Committee on the Status of Endangered Wildlife in Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr_snapping_turtle_0809_e.pdf. vii + 47 p. |
| Vascular Plant | American ginseng | *Panax quinquefolius* | END | END | END | G3G4 | S2 | Range | In Ontario, American ginseng is found in moist, undisturbed and relatively mature deciduous woods often dominated by sugar maple. It is commonly found on well-drained, south-facing slopes. American ginseng grows under closed canopies in well-drained soils of glacier origin that have a neutral pH (ECCC 2018). | Low - no suitable habitat. | General<br>Category 1 – Area occupied by American ginseng and area of forest or treed swamp ELC community classes within 100 m of occupied area<br>Category 2 – Area of forest or treed swamp ELC community classes between 100-150 m of occupied area, and contiguous with category 1 | Yes<br>Based on 2 criteria-<br>Habitat Occupancy: established from existing occurrence records based on the data available (at the time of analysis) from conservation data centres. The records associated with imprecise, historical, and extirpated occurrences are excluded. Only data from 1994 to 2013 (inclusive) corresponding to wild plants are considered. Records from other sources that may be awaiting integration into an existing occurrence or the assignment of an occurrence number are included<br>Habitat Suitability:<br>Within 100 m radius surrounding each plant<br>Structure is typical of mature forests (e.g., more than 90 years old) or older secondary forests with few recent disturbances (e.g., large trees, closed-canopy)<br>• Composition of trees is deciduous or mixed with species such as Sugar Maple, White Ash, Bitternut Hickory, Basswood, Red Oak, and Butternut; although some populations are found in White Cedar or Hemlock forests/swamps<br>• Shrub cover is relatively sparse (<25%) and understory companion plant species are generally diverse<br>• Soils are usually of glaciary origin, thick (50 to 100 cm), well drained (drainage classes of 20-well or 30-moderate) and have a relatively neutral pH; although some populations are found on very shallow, rocky soils, sometimes growing directly in small crevices in dolomitic limestone<br>• Light penetration at ground level is low (under 30%; typical of closed-canopy forests)<br>Maximum 50 m radius over and above the 100 m radius surrounding each plant<br>• Other forest habitats and treed swamps | ECCC (Environment and Climate Change Canada). 2018. Recovery Strategy for the American Ginseng (Panax quinquefolius) in Canada. Species at Risk Act Recovery Strategy Series. Ottawa ON: Environment and Climate Change Canada; [accessed 02 December 2019]. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/rs_american_ginseng_e_final.pdf. vii + 32 p. |
| Vascular Plant | Black ash | *Fraxinus nigra* | END (temporary suspension of protection until Jan 2024) | — | THR | G5 | S3 | Range | Found throughout Ontario in moist ecosystems; commonly found in northern swampy woodlands (MNRF 2018). This species typically grows on mucky or peaty soils and is considered a facultative wetland species (Reznicek et al. 2011). | Low - none observed during targeted surveys. | No protection until Jan 2024 per temporary suspension order | | MNRF (Ministry of Natural Resources and Forestry). 2019. Black Ash. [modified 16 October 2019; accessed 04 December 2019]. https://www.ontario.ca/page/black-ash.<br><br>Reznicek AA, Voss EG, Walters BS. 2011. Fraxinus nigra. Ann Arbour MI: University of Michigan; [accessed 19 December 2018]. https://michiganflora.net/species.aspx?id=1733. |
| Vascular Plant | Butternut | *Juglans cinerea* | END | END | END | G4 | S2? | NHIC | In Ontario, butternut is found along stream banks, on wooded valley slopes, and in deciduous and mixed forests. It is commonly associated with beech, maple, oak and hickory (Voss and Reznicek 2012). Butternut prefers moist, fertile, well-drained soils, but can also be found in rocky limestone soils. This species is shade intolerant (Farrar 1995). | Low - none observed during targeted surveys. | General (as of June 30, 2013) | No | Farrar JL. 1995. Trees in Canada. Markham, ON: Fitzhenry & Whiteside Limited and Ottawa, ON: Canadian Forest Service, Natural Resources Canada. 502 p.<br><br>Voss EG, Reznicek AA. 2012. Field Manual of Michigan Flora. Ann Arbour MI: University of Michigan Press. 990 p. |

**Notes:**

[1] *Endangered Species Act* (ESA), 2007. General (O.Reg 242/08 last amended 1 April 2021 as O. Reg 228/21). Species at Risk in Ontario List (O.Reg 230/08 last amended 26 January 2022 as O. Reg. 24/22); Schedule 1 (Extirpated - EXP), Schedule 2 (Endangered - END), Schedule 3 (Threatened - THR), Schedule 4 (Special Concern - SC)

[2] *Species at Risk Act* (SARA), 2002. Schedule 1 (Last amended 01 September 2021); Part 1 (Extirpated), Part 2 (Endangered), Part 3 (Threatened), Part 4 (Special Concern)

[3] Committee on the Status of Endangered Wildlife in Canada (COSEWIC) http://www.cosewic.gc.ca/

[4] Global Ranks (GRANK) are Rarity Ranks assigned to a species based on their range-wide status. GRANKS are assigned by a group of consensus of Conservation Data Centres (CDCs), scientific experts and the Nature Conservancy. These ranks are not legal designations. G1 (Extremely Rare), G2 (Very Rare), G3 (Rare to uncommon), G4 (Common), G5 (Very Common), GH (Historic, no record in last 20yrs), GU (Status uncertain), GX (Globally extinct), ? (Inexact number rank), G? (Unranked), Q (Questionable), T (rank applies to subspecies or variety). Last assessed August 2011

[5] Provincial Ranks (SRANK) are Rarity Ranks assigned to a species or ecological communities, by the Natural Heritage Information Centre (NHIC). These ranks are not legal designations. SRANKS are evaluated by NHIC on a continual basis and updated lists produced annually. SX (Presumed Extirpated), SH (Possibly Extirpated - Historical), S1 (Critically Imperiled), S2 (Imperiled), S3 (Vulnerable), S4 (Apparently Secure), S5 (Secure), SNA (Not Applicable), S#S# (Range Rank), S? (Not ranked yet), SAB (Breeding Accident), SAN (Non-breeding Accident), SX (Apparently Extirpated). Last assessed November 2019.

[6] General Habitat Protection is applied when a species is newly listed as endangered or threatened on the SARO list under the ESA, 2007. The definition of general habitat applies to areas that a species currently depends on. These areas may include dens and nests, wetlands, forests and other areas essential for breeding, rearing, feeding, hibernation and migration. General habitat protection will also apply to all listed endangered or threatened species without a species-specific habitat regulation as of June 30, 2013 (ESA 2007, c.6, s.10 (2)). Regulated Habitat is species-specific habitat used as the legal description of that species habitat. Once a species-specific habitat regulation is created, it replaces general habitat protection. Refer to O.Reg 242/08 for full details regarding regulated habitat.

[7] Refer to the individual species' federal recovery strategy for a full description of the critical habitat (http://www.sararegistry.gc.ca/sar/recovery/recovery_e.cfm)

[+]Species Codes derived from the following sources: Birds – 53rd AOU Supplement (2012); Amphibians – Marsh Monitoring Program (Bird Studies Canada 2003); Fish – Golder; Reptiles – Golder.

'—' No status

*NHIC (Natural Heritage Information Centre); OBBA (Ontario Breeding Bird Atlas); ORAA (Ontario Reptiles and Amphibian Atlas); OOA (Ontario Odonata Atlas); BCI (Bat Conservation International); eBird (Audubon Society eBird Web Application)

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