

**Species at Risk Assessment
Depot Harbour and Surrounding Lands**

Indigenous Services Canada

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Distribution List

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1.0 Introduction

Neegan Burnside Ltd. (Neegan Burnside) has been requested by Indigenous Services Canada (ISC) to conduct a desktop Species at Risk (SAR) assessment of two sites near Depot Harbour (Site 1A and Site 1B) that are being considered for Additions to Reserve (ATR) Status for Wasauksing First Nation (Figure 1A-1, Figure 1B-1). Information from the SAR study will be used to plan future land use and to plan potential development of these sites.

Species at Risk and supporting habitats for SAR listed as Endangered or Threatened under the *Species at Risk Act 2002* (SARA) are protected from harm on all federal and crown lands in Canada (ECCC, 2002). Species designated as Endangered or Threatened by the *Endangered Species Act 2007* (ESA) are also considered to be at higher risk of extinction or extirpation in Ontario and are protected throughout the province (MNRF, 2007).

Site 1A is the site of Depot Harbour, which at one time was a large and important shipping hub for the Great Lakes; significant disturbance associated with this historic settlement area and industrial land use is still evident within a large portion of the landscape. A few residential dwellings occupy Site 1B and a utility right of way and Wawbawzee Road cross through the southeast portion of Site 1B. Sites 1A and 1B (the Study Areas) both feature relatively high-quality natural areas of deciduous and mixed forest.

2.0 Species at Risk Screening

Multiple sources were reviewed for species records and historical sightings of SAR within the Study Area and surrounding lands. These sources are described below.

2.1 Natural Heritage Information Centre

The Natural Heritage Information Centre (NHIC) is a government entity (MNRF) that collects, reviews, manages, and distributes information and data records for natural heritage features, species of conservation concern, significant plant communities, wildlife concentration areas, and natural areas. An NHIC query was conducted for the lands surrounding the proposed project to identify species records and/or Key Natural Heritage Features (KNHF) within the area (NHIC, 2018). NHIC records are in Appendix A.

2.2 Ontario Breeding Bird Atlas

The Ontario Breeding Bird Atlas (OBBA) is a comprehensive bird research and conservation project which encompasses over 69,000 point-counts across the province (OBBA, 2005). A complete avian species list for the lands around the Study Area has been reproduced in Appendix B.

2.3 Ontario Reptile and Amphibian Atlas

The Ontario Reptile and Amphibian Atlas (ORAA) is a citizen-science program that tracks herpetofaunal species distribution across Ontario (ORAA, 2018). A combined effort between Ontario Parks, the Toronto Zoo, and the Ministry of Natural Resources and Forests (MNR), the ORAA is one of the province's premier data repositories for herpetofaunal species information. A complete herpetofaunal species list for the lands around the Study Area has been reproduced in Appendix C.

2.4 Department of Fisheries and Oceans

Aquatic SAR fall under the jurisdiction of the Department of Fisheries and Oceans (DFO). Known distributions of regulated SAR and SAR habitat in Canada can be reviewed through the Aquatic Species at Risk Maps series, found on <http://www.dfo-mpo.gc.ca>. DFO records for aquatic SAR associated with the Study Area can be found in Appendix D.

3.0 Ministry of Natural Resources and Forestry Correspondence

Management biologists from the MNR office in Parry Sound district were contacted in November 2017 to determine the presence of any SAR that were not accounted for by the previous databanks. Species at Risk records from adjacent districts of Parry Sound (Carling, Cowper, Foley and McDougall Districts) can be found in Appendix E.

4.0 Indigenous Services Canada

The Indigenous Services Canada database identified four SAR having potential habitat within the Wasauksing First Nation boundary. These species are:

- American Ginseng (Endangered);
- Broad Beech Fern (Special Concern);
- Englemann's Quillwort (Endangered);
- Spotted Wintergreen (Endangered).

Additional details are provided in Section 6.1.

5.0 Site Conditions

Much of the lands around the Study Area are deciduous or mixed forest and swamp, though a large wetland pocket is also evident inland from the shores of Georgian Bay. Depot Harbour was once a major shipping hub for the Great Lakes, and disturbed areas resulting from prior settlement areas are still evident within the landscape. A network of roads and single-dwelling homes are scattered throughout the Study Area. A fish farm (Aqua-Cage Fisheries Ltd.) is also active on the Depot Harbour site.

6.0 Potential SAR Present

6.1 Indigenous Services Canada Database

The ISC database identified four SAR having potential habitat within the Wasauksing First Nation boundary. These species are:

- American Ginseng (Endangered)
- Englemann's Quillwort (Endangered)
- Spotted Wintergreen (Endangered)
- Broad Beech Fern (Special Concern)

The presence of American Ginseng is unlikely in already disturbed areas, however any work taking place in undisturbed areas or treed swamps should follow proper mitigation measures to ensure suitable habitat of the species is not destroyed, particularly in Maple dominated areas.

Englemann's Quillwort is unlikely to be found as the species only has a few known populations, however possible habitat has been identified within the Wasauksing boundary. If working near or in shallow lakes and rivers, proper measures should be taken to ensure the species is not present.

Spotted Wintergreen is unlikely to be found as the species only has a few known populations; however possible habitat has been identified within the Wasauksing boundary for this species as well. Proper measures should be taken while working in undisturbed areas to ensure the species is not present.

While Broad Beech Fern is listed federally as a species of Special Concern, proper mitigation measures should still be taken to ensure suitable and critical habitat for this species is protected.

6.2 Other Resources

Other SAR were also identified SAR as potentially present in and around the Study Area by other resources such as:

- Natural Heritage Information Centre
- Ontario Breeding Bird Atlas
- Ontario Reptile and Amphibian Atlas
- Department of Fisheries and Oceans
- Ministry of Natural Resources and Forestry

Potential SAR identified by the above resources, as well as their habitat preferences and probability to be found in the Study Area, are summarized in Table 1.

7.0 Potential Impacts and Proposed Mitigation

7.1 Potential Impacts

7.1.1 Birds

There is moderate or higher potential for the presence of Bald Eagle (*Haliaeetus leucocephalus*), Bank Swallow (*Riparia riparia*), Barn Swallow (*Hirundo rustica*), Canada Warbler (*Cardellina canadensis*), Chimney Swift (*Chaetura pelagica*), Eastern Whip-poor-will (*Antrostomus vociferus*), Eastern Wood-pewee (*Contopus virens*), Golden-winged Warbler (*Vermivora chrysoptera*), Least Bittern (*Ixobrychus exilis*), Olive-sided Flycatcher (*Contopus cooperi*), Red-headed Woodpecker (*Melanerpes erythrocephalus*), Rusty Blackbird (*Euphagus carolinus*), and Wood Thrush (*Hylocichla mustelina*). Of these species, two are protected by the *ESA* (Bank Swallow, Barn Swallow), four are protected by *SARA* (Canada Warbler, Golden-winged Warbler, Olive-sided Flycatcher, Red-headed Woodpecker), and three are protected by both acts by being designated as Threatened or Endangered (Chimney Swift, Eastern Whip-poor-will, Least Bittern).

There is low potential for the presence of Bobolink (*Dolichonyx oryzivorus*), Common Nighthawk (*Chordeiles minor*), Eastern Meadowlark (*Sturnella magna*), and Grasshopper Sparrow (*Ammodramus savannarum*). Of these species, two are protected by the *ESA* (Bobolink, Eastern Meadowlark), and one is protected by *SARA* by being designated as Threatened or Endangered (Common Nighthawk).

Many of the avian species assessed as having moderate or higher potential for presence are associated with forest habitats (Bald Eagle, Canada Warbler, Eastern Whip-poor-will, Eastern Wood-pewee, Golden-winged Warbler, Olive-sided Flycatcher, Red-headed Woodpecker, Rusty Blackbird, Wood Thrush). Any impacts to treed habitats has the potential to impact these species if present.

Least Bittern is a small heron that requires relatively large and in-tact marshy wetland habitats. One inland wetland habitat exists within site 1A, though it is possible that lacustrine wetlands that border Georgian Bay may be present throughout the entire Study Area as well. Any proposed works around open wetland habitats must consider potential impacts to this species.

Other species, including Bank Swallow, Barn Swallow and Chimney Swift, have specific micro-habitat requirements. Impacts to these species should be assessed on a case-by-case basis using the habitat descriptions in Table 1.

It was determined through desktop screening that no suitable habitat for open-area species such as Bobolink, Common Nighthawk, Eastern Meadowlark, and Grasshopper Sparrow is present within the Study Area. If proposed works anticipate disturbance to

any areas that meet the habitat descriptions of these species as found in Table 1, the potential impacts to these species must be determined.

According to OBBA records, there is also potential for the presence of multiple species of migratory bird in the Study Area and surrounding areas.

The *Migratory Birds Convention Act, 1994* (MBCA) and the *Migratory Bird Regulations* (MBR) are federal legislative requirements that are binding on members of the public and all levels of government, including federal and provincial governments. The legislation protects certain species¹ (including Barn Swallow), controls the harvest of others, and prohibits commercial sale of all species.

One key responsibility under the MBCA is described in Section 6 of the associated MBR:

“6. Subject to subsection 5(9), no person shall

- (a) disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird, or
- (b) have in his possession a live migratory bird, or a carcass, skin, nest or egg of a migratory bird except under authority of a permit therefor.”

Any proposed works must not impact any nesting birds as listed by the *MBCA*.

Project locations to repair, install, or replace monitoring wells within Sites 1A and 1B are within existing road right of ways or otherwise disturbed areas. Most avian species with moderate or higher potential presence on Parry Island are associated with forested habitat; no encroachment into forest habitat would be required to access to any of these wells. No habitats for avian SAR or species listed under the *MBCA* are anticipated to experience negative impacts due to the maintenance or installation of wells within the Study Area.

7.1.2 Herpetofauna

There is moderate or higher potential for the presence of Blanding’s Turtle (*Emydoidea blandingii*), Common Five-lined Skink (*Plestiodon fascius*), Eastern Fox Snake (*Pantherophis gloydi*), Eastern Hognose Snake (*Heterodon platirhinos*), Eastern Musk Turtle (*Stemotherus odoratus*), Massasauga (*Sistrurus catenatus*), Northern Map Turtle (*Graptemys geographica*), Spotted Turtle (*Clemmys guttata*), and Snapping Turtle

¹ Bird species *not* regulated under the act include: Rock Dove, American Crow, Brown-headed Cowbird, Common Grackle, House Sparrow, Red-winged Blackbird, and European Starling. In addition, raptors are not regulated under the MBCA. However, they are protected under provincial legislation which restricts and regulates the taking or possession of eggs and nests. Furthermore, if the species identified is protected under Ontario’s Endangered Species Act, 2007 or the federal Species at Risk Act, additional restrictions may apply.

(*Chelydra serpentina*). Of these species, five are protected through both the *ESA* and *SARA* by being designated as Threatened or Endangered (Blanding's Turtle, Eastern Fox Snake, Eastern Hognose Snake, Massasauga, and Spotted Turtle).

There is extremely low potential for the presence of Jefferson Salamander (*Ambystoma jeffersonianum*), which is also protected through both the *ESA* and *SARA* by being designated as Endangered.

Turtle species will typically utilize both aquatic and terrestrial habitats throughout the year. The amount of large wetland habitat and adjacent forest habitat on Parry Island indicates that any turtles that are present on the island may be found within the Study Area during the spring, summer, or fall.

The presence of two protected snake species has been confirmed on Parry Island (Massasauga, Eastern Fox Snake). Massasauga is often found in habitats ranging from open areas (i.e. rock outcrop) to wooded and wetland areas. Eastern Fox Snakes around Georgian Bay tend to be found close to the shore (within 150 m) around rocky areas with some scattered shrubby vegetation for cover. The Eastern Hognose Snake is also protected and prefers sandy, drier wooded areas. These species should be assumed to be potentially present within the Study Area.

Project locations to repair, install, or replace monitoring wells within Sites 1A and 1B are within existing road right of ways or otherwise disturbed areas. No project locations were identified within, or adjacent to, any identified wetland areas. No habitats for herpetofaunal SAR are anticipated to experience negative impacts due to the maintenance or installation of wells within the Study Area. Some well sites are adjacent to, or within, roadways or open areas where snakes may be found basking. Field investigations for well maintenance was conducted outside of the active season for herpetofaunal species; no mortalities to herpetofauna occurred during any project activities.

7.1.3 Mammals

Four bat species are listed as Endangered under both the *ESA* and *SARA*. Eastern Small-footed Myotis (*Myotis leibii*), Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) have all experienced extremely severe population declines within the past decade; this decline is due to an aggressive thermophilic fungus, the causative agent in a fatal condition in bats known as White Nose Syndrome.

Eastern Small-footed Myotis tends to utilize rock fissures, caves, rubble, stone outcroppings, and anthropogenic structures as habitat outside of the winter months. It is Ontario's rarest bat, and little is known about its distribution in the province. Any impacts to suitable habitat for this species must take the potential presence of this species into account prior to any work commencement.

The remaining three bats are typically considered to be arboreal. Any deciduous or mixed swamp can potentially be considered Bat Maternity Habitat (BMH) (MNR, 2015).

Locations identified to repair, install, or replace wells did not result in any encroachment into wooded areas. Additionally, no anthropogenic structures that may serve as bat roosting habitat were impacted. No suitable roosting habitats for SAR bats are anticipated to be negatively impacted due to the maintenance or installation of wells within the Study Area.

7.1.4 Plants and Lichen

One protected plant species was identified as having moderate potential for presence within the Study Area. Branched Bartonian (*Bartonia paniculata ssp. paniculata*) is an extremely rare plant in Ontario. The Parry Sound district is one of the only known locations where the species naturally occurs. Any works proposed near or within nutrient-poor wetlands such as bogs or fens should assess whether this species is present in these areas prior to commencement.

No works were conducted within, or adjacent to, any identified wetland areas. No impacts to this wetland-obligate species are anticipated due to any project works.

8.0 Conclusion

The SAR screening identified 2 SAR with confirmed presence on Parry Island as follows:

- Eastern Fox Snake - tend to be found close to the shore (within 150 m) around rocky areas with some scattered shrubby vegetation for cover.
- Massasauga - Habitats ranging from open to wooded to wetland and rock outcrops.

The study identified 19 SAR listed under the *ESA* and/or *SARA*, as having a moderate to high potential for being present in the Study Area:

- Bald Eagle - Deciduous and mixed forest with ample open-water hunting areas.
- Bank Swallow - Any exposed areas with earthen banks.
- Barn Swallow - Vertical anthropogenic structures that offer shelter from the elements for the construction of mud nests.
- Canada Warbler - Large sections of wet/moist forest interior.
- Eastern Whip-poor-will - Nests directly on the open ground and as such prefers dry, open woodlands. This area-sensitive species requires large areas of forest.
- Least Bittern - Reclusive heron will utilize a variety of wetland habitats, but has a strong affinity for cattail marshes with variable topography.
- Red-Headed Woodpecker - Prefers pen woodlands and woodland edges.
- Rusty Blackbird - Coniferous swamps and coniferous forests which border open wetlands.
- Wood Thrush - small forest patches and large wooded landscapes.
- Little Brown Myotis - Prefer moist, mature deciduous or mixed forests with an abundance of cavity trees and close proximity to foraging areas such as wetlands. Known to roost in anthropogenic structures such as barns, sheds and dwellings.
- Northern Myotis - Prefer moist, mature deciduous or mixed forests with an abundance of cavity trees and close proximity to foraging areas such as wetlands. Known to roost in anthropogenic structures such as barns, sheds and dwellings.
- Tri-colored Bat - Prefer moist, mature deciduous or mixed forests with an abundance of cavity trees and close proximity to foraging areas such as wetlands. Known to roost in anthropogenic structures such as barns, sheds and dwellings.
- Blanding's Turtle - Requires a combination of lowland and upland areas, such as wetland-forest.
- Common Five-lined Skink - Associated with wooded areas featuring open bedrock;
- Eastern Hognose Snake - Prefers sandy, dry, wooded areas.
- Eastern Musk Turtle - Species occurrence should be assumed to correlate with wetland area. Utilize any soft-substrate upland areas for nesting.
- Northern Map Turtle - Species occurrence should be assumed to correlate with areas of deeper water. Utilize any soft-substrate upland areas for nesting;
- Spotted Turtle - Species occurrence assumed to correlate with wetland areas.
- Snapping Turtle - species is mostly aquatic, but can often be found in very small areas of standing water. Utilize any soft-substrate upland areas for nesting.

Any species listed in Table 1, regardless of assessed potential, cannot be confirmed as being absent from the Depot Harbour area, without the completion of appropriate presence/absence surveys. Survey requirements will vary based on the extent and nature of project works, and should be discussed with review agencies beforehand.

Impacts to known or suspected SAR habitat protected by applicable legislations may require permitting under the *ESA* or *SARA*. Additional survey requirements and compensation in the form of habitat construction, installation, or restoration may be a requirement of SAR permits being issued.

There is also the potential to affect birds protected under the *MBCA*. Works that are anticipated to impact treed areas should be completed outside of the bird breeding window (May 1 to August 31). Works that cannot take place outside of this window will require nesting surveys performed by a qualified avian biologist to avoid harm to nesting avian species.

Any works which may either disrupt soils or pose direct risk of mortality to wildlife should include Erosion Sediment Control (ESC)/wildlife exclusion fencing. Fencing should be installed to avoid indirect impacts to adjacent natural areas associated with any mapped or unmapped wetland or open-aquatic habitats, and to prevent any wildlife from accidentally entering construction areas. Sediment control features should be inspected regularly, and repaired or maintained as needed.

8.1 Depot Harbour Field Investigations

The field work to repair, install, or replace monitoring wells within Sites 1A and 1B will be conducted during winter months, outside of the bird breeding window and outside of the active season for bats and herpetofaunal species. These project locations are within existing road right of ways and disturbed areas. No encroachment into natural habitat will be required to access these locations, and as such no impacts to SAR or SAR habitat as defined by this report are anticipated as a result.

More complex, large scale field investigations may require field surveys to confirm whether SAR and SAR habitat are present within proposed work areas and whether proposed activities will potentially impact SAR or SAR habitat.

Precautions to reduce potential impacts to SAR include educating field staff to be able to identify SAR and taking care to avoid accidental mortality, especially to basking herpetofauna, while driving and conducting field work.

9.0 Recommendations

9.1 Future Land Use and Development

Future development of Site 1A and Site 1B may require field surveys to confirm whether SAR and SAR habitat are present within proposed development areas and whether construction activities or land use will potentially impact SAR or SAR habitat. Survey requirements will vary based on the extent and nature of project works and should be discussed with review agencies beforehand.

9.2 Birds - Surveys and Mitigation

9.2.1 Surveys

Breeding bird surveys should be conducted during the peak breeding season to confirm which species are present in the vicinity of the Study Area. Surveys should focus on characterizing species composition of all habitat types that may be affected by proposed works (deciduous/mixed/coniferous forest, deciduous/mixed/coniferous swamp, marsh, open upland, riparian, open water, etc.). Any works that may impact SAR protected by the *ESA* or *SARA* may require permitting or compensation through offsetting or habitat restoration. The *ESA* stipulates that compensatory habitat must be created either before the next active season begins (May 1), if work begins outside the active season, or before the active season begins, if work is to be done during that active bird-breeding window (May 1 to August 31). This means that no identified habitat structures may be removed prior to the installation of replacement nesting structure(s). Results should be discussed with review agencies as appropriate.

Impact to nesting habitat may affect avian species protected by the *ESA*, *SARA*, or the *MBCA*. If proposed works will result in potential adverse effects to bird species and habitat, it is recommended that clearing activities take place outside of the active breeding bird nesting window which extends from May 1 to August 31. Works that may result in potential adverse effects to bird species include, but are not limited to:

- Tree clearing, pruning, or modification;
- Harassment, disturbance, flushing or the interruption of egg incubation by nesting birds through work activities near nest sites; and,
- Removal or modification of anthropogenic structures such as bridges, culverts, uncapped chimneys, or other structures utilized by nesting birds.

If adhering to the breeding-bird exclusion period is not possible for activities that may impact nesting species protected by the *MBCA*, a breeding bird survey should be completed by a qualified avian ecologist during the peak breeding season (May 25 to July 10). If clearing of trees is required within this period, pre-clearing nest surveys may be required; the necessity of these surveys should be determined by review agencies and a qualified ecological professional.

9.2.2 Mitigation

The most effective means of mitigation for disturbance of bird species is to schedule construction projects in bird habitat outside of bird breeding timing windows. Peak nesting period for the species listed in Section 7.1.1 is from May 1 to August 31.

It is strongly recommended that these timing windows be considered when scheduling construction activities. Construction during nesting season has the potential to not only directly disturb nesting individuals, but also to indirectly drive birds from nearby nests due to noise, vibration, and a general increase in activity.

A qualified avian biologist may be required on-site should a nesting migratory bird (or Endangered/Threatened SAR protected under the *ESA* or *SARA*) be identified within or adjacent to the construction site. The avian biologist may also be required to confirm the presence and identification of an active nest and/or breeding bird prior to contacting MNRF for further advice.

Habitat degradation is also possible due to the inadvertent introduction of aggressive invasive species such as Common Reed (*Phragmites australis*) and Narrow-leaved Cattail (*Typhus angustifolia*). These invaders can outcompete native species and result in heavy degradation of natural habitats. In order to avoid transmitting species, all equipment should be cleaned of all plant materials, mud, dirt, etc. and disinfected with a bleach solution prior to each new site visit.

Mitigation for the loss or degradation of SAR habitat may require compensation through habitat offsetting or restoration. Habitat removal and subsequent mitigation should be discussed with review agencies well in advance of project initiation.

9.3 Herpetofauna - Surveys and Mitigation

9.3.1 Surveys

Suitable habitat was identified for nine herpetofaunal species, five of which are protected under the *ESA* and *SARA*. Projects that may affect natural habitat within the Study Area should first include herpetofaunal surveys as determined necessary through correspondence with review agencies. These may include turtle basking surveys within any habitats that contain standing water and targeted surveys for SAR snakes as defined within the Survey Protocol for Ontario's Species at Risk Snakes (MNRF, 2016).

9.3.2 Mitigation

The installation of ESC/wildlife exclusion fencing prior to site preparation or clearing activities is recommended to prevent any wildlife species movement from natural habitat features into work areas during construction activities, as well as to avoid indirect impacts to habitats that may exist offsite within any adjacent natural areas. The integrity

and functionality of ESC features should be inspected regularly and repaired immediately to ensure that wildlife species do not enter construction areas.

Habitat degradation is also possible due to the inadvertent introduction of aggressive invasive species such as Common Reed (*Phragmites australis*) and Narrow-leaved Cattail (*Typhus angustifolia*). These invaders can outcompete native species and result in heavy degradation of natural habitats. In order to avoid transmitting species, all equipment should be cleaned of all plant materials, mud, dirt, *etc.* and disinfected with a bleach solution prior to each new site visit.

Works involving impacts to Species at Risk or their habitats may require permitting; this should be determined with appropriate review agencies as required. Mitigation for the loss or degradation of SAR habitat may require compensation through habitat offsetting or restoration. Habitat removal and subsequent mitigation should also be discussed with review agencies well in advance of project initiation.

9.4 Mammals - Surveys and Mitigation

9.4.1 Surveys

Typically bats prefer mature trees with cavities, crevices, loose bark, or other such features that would provide cover and reduce the risk of predation. There is an abundance of trees within the Study Area. Any impacts to trees that may be suitable as bat habitat, will require surveys to confirm the presence or absence of Little Brown Myotis, Northern Myotis, and Tri-colored Bat, and may require a permitting process under either the *ESA* or *SARA*. Habitat assessment for arboreal bats can be carried out as defined in the MNR – Guelph District Survey Protocol for Species at Risk Bats within Treed Habitats (MNR 2017).

Eastern Small-footed Myotis may be found in natural rocky outcroppings, caves, or mines. All at-risk bat species may also be found within anthropogenic structures such as barns, sheds, bridges, culverts, *etc.* Specific survey requirements and protocols regarding specific habitat features such as these should be discussed with review agencies on a case-by-case basis as they are identified.

9.4.2 Mitigation

Works involving impacts to Species at Risk bats or their habitats may require permitting; this should be determined with appropriate review agencies as required. Mitigation for the loss or degradation of SAR habitat may require compensation through habitat offsetting or restoration. Bat habitat compensation typically involves the installation of artificial “bat box” habitat. Habitat removal and subsequent mitigation should also be discussed with review agencies well in advance of project initiation.

The *ESA* stipulates that compensatory habitat must be created either:

- Before the next active season begins (May 1), if work begins outside the active season; or
- Before the active season begins, if work is to be done during that active season (May 1 – September 1).

This means that no identified habitat structures may be removed prior to the installation of replacement nesting structure(s).

9.5 Plants and Lichen - Surveys and Mitigation

9.5.1 Surveys

Any nutrient-poor wetland areas that may be impacted by proposed works should undergo a vegetation inventory during the summer to identify the potential presence of Branched *Bartonia*.

Although American Ginseng is unlikely in already disturbed areas, any work taking place in undisturbed areas or treed swamps, particularly in Maple dominated areas, should follow proper mitigation measures to ensure suitable habitat of the species is not destroyed.

Englemann's Quillwort is unlikely to be found as the species only has a few known populations, however possible habitat has been identified within the Wasauksing boundary. If working near or in shallow lakes and rivers, proper measures should be taken to ensure the species is not present.

Spotted Wintergreen is also unlikely to be found as the species only has a few known populations; however possible habitat has been identified within the Wasauksing boundary for this species as well. Proper measures should be taken while working in undisturbed areas to ensure the species is not present.

While Broad Beech Fern is listed federally as a species of Special Concern, proper mitigation measures should still be taken to ensure suitable and critical habitat for this species is protected.

9.5.2 Mitigation

If Branched *Bartonia* is found to occur within areas where negative impacts are anticipated, permitting and potential compensation should be discussed with review agencies well in advance of project initiation. Compensation may involve transplanting of affected individuals to areas where impacts will be minimal.

Habitat degradation is also possible due to the inadvertent introduction of aggressive invasive species such as Common Reed (*Phragmites australis*) and Narrow-leaved

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Cattail (*Typhus angustifolia*). These invaders can outcompete native species and result in heavy degradation of natural habitats. In order to avoid transmitting species, all equipment should be cleaned of all plant materials, mud, dirt, *etc.* and disinfected with a bleach solution prior to each new site visit.

Any nutrient-poor wetland areas that may be impacted by proposed works should undergo a vegetation inventory during the summer to identify the potential presence of Branched Bartonian.

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NEEGAN BURNSIDE



Tables

Table 1: Screening Table - Background Review of Species at Risk and Species of Conservation Concern Potentially Present in the Study Area

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
Birds									
Bald Eagle	<i>Haliaeetus leucocephalus</i>	S2N, S4B	SC	NAR	NAR	-	Bald eagles require large continuous area of deciduous or mixed woods around large lakes, rivers; require area of 255 ha for nesting, shelter, feeding, roosting; prefer open woods with 30 to 50% canopy cover; nest in tall trees 50 to 200 m from shore; require tall, dead, partially dead trees within 400 m of nest for perching; sensitive to toxic chemicals.	High potential for nesting habitat present in the Study Area due to the abundance of deciduous and mixed forest on Parry Island combined with ample open-water hunting areas. Within the known distribution of Bald Eagle in the province.	MNRF District Records OBBA
Bank Swallow	<i>Riparia riparia</i>	S4B	THR	THR	THR	1	Prefers open habitats including, farmland, lake/river shorelines, grasslands, and wetlands. Nests in exposed earthen banks along shorelines and in artificial sites such as sand and gravel pits.	Moderate to high potential for nesting habitat in any areas with exposed earthen banks.	MNRF District Records
Barn Swallow	<i>Hirundo rustica</i>	S4B	THR	THR	THR	1	Prefers farmland, lake/river shorelines, wooded clearings, urban populated areas, rocky cliffs, and wetlands. Nests inside or on exterior of buildings; under bridges and in road culverts; less commonly on rock faces, and in caves.	Moderate to high potential for nesting habitat on or within any anthropogenic structures that offer vertical structures and shelter from the elements for the construction of mud nests. Impacts to anthropogenic structures which may be suitable nesting habitat should be assessed for the presence of Barn Swallow if works occur within the bird breeding window (May-August).	MNRF District Records OBBA
Bobolink	<i>Dolichonyx oryzivorus</i>	S4B	THR	THR	THR	1	Generally prefers open grasslands and hay fields for nesting, typically featuring relatively tall vegetation. Sometimes uses large fields of winter wheat and rye in southwestern Ontario. Sensitive to vegetation structure and composition. Positively associated with high grass-to-forb ratios; moderate litter depth; tolerate wetter portions of fields compared to EAME and more likely to nest closer to field centres rather than field margins. Lower tolerance to presence of patches of bare	Low potential for nesting habitat within the Study Area. Bobolink and Meadowlark require relatively dry areas of open grassland for nesting. It is possible that small patches of suitable habitat may accommodate these species at the local scale.	MNRF District Records

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
							ground. Appear to prefer larger fields than Eastern Meadowlark.		
Canada Warbler	<i>Cardellina canadensis</i>	S4B	SC	THR	THR	1	An interior forest species; dense, mixed coniferous, deciduous forests with closed canopy, wet bottomlands of cedar or alder; shrubby undergrowth in cool moist mature woodlands; riparian habitat; usually requires at least 30 ha.	High potential for nesting habitat present in the Study Area. This area-sensitive species requires large sections of wet/moist forest interior. Forest margins may not be suitable for this species, but impacts to forest margins may affect the integrity of interior habitats.	MNRF District Records OBBA
Chimney Swift	<i>Chaetura pelagica</i>	S4B, S4N	THR	THR	THR	1	Commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, chimneys; highly gregarious; feeds over open water.	Moderate potential for nesting habitat if uncapped chimneys are present within the Study Area. Any works that may impact man-made structures including un-capped chimneys should be assessed for Chimney Swift nests if works are to take place within the bird breeding window (May-August).	MNRF District Records OBBA
Common Nighthawk	<i>Chordeiles minor</i>	S4B	SC	THR	THR	1	Common Nighthawk are associated with open ground; clearings in dense forests; ploughed fields; gravel beaches or barren areas with rocky soils; open woodlands; flat gravel roofs.	Low potential for nesting habitat present in the Study Area. Common Nighthawk will often utilize flat gravel roofs for nesting habitat in urban settings. Preferred natural areas are open spaces with little to no vegetation.	MNRF District Records OBBA
Eastern Meadowlark	<i>Sturnella magna</i>	S4B	THR	THR	NAR	-	Generally prefers grassy pastures, meadows and hay fields. Prefers moderately tall grass with abundant litter cover, a high proportion of grass cover, moderate forb density, low proportions of shrub and woody vegetation cover, and low percent of bare ground. Prefers to nest in drier sites and frequently nests around field margins.	Low potential for nesting habitat within the Study Area. Bobolink and Meadowlark require relatively dry areas of open grassland for nesting. It is possible that small patches of suitable habitat may accommodate these species at the local scale.	MNRF District Records OBBA
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	S4B	THR	THR	THR	1	Associated with dry, open, deciduous woodlands of small to medium trees; oak or beech with lots of clearing and shaded leaf litter; wooded edges; forest clearings with little herbaceous growth; pine plantation; association with >100 ha forests; may require 500 to 1000 ha to maintain population.	Moderate to high potential for nesting habitat within forests of Parry Island. This species nests directly on the open ground and as such prefers dry, open woodlands. This area-sensitive species requires large areas of forest.	MNRF District Records

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
Eastern Wood-pewee	<i>Contopus virens</i>	S4B	SC	SC	NAR	-	Prefers open space near the nest in the form of forest edges, clearings, roadways, and water. Does not require large areas of woods but occurs less frequently in woodlots surrounded by development than in those without.	Moderate potential for nesting habitat within any forest edge or gap areas.	MNRF District Records OBBA
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	S4B	SC	THR	THR	1	Golden-winged Warbler prefer early successional habitat; shrubby, grassy abandoned fields with small deciduous trees bordered by low woodland and wooded swamps; alder bogs; deciduous, damp woods; shrubby clearing in deciduous woods with saplings and grasses; brier-woodland edges; requires >10 ha of habitat.	Moderate potential for nesting habitat within any forest edge, early successional, or waste-area landscapes. This species is rare in Ontario.	MNRF District Records OBBA
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	S4B	SC	SC	NAR	-	Prefers dry, sparsely vegetated grasslands (especially rough or unimproved pastureland) at least 30 ha in area. Typical habitats will support variable growth of forbs and shrubs, though this species may occasionally utilize cultivated hayfields or cereal cropland.	Low potential for nesting habitat within the Study Area. This species is associated with grasslands and early-successional shrubland. It is possible that small patches of suitable habitat may accommodate this species at the local scale.	MNRF District Records
Least Bittern	<i>Ixobrychus exilis</i>	S4B	THR	THR	THR	1	Least Bittern are found in deep marshes, swamps, bogs; marshy borders of lakes, ponds, streams, ditches; dense emergent vegetation of cattail, bulrush, sedge; nests in cattails; intolerant of loss of habitat and human disturbance.	Moderate to high potential for nesting habitat within the Study Area. This reclusive heron will utilize a variety of wetland habitats, but has a strong affinity for cattail marshes with variable topography. The network of wetland pockets and dense vegetation on Parry Island would be considered highly suitable for this species.	MNRF District Records
Olive-sided Flycatcher	<i>Contopus cooperi</i>	S4B	SC	THR	THR	1	This species lives in semi-open, conifer forest, prefers spruce; near pond, lake or river; treed wetlands for nesting; burns with dead trees for perching.	Moderate potential for nesting habitat within the Study Area. This species may be declining due to fire-suppression, as it requires forests which are relatively open with abundant standing snags. Mixed and coniferous forests are abundant on Parry Island, and any open wooded area could be considered suitable habitat for this species.	MNRF District Records OBBA

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	S4B	SC	THR	THR	1	Found in open, deciduous forest with little understory; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; feeds on insects and stores nuts or acorns for winter; loss of habitat is limiting factor; requires cavity trees with at least 40 cm dbh; require about 4 ha for a territory.	Moderate to high potential for nesting habitat within the Study Area. This species prefers open woodlands and woodland edges. Mature wooded areas bordering wetlands would offer abundant foraging opportunities for this species.	MNRF District Records
Rusty Blackbird	<i>Euphagus carolinus</i>	S4B	NAR	SC	SC	1	Habitat includes openings in coniferous woodlands bordering bodies of water, tree-bordered marshes, beaver ponds, muskegs, bogs, fens or wooded swamps; stream borders with alder, willow, wooded islands on lakes.	Low to moderate potential for nesting habitat within the Study Area, but moderate to high potential for nesting habitat on Parry Island. Coniferous swamps and coniferous forests which border open wetlands would be considered high quality habitat for this species.	OBBA
Wood Thrush	<i>Hylocichla mustelina</i>	S4B	SC	THR	NAR	-	Inhabits and breeds in woodlands ranging from small (3 ha) and isolated to large and contiguous. The presence of tall trees and a thick understory are usually prerequisites for site occupancy.	High potential for nesting habitat within the Study Area. Wood Thrush can utilize both small forest patches and large wooded landscapes. Lack of disturbance on Parry Island indicate a very high likelihood of species presence.	MNRF District Records OBBA
Fish and Mussels									
Deepwater Sculpin	<i>Myoxocephalus thompsonii</i> pop. 2	S3?	NAR	SC	SC	1	Global distribution almost entirely limited to Canada. Limited to cold, deep lakes connected with prehistoric glacial activity. This bottom-dwelling fish lives in cold (<7C°), well-oxygenated, deep water (60-150 m in depth).	No potential for habitat within Study Area. This deepwater species may be found in very deep lakes, none of which occur within the Study Area boundary. Adjacent waters on Georgian Bay do support this species. Activities which may affect the water quality or thermal regime of adjacent water bodies may pose some risk to this species.	DFO SAR Mapping
Lake Sturgeon	<i>Acipenser fulvescens</i> pop. 3	S2	THR	THR	NAR	-	Lives almost exclusively in freshwater lakes and rivers with soft mud, sand, or gravel substrates. Often spawn in shallow, fast-flowing water with gravel and boulder substrates, though they are known to spawn in deeper water or open shoals with strong currents when the habitat is available.	Low potential for habitat within the Study Area. Channels that connect inland water features to Georgian Bay may support spawning individuals.	DFO SAR Mapping MNRF District Records NHIC Data Records

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i> pop. 1	SNR	SC	SC	SC	1	Inhabits clear, cool-water streams. Larval life stages require soft substrates (silt, sand) as often found in slower-moving portions of streams. Adult Brook Lamprey are associated with spawning areas such as fast-flowing riffles with rock or gravel substrates.	Low to moderate potential for habitat within the Study Area. Any cool-water streams with soft substrates may support this species. One such outlet exists immediately southeast of Depot Harbour.	DFO SAR Mapping
Upper Great Lakes Kiyi	<i>Coregonus kiyi kiyi</i>	S3	SC	SC	SC	1	Lives in the Great Lakes at depths of between 35-200 m. Feeds primarily on deep-water crustaceans. Great Lakes Kiyi are rarely found in waters shallower than 100 m in depth.	No potential for habitat within the Study Area. This deepwater species may be found in very deep lakes, none of which occur within the Study Area boundary. Adjacent waters on Georgian Bay do support this species. Activities which may affect the water quality or thermal regime of adjacent water bodies may pose some risk to this species.	DFO SAR Mapping MNR District Records
Invertebrates									
Monarch	<i>Danaus plexippus</i>	S2N, S4B	SC	THR	THR	1	In Canada, exist primarily wherever milkweed (<i>Asclepias</i>) and wildflowers (such as Goldenrod, asters, and Purple Loosestrife) exist. This includes abandoned farmland, along roadsides, and other open spaces where these plants grow. Monarch wintering habitats include Eucalyptus trees along the Californian coast, and the Oyamel Fir forest in central Mexico. The distribution of the Monarch has gradually shifted eastward over the past century, due to a combination of clearing of deciduous forests in the eastern USA and southeastern Canada, and loss of habitat to agricultural development in the Great Plains	Moderate potential for habitat within the Study Area. The Monarch butterfly can be found anywhere with an abundance of wildflowers are allowed to grow. Milkweed (<i>Asclepias</i>) are indicators of higher quality habitat for this species.	MNR District Records
Mammals									
Eastern Small-footed Myotis	<i>Myotis leibii</i>	S2S3	END	END	END	1	During the active months of spring and summer, this bat will roost in a range of habitats, including under rocks, in rock outcrops or fissures, in buildings, under bridges, in caves, mines, or hollow trees. In winter, this species is known to hibernate in Ontario in caves and abandoned mines.	Low potential for habitat within the Study Area. This species is typically associated with rocky outcroppings from the Canadian Shield or Niagara Peninsula in Ontario, though much is unknown about roosting preferences for this species. Any impacts to exposed rock, cave or mine systems, or any anthropogenic structures which may offer suitable roosting	MNR District Records

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
								potential should be considered candidate habitat for this species.	
Little Brown Myotis	<i>Myotis lucifugus</i>	S4	END	END	END	1	Bat maternity habitat is often associated with cavities, crevices of large diameter trees (>25 cm DBH) exhibiting early stages of decay (Class 1-3; Watt & Caceres, 1999) in treed habitat types. Rarely found roosting in human-made structures (attics, barns etc.).	High potential for habitat within the Study Area. Ontario's arboreal bats prefer moist, mature deciduous or mixed forests with an abundance of cavity trees and close proximity to foraging areas such as wetlands. These species are also known to roost in anthropogenic structures such as barns, sheds, and occasionally in human dwellings.	MNRF District Records
Northern Myotis	<i>Myotis septentrionalis</i>	S3	END	END	END	1	Bat maternity habitat is often associated with cavities, crevices of large diameter trees (>25 cm DBH) exhibiting early stages of decay (Class 1-3; Watt & Caceres, 1999) in treed habitat types. Rarely found roosting in human-made structures (attics, barns etc.).	High potential for habitat within the Study Area. Ontario's arboreal bats prefer moist, mature deciduous or mixed forests with an abundance of cavity trees and close proximity to foraging areas such as wetlands. These species are also known to roost in anthropogenic structures such as barns, sheds, and occasionally in human dwellings.	MNRF District Records
Tri-colored Bat	<i>Perimyotis subflavus</i>	S3?	END	END	END	1	Maternal Roosts: Often within live or dead foliage within or below the canopy. Oak and maple are preferred roost tree species, though other deciduous species are similarly utilized.	High potential for habitat within the Study Area. Ontario's arboreal bats prefer moist, mature deciduous or mixed forests with an abundance of cavity trees and close proximity to foraging areas such as wetlands. These species are also known to roost in anthropogenic structures such as barns, sheds, and occasionally in human dwellings.	MNRF District Records
Plants and Lichen									
Branched Bartonian	<i>Bartonia paniculate ssp. paniculata</i>	S2	THR	THR	THR	1	Branched Bartonian is a plant of sphagnum bog or fen wetlands dominated by sedges or low shrubs. It is associated with Tamarack and Black Spruce. Exceedingly rare in Canada. It is only known to exist in 10 sites in south-central Ontario (in Muskoka and Parry Sound Districts).	Moderate potential for species occurrence in any bog or fen wetlands in the Parry Sound District and surrounding areas.	MNRF District Records

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
American Ginseng	<i>Panax quinquefolius</i>	S2	END	END	END	1	American Ginseng typically grows in rich, moist, but well-drained, and relatively mature, deciduous woods dominated by Sugar Maple, White Ash and American Basswood. It usually grows in deep, nutrient rich soil over limestone or marble bedrock. In Canada, it is found in southwestern Quebec and southern Ontario.	The presence of American Ginseng is unlikely in already disturbed areas, however any work taking place in undisturbed areas or treed swamps should follow proper mitigation measures to ensure suitable habitat of the species is not destroyed, particularly in Maple dominated areas.	ISC Ontario.ca sararegistry.ca
Broad Beech Fern	<i>Phegopteris hexagonoptera</i>	S3	SC	SC	SC	3	Broad Beech Fern prefers to grow in rich soils in deciduous forests, often in areas dominated by maple and beech trees. It requires moist soil and usually grows in full shade. In Ontario, the species is found in forest remnants in southern Muskoka, along Lake Erie, and in the eastern Lake Ontario-St. Lawrence River region.	While Broad Beech Fern is listed federally and provincially as a species of Special Concern, proper mitigation measures should still be taken to ensure suitable and critical habitat for this species is protected.	ISC Ontario.ca sararegistry.ca
Engelmann's Quillwort	<i>Isoetes engelmannii</i>	S1	END	END	END	1	Engelmann's Quillwort is an aquatic plant that grows in shallow water in lakes and rivers. The long, thin, hollow leaves are green to yellow-green and can grow up to 20 cm in length. In Canada, Engelmann's Quillwort occurs at just two locations (Gull River and Severn River) both in Ontario. It was first found in the province in the 1970s.	Englemann's Quillwort is unlikely to be found as the species only has a few known populations, however possible habitat has been identified within the Wasauksing boundary. If working near or in shallow lakes and rivers, proper measures should be taken to ensure the species is not present.	ISC Ontario.ca sararegistry.ca
Spotted Wintergreen	<i>Chimaphila maculata</i>	S2	END	THR	END	1	Spotted Wintergreen occurs in dry oak-pine woodland habitats with sandy soils. Typically, dominant tree species include White Pine, Red Oak, Black Oak, and American Beech. The species does best in semi-open habitats. It is only found in a few locations in southern Ontario in Norfolk County and the Niagara Region. It is believed to have been extirpated from Simcoe Kent, Middlesex and York Counties, Hamilton-Wentworth Region and the District of Muskoka.	Spotted Wintergreen is unlikely to be found as the species only has a few known populations; however possible habitat has been identified within the Wasauksing boundary for this species as well. Proper measures should be taken while working in undisturbed areas to ensure the species is not present.	ISC Ontario.ca sararegistry.ca

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
Reptiles and Amphibians									
Blanding's Turtle	<i>Emydoidea blandingii</i>	S3	THR	THR	THR	1	Found in shallow water marshes, bogs, ponds or swamps, or coves in larger lakes with soft muddy bottoms and aquatic vegetation; basks on logs, stumps, or banks; surrounding natural habitat is important in summer as they frequently move from aquatic habitat to terrestrial habitats; hibernates in bogs; not readily observed.	High potential for species presence on all parts of Parry Island. Blanding's Turtle require a mosaic of lowland and upland areas. The wetland-forest mosaic that makes up most of the island indicates high quality habitat for this and other turtle species endemic to Ontario.	MNRF District Records ORAA
Common Five-lined Skink	<i>Plestiodon fasciatus pop. 2</i>	S3	SC	SC	SC	1	This species lives in moderately dense or open deciduous or mixed woodlands with logs and slash piles; damp spots under logs, leaf litter, or sawdust; open talus slopes, barren rock; sandy beaches of Lake Erie, Lake Ontario; breeds in forest floor litter; lays, protects eggs under rocks, logs; forages in open woodlands, in sandy areas, along shores of lakes, and islands; hibernates under rock piles, in rock crevices, under logs and in stumps.	Moderate to high potential for species presence on Parry Island. This species has confirmed presence in the Parry Sound area. The southern shield population is associated with wooded areas featuring open bedrock. Areas with this habitat combination should be considered candidate habitat for this species.	MNRF District Records ORAA
Eastern Fox Snake	<i>Pantherophis gloydi pop. 1</i>	S3	THR	END	END	1	Found on open habitats along the shores of Georgian Bay, specifically rock barrens and meadow marshes for foraging, mating and thermoregulating; those inhabiting shoreline do not venture far inland, restricting majority of activity to within 150 m of the water; move about primarily via water; hibernate in fissures in bedrock; egg-laying sites located along Georgian Bay include rock crevices and composting vegetation piles; bask and obtain shelter in brush piles, root systems of living or downed trees, bases of common junipers, and rocky sites of either table rocks with suitable gaps between rock and substrate or fissures in bedrock; confined to habitat within 100 m from Georgian Bay shoreline, therefore main threat is encroaching cottage and recreational development.	This species has confirmed presence on Parry Island. The Georgian Bay population of Eastern Fox Snake are typically found within 150 m of the shore in rocky habitats spotted with trees and shrubs. There is a very high likelihood of species presence within the Study Area.	MNRF District Records ORAA

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	S3	THR	THR	THR	1	Prefers sandy upland fields, pastures, savannahs, sandy beaches; dry open oak-pine-maple forest with sandy soils; prefer forest areas > 5 ha.	Moderate to high potential for species presence on all parts of Parry Island, though species occurrence should be assumed to correlate with well-drained, sandy habitats with abundant forage (frogs and other amphibians).	MNRF District Records ORAA
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	S3	SC	SC	SC	1	Mostly aquatic, except when laying eggs; shallow slow moving water of lakes, streams, marshes and ponds; hibernate in underwater mud, in banks or in muskrat lodges; eggs are laid in debris or under stumps or fallen logs at waters edge; often share nest sites; sometimes congregate at hibernation sites; not readily observed.	High potential for species presence on all parts of Parry Island, though species occurrence should be assumed to correlate with wetland areas. Eastern Musk Turtle could feasibly utilize any soft-substrate upland areas for nesting within the Study Area.	MNRF District Records ORAA
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	S2	END	END	END	1	Prefers well-shaded forests with abundant leaf litter, logs, stumps, and other microtopography. Hibernates underground. Utilizes vernal pools and fishless wetlands for breeding and laying eggs.	Extremely low potential for species presence on Parry Island. Though suitable habitat exists for this species, this area is well outside of the current known range for Jefferson Salamanders. Sightings well outside of its known range have occurred in Ontario.	ORAA
Massasauga	<i>Sistrurus catenatus</i>	S3	THR	THR	THR	1	Suitable habitats range from tall grass prairie to cedar bogs to shorelines; need sufficient protection from predators and elements, so habitat cannot be too open; require access to spots warm enough to digest food and reproduce; granite rock tables in the Georgian Bay area and brush piles in the Ojibway prairie provide hot spots to bask in; sufficient moisture key to surviving winter; hibernacula (overwintering sites) often associated with wetlands or small, wet depressions in terrain.	This species has confirmed presence on Parry Island. Massasaugas can be found in a wide variety of habitats in Ontario, including tallgrass prairie, bogs, marshes, forests and alvar. There is a very high likelihood of species presence within the Study Area.	MNRF District Records NHIC Data Records ORAA
Northern Map Turtle	<i>Graptemys geographica</i>	S3	SC	SC	SC	1	Northern Map Turtles are associated with large bodies of water with soft bottoms, and aquatic vegetation; basks on logs or rocks or on beaches and grassy edges, will bask in groups; uses soft soil or clean dry sand for nest sites; may nest at some distance from water; home range size is larger for females (about 70 ha) than males (about 30 ha) and includes	High potential for species presence on all parts of Parry Island, though species occurrence should be assumed to correlate with areas of deeper water. Northern Map Turtle could feasibly utilize any soft-substrate upland areas for nesting within the Study Area.	MNRF District Records ORAA

Indigenous Services Canada

Species at Risk Assessment
2018

Common Name	Scientific Name	Provincial S-RANK ¹	Provincial SARO Status ²	COSEWIC ³	Federal SARA Status ³	Federal SARA Schedule ⁴	Habitat Description	Candidate Habitat Present in the Study Area?	Source
							hibernation, basking, nesting and feeding areas; aquatic corridors (e.g. stream) are required for movement; not readily observed.		
Spotted Turtle	<i>Clemmys guttate</i>	S3	END	END	END	1	Requires unpolluted, shallow bodies of water such as streams, ponds, wet meadows, marshes or swamps with aquatic vegetation, logs or clumps of vegetation for basking; nest is dug near water in fine-textured soil (e.g. sand) or moss; vulnerable to factors affecting water quality, vegetation composition and structure; average home range size 3.7 ha.	High potential for species presence on all parts of Parry Island, though species occurrence should be assumed to correlate with wetland areas. Spotted Turtle have declined rapidly in Ontario over the past 30 years, likely due to habitat degradation. The abundance of in-tact habitat on Parry Island suitable for this species indicate a high likelihood of presence within the Study Area.	MNRF District Records
Snapping Turtle	<i>Chelydra serpentina</i>	S3	SC	SC	SC	1	Generally inhabit shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	High potential for species presence on all parts of Parry Island. This large species is mostly aquatic, but can often be found in very small areas of standing water. Snapping Turtle could feasibly utilize any soft-substrate upland areas for nesting within the Study Area.	MNRF District Records ORAA

¹S-Ranks (provincial)

Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario (Please refer to: <http://explorer.natureserve.org/nsranks.htm>)

SX — Presumed Extirpated - Species or community is believed to be extirpated from the province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

SH — Possibly Extirpated (Historical) - Species or community occurred historically in the province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20–40 years. A species or community could become SH without such a 20–40 year delay if the only known occurrences in a province were destroyed or if it had been extensively and unsuccessfully looked for. The SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.

S1 — Critically Imperiled - Critically imperiled in the province or state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the province.

S2 — Imperiled - Imperiled in the province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the province.

S3 — Vulnerable - Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 — Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 — Secure - Common, widespread, and abundant in the province.

SNR — Unranked - Province conservation status not yet assessed.

SU — Unrankable - Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

SNA — Not Applicable - A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

S#S# — Range Rank - A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

S#? — Inexact or Uncertain - Denotes inexact or uncertain numeric rank.

Breeding Status Qualifiers

B – Breeding Conservation status refers to the breeding population of the species in the nation or state/province.

N – Nonbreeding Conservation status refers to the non-breeding population of the species in the province.

M – Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the province.

²SARO Endangered Species Act, 2007

(provincial status from <http://www.ontario.ca/environment-and-energy/how-species-risk-are-listed#section-3>)

The provincial review process is implemented by the MNR's Committee on the Status of Species at Risk in Ontario (COSSARO).

Indigenous Services Canada

Species at Risk Assessment
2018

Extinct - A species that no longer exists anywhere.

Extirpated (EXT) - Lives somewhere in the world, and at one time lived in the wild in Ontario, but no longer lives in the wild in Ontario.

Endangered (END) - Lives in the wild in Ontario but is facing imminent extinction or extirpation.

Threatened (THR) - Lives in the wild in Ontario, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening it.

Special concern (SC) - Lives in the wild in Ontario, is not endangered or threatened, but may become threatened or endangered due to a combination of biological characteristics and identified threats.

Not at Risk (NAR) - A species that has been evaluated and found to be not at risk.

Data Deficient (DD) - A species for which there is insufficient information for a provincial status recommendation.

³SARA (*Federal Species at Risk Act*) Status and Schedule (includes COSEWIC Status)

The Act establishes Schedule 1, as the official list of wildlife species at risk. It classifies those species as being either Extirpated, Endangered, Threatened, or Special Concern. Once listed, the measures to protect and recover a listed wildlife species are implemented.

Extinct - A wildlife species that no longer exists.

Extirpated (EXT) - A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.

Endangered (END) - A wildlife species facing imminent extirpation or extinction.

Threatened (THR) - A wildlife species that is likely to become an endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

Special Concern (SC) - A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

Data Deficient (DD) - A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

Not At Risk (NAR) - A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

⁴SARA Schedule

Schedule 1: is the official list of species that are classified as extirpated, endangered, threatened, and of special concern.

Schedule 2: species listed in Schedule 2 are species that had been designated as endangered or threatened, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

Schedule 3: species listed in Schedule 3 are species that had been designated as special concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

The Act establishes Schedule 1 as the official list of wildlife species at risk. However, please note that while Schedule 1 lists species that are extirpated, endangered, threatened and of special concern, the prohibitions do not apply to species of special concern.

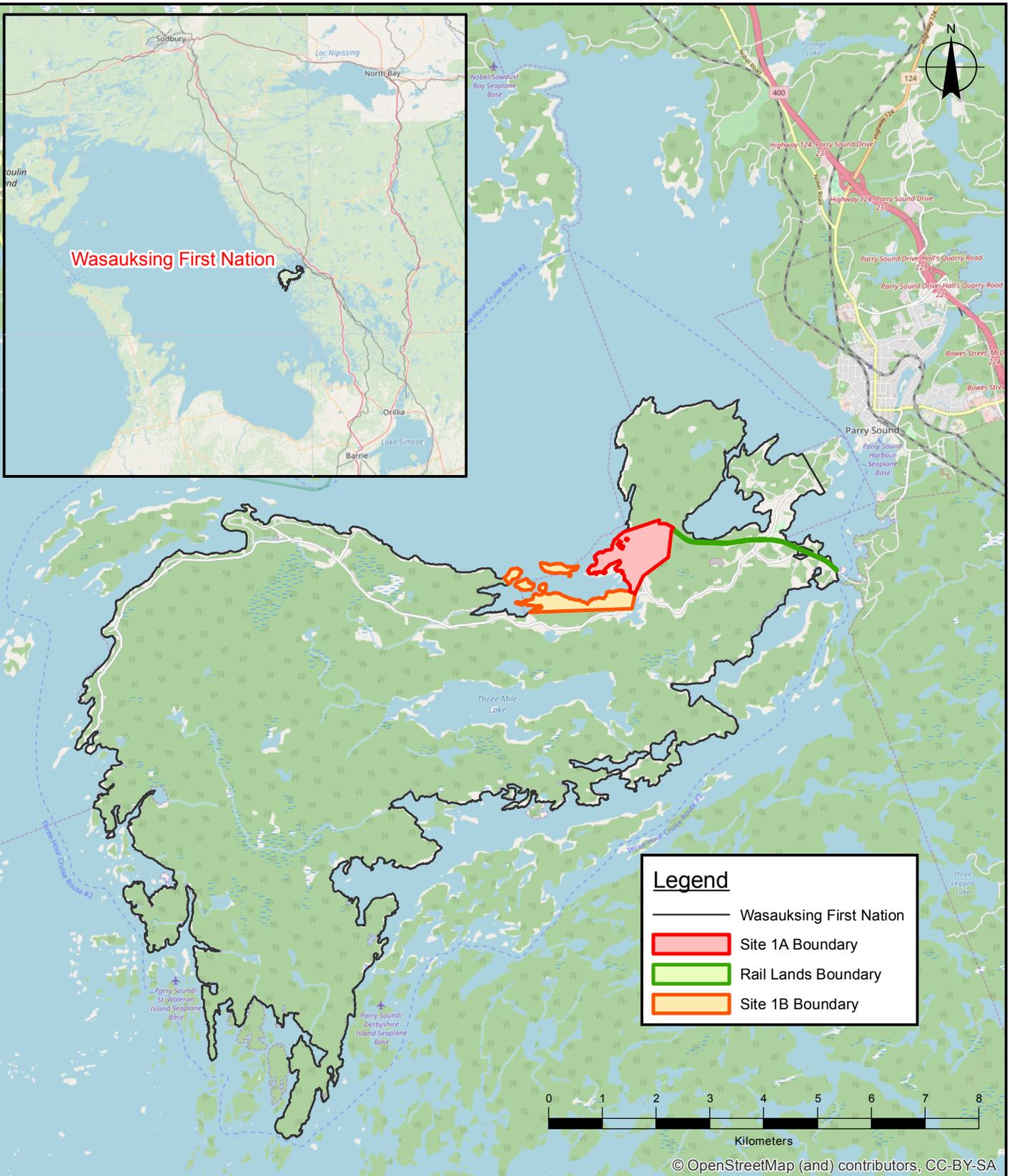
Species that were designated at risk by COSEWIC prior to October 1999 (Schedule 2 & 3) must be reassessed using revised criteria before they can be considered for addition to Schedule 1 of SARA. After they have been assessed, the Governor in Council may on the recommendation of the Minister, decide on whether or not they should be added to the List of Wildlife Species at Risk.

⁵Source: Ontario Ministry of Natural Resources. 2000. *Significant Wildlife Habitat Technical Guide & Appendices*.

NEEGAN BURNSIDE

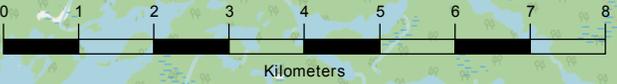
Figures

Figures



Legend

- Wasauksing First Nation
- Site 1A Boundary
- Rail Lands Boundary
- Site 1B Boundary



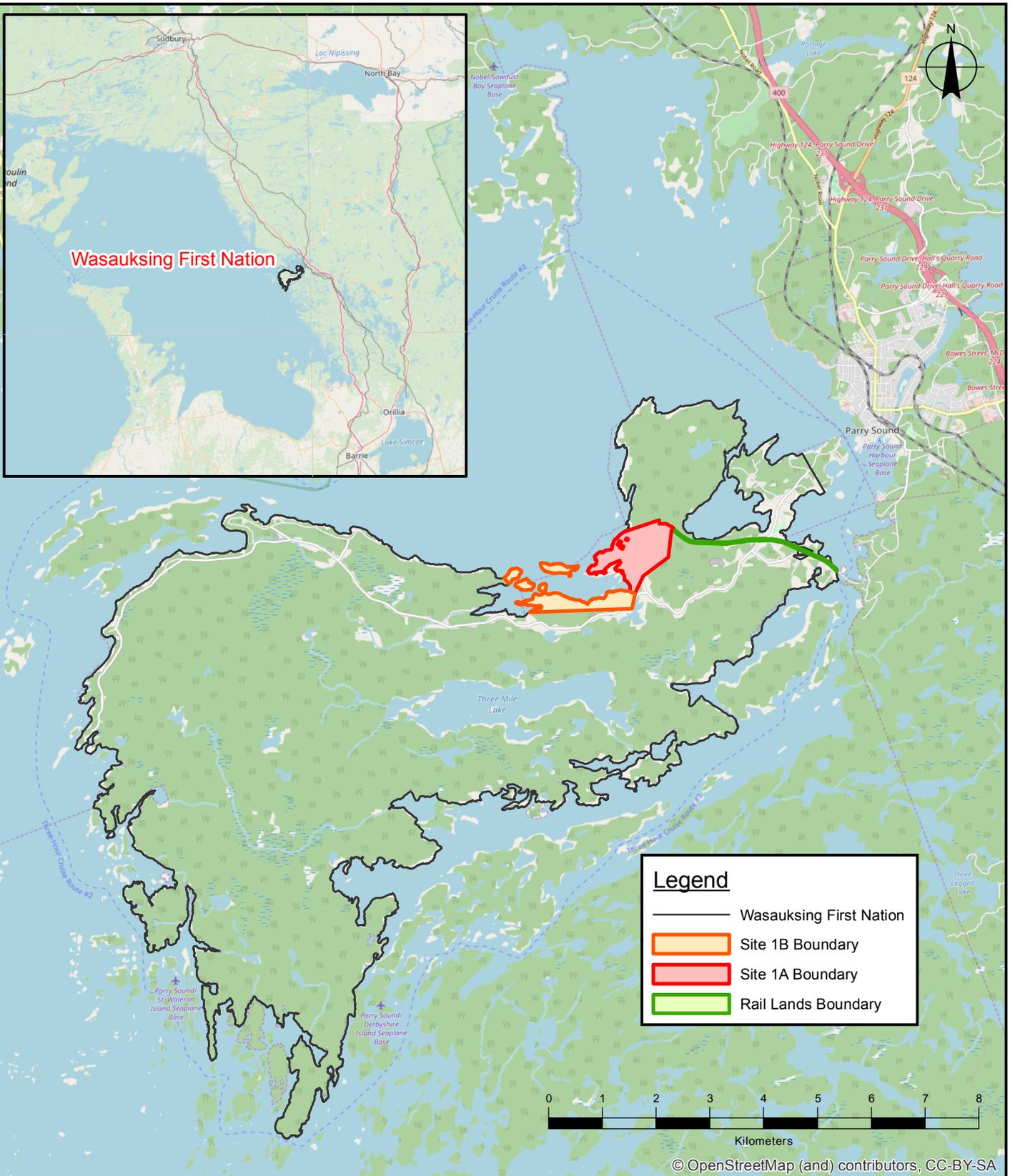
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Map Title
**DOCUMENT REVIEW AND
 SITE VISIT SUMMARY
 DEPOT HARBOUR
 SITE 1A & PART 1 FORMER RAIL LANDS
 SITE LOCATION MAP**

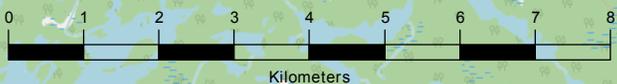
Client
**INDIGENOUS SERVICES CANADA
 (ISC)**

Drawn	Checked	Date	Figure No. 1A-1
C.S.	K.L.	2018	
Scale	Project No.		
H 1:100,000		300040284	



Legend

- Wasauksing First Nation
- ▭ Site 1B Boundary
- ▭ Site 1A Boundary
- ▭ Rail Lands Boundary



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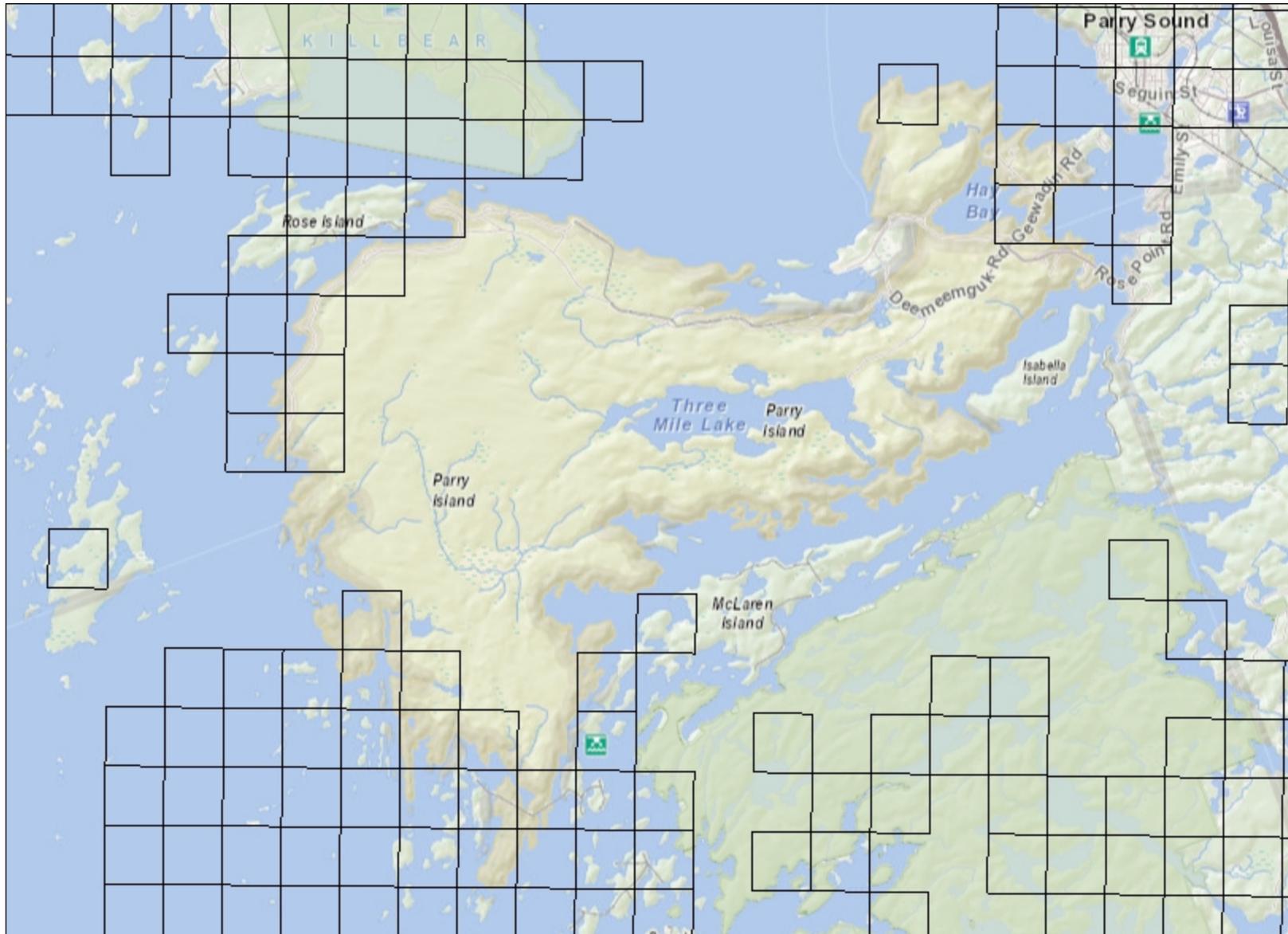
Map Title
**PHASE I ESA
 DEPOT HARBOUR - SITE 1B**
 SITE LOCATION MAP

Client
**INDIGENOUS SERVICES CANADA
 (ISC)**

Drawn	Checked	Date	Figure No. 1B-1
C.S.	K.L.	2018	
Scale	Project No.		
H 1:100,000		300040284	

Appendix A

National Heritage Information Centre Species List



Legend

- Assessment Parcel
- Woodland
- Conservation Reserve
- Provincial Park
- Natural Heritage System
- Ecoregion
- Wetland**
 - Provincially Significant Wetland Evaluated
 - Non - Provincially Significant Wetland Evaluated
 - Unevaluated Wetland
- Area of Natural Heritage & Scientific Interest (ANSI)**
 - Provincially Significant Life Science ANSI
 - Provincially Significant Earth Science ANSI
- Greenbelt Plan**
 - Boundary
 - River Valley Connections
- Land Use Designations**
 - Protected Countryside
 - Towns and Villages
 - Hamlets
 - Urban River Valley
 - Specialty Crop Area
- Niagara Escarpment Plan (NEP)**
 - Boundary
 - Parks and Open Space System
- Land Use Designations**
 - Escarpment Natural Area
 - Escarpment Protection Area
 - Escarpment Rural Area
 - Mineral Resource Extraction Area
 - Escarpment Recreation Area
 - Urban Area
 - Minor Urban Centre
- Oak Ridges Moraine Conservation Plan (ORM)**
 - Boundary
 - Natural Core Area
 - Natural Linkage Area
 - Countryside Area
 - Rural Settlement
 - Palgrave Estates Residential Community
 - Settlement Area



Scale: 1 : 144,447



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17NL7121								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				1942	13549	

17NL7321								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				5/24/2016	13214	
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	1983-00-00	93848	http://nhic.mnr.gov.on.ca/r

17NL7320								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	1983-00-00	93848	http://

17NL7420								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	1983-00-00	93848	http://n

17NL7319								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	1983-00-00	93848	http://nhic.mnr.go

17NL6509								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Prairie Warbler	Setophaga discolor	S3B	NAR	NAR	6/28/1997	21415	http://nhic.mnr.gov.on.ca/reports/public_details.php?source=1kmgriddetail&nhic_eo_id=21415
SPECIES	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	Acipenser fulvescens pop. 3	S2	THR	THR	9/1/2010	104238	http://nhic.m

17NL6310								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	Acipenser fulvescens pop. 3	S2	THR	THR	9/1/2010	104238	http://

17NL6311								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				8/26/2006	13537	

17NL6211								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				8/26/2006	13537	
SPECIES	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	Acipenser fulvescens pop. 3	S2	THR	THR	9/1/2010	104238	http://nhic

17NL6212								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				8/26/2006	13537	

17NL6115								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	8/27/2009	1416	http://nhic.mnr.gov.on.ca/r

17NL6116								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	8/27/2009	1416	http://nhic.mnr.g

17NL6117								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				7/30/2005	13548	

17NL6118								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	8/27/2009	1416	http://nhic.m

17NL6218								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1	S3	THR	THR	8/27/2009	1416	http://nhic.mnr.gov.on.ca

17NL6319								
Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				7/30/2005	13548	

NHIC Data Square – 17PJ7163

Element Type	Common Name	Scientific Name	S-Rank	SARO Status	COSEWIC Status	Last Obs Date
SPECIES	Red Mulberry	Morus rubra	S2	END	END	1894-08-01
SPECIES	Northern Bobwhite	Colinus virginianus	S1	END	END	1885
SPECIES	Pronghorn Clubtail	Gomphus graslinellus	S3			6/23/1996

NHIC Data Square – 17PJ7162

Element Type	Common Name	Scientific Name	S-Rank	SARO Status	COSEWIC Status	Last Obs Date
SPECIES	Red Mulberry	Morus rubra	S2	END	END	1894-08-01
SPECIES	Northern Bobwhite	Colinus virginianus	S1	END	END	1885
SPECIES	Pronghorn Clubtail	Gomphus graslinellus	S3			6/23/1996

Appendix B

Ontario Breeding Bird Atlas Species List

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL71	Alder Flycatcher	T	PROB	1	Jim Laird	2	6.9	0.1034	1
28	17NL71	American Bittern	D	PROB	1		1	3.45	0.0345	1
28	17NL71	American Black Duck	FY	CONF	1	Russ Weeber				
28	17NL71	American Crow	CF	CONF	1		14	48.28	0.6897	1
28	17NL71	American Goldfinch	T	PROB	1	Jim Laird	6	20.69	0.3448	1
28	17NL71	American Redstart	CF	CONF	1	Jim Laird	11	37.93	0.4483	1
28	17NL71	American Robin	FY	CONF	1	Jim Laird	11	37.93	0.6552	1
28	17NL71	American Woodcock	FY	CONF	1	Jim Laird				
28	17NL71	Bald Eagle	H	POSS	1	Jim Laird				
28	17NL71	Baltimore Oriole	S	POSS	1	Jim Laird				
28	17NL71	Barn Swallow	CF	CONF	1	Jim Laird	1	3.45	0.0345	1
28	17NL71	Barred Owl	T	PROB	1	Jim Laird				
28	17NL71	Bay-breasted Warbler	T	PROB	1	Jim Laird				
28	17NL71	Belted Kingfisher	FY	CONF	1	Jim Laird	1	3.45	0.0345	1
28	17NL61	Belted Kingfisher	T	PROB	1	Jim Laird	2	7.41	0.0741	1
28	17NL61	Black/Yellow-billed Cuckoo	A	PROB	1	Jim Laird				
28	17NL61	Black-and-white Warbler	CF	CONF	1	Jim Laird	12	44.44	0.4444	1

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Black-backed Woodpecker	H	POSS	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Black-billed Cuckoo	P	PROB	1	Jim Laird	1	3.7	0.0741	1
28	17NL61	Blackburnian Warbler	FY	CONF	1	Jim Laird	7	25.93	0.2593	1
28	17NL61	Black-capped Chickadee	FY	CONF	1	Jim Laird	14	51.85	0.8889	1
28	17NL61	Black-throated Blue Warbler	T	PROB	1	Jim Laird	18	66.67	0.9259	1
28	17NL61	Black-throated Green Warbler	T	PROB	1	Jim Laird	14	51.85	0.8889	1
28	17NL61	Blue Jay	FY	CONF	1	Jim Laird	10	37.04	0.3704	1
28	17NL61	Blue-headed Vireo	T	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Blue-winged/Golden-winged Warbler	T	PROB	1	Jim Laird				
28	17NL61	Boreal Chickadee	FY	CONF	1	Jim Laird				
28	17NL71	Brewer's Blackbird	CF	CONF	1	Jim Laird				
28	17NL71	Broad-winged Hawk	NY	CONF	1	Sheldon E McGregor				
28	17NL71	Brown Creeper	T	PROB	1	Jim Laird				
28	17NL71	Brown Thrasher	CF	CONF	1	Stan Fairchild	1	3.45	0.0345	1
28	17NL71	Brown-headed Cowbird	FY	CONF	1	Stan Fairchild				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL71	Canada Goose	FY	CONF	1	2 atlassers	1	3.45	0.069	1
28	17NL71	Canada Warbler	T	PROB	1	Jim Laird	1	3.45	0.0345	1
28	17NL71	Cape May Warbler	S	POSS	1	Jim Laird				
28	17NL61	Cedar Waxwing	FY	CONF	1	Jim Laird	3	11.11	0.1852	1
28	17NL71	Chestnut-sided Warbler	CF	CONF	1	Joel Kits	6	20.69	0.2069	1
28	17NL61	Chimney Swift	P	PROB	1	Jim Laird				
28	17NL61	Chipping Sparrow	CF	CONF	1	Donald A Sutherland	8	29.63	0.2963	1
28	17NL61	Clay-colored Sparrow	S	POSS	1	Jim Laird				
28	17NL71	Common Grackle	CF	CONF	1	Jim Laird				
28	17NL71	Common Loon	FY	CONF	1	Jim Laird	1	3.45	0.0345	1
28	17NL61	Common Merganser	T	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL71	Common Nighthawk	S	POSS	1	Sheldon E McGregor				
28	17NL61	Common Raven	T	PROB	1	Jim Laird	6	22.22	0.2963	1
28	17NL61	Common Snipe	T	PROB	1	Jim Laird				
28	17NL61	Common Tern	NE	CONF	1					

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Common Yellowthroat	FY	CONF	1	Jim Laird	13	48.15	0.8519	1
28	17NL61	Cooper's Hawk	T	PROB	1	Jim Laird				
28	17NL71	Dark-eyed Junco	T	PROB	1	Jim Laird				
28	17NL61	Downy Woodpecker	T	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Eastern Bluebird	FY	CONF	1	Jim Laird				
28	17NL61	Eastern Kingbird	P	PROB	1	Donald A Sutherland	1	3.7	0.037	1
28	17NL61	Eastern Meadowlark	S	POSS	1	Jim Laird				
28	17NL61	Eastern Phoebe	T	PROB	1	Jim Laird	2	7.41	0.0741	1
28	17NL61	Eastern Towhee	T	PROB	1	Jim Laird				
28	17NL61	Eastern Wood-Pewee	T	PROB	1	Jim Laird	3	11.11	0.1481	1
28	17NL61	European Starling	CF	CONF	1	Donald A Sutherland				
28	17NL61	Evening Grosbeak	FY	CONF	1	Jim Laird				
28	17NL71	Field Sparrow	T	PROB	1	Jim Laird				
28	17NL61	Golden-crowned Kinglet	T	PROB	1	Jim Laird	2	7.41	0.0741	1
28	17NL61	Golden-winged Warbler	H	POSS	1	Jim Laird				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Gray Catbird	T	PROB	1	Jim Laird	2	7.41	0.1111	1
28	17NL61	Gray Jay	T	PROB	1	Jim Laird				
28	17NL61	Great Blue Heron	H	POSS	1	Jim Laird				
28	17NL61	Great Crested Flycatcher	T	PROB	1	Jim Laird	2	7.41	0.0741	1
28	17NL71	Great Horned Owl	H	POSS	1	Jim Laird				
28	17NL71	Green Heron	H	POSS	1	Jim Laird				
28	17NL61	Hairy Woodpecker	T	PROB	1	Jim Laird	3	11.11	0.1111	1
28	17NL61	Hermit Thrush	T	PROB	1	Jim Laird	4	14.81	0.2593	1
28	17NL61	Herring Gull	P	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Hooded Merganser	T	PROB	1	Jim Laird				
28	17NL61	Horned Lark	S	POSS	1	Jim Laird				
28	17NL71	House Sparrow	A	PROB	1	Jim Laird				
28	17NL61	House Wren	T	PROB	1	Jim Laird				
28	17NL61	Indigo Bunting	T	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Killdeer	S	POSS	1	Jim Laird				
28	17NL61	Least Flycatcher	T	PROB	1	Jim Laird	3	11.11	0.2593	1
28	17NL71	Lincoln's Sparrow	S	POSS	1	Jim Laird				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Magnolia Warbler	T	PROB	1	Jim Laird	4	14.81	0.1481	1
28	17NL61	Mallard	FY	CONF	1	Jim Laird				
28	17NL61	Marsh Wren	S	POSS	1	Jim Laird				
28	17NL71	Merlin	H	POSS	1	Jim Laird				
28	17NL61	Mourning Dove	P	PROB	1	Jim Laird				
28	17NL61	Mourning Warbler	S	POSS	1	Donald A Sutherland	6	22.22	0.3333	1
28	17NL61	Nashville Warbler	T	PROB	1	Jim Laird	7	25.93	0.2963	1
28	17NL61	Northern Cardinal	T	PROB	1	Jim Laird				
28	17NL61	Northern Flicker	T	PROB	1	Jim Laird	5	18.52	0.2593	1
28	17NL61	Northern Harrier	H	POSS	1	Jim Laird				
28	17NL61	Northern Parula	T	PROB	1	Jim Laird				
28	17NL61	Northern Waterthrush	T	PROB	1	Jim Laird	2	7.41	0.2222	1
28	17NL61	Olive-sided Flycatcher	T	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Osprey	H	POSS	1	Jim Laird				
28	17NL61	Ovenbird	T	PROB	1	Jim Laird	18	66.67	1.7407	1
28	17NL61	Philadelphia Vireo	T	PROB	1	Jim Laird				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Pied-billed Grebe	S	POSS	1	Jim Laird				
28	17NL61	Pileated Woodpecker	T	PROB	1	Jim Laird	6	22.22	0.2963	1
28	17NL61	Pine Siskin	S	POSS	1	Jim Laird				
28	17NL61	Pine Warbler	T	PROB	1	Jim Laird	2	7.41	0.0741	1
28	17NL61	Purple Finch	S	POSS	1	2 atlassers	7	25.93	0.2593	1
28	17NL61	Red-breasted Merganser	P	PROB	1	Jim Laird				
28	17NL61	Red-breasted Nuthatch	T	PROB	1	Jim Laird	1	3.7	0.0741	1
28	17NL61	Red-eyed Vireo	FY	CONF	1	Jim Laird	23	85.19	2.8148	1
28	17NL61	Red-shouldered Hawk	T	PROB	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Red-tailed Hawk	H	POSS	1	Jim Laird				
28	17NL61	Red-winged Blackbird	FY	CONF	1	Jim Laird	2	7.41	0.1481	1
28	17NL61	Ring-billed Gull	H	POSS	1	Burke Korol	1	3.7	0.037	1
28	17NL71	Ring-necked Duck	FY	CONF	1	Jim Laird				
28	17NL71	Rock Pigeon	T	PROB	1	Jim Laird				
28	17NL61	Rose-breasted Grosbeak	T	PROB	1	Jim Laird	11	40.74	0.5185	1
28	17NL61	Ruby-crowned Kinglet	T	PROB	1	Jim Laird				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Ruby-throated Hummingbird	D	PROB	1	Donald A Sutherland	3	11.11	0.1481	1
28	17NL61	Ruffed Grouse	FY	CONF	1	Jim Laird	7	25.93	0.2593	1
28	17NL71	Rusty Blackbird	FY	CONF	1	Jim Laird				
28	17NL61	Savannah Sparrow	S	POSS	1	Jim Laird				
28	17NL61	Scarlet Tanager	T	PROB	1	Jim Laird	7	25.93	0.3333	1
28	17NL71	Sedge Wren	S	POSS	1	Jim Laird				
28	17NL61	Sharp-shinned Hawk	H	POSS	1	Jim Laird				
28	17NL61	Song Sparrow	CF	CONF	1	Jim Laird	2	7.41	0.1111	1
28	17NL71	Sora	T	PROB	1	Jim Laird	1	3.45	0.0345	1
28	17NL71	Spotted Sandpiper	T	PROB	1	Jim Laird				
28	17NL71	Spruce Grouse	S	POSS	1	Jim Laird				
28	17NL61	Swainson's Thrush	T	PROB	1	Jim Laird				
28	17NL71	Swamp Sparrow	T	PROB	1	Jim Laird	2	6.9	0.069	1
28	17NL61	Tennessee Warbler	S	POSS	1	Jim Laird				
28	17NL61	Tree Swallow	AE	CONF	1	Donald A Sutherland				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Turkey Vulture	P	PROB	1	Jim Laird				
28	17NL61	Upland Sandpiper	H	POSS	1	Jim Laird				
28	17NL61	Veery	T	PROB	1	Jim Laird	16	59.26	1.2593	1
28	17NL71	Vesper Sparrow	S	POSS	1	Jim Laird				
28	17NL71	Virginia Rail	S	POSS	1	Jim Laird				
28	17NL61	Warbling Vireo	S	POSS	1	2 atlassers				
28	17NL71	Whip-poor-will	S	POSS	1	Sheldon E McGregor				
28	17NL61	White-breasted Nuthatch	T	PROB	1	Jim Laird	4	14.81	0.1481	1
28	17NL61	White-throated Sparrow	T	PROB	1	Jim Laird	7	25.93	0.2963	1
28	17NL71	Wild Turkey	H	POSS	1		1	3.45	0.0345	1
28	17NL61	Willow Flycatcher	S	POSS	1	Jim Laird				
28	17NL61	Winter Wren	T	PROB	1	Jim Laird	8	29.63	0.3333	1
28	17NL71	Wood Duck	FY	CONF	1	Jim Laird				
28	17NL61	Wood Thrush	FY	CONF	1	Jim Laird	1	3.7	0.0741	1
28	17NL61	Yellow Warbler	CF	CONF	1	Jim Laird	4	14.81	0.1481	1
28	17NL61	Yellow-bellied Flycatcher	T	PROB	1	Jim Laird				

Combined Species lists for squares 17NL71 and 17NL61

Region	Square	Species	Max BE	Breeding Evidence			Point Counts			
				Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
28	17NL61	Yellow-bellied Sapsucker	T	PROB	1	Jim Laird	14	51.85	0.5926	1
28	17NL61	Yellow-rumped Warbler	FY	CONF	1	Jim Laird	1	3.7	0.037	1
28	17NL61	Yellow-throated Vireo	S	POSS	1	Donald A Sutherland				

Square	Species	Breeding Evidence			
		Max BE	Categ	#Sq	Atlasser Name
17PJ76	Alder Flycatcher	T	PROB	1	Tyler Hoar
17PJ76	American Bittern	S	POSS	1	Tyler Hoar
17PJ76	American Black Duck	H	POSS	1	Tyler Hoar
17PJ76	American Coot	FY	CONF	1	Tyler Hoar
17PJ76	American Crow	NY	CONF	1	Tyler Hoar
17PJ76	American Goldfinch	NY	CONF	1	Tyler Hoar
17PJ76	American Kestrel	CF	CONF	1	Tyler Hoar
17PJ76	American Redstart	CF	CONF	1	Tyler Hoar
17PJ76	American Robin	NY	CONF	1	2 atlassers
17PJ76	American Wigeon	T	PROB	1	Tyler Hoar
17PJ76	American Woodcock	D	PROB	1	Tyler Hoar
17PJ76	Baltimore Oriole	AE	CONF	1	Tyler Hoar
17PJ76	Bank Swallow	NB	CONF	1	
17PJ76	Barn Swallow	NY	CONF	1	Tyler Hoar
17PJ76	Barred Owl	H	POSS	1	Tyler Hoar
17PJ76	Belted Kingfisher	AE	CONF	1	Tyler Hoar
17PJ76	Black Tern	NE	CONF	1	Tyler Hoar
17PJ76	Black-and-white Warbler	T	PROB	1	
17PJ76	Black-billed Cuckoo	T	PROB	1	Tyler Hoar
17PJ76	Blackburnian Warbler	H	POSS	1	Tyler Hoar
17PJ76	Black-capped Chickadee	NY	CONF	1	Dennis Barry
17PJ76	Black-throated Blue Warbler	S	POSS	1	
17PJ76	Black-throated Green Warbler	CF	CONF	1	Tyler Hoar
17PJ76	Blue Jay	NY	CONF	1	Tyler Hoar
17PJ76	Blue-gray Gnatcatcher	NY	CONF	1	Tyler Hoar
17PJ76	Blue-winged Teal	FY	CONF	1	Tyler Hoar
17PJ76	Bobolink	FY	CONF	1	Tyler Hoar
17PJ76	Broad-winged Hawk	H	POSS	1	Tyler Hoar
17PJ76	Brown Creeper	A	PROB	1	Tyler Hoar
17PJ76	Brown Thrasher	NY	CONF	1	Tyler Hoar
17PJ76	Brown-headed Cowbird	FY	CONF	1	Tyler Hoar
17PJ76	Canada Goose	NE	CONF	1	3 atlassers
17PJ76	Carolina Wren	T	PROB	1	Tyler Hoar
17PJ76	Cedar Waxwing	FY	CONF	1	Tyler Hoar
17PJ76	Chestnut-sided Warbler	CF	CONF	1	Tyler Hoar
17PJ76	Chimney Swift	V	PROB	1	Tyler Hoar
17PJ76	Chipping Sparrow	NY	CONF	1	Jim Richards
17PJ76	Clay-colored Sparrow	T	PROB	1	Tyler Hoar
17PJ76	Common Gallinule	T	PROB	1	Tyler Hoar
17PJ76	Common Grackle	NY	CONF	1	
17PJ76	Common Loon	D	PROB	1	Tyler Hoar
17PJ76	Common Merganser	H	POSS	1	

Square	Species	Breeding Evidence			
		Max BE	Categ	#Sq	Atlasser Name
17PJ76	Common Nighthawk	NY	CONF	1	Tyler Hoar
17PJ76	Common Snipe	D	PROB	1	Tyler Hoar
17PJ76	Common Tern	NY	CONF	1	Tyler Hoar
17PJ76	Common Yellowthroat	NY	CONF	1	Tyler Hoar
17PJ76	Cooper's Hawk	NY	CONF	1	Tyler Hoar
17PJ76	Downy Woodpecker	AE	CONF	1	Tyler Hoar
17PJ76	Eastern Bluebird	H	POSS	1	Tyler Hoar
17PJ76	Eastern Kingbird	NE	CONF	1	Tyler Hoar
17PJ76	Eastern Meadowlark	T	PROB	1	Tyler Hoar
17PJ76	Eastern Phoebe	NY	CONF	1	2 atlassers
17PJ76	Eastern Screech-Owl	AE	CONF	1	Tyler Hoar
17PJ76	Eastern Towhee	S	POSS	1	Tyler Hoar
17PJ76	Eastern Wood-Pewee	T	PROB	1	Tyler Hoar
17PJ76	European Starling	NY	CONF	1	Cindy Jahn-Cartwright
17PJ76	Field Sparrow	T	PROB	1	Tyler Hoar
17PJ76	Gadwall	FY	CONF	1	Tyler Hoar
17PJ76	Golden-crowned Kinglet	T	PROB	1	Tyler Hoar
17PJ76	Grasshopper Sparrow	S	POSS	1	Tyler Hoar
17PJ76	Gray Catbird	NY	CONF	1	2 atlassers
17PJ76	Great Blue Heron	NY	CONF	1	Tyler Hoar
17PJ76	Great Crested Flycatcher	A	PROB	1	
17PJ76	Great Horned Owl	NY	CONF	1	Tyler Hoar
17PJ76	Green Heron	NY	CONF	1	2 atlassers
17PJ76	Green-winged Teal	FY	CONF	1	Tyler Hoar
17PJ76	Hairy Woodpecker	AE	CONF	1	Tyler Hoar
17PJ76	Hermit Thrush	S	POSS	1	Tyler Hoar
17PJ76	Herring Gull	NY	CONF	1	Tyler Hoar
17PJ76	Hooded Merganser	FY	CONF	1	Tyler Hoar
17PJ76	Horned Lark	T	PROB	1	Tyler Hoar
17PJ76	House Finch	NY	CONF	1	Tyler Hoar
17PJ76	House Sparrow	NY	CONF	1	
17PJ76	House Wren	NE	CONF	1	Jim Richards
17PJ76	Indigo Bunting	D	PROB	1	
17PJ76	Killdeer	FY	CONF	1	Tyler Hoar
17PJ76	Least Bittern	T	PROB	1	Tyler Hoar
17PJ76	Least Flycatcher	CF	CONF	1	Tyler Hoar
17PJ76	Magnolia Warbler	S	POSS	1	
17PJ76	Mallard	NE	CONF	1	2 atlassers
17PJ76	Marsh Wren	CF	CONF	1	Tyler Hoar
17PJ76	Mourning Dove	NY	CONF	1	Tyler Hoar
17PJ76	Mourning Warbler	A	PROB	1	2 atlassers
17PJ76	Mute Swan	NE	CONF	1	Tyler Hoar

Square	Species	Breeding Evidence			
		Max BE	Categ	#Sq	Atlasser Name
17PJ76	Northern Cardinal	NY	CONF	1	Tyler Hoar
17PJ76	Northern Flicker	NY	CONF	1	Tyler Hoar
17PJ76	Northern Harrier	FY	CONF	1	Tyler Hoar
17PJ76	Northern Mockingbird	NY	CONF	1	2 atlassers
17PJ76	Northern Pintail	T	PROB	1	Tyler Hoar
17PJ76	Northern Rough-winged Swallow	T	PROB	1	Tyler Hoar
17PJ76	Northern Saw-whet Owl	FY	CONF	1	
17PJ76	Northern Shoveler	FY	CONF	1	Tyler Hoar
17PJ76	Northern Waterthrush	T	PROB	1	Tyler Hoar
17PJ76	Orchard Oriole	AE	CONF	1	Tyler Hoar
17PJ76	Ovenbird	T	PROB	1	Tyler Hoar
17PJ76	Pied-billed Grebe	NY	CONF	1	Jim Richards
17PJ76	Pileated Woodpecker	AE	CONF	1	Tyler Hoar
17PJ76	Purple Finch	H	POSS	1	Tyler Hoar
17PJ76	Purple Martin	AE	CONF	1	Tyler Hoar
17PJ76	Red-bellied Woodpecker	S	POSS	1	
17PJ76	Red-breasted Nuthatch	T	PROB	1	Tyler Hoar
17PJ76	Red-eyed Vireo	FY	CONF	1	Tyler Hoar
17PJ76	Redhead	P	PROB	1	Tyler Hoar
17PJ76	Red-headed Woodpecker	AE	CONF	1	Tyler Hoar
17PJ76	Red-tailed Hawk	NY	CONF	1	Tyler Hoar
17PJ76	Red-winged Blackbird	NY	CONF	1	Tyler Hoar
17PJ76	Ring-necked Pheasant	H	POSS	1	Tyler Hoar
17PJ76	Rock Pigeon	NY	CONF	1	Tyler Hoar
17PJ76	Rose-breasted Grosbeak	T	PROB	1	Tyler Hoar
17PJ76	Ruby-throated Hummingbird	D	PROB	1	
17PJ76	Ruddy Duck	FY	CONF	1	Tyler Hoar
17PJ76	Ruffed Grouse	FY	CONF	1	Tyler Hoar
17PJ76	Savannah Sparrow	NE	CONF	1	Tyler Hoar
17PJ76	Sedge Wren	CF	CONF	1	Tyler Hoar
17PJ76	Sharp-shinned Hawk	CF	CONF	1	Tyler Hoar
17PJ76	Song Sparrow	NY	CONF	1	Tyler Hoar
17PJ76	Sora	FY	CONF	1	Tyler Hoar
17PJ76	Spotted Sandpiper	FY	CONF	1	Tyler Hoar
17PJ76	Swamp Sparrow	NY	CONF	1	Tyler Hoar
17PJ76	Tree Swallow	NY	CONF	1	2 atlassers
17PJ76	Trumpeter Swan	NE	CONF	1	Tyler Hoar
17PJ76	Turkey Vulture	NY	CONF	1	Tyler Hoar
17PJ76	Veery	T	PROB	1	Tyler Hoar
17PJ76	Vesper Sparrow	T	PROB	1	Tyler Hoar
17PJ76	Virginia Rail	FY	CONF	1	2 atlassers
17PJ76	Warbling Vireo	NE	CONF	1	Tyler Hoar

Square	Species	Breeding Evidence			
		Max BE	Categ	#Sq	Atlasser Name
17PJ76	White-breasted Nuthatch	A	PROB	1	Tyler Hoar
17PJ76	Willow Flycatcher	T	PROB	1	Tyler Hoar
17PJ76	Winter Wren	S	POSS	1	Tyler Hoar
17PJ76	Wood Duck	FY	CONF	1	Tyler Hoar
17PJ76	Wood Thrush	CF	CONF	1	Tyler Hoar
17PJ76	Yellow Warbler	NY	CONF	1	Tyler Hoar
17PJ76	Yellow-bellied Sapsucker	N	PROB	1	Tyler Hoar
17PJ76	Yellow-billed Cuckoo	H	POSS	1	Tyler Hoar
17PJ76	Yellow-rumped Warbler	H	POSS	1	Tyler Hoar

Appendix C

Ontario Reptile and Amphibian Atlas Species List

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Common Name	Number of Individuals	Year of Latest Observation	Observation ID
American Bullfrog	1	2010	123592
American Toad	1	2017	458361
Blanding's Turtle	1	2000	123370
Dekay's Brownsnake	12	2017	366056
Eastern Gartersnake	1	2017	457726
Eastern Musk Turtle	1	1952	407429
Eastern Newt	1	1987	127829
Eastern Red-backed Salamander	1	1993	129158
Gray Treefrog	4	2011	127406
Green Frog	1	2017	452656
Jefferson/Blue-spotted Salamander Complex	1	1981	127797
Midland Painted Turtle	5	2017	458535
Milksnake	1	1987	127844
Mudpuppy	1	1969	127791
Northern Leopard Frog	1	2013	123432
Pickerel Frog	1	1988	124363
Red-eared Slider	1	2009	123407
Snapping Turtle	1	2017	457036
Spotted Salamander	1	1972	127803
Spring Peeper	3	2013	130289
Western Chorus Frog	1	2013	124329
Wood Frog	6	2016	365778

Appendix D

Department of Fisheries and Oceans Records

Aquatic Species at Risk Found Within Mapped Area (Ontario North East - Map 18 of 27)

Common Name*	Population	Scientific Name	Taxon	Species at Risk Status
Deepwater Sculpin	Great Lakes - Western St. Lawrence	<i>Myoxocephalus thompsonii</i>	Fishes	Special Concern
Northern Brook Lamprey	Great Lakes - Upper St. Lawrence	<i>Ichthyomyzon fossor</i>	Fishes	Special Concern
Upper Great Lakes Kiyi	None	<i>Coregonus kiyi</i>	Fishes	Special Concern

Appendix E

**Ministry of Natural Resources and Forestry
District Records**

CARLING

SAR Designations



Endangered
Threatened
Special Concern

Jump To: [List of Municipalities](#)

		Key Habitats Used By Species (See below for wetland definitions)	Timing of Life History Events
Bald Eagle	Known To Occur	Nests Winter perching areas around winter feeding areas ESA Protection: N/A	Active: February - late June Nests: March - Late May and will be on nest for most of summer
Bank Swallow	Known To Occur	Eroding, vertical banks of unconsolidated substrate: earthen banks along watercourses and lakeshores, sand and gravel pits, along roadsides, stockpiles of soil and other materials. ESA Protection: Species and General Habitat protection	Active: May - August Nests: May-August
Barn Swallow	Known To Occur	Ledges and walls of man-made structures such as buildings, barns, bathhouses Cliffs or caves ESA Protection: Species and general habitat protection	Nests: May - July
Blanding's Turtle	Known To Occur	Fen (poor fens), marsh, swamp Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: April – October Nests: June Hatchling Emergence: September Hibernates: October – April Spring survey best time to determine where potential hibernation sites would be
Bobolink	Known To Occur	Large old fields and meadows, tall grasslands, hayfields ESA Protection: Species and general habitat protection	Nests: May - July
Branched Bartonia	Presumed to Occur	Fen, sphagnum bogs Shoreline (with hummock vegetation) ESA Protection: Species and general habitat protection	Flowers: mid September - end of September
Canada Warbler	Known To Occur	Forests with well-developed understorey, particularly low-lying areas (e.g., alder swamps). ESA Protection: N/A	Active: May - August Nests: Late May - late June
Chimney Swift	Known To Occur	Man-made structures such as chimneys Hollow trees or cavities in old growth or mature forests ESA Protection: Species and general habitat protection	Nests: May-July

Common Five-lined Skink	Known To Occur	Rock-barren and sandy habitats in dry-mesic Oak-Pine woods ESA Protection: N/A	Active: mid April - early October Nests: late May - early June
Common Nighthawk	Known To Occur	Open areas with no or little vegetation, rock outcrops, forest clearing, peat bogs. ESA Protection: N/A	Active: May - August Nests: May - August
Eastern Foxsnake	Known To Occur	Sections of the Severn River ESA Protection: Species and regulated habitat protection	Active: May - October Hibernates: mid September - mid May Retreat to hibernacula: September & October Mates: late May - mid June Lays eggs: late June - mid July Best time to look for hibernation sites is during egress in May
Eastern Hog-nosed Snake	Known To Occur	Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: May - October Mates: August and early September Nests: late June - mid July Hibernates: October - April
Eastern Meadowlark	Known To Occur	Grasslands, pastures, agricultural fields, old fields, meadows; often overgrown with shrubs Can also use golf courses and sand dunes ESA Protection: Species and general habitat protection	Nests: May - July
Eastern Musk Turtle	Known To Occur	Marsh, swamp, fen (bog) ESA Protection: N/A	Mates: spring and fall (congregate at hibernation sites) Nesting: June - early July
Eastern Ribbonsnake	Known To Occur	Marsh, swamp, fen (bog) ESA Protection: N/A	Active: early May - October Live Young: September Hibernates: October - April
Eastern Small-footed Myotis	Presumed to Occur	Active season roosting habitat: talus fields and slopes, rocky ridges, rock outcrops, sandstone boulders, shale rock piles, limestone spoil piles, rocky terrain around strip mines, cliff crevices, rock dams, road cuts, rock fields within utility corridors, buildings. Active season foraging habitat: Rivers, streams, riparian forests, upland forests, clearings, strip mines, ridgetops. Hibernation habitat: Caves, abandoned mines, rock outcrops, stone highway culverts, features where appropriate humidity and temperature exist. ESA Protection: Species and general habitat protection.	Active: April - November Birthing/Rearing young : May - August Hibernation: November -April
Eastern Whip-poor-will	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: May - August Nests: Last weeks of May at dusk, on cloudless nights during full moons Requires special surveying effort

Eastern Wood-Pewee	Known To Occur	Deciduous and mixed forests, in proximity to open space such as forest edges, clearings, water, and roadways. ESA Protection: N/A	Active: May - August Nests: June - August
Golden-winged Warbler	Known To Occur	Successional scrub habitats surrounded by forest. ESA Protection: N/A	Active: May - August Nests: May - July
Lake Sturgeon	Known To Occur	Bottoms of lakes and large rivers over clay, mud, sand and gravel Shallow waters of Georgian Bay and large tributary rivers up to the first barrier to migration ESA Protection: Species and general habitat protection	Spawns: Spring, May-June
Least Bittern	Known To Occur	Marsh (cattail) ESA Protection: Species and general habitat protection	Active: mid May – July Mates: mid May – June Nests: June – July (nestlings remain near nest until August)
Little Brown Myotis	Known To Occur	Forests, cavity trees, dead and dying trees, buildings Caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Massasauga	Known To Occur	Fen (bog), swamp, marsh Rock-barren ESA Protection: Species and general habitat protection	Active: early May - mid September Hibernates: September - late April (early May) Live young: late August (sometimes late July – early August)
Monarch	Known To Occur	Breeds in areas where milkweed is present. Larva - fields with milkweed. Adults - various habitats, including marshes. Feeds on flowering plants. Overwinters in forested areas in Mexico. ESA Protection: N/A	Active: June - August/early October Migration: south - August/mid October. North - March/April. Eggs are laid on the underside of milkweed leaves - hatch in 3-12 days. 2-3 broods per season. Larval stage: 2 weeks Cocoon: ~2 weeks
Northern Map Turtle	Known To Occur	Littoral (shallow water) habitat and basking sites along open water ESA Protection: N/A	Mates: While still in hibernacula, October - April Nests: early June - late July Hatchling Emergence: late August - early September
Northern Myotis	Presumed to Occur	Forests, boreal forest, cavity trees, dead and dying trees, buildings caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Olive-sided Flycatcher	Known To Occur	Forests ESA Protection: N/A	Active: May/June - August Nests: June - August

Red-headed Woodpecker	Known To Occur	Open deciduous forests, woodland edges, riparian forests, open parkland, sparsely-treed fencerows. ESA Protection: N/A	Active: May - September Nests: May-August
Snapping Turtle	Known To Occur	Marsh, swamp, fen (poor fens) Shallow waters in lakes or along streams Open areas of sand or gravel ESA Protection: N/A	Active: April - October Nests: June
Spotted Turtle	Known To Occur	Marsh, swamp, fen (poor fen) Vernal pools Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: April - October Mates: May Nests: June
Wood Thrush	Known To Occur	Moist deciduous and mixed forests, prefer larger tracts but will use small (~3ha) patches. ESA Protection: N/A	Active: April - September Nests: April/May - August _ double-brooding common, triple-brooding has been recorded in Ontario

Jump To: [List of Municipalities](#)

Wetland Definitions	Marsh: wet areas periodically inundated with standing or slowly moving water and/or permanently inundated areas. Characterized by robust emergents such as cattails and anchored floating plants and submergents. Substrate is mineral or organic soils with high mineral content. Open water marshes are marshes with permanent open water, usually less than 2 m deep and with floating, submergent or partially emergent vegetation.
	Swamp: wooded wetlands dominated by trees or tall shrubs. The soils are continuously waterlogged and standing or gently moving water may be present seasonally. There are usually pools and channels, and the understory is usually densely vegetated with trees, tall shrubs, low shrubs, herbs and mosses.
	Bogs: peat-covered wetlands characterized by a high water table and surface carpet of mosses, mainly Sphagnum sp. Trees are not usually present, or if present, are restricted to stunted black spruce, and ericaceous shrubs are usually present. These wetland types are nutrient poor and acidic and are characterized by low species diversity.
	Fens (poor fens): peatlands with a dominant component of sedges and mosses (Sphagnum sp may be present but not necessarily) typical of this wetland type. Shrubs (including non-ericaceous shrubs) and stunted trees (including white cedar and tamarack) may be present, and this wetland type has higher species diversity than bogs.

COWPER

SAR Designations



Endangered
Threatened
Special Concern

Jump To: [List of Municipalities](#)

		Key Habitats Used By Species (See below for wetland definitions)	Timing of Life History Events
Bald Eagle	Presumed to Occur	Nests Winter perching areas around winter feeding areas ESA Protection: N/A	Active: February - late June Nests: March - Late May and will be on nest for most of summer
Bank Swallow	Presumed to Occur	Eroding, vertical banks of unconsolidated substrate: earthen banks along watercourses and lakeshores, sand and gravel pits, along roadsides, stockpiles of soil and other materials. ESA Protection: Species and General Habitat protection	Active: May - August Nests: May-August
Barn Swallow	Known To Occur	Ledges and walls of man-made structures such as buildings, barns, bathhouses Cliffs or caves ESA Protection: Species and general habitat protection	Nests: May - July
Blanding's Turtle	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: April – October Nests: June Hatchling Emergence: September Hibernates: October – April Spring survey best time to determine where potential hibernation sites would be
Bobolink	Presumed to Occur	Large old fields and meadows, tall grasslands, hayfields ESA Protection: Species and general habitat protection	Nests: May - July
Canada Warbler	Known To Occur	Forests with well-developed understorey, particularly low-lying areas (e.g., alder swamps). ESA Protection: N/A	Active: May - August Nests: Late May - late June
Chimney Swift	Presumed to Occur	Man-made structures such as chimneys Hollow trees or cavities in old growth or mature forests ESA Protection: Species and general habitat protection	Nests: May-July
Common Five-lined Skink	Known To Occur	Rock-barren and sandy habitats in dry-mesic Oak-Pine woods ESA Protection: N/A	Active: mid April - early October Nests: late May - early June

Common Nighthawk	Known To Occur	Open areas with no or little vegetation, rock outcrops, forest clearing, peat bogs. ESA Protection: N/A	Active: May - August Nests: May - August
Eastern Foxsnake	Known To Occur	Sections of the Severn River ESA Protection: Species and regulated habitat protection	Active: May - October Hibernates: mid September - mid May Retreat to hibernacula: September & October Mates: late May - mid June Lays eggs: late June - mid July Best time to look for hibernation sites is during egress in May
Eastern Hog-nosed Snake	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: May - October Mates: August and early September Nests: late June - mid July Hibernates: October - April
Eastern Meadowlark	Presumed to Occur	Grasslands, pastures, agricultural fields, old fields, meadows; often overgrown with shrubs Can also use golf courses and sand dunes ESA Protection: Species and general habitat protection	Nests: May - July
Eastern Musk Turtle	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Mates: spring and fall (congregate at hibernation sites) Nesting: June - early July
Eastern Ribbonsnake	Known To Occur	Marsh, swamp, fen (bog) ESA Protection: N/A	Active: early May - October Live Young: September Hibernates: October - April
Eastern Small-footed Myotis	Presumed to Occur	Active season roosting habitat: talus fields and slopes, rocky ridges, rock outcrops, sandstone boulders, shale rock piles, limestone spoil piles, rocky terrain around strip mines, cliff crevices, rock dams, road cuts, rock fields within utility corridors, buildings. Active season foraging habitat: Rivers, streams, riparian forests, upland forests, clearings, strip mines, ridgetops. Hibernation habitat: Caves, abandoned mines, rock outcrops, stone highway culverts, features where appropriate humidity and temperature exist. ESA Protection: Species and general habitat protection.	Active: April - November Birthing/Rearing young : May - August Hibernation: November -April
Eastern Whip-poor-will	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: May - August Nests: Last weeks of May at dusk, on cloudless nights during full moons Requires special surveying effort
Eastern Wood-Pewee	Known To Occur	Deciduous and mixed forests, in proximity to open space such as forest edges, clearings, water, and roadways. ESA Protection: N/A	Active: May - August Nests: June - August

Golden-winged Warbler	Known To Occur	Successional scrub habitats surrounded by forest. ESA Protection: N/A	Active: May - August Nests: May - July
Least Bittern	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: mid May – July Mates: mid May – June Nests: June – July (nestlings remain near nest until August)
Little Brown Myotis	Presumed to Occur	Forests, cavity trees, dead and dying trees, buildings Caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Massasauga	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: early May - mid September Hibernates: September - late April (early May) Live young: late August (sometimes late July – early August)
Monarch	Known To Occur	Breeds in areas where milkweed is present. Larva - fields with milkweed. Adults - various habitats, including marshes. Feeds on flowering plants. Overwinters in forested areas in Mexico. ESA Protection: N/A	Active: June - August/early October Migration: south - August/mid October. North - March/April. Eggs are laid on the underside of milkweed leaves - hatch in 3-12 days. 2-3 broods per season. Larval stage: 2 weeks Cocoon: ~2 weeks
Northern Map Turtle	Known To Occur	Littoral (shallow water) habitat and basking sites along open water ESA Protection: N/A	Mates: While still in hibernacula, October - April Nests: early June - late July Hatchling Emergence: late August - early September
Northern Myotis	Presumed to Occur	Forests, boreal forest, cavity trees, dead and dying trees, buildings caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Olive-sided Flycatcher	Known To Occur	Forests ESA Protection: N/A	Active: May/June - August Nests: June - August
Snapping Turtle	Known To Occur	Marsh, swamp, fen (poor fens) Shallow waters in lakes or along streams Open areas of sand or gravel ESA Protection: N/A	Active: April - October Nests: June
Spotted Turtle	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: April - October Mates: May Nests: June

Wood Thrush	Known To Occur	Moist deciduous and mixed forests, prefer larger tracts but will use small (~3ha) patches. ESA Protection: N/A	Active: April - September Nests: April/May - August _ double-brooding common, triple-brooding has been recorded in Ontario
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Wetland Defintions	<p>Marsh: wet areas periodically inundated with standing or slowly moving water and/or permanently inundated areas. Characterized by robust emergents such as cattails and anchored floating plants and submergents. Substrate is mineral or organic soils with high mineral content. Open water marshes are marshes with permanent open water, usually less than 2 m deep and with floating, submergent or partially emergent vegetation.</p> <p>Swamp: wooded wetlands dominated by trees or tall shrubs. The soils are continuously waterlogged and standing or gently moving water may be present seasonally. There are usually pools and channels, and the understory is usually densely vegetated with trees, tall shrubs, low shrubs, herbs and mosses.</p> <p>Bogs: peat-covered wetlands characterized by a high water table and surface carpet of mosses, mainly Sphagnum sp. Trees are not usually present, or if present, are restricted to stunted black spruce, and ericaceous shrubs are usually present. These wetland types are nutrient poor and acidic and are characterized by low species diversity.</p> <p>Fens (poor fens): peatlands with a dominant component of sedges and mosses (Sphagnum sp may be present but not necessarily) typical of this wetland type. Shrubs (including non-ericaceous shrubs) and stunted trees (including white cedar and tamarack) may be present, and this wetland type has higher species diversity than bogs.</p>
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FOLEY

SAR Designations



Endangered
Threatened
Special Concern

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		Key Habitats Used By Species (See below for wetland definitions)	Timing of Life History Events
Bank Swallow	Presumed to Occur	Eroding, vertical banks of unconsolidated substrate: earthen banks along watercourses and lakeshores, sand and gravel pits, along roadsides, stockpiles of soil and other materials. ESA Protection: Species and General Habitat protection	Active: May - August Nests: May-August
Barn Swallow	Known To Occur	Ledges and walls of man-made structures such as buildings, barns, boathouses Cliffs or caves ESA Protection: Species and general habitat protection	Nests: May - July
Blanding's Turtle	Known To Occur	Fen (poor fens), marsh, swamp Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: April – October Nests: June Hatchling Emergence: September Hibernates: October – April Spring survey best time to determine where potential hibernation sites would be
Bobolink	Presumed to Occur	Large old fields and meadows, tall grasslands, hayfields ESA Protection: Species and general habitat protection	Nests: May - July
Canada Warbler	Known To Occur	Forests with well-developed understorey, particularly low-lying areas (e.g., alder swamps). ESA Protection: N/A	Active: May - August Nests: Late May - late June
Chimney Swift	Presumed to Occur	Man-made structures such as chimneys Hollow trees or cavities in old growth or mature forests ESA Protection: Species and general habitat protection	Nests: May-July
Common Five-lined Skink	Known To Occur	Rock-barren and sandy habitats in dry-mesic Oak-Pine woods ESA Protection: N/A	Active: mid April - early October Nests: late May - early June
Common Nighthawk	Known To Occur	Open areas with no or little vegetation, rock outcrops, forest clearing, peat bogs. ESA Protection: N/A	Active: May - August Nests: May - August
Eastern Foxsnake	Known To Occur	Georgian Bay islands and shoreline with structure Marsh, swamp, fen (bog) Rock-barren ESA Protection: Species and general habitat protection	Active: May - October Hibernates: mid September - mid May Retreat to hibernacula: September & October Mates: late May - mid June Lays eggs: late June - mid July Best time to look for hibernation sites is during egress in May

Eastern Hog-nosed Snake	Known To Occur	Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: May - October Mates: August and early September Nests: late June - mid July Hibernates: October - April
Eastern Meadowlark	Presumed to Occur	Grasslands, pastures, agricultural fields, old fields, meadows; often overgrown with shrubs Can also use golf courses and sand dunes ESA Protection: Species and general habitat protection	Nests: May - July
Eastern Musk Turtle	Presumed to Occur	Marsh, swamp, fen (bog) ESA Protection: N/A	Mates: spring and fall (congregate at hibernation sites) Nesting: June - early July
Eastern Ribbonsnake	Known To Occur	Marsh, swamp, fen (bog) ESA Protection: N/A	Active: early May - October Live Young: September Hibernates: October - April
Eastern Small-footed Myotis	Presumed to Occur	Active season roosting habitat: talus fields and slopes, rocky ridges, rock outcrops, sandstone boulders, shale rock piles, limestone spoil piles, rocky terrain around strip mines, cliff crevices, rock dams, road cuts, rock fields within utility corridors, buildings. Active season foraging habitat: Rivers, streams, riparian forests, upland forests, clearings, strip mines, ridgetops. Hibernation habitat: Caves, abandoned mines, rock outcrops, stone highway culverts, features where appropriate humidity and temperature exist. ESA Protection: Species and general habitat protection.	Active: April - November Birthing/Rearing young : May - August Hibernation: November -April
Eastern Whip-poor-will	Presumed to Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: May - August Nests: Last weeks of May at dusk, on cloudless nights during full moons Requires special surveying effort
Eastern Wood-Pewee	Known To Occur	Deciduous and mixed forests, in proximity to open space such as forest edges, clearings, water, and roadways. ESA Protection: N/A	Active: May - August Nests: June - August
Golden-winged Warbler	Known To Occur	Successional scrub habitats surrounded by forest. ESA Protection: N/A	Active: May - August Nests: June - August
Little Brown Myotis	Presumed to Occur	Deciduous and mixed forests, in proximity to open space such as forest edges, clearings, water, and roadways. ESA Protection: N/A	Active: May - August Nests: June - August

Massasauga	Known To Occur	Fen (bog), swamp, marsh Rock-barren ESA Protection: Species and general habitat protection	Active: early May - mid September Hibernates: September - late April (early May) Live young: late August (sometimes late July – early August)
Monarch	Known To Occur	Breeds in areas where milkweed is present. Larva - fields with milkweed. Adults - various habitats, including marshes. Feeds on flowering plants. Overwinters in forested areas in Mexico. ESA Protection: N/A	Active: June - August/early October Migration: south - August/mid October. North - March/April. Eggs are laid on the underside of milkweed leaves - hatch in 3-12 days. 2-3 broods per season. Larval stage: 2 weeks Coccon: ~2 weeks
Northern Map Turtle	Known To Occur	Littoral (shallow water) habitat and basking sites along open water ESA Protection: N/A	Mates: While still in hibernacula, October - April Nests: early June - late July Hatchling Emergence: late August - early September
Northern Myotis	Presumed to Occur	Forests, boreal forest, cavity trees, dead and dying trees, buildings caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Olive-sided Flycatcher	Known To Occur	Forests ESA Protection: N/A	Active: May/June - August Nests: June - August
Red-headed Woodpecker	Known To Occur	Open deciduous forests, woodland edges, riparian forests, open parkland, sparsely-treed fencerows. ESA Protection: N/A	Active: May - September Nests: May-August
Snapping Turtle	Known To Occur	Marsh, swamp, fen (poor fens) Shallow waters in lakes or along streams Open areas of sand or gravel ESA Protection: N/A	Active: April - October Nests: June
Spotted Turtle	Known To Occur	Marsh, swamp, fen (poor fen) Vernal pools Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: April - October Mates: May Nests: June
Upper Great Lakes Kivi	Historically Known to Occur	Clear, cold, deep waters of the Great Lakes Eggs are deposited on rocks and gravel shoals ESA Protection: N/A	Spawns: Fall, October - December
Wood Thrush	Known To Occur	Moist deciduous and mixed forests, prefer larger tracts but will use small (~3ha) patches. ESA Protection: N/A	Active: April - September Nests: April/May - August _ double-brooding common, triple-brooding has been recorded in Ontario

Jump To: [List of Municipalities](#)

Wetland Definitions	<p>Marsh: wet areas periodically inundated with standing or slowly moving water and/or permanently inundated areas. Characterized by robust emergents such as cattails and anchored floating plants and submergents. Substrate is mineral or organic soils with high mineral content. Open water marshes are marshes with permanent open water, usually less than 2 m deep and with floating, submergent or partially emergent vegetation.</p>
	<p>Swamp: wooded wetlands dominated by trees or tall shrubs. The soils are continuously waterlogged and standing or gently moving water may be present seasonally. There are usually pools and channels, and the understory is usually densely vegetated with trees, tall shrubs, low shrubs, herbs and mosses.</p>
	<p>Bogs: peat-covered wetlands characterized by a high water table and surface carpet of mosses, mainly Sphagnum sp. Trees are not usually present, or if present, are restricted to stunted black spruce, and ericaceous shrubs are usually present. These wetland types are nutrient poor and acidic and are characterized by low species diversity.</p>
	<p>Fens (poor fens): peatlands with a dominant component of sedges and mosses (Sphagnum sp may be present but not necessarily) typical of this wetland type. Shrubs (including non-ericaceous shrubs) and stunted trees (including white cedar and tamarack) may be present, and this wetland type has higher species diversity than bogs.</p>

MCDUGALL

SAR Designations



Endangered
Threatened
Special Concern

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		Key Habitats Used By Species (See below for wetland definitions)	Timing of Life History Events
Bank Swallow	Known To Occur	Eroding, vertical banks of unconsolidated substrate: earthen banks along watercourses and lakeshores, sand and gravel pits, along roadsides, stockpiles of soil and other materials. ESA Protection: Species and General Habitat protection	Active: May - August Nests: May-August
Barn Swallow	Known To Occur	Ledges and walls of man-made structures such as buildings, barns, boathouses Cliffs or caves ESA Protection: Species and general habitat protection	Nests: May - July
Blanding's Turtle	Known To Occur	Fen (poor fens), marsh, swamp Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: April – October Nests: June Hatchling Emergence: September Hibernates: October – April Spring survey best time to determine where potential hibernation sites would be
Bobolink	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: May - August Nests: Last weeks of May at dusk, on cloudless nights during full moons Requires special surveying effort
Canada Warbler	Known To Occur	Forests with well-developed understorey, particularly low-lying areas (e.g., alder swamps). ESA Protection: N/A	Active: May - August Nests: Late May - late June
Chimney Swift	Known To Occur	Man-made structures such as chimneys Hollow trees or cavities in old growth or mature forests ESA Protection: Species and general habitat protection	Nests: May-July
Common Five-lined Skink	Known To Occur	Rock-barren and sandy habitats in dry-mesic Oak-Pine woods ESA Protection: N/A	Active: mid April - early October Nests: late May - early June
Common Nighthawk	Known To Occur	Open areas with no or little vegetation, rock outcrops, forest clearing, peat bogs. ESA Protection: N/A	Active: May - August Nests: May - August
Eastern Foxsnake	Known To Occur	Georgian Bay islands and shoreline with structure Marsh, swamp, fen (bog) Rock-barren ESA Protection: Species and general habitat protection	Active: May - October Hibernates: mid September - mid May Retreat to hibernacula: September & October Mates: late May - mid June Lays eggs: late June - mid July Best time to look for hibernation sites is during egress in May

Eastern Hog-nosed Snake	Known To Occur	Open areas of sand or fine gravel Rock-barren ESA Protection: Species and general habitat protection	Active: May - October Mates: August and early September Nests: late June - mid July Hibernates: October - April
Eastern Meadowlark	Known To Occur	Grasslands, pastures, agricultural fields, old fields, meadows; often overgrown with shrubs Can also use golf courses and sand dunes ESA Protection: Species and general habitat protection	Nests: May - July
Eastern Ribbonsnake	Known To Occur	Marsh, swamp, fen (bog) ESA Protection: N/A	Active: early May - October Live Young: September Hibernates: October - April
Eastern Small-footed Myotis	Presumed to Occur	Active season roosting habitat: talus fields and slopes, rocky ridges, rock outcrops, sandstone boulders, shale rock piles, limestone spoil piles, rocky terrain around strip mines, cliff crevices, rock dams, road cuts, rock fields within utility corridors, buildings. Active season foraging habitat: Rivers, streams, riparian forests, upland forests, clearings, strip mines, ridgetops. Hibernation habitat: Caves, abandoned mines, rock outcrops, stone highway culverts, features where appropriate humidity and temperature exist. ESA Protection: Species and general habitat protection.	Active: April - November Birthing/Rearing young : May - August Hibernation: November -April
Eastern Whip-poor-will	Known To Occur	Areas with a mix of open and forested areas ESA Protection: Species and general habitat protection	Active: May - August Nests: Last weeks of May at dusk, on cloudless nights during full moons Requires special surveying effort
Eastern Wood-Pewee	Known To Occur	Deciduous and mixed forests, in proximity to open space such as forest edges, clearings, water, and roadways. ESA Protection: N/A	Active: May - August Nests: June - August
Golden-winged Warbler	Known To Occur	Successional scrub habitats surrounded by forest. ESA Protection: N/A	Active: May - August Nests: May - July
Lake Sturgeon	Known To Occur	Bottoms of lakes and large rivers over clay, mud, sand and gravel Shallow waters of Georgian Bay and large tributary rivers up to the first barrier to migration ESA Protection: Species and general habitat protection	Spawns: Spring, May-June
Least Bittern	Known To Occur	Marsh (cattail) ESA Protection: Species and general habitat protection	Active: mid May – July Mates: mid May – June Nests: June – July (nestlings remain near nest until August)

Little Brown Myotis	Presumed to Occur	Forests, cavity trees, dead and dying trees, buildings Caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Massasauga	Known To Occur	Fen (bog), swamp, marsh Rock-barren ESA Protection: Species and general habitat protection	Active: early May - mid September Hibernates: September - late April (early May) Live young: late August (sometimes late July – early August)
Monarch	Known To Occur	Breeds in areas where milkweed is present. Larva - fields with milkweed. Adults - various habitats, including marshes. Feeds on flowering plants. Overwinters in forested areas in Mexico. ESA Protection: N/A	Active: June - August/early October Migration: south - August/mid October. North - March/April. Eggs are laid on the underside of milkweed leaves - hatch in 3-12 days. 2-3 broods per season. Larval stage: 2 weeks Cocoon: ~2 weeks
Northern Map Turtle	Known To Occur	Littoral (shallow water) habitat and basking sites along open water ESA Protection: N/A	Mates: While still in hibernacula, October - April Nests: early June - late July Hatchling Emergence: late August - early September
Northern Myotis	Presumed to Occur	Forests, boreal forest, cavity trees, dead and dying trees, buildings caves, abandoned mines ESA Protection: Species and general habitat protection	Active: April - October Hibernates: October/November - April/May Live Young: June (usually only one pup)
Olive-sided Flycatcher	Known To Occur	Forests ESA Protection: N/A	Active: May/June - August Nests: June - August
Snapping Turtle	Known To Occur	Marsh, swamp, fen (poor fens) Shallow waters in lakes or along streams Open areas of sand or gravel ESA Protection: N/A	Active: April - October Nests: June
Upper Great Lakes Kivi	Historically Known to Occur	Clear, cold, deep waters of the Great Lakes Eggs are deposited on rocks and gravel shoals ESA Protection: N/A	Spawns: Fall, October - December
Wood Thrush	Known To Occur	Moist deciduous and mixed forests, prefer larger tracts but will use small (~3ha) patches. ESA Protection: N/A	Active: April - September Nests: April/May - August _ double-brooding common, triple-brooding has been recorded in Ontario

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Wetland Defintions	Marsh: wet areas periodically inundated with standing or slowly moving water and/or permanently inundated areas. Characterized by robust emergents such as cattails and anchored floating plants and submergents. Substrate is mineral or organic soils with high mineral content. Open water marshes are marshes with permanent open water, usually less than 2 m deep and with floating, submergent or partially emergent vegetation.
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Swamp: wooded wetlands dominated by trees or tall shrubs. The soils are continuously waterlogged and standing or gently moving water may be present seasonally. There are usually pools and channels, and the understory is usually densely vegetated with trees, tall shrubs, low shrubs, herbs and mosses.

Bogs: peat-covered wetlands characterized by a high water table and surface carpet of mosses, mainly Sphagnum sp. Trees are not usually present, or if present, are restricted to stunted black spruce, and ericaceous shrubs are usually present. These wetland types are nutrient poor and acidic and are characterized by low species diversity.

Fens (poor fens): peatlands with a dominant component of sedges and mosses (Sphagnum sp may be present but not necessarily) typical of this wetland type. Shrubs (including non-ericaceous shrubs) and stunted trees (including white cedar and tamarack) may be present, and this wetland type has higher species diversity than bogs.