

47 Bedford Road, Township of Guelph-Eramosa
Wellington County, Ontario
Species at Risk & Significant Wildlife Habitat Assessment

Prepared for:
Martin Knowles, Marann Homes

Project Number:
AA22-142B

Date:
March 12, 2024





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March 12, 2024

Project #: AA22-142B

Sent by E-mail: Martin.Knowles@marannhomes.com

Martin Knowles
President
Marann Homes
449 Laird Rd. Unit 6
Guelph, ON

Re: 47 Bedford Road, Township of Guelph-Eramosa, Wellington County, ON Species at Risk and Significant Wildlife Habitat Assessment

Dear Mr. Knowles:

We have completed our Species at Risk and Significant Wildlife Habitat Assessment for the proposed residential development at 47 Bedford Road, Township of Guelph-Eramosa, Ontario. This assessment has been prepared to reduce the likelihood of harm and disturbance to Species at Risk (SAR), their habitat, and Significant Wildlife Habitat (SWH) during the proposed works. This document evaluates the potential for SAR and SWH to occur within the study area through background information available online, information provided by the client, an evaluation of site conditions from aerial imagery, and a site visit completed on March 1, 2024. In addition, a bat habitat assessment and pileated woodpecker nesting hole assessment were performed at the site.

Sincerely,

ABOUD & ASSOCIATES INC.

Heather Dixon, PhD
Aquatic Ecologist
heather@aboudtng.com

1.0 Introduction

1.1 Proposed Site Development

Manann Homes is proposing the development of a residential subdivision. As a due diligence exercise, a Species at Risk Screening, and a Significant Wildlife Habitat (SWH) assessment have been completed to determine if SAR, their habitat, or SWH are likely to be harmed during the repair of the subject structure.

1.2 Existing Conditions

The subject lands are surrounded by green space, small woodlots and hedgerows, and residential development (*Figure 1*).

1.3 Existing Regulations

1.3.1 Provincial Policy Statement

The *Provincial Policy Statement* (PPS) (OMMHA 2020) provides policy direction on matters of provincial interest related to land use planning and development.

Section 2.1.7 of the PPS states that:

“Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.”

Further, Section 2.1.8 states:

“Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.”

1.3.2 Endangered Species Act, 2007

The provincial Endangered Species Act, 2007 (ESA) provides protection to species designated as Threatened or Endangered on the Species at Risk in Ontario list (MNRF 2019). The habitat of species at risk is also generally protected under the ESA.

Protected habitat is habitat identified as essential for life processes including breeding, rearing, feeding, hibernation, and migration.

The ESA (Subsection 9(1)) states that:

“No person shall,

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

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

“No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species.”

Clause 16(5) of the ESA states that:

“An agreement entered into under this section may require the authorized party under the agreement to pay a species conservation charge to the Agency in accordance with Section 20.3 if an impacted species under the agreement is also a conservation fund species.”

Clause 17(1) of the ESA states:

“The Minister may issue a permit to a person that, with respect to a species specified in the permit that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threated species, authorizes the person to engage in an activity specified in the permit that would otherwise be prohibited by Section 9 or 10. 2007, c. 6, s. 17(1)”.

An authorization or permit between the proponent and the Minister of Natural Resources and Forestry is required to authorize activities that would otherwise be prohibited by subsection 9(1) and 10(1), 16(5) or 17(1) of the ESA.

1.3.4 Species at Risk Act (S.C. 2002, c. 29)

The Species at Risk Act (SARA) includes prohibitions to protect listed wildlife species. Prohibitions of SARA within the Province of Ontario generally apply to species present on federal lands and all aquatic Species at Risk.

SARA subsection 32 (1) and (2) states that:

“No person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.

And,

No person shall possess, collect, buy, sell or trade an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species, or any part or derivative of such an individual.”

SARA subsection 33 also states that:

“No person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.”

SARA subsection 34(1), identifies where SARA does not apply in the Province:

With respect to individuals of a listed wildlife species that is not an aquatic species or species of birds that are migratory birds protected by the Migratory Birds Convention Act, 1994, sections 32 and 33 do not apply to lands in a province that are not federal lands unless an order is made under subsection (2) to provide that they apply.

The Species at Risk Act requires that projects and activities avoid causing serious harm to Species at Risk or their habitat unless authorized to do so. This applies to work conducted in or near waterbodies that support species at risk fish, or their critical habitat. Any proposed actions that could impact species at risk or their habitat would need to be assessed for compliance. If it is determined that proposed actions will cause serious harm to species at risk that cannot be mitigated, then a Species at Risk Act Authorization would be required.

2.0 Species at Risk and Significant Wildlife Habitat Assessment

2.1 Background Review

A background information review was conducted of both biological and physical features within the vicinity of the study area. The following resources were consulted during this review:

- Atlas of the Breeding Birds of Ontario, 2021-2025
- Ontario Reptile and Amphibian Atlas Interactive map (Ontario Nature, 2019)

- Ontario Mammal Atlas (1994)
- Natural Heritage Information Centre (NHIC) database, (2020)
- iNaturalist (accessed: March 2024)
- Ontario Butterfly Atlas Online (Toronto Entomologists' Association, 2019)
- eBird (accessed: March 2024)

A list of all wildlife species found in the background review can be found in *Appendix B*.

2.2 Species at Risk Habitat

A thorough review of background documents was conducted to compile a master list of all Species at Risk, and species with conservation designation that may occur in the study area. A review of the site, along with habitat requirements for each species was conducted. A desktop GIS review of the property for SAR habitat was conducted on February 29, 2024, using aerial imagery. The study area was additionally investigated for the potential presence of SAR habitat during a site visit on March 1, 2024. An assessment of the study area for all SAR is provided in *Appendix A*. A list of all wildlife species found in the background review can be found in *Appendix B*.

2.3 Significant Wildlife Habitat

With guidance from the *Significant Wildlife Habitat Technical Guide* (2000) and the SWH EcoRegion Criterion Schedule 6E (2015), the subject lands and study area (within 120m) were considered for the presence of Significant Wildlife Habitat (e.g., specialized habitats for wildlife, and habitat for species of conservation concern). An assessment of the study area for all SWH is provided in *Appendix C*.

2.4 Bat Maternity Habitat Surveys

Bat maternity habitat surveys occurred during leaf off, and were conducted by Shannon Davison, Terrestrial Ecologist, and Heather Dixon, Aquatic Ecologist. All trees with a diameter at breast height greater than 10 cm, and meeting any of the criteria for candidate bat habitat as outlined in the Bats and Treed Habitats Maternity Roost Surveys (MECP, 2022) were recorded.

Candidate trees are those with some or all of the following characteristics (in order of importance):

- Tallest snag/cavity tree
- Exhibits cavities or crevices most often originating as cracks, scars, knot holes or woodpecker cavities
- Has leaf clusters

- Has the largest diameter breast height (>25cm diameter at breast height)
- Is within the highest density of snags/cavity trees (e.g., cluster of snags)
- Has a large amount of loose, peeling bark
- Cavity or crevice is high in snag/cavity tree (>10m)
- Tree species that provide good cavity habitat (e.g., white pine, maple, aspen, ash, oak)
- Canopy is more open (to determine canopy cover, determine the percentage of the ground covered by a vertical projection of the outermost perimeter of the natural spread of the foliage of trees); and
- Exhibits early stages of decay (decay Class 1-3; refer to Watt and Caceres 1999).

The survey occurred on March 1, 2024. A thorough walk-through of each suitable vegetation community identified above, where access was provided, was performed. During the walk-through, trees exhibiting one or more of the above characteristics were recorded.

2.5 Pileated Woodpecker Cavity Identification Surveys

With guidance from the Pileated Woodpecker Cavity Identification Guide (Environment and Climate Change Canada, 2023), all trees within the subject lands were examined for Pileated Woodpecker cavities including those for nesting, roosting, and feeding.

Pileated Woodpeckers create cavities for different stages of their life cycle including nesting, roosting, and feeding. The following characteristics were examined during surveys to determine the type of cavity observed.

- Number of holes
- Cavity edge texture
- Hole shape
- Hole size
- Hole depth
- Hole appearance
- Suspected Woodpecker species
- Tree Type

3.0 Species at Risk Review

3.1 Background Review

Table 1 lists all the SAR found in our background review, including provincial and federal status, and what background source(s) identified its presence.

3.1.1 Natural Heritage Information Centre - Species at Risk

Preliminary investigation through the Natural Heritage Information Centre (NHIC 2021) identified SAR records in the two 1 km x 1 km squares containing the study area (17NJ5825 and 17NJ5725), and the squares surrounding the study area (17NJ5624, 17NJ5924, 17NJ5925, 17NJ5926, 17NJ5625, 17NJ5626, 17NJ5824, 17NJ5724, 17NJ5826, and 17NJ5726). Fourteen SAR listed under the ESA and/or SARA, respectively, were identified: Barn Swallow (*Hirundo rustica*; SC, THR), Bobolink (*Dolichonyx oryzivorus*; THR, THR), Chimney Swift (*Chaetura pleagica*; THR, THR), Eastern Meadowlark (*Sturnella magna*; THR, THR), Eastern Wood-pewee (*Contopus virens*; SC, SC), Grasshopper Sparrow (*Ammodramus savannarum*; SC, SC), Red-headed Woodpecker (*Melanerpes erythrocephalus*; END, END), Wood Thrush (*Hylocichla mustelina*; SC, THR), American Burying Beetle (*Nicrophorus americanus*; EXP, EXP), Yellow-banded Bumble Bee (*Bombus terricola*; SC, SC); Milksnake (*Lampropeltis triangulum*; NL, SC), Midland Painted Turtle (*Chrysemys picta marginata*; NL, SC), Northern Map Turtle (*Graptemys geographica*; SC, SC), Snapping Turtle (*Chelydra serpentina*; SC, SC), and Black Ash (*Fraxinus nigra*; END, THR under COSEWIC only). It should be noted that American Burying Beetle is presumed extirpated in the province. The findings of this review are presented in Table 1. An assessment of the study area of candidate habitat for these SAR is included in Appendix A.

3.1.2 Ontario Breeding Birds Atlas

A list of birds determined to be present in the 10 km x 10 km square containing the study area (17NJ52) during the 2021-2025 Ontario Breeding Bird Atlas (Cadman et. al. 2007) was compiled. It should be noted that these observations have not been assessed for breeding, and may include non-breeding, wintering and migratory individuals. This list includes 198 species; 18 of which are considered SAR under the ESA and SARA, respectively: Barn Swallow, Bobolink, Chimney Swift, Eastern Meadowlark, Eastern Wood-pewee, Grasshopper Sparrow, Red-headed Woodpecker, Wood Thrush, Bank Swallow (*Riparia riparia*; THR, THR), Canada Warbler (*Wilsonia canadensis*; SC, THR), Common Nighthawk (*Chordeiles minor*; SC, THR), Harris's Sparrow (*Zonotrichia querula*; NL, SC), Least Bittern (*Ixobrychus exilis*; THR, THR), Lesser Yellowlegs (*Tringa flavipes*; THR, NL), Olive-sided Flycatcher (*Contopus*

cooperi; SC, THR), Peregrine Falcon (*Falco peregrinus*; SC, SC), Rusty Blackbird (*Euphagus carolinus*; SC, SC), and Yellow-breasted Chat (*Icteria virens*; END, END). The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat for these SAR is included in *Appendix A*.

3.1.3 Ontario Reptile and Amphibian Atlas

Review of the Ontario Reptile and Amphibian Atlas (Ontario Nature 2019) identified 16 species that are known to occur or have historically occurred within the 10 km x 10 km square containing the study area (17NJ52). This list includes four species which are considered SAR under the ESA and/or SARA respectively: Milksnake, Midland Painted Turtle, Snapping Turtle, and Western Chorus Frog (Great Lakes / St. Lawrence-Canadian Shield Population; *Pseudacris triseriata* pop. 2; NAR, THR). The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat is included in *Appendix A*.

3.1.4 eBird

eBird is an online reporting system for birdwatchers managed by the Cornell Lab of Ornithology. The database was reviewed to see what bird species had been reported in the vicinity of the subject property. It should be noted that eBird observations occur year-round, and may include non-breeding, wintering and migratory individuals. The closest reporting location is Guelph-Ignatius-Old Growth Forest Trails, approximately 580 m east of the subject lands. One-hundred-and-seven species have been observed at this site. This list includes eight SAR listed under the ESA and SARA: Barn Swallow, Canada Warbler, Chimney Swift, Eastern Meadowlark, Eastern Wood-pewee, Golden-winged Warbler, Olive-sided Flycatcher, Wood Thrush, and Golden-winged Warbler (*Vermivora chrysoptera*; SC, THR). The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat for this SAR is included in *Appendix A*.

3.1.5 Ontario Butterfly Atlas

Review of the Ontario Butterfly Atlas online database (Toronto Entomologists' Association, 2019) identified 47 species that are known to occur or have historically occurred within the 10 km x 10 km square containing the study area (17NJ52), including one SAR: Monarch (*Danaus plexippus*; SC, SC). The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat for this SAR is included in *Appendix A*.

3.1.6 Atlas of the Mammals of Ontario

Review of the Atlas of the Mammals of Ontario (Dobbyn 1994) identified 20 species that are known to occur or have historically occurred within the 10 km x 10 km square containing the study area (17NJ52), none of which were SAR. It should be noted that other species of SAR bats could occur anywhere in Ontario. The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat for this SAR is included in *Appendix A*.

3.1.7 iNaturalist

iNaturalist, another self-reporting system that is not limited by taxa, was also consulted. The search was limited to a 1 km radius from the centre of the study area and only research grade reports, which are confirmed independently, were used to compile the list. Two-hundred-and-forty-eight wildlife species and 238 vascular plant, fungi, and protozoan species were identified in the search radius. This list includes five SAR: Bobolink, Monarch, Milksnake, Midland Painted Turtle, and Snapping Turtle. It should be noted that locations of SAR on iNaturalist are obscured, and as a result, these observations may not be within 1 km of the study area. The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat for this SAR is included in *Appendix A*.

3.1.8 Agency Communication

A request for information was sent to the Ministry of Environment, Conservation and Parks (MECP) on March 5, 2024, to inquire whether any Species at Risk may occur in the study area. A response was received directing us to contact the Natural Heritage Information Centre (NHIC) for additional SAR information. A request for information was sent to the NHIC on March 6, 2024, and a response was received on March 8, 2024 identifying the potential presence of Bank Swallow, Canada Warbler, Lesser Yellowlegs, Monarch, Peregrine Falcon, and Northern Bobwhite (*Colinus virginianus*; END, END). The request for information and responses from the MECP and NHIC are given in *Appendix D*.

3.1.9 Background Summary

A total of 28 listed wildlife SAR were found in the background review. Twenty-three species are listed both provincially and federally, four species are only listed federally, and one species is only listed provincially. One species of vascular plant SAR were also identified. The findings of this review are presented in *Table 1*. An assessment of the study area of candidate habitat for Species at Risk is included in *Appendix A*. A list of all wildlife species found in the background review can be found in *Appendix B*.

Table 1. Species at Risk Found in Background Review

SOURCE	COMMON NAME	SCIENTIFIC NAME	COSSARO	SARO	COSEWIC	SARA	S-RANK	G-RANK	N-Rank	AREA SENSITIVE	AREA REQUIRED	PIF SPECIES (BCR 13)
ORAA (2017)	Western Chorus Frog - Great Lakes / St. Lawrence - Canadian Shield Population	<i>Pseudacris triseriata pop. 2</i>	NL	NAR	THR	THR	S4	G5TNR	N4			
OBBA, NHIC email correspondence	Bank Swallow	<i>Riparia riparia</i>	THR	THR	THR	THR	S4B	G5	N5B,N5M			✓
OBBA, NHIC, eBird (2022)	Barn Swallow	<i>Hirundo rustica</i>	SC	SC	THR	THR	S4B	G5	N3N4B,N3N4M			
OBBA, NHIC, iNat (2023)	Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR	THR	THR	S4B	G5	N5B,N4N5M	✓	>10ha	✓
OBBA, eBird (2023), NHIC email correspondence	Canada Warbler	<i>Wilsonia canadensis</i>	SC	SC	SC	THR	S4B	G5	N4B,N3M	✓	>30ha	
OBBA, NHIC, eBird (2021)	Chimney Swift	<i>Chaetura pelagica</i>	THR	THR	THR	THR	S3B	G4G5	N4BN3M			✓
OBBA, eBird (2023)	Common Nighthawk	<i>Chordeiles minor</i>	SC	SC	SC	THR	S4B	G5	N4B,N3M			
OBBA, NHIC	Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR	THR	THR	S4B,S3N	G5	N4B,NUM	✓	>10ha	✓
OBBA, NHIC, eBird (2023)	Eastern Wood-Pewee	<i>Contopus virens</i>	SC	SC	SC	SC	S4B	G5	N5B,N5M			✓
eBird (2021)	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	NL	SC	THR	THR	S3B	G4	N4B,NUM			✓
OBBA, NHIC	Grasshopper Sparrow	<i>Ammodramus saviannarum</i>	SC	SC	SC	SC	S4B	G5	N4N5B,N4N5M	✓	>10ha	✓
OBBA	Harris's Sparrow	<i>Zonotrichia querula</i>			SC	SC	S2B	G5	N4B,NUN,N5M			
OBBA	Least Bittern	<i>Ixobrychus exilis</i>		THR	THR	THR	S4B	G4G5	N4B,N3M	✓		
OBBA, NHIC email correspondence	Lesser Yellowlegs	<i>Tringa flavipes</i>	THR	THR	THR	NL	S3S4B,S5M	G5	N4N5B,N5M			
NHIC email correspondence	Northern Bobwhite	<i>Colinus virginianus</i>	END	END	END	END	S1?B	G4G5	N1B,NNRM			✓
OBBA, eBird (2023)	Olive-sided Flycatcher	<i>Contopus cooperi</i>	SC	SC	SC	THR	S4B	G4	N4B,N3M			
OBBA, NHIC email correspondence	Peregrine Falcon	<i>Falco peregrinus</i>	SC	SC	SC	SC	S4	G4	N3N4B,N2N,N3N4M			✓
OBBA, NHIC	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	END	END	END	END	S3	G5	N4B,N3M			✓

SOURCE	COMMON NAME	SCIENTIFIC NAME	COSSARO	SARO	COSEWIC	SARA	S-RANK	G-RANK	N-Rank	AREA SENSITIVE	AREA REQUIRED	PIF SPECIES (BCR 13)
OBBA	Rusty Blackbird	<i>Euphagus carolinus</i>	SC	SC	SC	SC	S4B,S3N	G4	N4B,NUN,N4M			
OBBA, NHIC, eBird (2023)	Wood Thrush	<i>Hylocichla mustelina</i>	SC	SC	THR	THR	S4B	G4	N4B,NUM			✓
OBBA	Yellow-breasted Chat	<i>Icteria virens</i>	END	END	END	END	S1B	G5	N3N4B,N3N4M			✓
OBA (2022), iNat (2023), NHIC email correspondence	Monarch	<i>Danaus plexippus</i>	SC	SC	END	SC	S2N,S4B	G5	N3B,NNRM			
NHIC	American Burying Beetle	<i>Nicrophorus americanus</i>	EXP	EXP	EXP	EXP	SH	G2G3	NH			
NHIC	Yellow-banded Bumble Bee	<i>Bombus terricola</i>	SC	SC	SC	SC	S3S4	G2G4	N4?			
NHIC, ORAA (2013), iNat (2023)	Milksnake	<i>Lampropeltis triangulum</i>	NAR	NAR	SC	SC	S4	G5T5	N3			
NHIC, ORAA (2019), iNat (2020)	Midland Painted Turtle	<i>Chrysemys picta marginata</i>	NAR	NAR	SC	SC	S4	G5T5	N4			
NHIC	Northern Map Turtle	<i>Graptemys geographica</i>	SC	SC	SC	SC	S3	G5	N3	✓		
NHIC, ORAA (2019), iNat (2023)	Snapping Turtle	<i>Chelydra serpentina</i>	NL	SC	SC	SC	S4	G5T5	N4			
NHIC	Black Ash	<i>Fraxinus nigra</i>	END	END	THR	NL	S4	G5	N4			

3.2 Species at Risk Screening

A thorough review of background documents was conducted to compile a master list of all Species at Risk, and species with conservation designations that may occur in the study area. Based on the background review and site assessment, no candidate habitat for any SAR was identified in the study area. *Appendix A* details the habitat requirements for the species in the SAR candidate habitat review. *Appendix E* includes a list of incidental species identified during the site visit.

3.3 Significant Wildlife Habitat

With guidance from the *Significant Wildlife Habitat Technical Guide* (2000) and the SWH EcoRegion Criterion Schedule 6E (2015), we have determined that there is no candidate or confirmed SWH in the subject lands.

3.4 Bat Maternity Habitat Surveys

Investigations were completed to identify candidate bat maternity habitat trees. No candidate trees were identified. Trees were generally young, small, and in reasonably good health, and many were of unsuitable species (e.g. conifers).

3.5 Pileated Woodpecker Cavity Identification Surveys

Investigations were completed to identify Pileated Woodpecker cavities within the subject lands. One Manitoba Maple with a cavity was identified (see *Appendix F* for photos). The study collected information on all woodpecker activity, targeting multiple types of cavities, a summary of key differences among pileated woodpecker cavity types has been provided in Table 2.

Table 2. Summary of Key Differences Among Pileated Woodpecker Cavity Types

Characteristics	Nesting	Roosting	Feeding
Number of holes	1	>1	>1
Edge Texture	Smooth	Smooth	Rough
Hole Shape	Round or tear drop	Oval	Irregular
Hole Size (cm)	~12 high ~9 wide	7-5-10 wide 10-12.5 high	Variable
Cavity depth (m)	0.75	4.3	0.05 to 0.2
Tree Type	Solid, with heart rot	Hollow	Dead and decaying

A single woodpecker hole was observed on a Manitoba Maple with a DBH of 41 cm on a dead branch. The rest of the tree was in good health, with no evidence of heart rot.

The hole was round or oval with a smooth edge, and was estimated to be roughly 10 cm in length. As the hole was about 15 m off the ground depth could not be investigated, but the hole was dark from the outside. No woodpeckers were observed in the area. The hole is most likely a nesting or roosting hole for either a Northern Flicker or Red-bellied Woodpecker. Given the habitat present in the area this is likely a Northern Flicker hole. As this hole is unlikely to be a Pileated Woodpecker nesting cavity, mitigation will not be required.

4.0 Conclusions

Based on the proposed residential subdivision at 47 Bedford Road, Township of Guelph-Eramosa, ON, a SAR and SWH Assessment was completed as a due diligence exercise to ensure no Species at Risk, their habitat, or SWH may be harmed during the proposed works. Through background review, a site visit and analysis of the provided site information and imagery, it has been determined that the proposed rehabilitation of the structure is unlikely to impact habitat occupied by Species at Risk in Ontario, provided that the recommendations listed in this report are followed. Recommendations to avoid potential impacts to SAR habitat includes:

1. All vegetation should be removed outside of the breeding bird nesting season (April 1-August 31). A nest search between April 1 and May 1 by a qualified ecologist would be possible to facilitate the removal of vegetation within this window, but removal and nest search is not recommended during the peak season of May 1 to July 31 due to the density of the vegetation.
2. If vegetation is removed, it should be reseeded/planted as soon as possible following completion of work with native seeds and/or plants.
3. Prepare and implement an Erosion and Sediment Control (ESC) Plan, per GGH Erosion and Sediment Guidelines, as part of detailed design
4. ESC measures to be kept in place until construction is completed and disturbed soils have been vegetated.
5. That appropriate ESC fencing is installed to delineate the work area to reduce the risk of wildlife wandering into the site.

Please contact the undersigned should you require additional information of the above.

Yours truly,



Heather Dixon, PhD
Aquatic Ecologist

Reviewed by:

A handwritten signature in blue ink, appearing to read "Cheryl-Anne Ross".

Cheryl-Anne Ross, B. Sc.
Ecology Lead & Wildlife Ecologist

References

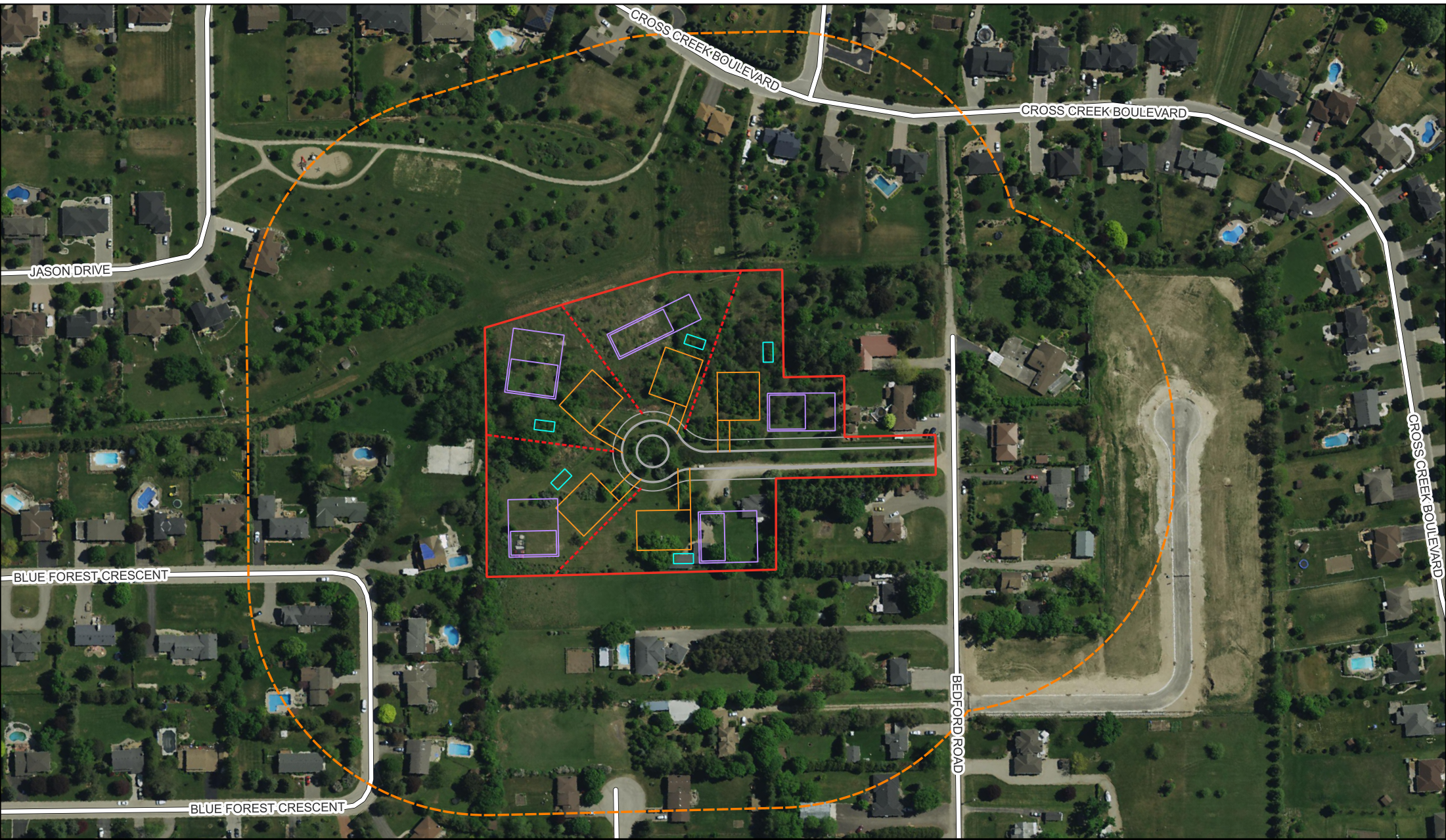
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SPECIES AT RISK SCREENING
Proposed Residential Development

Figure 1



LEGEND

- SUBJECT LANDS
- STUDY AREA
- PROPOSED LOTS
- PROPOSED SEPTIC
- PROPOSED ROAD
- PROPOSED DWELLINGS
- PROPOSED WASTEWATER

Information Sources:
 1. Orthophotography provided by First Base Solutions. Accessed March 2024.
 2. Roads provided by LIO Open Data. Accessed March 2024.

Title:
STUDY AREA

Project:
**47 BEDFORD ROAD
 GUELPH-ERAMOSIA, ON**



Date: MARCH 2024
 Project: AA22-142B
 Scale: 1 : 2500

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Figure No:
1

SPECIES AT RISK SCREENING
Proposed Residential Development

APPENDIX A
Species at Risk Habitat Assessment

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Amphibians	END	END	S2	MNRF Species Occurrence Mapping	Adults are found within upland deciduous or mixed forest habitat with suitable breeding ponds, such as kettle ponds, natural basins and limestone sink holes, which can be permanent or ephemeral, and include appropriate egg attachment sites and lack of predatory fish (COSEWIC 2010).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2010. COSEWIC assessment and status report on the Jefferson Salamander (<i>Ambystoma jeffersonianum</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 38 pp.
Unisexual Ambystoma, Jefferson dependent population	<i>Ambystoma laterale</i> - (2) <i>jeffersonianum</i>	Amphibians	END	END	S2	MNRF Species Occurrence Mapping	Unisexual ambystoma share the same habitat requirements as Jefferson salamander, as they rely on Jefferson salamander for sperm donation to breed (COSEWIC 2016).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2016. COSEWIC assessment and status report on the unisexual Ambystoma, (<i>Ambystoma laterale</i>), Small-mouthed Salamander–dependent population, Jefferson Salamander–dependent population and the Blue-spotted Salamander– dependent population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxii + 61 pp.
Western Chorus Frog – Great Lakes / St. Lawrence - Canadian Shield Population	<i>Pseudacris triseriata</i> pop. 2	Amphibians	NAR	THR	S4	MNRF Species Occurrence Mapping, ORAA (2017)	Generally found in lowland communities, such as swamps, inhabiting lowland shrubs and grasses in the community, near breeding habitat. Breeding occurs in lowland, ephemeral ponds, devoid of predatory fish species (COSEWIC 2008a).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2008. COSEWIC assessment and update status report on the Western Chorus Frog (<i>Pseudacris triseriata</i>) Carolinian population and Great Lakes/St. Lawrence – Canadian Shield population in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.
American Burying Beetle	<i>Nicrophorus americanus</i>	Butterflies, bees, damselflies, dragonflies & insects	EXP	EXP	SH	NHIC	Given that the species had a very broad historical range, which crossed many basic landforms and vegetation zones, it is unlikely that it was ever a consistent habitat specialist throughout its range. There appear to be three requirements for viable habitat: (1) soils sufficiently friable for the excavation of the brood chamber; (2) presence of a sufficient supply of carcasses of the appropriate size; and (3) absence of an overwhelming number of competitors for the carcasses (COSEWIC 2011)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2011. COSEWIC assessment and status report on the American Burying Beetle <i>Nicrophorus americanus</i> in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 35 pp.
Monarch	<i>Danaus plexippus</i>	Butterflies, bees, damselflies, dragonflies & insects	SC	SC	S2N, S4B	MNRF Species Occurrence Mapping, OBA (2022), iNat (2023), NHIC email correspondence	Requires milkweed for larval feeding, other wildflower species are also important for adult feeding when milkweed is not in flower; often found in abandoned farmland, along roadsides, and other open spaces (COSEWIC 2010b)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2010. COSEWIC assessment and status report on the Monarch (<i>Danaus plexippus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 43 pp.
West Virginia White	<i>Pieris virginienis</i>	Butterflies, bees, damselflies, dragonflies & insects	SC	NAR	S3	MNRF Species Occurrence Mapping	Found in rich deciduous and mixed forests and swamps with a poorly vegetated shrub layer. The larvae feed only on the leaves of a few host plants, including the Two-leaved Toothwort (<i>Cardamine diphylla</i>) and cut-leaved toothwort (Burke 2013).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Peter S. Burke. 2013. Management Plan for the West Virginia White (<i>Pieris virginienis</i>) in Ontario. Ontario Management Plan Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. v + 44 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Yellow-banded Bumble Bee	<i>Bombus terricola</i>	Butterflies, bees, damselflies, dragonflies & insects	SC	SC	S3S5	MNRF Species Occurrence Mapping, NHIC	Occur in a diverse range of habitat, including mixed woodlands, farmlands, urban areas, montane meadows, prairie grasslands and boreal habitats. Queens overwinter underground and in decomposing organic material such as rotting lots (COSEWIC 2015)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2015. COSEWIC assessment and status report on the Yellow-banded Bumble Bee (<i>Bombus terricola</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 60 pp. *rank considered out of date
Bank Swallow	<i>Riparia riparia</i>	Birds	THR	THR	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC email correspondence	Breeds in a variety of natural and artificial bank type habitat, such as bluffs, stream and river banks, sand and gravel pits, piles of sand, topsoil and other material. Nests are typically in vertical or near-vertical surfaces (COSEWIC 2013b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2013. COSEWIC assessment and status report on the Bank Swallow (<i>Riparia riparia</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.
Barn Swallow	<i>Hirundo rustica</i>	Birds	SC	THR	S5B	MNRF Species Occurrence Mapping, OBBA, NHIC, eBird (2022)	Occurs in farmland, along lake/river shorelines, in wooded clearings and in urban populated areas. Nesting may occur inside or outside buildings; under bridges and in road culverts (COSEWIC 2011a).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2011. COSEWIC assessment and status report on the Barn Swallow (<i>Hirundo rustica</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.
Barn Owl	<i>Tyto alba</i>	Birds	END	END	S1	MNRF Species Occurrence Mapping	Requires open habitat for foraging, such as old fields and pastures, that provide habitat for rodents, and uses a variety of natural and man-made structures for nesting (COSEWIC 2010e)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2010. COSEWIC assessment and status report on the Barn Owl (<i>Tyto alba</i>) (Eastern population and Western population) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiv + 34 pp.
Bobolink	<i>Dolichonyx oryzivorus</i>	Birds	THR	THR	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC, iNat (2023)	Nest in grassland habitats, including hayfields and meadows with a mixture of grasses and broad-leaved forbs with a high litter cover. Area Sensitive, with increased density in grasslands greater than 10ha (Renfrew et. al. 2015)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Renfrew, R., A.M. Strong, N.G. Perlut, S.G. Martin and T.A. Gavin. 2015. Bobolink (<i>Dolichonyx oryzivorus</i>), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Birds of North America Online: http://bna.birds.cornell.edu/bna/species/176
Canada Warbler	<i>Wilsonia canadensis</i>	Birds	SC	THR	S4B	MNRF Species Occurrence Mapping, OBBA, eBird (2023), NHIC email correspondence	Prefers wet coniferous, deciduous and mixed forest types, with a dense shrub layer (COSEWIC 2008b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2008. COSEWIC assessment and status report on the Canada Warbler (<i>Wilsonia Canadensis</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 35 pp. (www.sararegistry.gc.ca/status/status_e.cfm).
Cerulean Warbler	<i>Setophaga cerulea</i>	Birds	THR	END	S3B	MNRF Species Occurrence Mapping	Occur in older, mature, deciduous forests, preferentially oak-maple composition, with a full, to partially open canopy, and little to no understory cover. Often in bottomland forests, or adjacent to treed swamplands (COSEWIC 2010f).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2010. COSEWIC assessment and status report on the Cerulean Warbler (<i>Dendroica cerulea</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.
Chimney Swift	<i>Chaetura pelagica</i>	Birds	THR	THR	S4B, S4N	MNRF Species Occurrence Mapping, OBBA, NHIC, eBird (2021)	Typically nests in traditional chimneys of older buildings, which also provide roosting sites for many individuals during spring and fall migration (MNRF 2013).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	MNRF, 2013. General Habitat Description for the Chimney Swift (<i>Chaetura pelagica</i>). Ontario Ministry of Natural Resources and Forestry. July 2, 2013.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Common Nighthawk	<i>Chordeiles minor</i>	Birds	SC	THR	S4B	MNRF Species Occurrence Mapping, OBBA, eBird (2023)	Breeds in open habitat, on the ground, in areas with no vegetation, including sand dunes, burned areas, open forests, railways, and gravel rooftops. Eggs are laid directly on the ground (COSEWIC 2007b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2007. COSEWIC assessment and status report on the Common Nighthawk (<i>Chordeiles minor</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 25 pp.
Eastern Meadowlark	<i>Sturnella magna</i>	Birds	THR	THR	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC	Nest in grassland habitats, including hayfields, pasture, savannahs, and other open areas. Preferential habitat includes areas with good grass and thatch (litter) cover (Jaster et. al. 2012).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Jaster, Levi A., William E. Jensen and Wesley E. Lanyon. (2012). Eastern Meadowlark (<i>Sturnella magna</i>), The Birds of North America (P. G. Rodewald, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America: https://birdsna.org/Species-Account/bna/species/easmea
Eastern Whip-poor-will	<i>Caprimulgus vociferus</i>	Birds	THR	THR	S4B	MNRF Species Occurrence Mapping	Often found breeding in semi-open habitats, with little ground cover, and canopy openings allowing light to penetrate the forest floor, often associated with pine or oak, savannahs and barrens, early-successional poplar stands and open conifer plantations (COSEWIC 2009a)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2009. COSEWIC assessment and status report on the Whip-poor-will (<i>Caprimulgus vociferus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 28 pp.
Eastern Wood-Pewee	<i>Contopus virens</i>	Birds	SC	SC	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC, eBird (2023)	Associated with mid-age mixed and deciduous forest stands, often dominated by Maple (Acer), Elm (Ulmus) or Oak (Quercus), and include areas with clear-cuts, openings or forest edges. Also prefers forest stands with little to no understory vegetation (COSEWIC 2012a).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2012. COSEWIC assessment and status report on the Eastern Wood-Pewee (<i>Contopus virens</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Birds	SC	SC	S4B	MNRF Species Occurrence Mapping	Breeding habitat includes open, mature mixed wood forests, where fir species and/or White Spruce are dominant, and Spruce Budworm is abundant (COSEWIC 2016)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2016. COSEWIC assessment and status report on the Evening Grosbeak (<i>Coccothraustes vespertinus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 64 pp.
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Birds	SC	THR	S4B	MNRF Species Occurrence Mapping, eBird (2021)	Nests in early successional shrub habitat, with adjacent forest edges for singing perches, often in hydro cut-overs, recently logged areas and beaver marshes (COSEWIC 2006a).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2006. COSEWIC assessment and status report on the Golden-winged Warbler (<i>Vermivora chrysoptera</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 30 pp.
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Birds	SC	SC	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC	Prefers moderately open grasslands and prairies with patchy bare ground; avoids grasslands with extensive shrub cover (Vickery 1996).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Vickery, Peter D. 1996. Grasshopper Sparrow (<i>Ammodramus savannarum</i>), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/239

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Harris's Sparrow	<i>Zonotrichia querula</i>	Birds	NL	SC	S2B	OBBA	Favours a mosaic of upland and tundra, with scattered lakes. Breeding territories typically include coniferous trees; densities are highest where forest stands are dominated by spruce or tamarack, interspersed with shrubs typically <1 m tall. In winter and during migration, frequents a variety of habitats, with riparian thickets, grasslands, woodland edges, hedgerows, and willow thickets commonly used.	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2017. COSEWIC assessment and status report on the Harris's Sparrow <i>Zonotrichia querula</i> in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 36 pp. (Species at Risk Public Registry website).
Henslow's Sparrow	<i>Ammodramus henslowii</i>	Birds	END	END	SHB	MNRF Species Occurrence Mapping	Breeds in grassland habitat and is area sensitive. Grasslands with tall, dense cover a thick thatch layer, and are greater than 30ha, but preferentially larger than 100ha are preferred (COSEWIC 2011b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2011. COSEWIC assessment and status report on the Henslow's Sparrow (<i>Ammodramus henslowii</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 37 pp.
Least Bittern	<i>Ixobrychus exilis</i>	Birds	THR	THR	S4B	MNRF Species Occurrence Mapping, OBBA	Breeds in large marshes (>5ha) with emergent vegetation, typically cattails, with at least 50% open water, and relatively stable water levels (COSEWIC 2009b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2009. COSEWIC assessment and update status report on the Least Bittern (<i>Ixobrychus exilis</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.
Lesser Yellowlegs	<i>Tringa flavipes</i>	Birds	THR	THR	S3S4B, S5M	OBBA, NHIC email correspondence	Nests on dry ground near peatlands, marshes, ponds, and other wetlands in the boreal forest and taiga. In winter and during migration, the species frequents coastal salt marshes, estuaries and ponds, as well as lakes, other freshwater wetlands, and anthropogenic wetlands such as flooded rice fields and sewage lagoons (COSEWIC 2020).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2020. COSEWIC assessment and status report on the Lesser Yellowlegs (<i>Tringa flavipes</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 64 pp.
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Birds	END	END	S2B	MNRF Species Occurrence Mapping	Nests in open, low, grassy habitat with scattered shrubs. Presence of thorny shrubs, such as hawthorn, or barbwire fencing required for impaling prey. Only two recent areas of breeding in the province (Carden Plain and Napanee Plain) (Environment Canada 2015).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Environment Canada. 2015. Recovery Strategy for the Loggerhead Shrike, <i>migrans</i> subspecies (<i>Lanius ludovicianus migrans</i>), in Canada. Species at Risk Act Recovery Strategy Series. Environment Canada, Ottawa. vii + 35 pp.
Louisiana Waterthrush	<i>Seiurus motacilla</i>	Birds	SC	THR	S3B	MNRF Species Occurrence Mapping	Nests along headwater streams and associated wetlands which occur within large tracts of mature forest especially mixed wood forests with a component of hemlock. Nests are in stream bank niches, under mossy logs, and within the roots of fallen trees (COSEWIC 2006b)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2006. COSEWIC assessment and update status report on the Louisiana Waterthrush (<i>Seiurus motacilla</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 26 pp.
Northern Bobwhite	<i>Colinus virginianus</i>	Birds	END	END	S1	NHIC email correspondence	Requires early successional habitat with a mix of croplands, dense brush cover and grassland in close proximity for feeding, dusting, roosting, escaping predators and nesting. Only known self-sustaining population found on Walpole Island (COEWSIC 2003).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2003. COSEWIC assessment and update status report on the Northern Bobwhite (<i>Colinus virginianus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 20 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Birds	SC	THR	S4B	MNRF Species Occurrence Mapping, OBBA, eBird (2023)	Associated with natural forest openings (usually conifer or mixed), and edges of forests adjacent wetlands or watercourses, will also use open and semi-open forests and clear-cuts. Presence of tall snags and residual live trees required for nesting and foraging (COSEWIC 2007c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2007. COSEWIC assessment and status report on the Olive-sided Flycatcher (<i>Contopus cooperi</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 25 pp.
Peregrine Falcon	<i>Falco peregrinus</i>	Birds	SC	SC	S3B	OBBA, NHIC email correspondence	Nests on cliff-ledges (50-200m preferred) near foraging areas. Also nests on anthropomorphic structures, such as tall building ledges, bridges, quarries, mines and cuts for road beds (COSEWIC, 2007a).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2007. COSEWIC assessment and update status report on the Peregrine Falcon (<i>Falco peregrinus</i>) (<i>pealei</i> subspecies - <i>Falco peregrinus</i> and <i>pealei anatum/tundrius</i> - <i>Falco peregrinus anatum/tundrius</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 45 pp.
Prothonotary Warbler	<i>Protonotaria citrea</i>	Birds	END	END	S1B	MNRF Species Occurrence Mapping	Occupies large, mature and semi-mature, deciduous swamp forest and riparian floodplains. Permanent and semi-permanent pools of open water are characteristics, and nests are typically situated over standing or slow-moving water (COSEWIC 2007)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2007. COSEWIC assessment and update status report on the Prothonotary Warbler (<i>Prothonotaria citrea</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 31 pp.
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Birds	END	THR	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC	Found in a variety of open areas, with a high density of dead or dying trees, particularly forests dominated by oak or beech (COSEWIC 2007d).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2007. COSEWIC assessment and update status report on the Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.
Rusty Blackbird	<i>Euphagus carolinus</i>	Birds	SC	SC	S4B	OBBA	Breeding habitat is characterized by coniferous-dominated forests adjacent to wetlands, such as slow-moving streams, peat bogs, sedge meadows, marshes, swamps and beaver ponds. On migration, the Rusty Blackbird is primarily associated with wooded wetlands (COSSARO 2017).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2017. COSEWIC assessment and status report on the Rusty Blackbird (<i>Euphagus carolinus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 64 pp.
Short-eared Owl	<i>Asio flammeus</i>	Birds	THR	SC	S2N, S4B	MNRF Species Occurrence Mapping	Breeds in open habitats, including grasslands, old pasture marshes, bogs, and sand-sage. Nests are scrapes, located on the ground (COSEWIC 2008c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2008. COSEWIC assessment and update status report on the Short-eared Owl (<i>Asio flammeus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 24 pp.
Wood Thrush	<i>Hylocichla mustelina</i>	Birds	SC	THR	S4B	MNRF Species Occurrence Mapping, OBBA, NHIC, eBird (2023)	Prefers second growth moist deciduous forests, with tall trees, and a dense understory of low saplings and an open forest floor with decaying leaf litter. Often nests in saplings, shrubs or occasionally dead stumps (COSEWIC 2012b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2012. COSEWIC assessment and status report on the Wood Thrush (<i>Hylocichla mustelina</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Yellow-breasted Chat	<i>Icteria virens</i>	Birds	END	END	S1B	MNRF Species Occurrence Mapping	Shrub specialist, nesting in early successional, dense, low-shrub habitat, including old fields, hydro-cutovers and forest edges experiencing regeneration (COSEWIC 2011c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2011. COSEWIC assessment and status report on the Yellow-breasted Chat <i>auricollis</i> subspecies (<i>Icteria virens auricollis</i>) and the Yellow-breasted Chat <i>virens</i> subspecies (<i>Icteria virens virens</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xvi + 51 pp.
Eastern Red Bat	<i>Lasiurus borealis</i>	Mammals	NL	END	S4	MNRF Species Occurrence Mapping	Typically roosts among the foliage of trees and occasionally shrubs. They use both deciduous and coniferous forests of any age class, but in some parts of their range will avoid conifer species when suitable deciduous species are present. Trees used as maternity roosts tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy. They forage in both forested and non-forested habitats, in both open and semi-cluttered habitats, both above and below forest canopies, and in both early and later stage forests (COSEWIC 2023).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat <i>Lasiurus cinereus</i> , Eastern Red Bat <i>Lasiurus borealis</i> and Silver-haired Bat, <i>Lasionycteris noctivagans</i> , in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxi + 100 pp. (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html).
Eastern Small-footed Myotis	<i>Myotis leibii</i>	Mammals	END	NA	S2S3	MNRF Species Occurrence Mapping	Associated with hilly or mountainous terrain, in or near coniferous or deciduous forest habitat. Maternity roosts located in cracks and crevices of talus slopes and rocky outcrops, or, occasionally in bridges, old buildings, hollow trees (or loose bark) and caves and mines during the maternity season. Hibernate singly or in small clusters in mines and caves (NatureServe, 2015).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2013. COSEWIC assessment and status report on the Little Brown Myotis (<i>Myotis lucifugus</i>), Northern Myotis (<i>Myotis septentrionalis</i>) and Tri-colored Bat (<i>Perimyotis subflavus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.
Hoary Bat	<i>Lasiurus cinereus</i>	Mammals	NL	END	S4	MNRF Species Occurrence Mapping	Roosts solitarily in trees, with preferences including maple, oak, ash, elder, hemlock, and redwood trees. Typically roosts among the foliage of trees and occasionally shrubs, and use both deciduous and coniferous forests, of any age class. Trees used as maternity roosts tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy. Forages in the open, and suitable habitats may include wetlands, grasslands and open fields with patchily distributed trees (COSEWIC 2023).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat <i>Lasiurus cinereus</i> , Eastern Red Bat <i>Lasiurus borealis</i> and Silver-haired Bat, <i>Lasionycteris noctivagans</i> , in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxi + 100 pp. (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html).
Little Brown Myotis	<i>Myotis lucifugus</i>	Mammals	END	END	S3	MNRF Species Occurrence Mapping	Hibernate in Caves; maternity colonies located in warm sites, often associated with human habitation; including attics, old buildings, under bridges, rock crevices and cavities in canopy trees in wooded areas (COSEWIC, 2013c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2013. COSEWIC assessment and status report on the Little Brown Myotis (<i>Myotis lucifugus</i>), Northern Myotis (<i>Myotis septentrionalis</i>) and Tri-colored Bat (<i>Perimyotis subflavus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Northern Myotis	<i>Myotis septentrionalis</i>	Mammals	END	END	S3	MNRF Species Occurrence Mapping	Hibernate in Caves; maternity colonies usually located in trees, and are closely associated with specific tree characteristics and density of suitable trees. Characterized by tall, large diameter trees in early stages of decay, located in openings in mature forest canopies (COSEWIC, 2013c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2013. COSEWIC assessment and status report on the Little Brown Myotis (<i>Myotis lucifugus</i>), Northern Myotis (<i>Myotis septentrionalis</i>) and Tri-colored Bat (<i>Perimyotis subflavus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Mammals	NL	END	S4	MNRF Species Occurrence Mapping	Roosting occurs primarily under bark and in the cavities of trees, making them reliant on habitats where large, decaying trees are available. Roosts in a variety of large diameter coniferous and deciduous trees. When taken as a whole, the data indicate that the species does select specific attributes of trees to roost in. However, these attributes are not specific to particular tree species or type (deciduous or coniferous specifically) across the species range. Roost-tree species and type differ depending on the region but tree size, height, roost aspect, and cavity temperature are important characteristics. Deciduous species (especially <i>Populus</i> spp.) often have decay characteristics that make them ideal as roost sites, particularly in older forests where these features are more likely to occur. Heart-rot infections at the site of limb breakages often result in large well-protected inner chambers and large sheets of exfoliating bark are ideal for roosting. In other parts of their range, coniferous species are used. Several studies report the frequent use of old woodpecker cavities (COSEWIC 2023).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat <i>Lasiurus cinereus</i> , Eastern Red Bat <i>Lasiurus borealis</i> and Silver-haired Bat, <i>Lasionycteris noctivagans</i> , in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxi + 100 pp. (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html).
Tri-colored Bat	<i>Perimyotis subflavus</i>	Mammals	END	END	S3?	MNRF Species Occurrence Mapping	Hibernate in caves, abandoned mines, wells, and tunnels. Summer roosts include clumps of dead foliage and lichens, typically found in forested habitat close to water sources. May also use anthropogenic structures such as barns for maternity roosts. Foraging habitat includes forested riparian areas over water in relatively open areas (Environment Canada 2015).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Environment Canada. 2015. Recovery Strategy for Little Brown Myotis (<i>Myotis lucifugus</i>), Northern Myotis (<i>Myotis septentrionalis</i>), and Tri-colored Bat (<i>Perimyotis subflavus</i>) in Canada [Proposed]. Species at Risk Act Recovery Strategy Series. Environment Canada, Ottawa. ix + 110 pp

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Blanding's Turtle	<i>Emydoidea blandingii</i>	Reptiles	THR	THR	S3	MNRF Species Occurrence Mapping	Use a variety of eutrophic wetland habitat types, including lakes, ponds, watercourses, marshes, man-made channels, farm fields, coastal areas and bays. Seasonal overland terrestrial movements up to 2.5 km occur to reach nesting and overwintering areas, generally through wooded coniferous or mixed forest habitat. Nests are usually laid in loose sand or organic soil (COSEWIC 2005b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2005. COSEWIC assessment and update status report on the Blanding's Turtle (<i>Emydoidea blandingii</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. viii + 40 pp.
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	Reptiles	NL	SC	S4	MNRF Species Occurrence Mapping, NHIC, ORAA (2019), iNat (2020)	Occupy slow moving, relatively shallow and well-vegetated wetlands and water bodies with abundant basking sites and organic substrate. Found in association with submergent aquatic plants, which are used for cover and feeding. Semi -tolerant of human-altered landscapes, occasionally found occupying urban ponds and lands subject to anthropogenic disturbance. Suitable nesting habitat includes open, often south-facing, and sloped areas with sandy-loamy and/or gravel substrate usually within 1200 m of aquatic active season habitats. Overwinter in shallow water with deep sediment (COSEWIC 2018).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2018. COSEWIC assessment and status report on the Midland Painted Turtle (<i>Chrysemys picta marginata</i>) and the Eastern Painted Turtle (<i>Chrysemys picta picta</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xvi + 107 pp.
Northern Map Turtle	<i>Graptemys geographica</i>	Reptiles	SC	SC	S3	MNRF Species Occurrence Mapping, NHIC	Highly aquatic species, found in deep, large waterbodies, including Lakes and large rivers, with abundant basking sites. Emerge onto land only during nesting, which occurs in soft sand or soil. Waterbodies with slow currents, soft mud bottoms and abundant aquatic vegetation are preferred (COSEWIC, 2002b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2002. COSEWIC assessment and status report on the Northern Map Turtle (<i>Graptemys geographica</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 34 pp.
Snapping Turtle	<i>Chelydra serpentina</i>	Reptiles	SC	SC	S4	MNRF Species Occurrence Mapping NHIC, ORAA (2019), iNat (2023)	Inhabit slow-moving waters with soft, muck bottom and dense aquatic vegetation. Ponds, sloughs and shallow bays are all often used as summering and overwintering habitat (COSEWIC 2008d).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2008. COSEWIC assessment and status report on the Snapping Turtle (<i>Chelydra serpentina</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.
Spotted Turtle	<i>Clemmys guttata</i>	Reptiles	END	END	S2	MNRF Species Occurrence Mapping	Found in wetlands with high organic content, including bogs, fens, marshes, woodland streams, sedge meadows, and shallow bays. Only one population is known from Wellington County, in Luther Marsh. Preferential to unpolluted shallow water with aquatic vegetation and soft substrates. Presence of Sphagnum moss, sedge tussocks, cattails and water lilies, may be important to Canadian populations (COSEWIC, 2002b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2004. COSEWIC assessment and update status report on the Spotted Turtle (<i>Clemmys guttata</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Wood Turtle	<i>Glyptemys insculpta</i>	Reptiles	END	THR	S2	MNRF Species Occurrence Mapping	Generally found in forested landscapes, associated with clear freshwater streams and associated floodplains. Preferential to streams with year-round current, with sandy or gravelly-sandy bottoms. Streams used are typically meandering with frequent oxbows. Overwintering associated with stable, high concentration dissolved oxygen in pools, under mud or under overhanging banks. Nesting occurs in open areas with high sun exposure, typically within 10 to 50m of aquatic habitat. Home ranges are typically linear, following streams (Environment Canada, 2016).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	Environment Canada. 2016. Recovery Strategy for the Wood Turtle (<i>Glyptemys insculpta</i>) in Canada [Proposed]. Species at Risk Act Recovery Strategy Series. Environment Canada, Ottawa. v + 48 pp.
Butler's Gartersnake	<i>Thamnophis butleri</i>	Reptiles	END	END	S2	MNRF Species Occurrence Mapping	Occupies open areas with dense grass and thatch cover, including tall grass prairie, old fields, abandoned sites in urban areas, drainage swales and seasonally dry marshes. only one population is known from Wellington County, in Luther Marsh. Artificial cover features such as plywood, concrete, shingles, metal sheets etc., increases probability of encounters, but is not essential (COSEWIC, 2010h).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2010. COSEWIC assessment and status report on the Butler's Gartersnake (<i>Thamnophis butleri</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 51 pp.
Eastern Ribbonsnake	<i>Thamnophis sauritus</i>	Reptiles	SC	SC	S4	MNRF Species Occurrence Mapping	A semi-aquatic species that inhabits dense, low- vegetation, edges of ponds, streams, marshes, fens and bogs, with open sunlit areas for basking (COSEWIC 2002c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2002. COSEWIC assessment and status report on the Eastern Ribbonsnake (<i>Thamnophis sauritus</i>). Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 24 pp.
Milksnake	<i>Lampropeltis triangulum</i>	Reptiles	SC	SC	S4	MNRF Species Occurrence Mapping, NHIC, ORAA (2013), iNat (2023)	Habitat generalists often associated with edge habitat, meadows, prairies, pastures, rocky outcrops and human disturbances such as hydro corridors and railway embankments. Habitat is usually close to a water source. Hibernation occurs in a variety of natural and man-made features, including rotting logs, old foundations, basements and burrows (COSEWIC 2014).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2014. COSEWIC assessment and status report on the Eastern Milksnake (<i>Lampropeltis Triangulum</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 61 pp.
Massasauga Rattlesnake	<i>Sistrurus catenatus</i>	Reptiles	SC	THR	S3	MNRF Species Occurrence Mapping	Only historic observations of Masassauga in the north western portion of Wellington County. Found in wet prairies, old fields, peatlands, rock barrens and coniferous forests, with open-areas, and areas of dense shrub cover. Hibernate in damp areas below the frost line (COSEWIC, 2012b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2012. COSEWIC assessment and status report on the Massasauga (<i>Sistrurus catenatus</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 84 pp.
American Ginseng	<i>Panax quinquefolius</i>	Vascular plants	END	END	S2	MNRF Species Occurrence Mapping	Occur in moist, rich, undisturbed, mature Sugar Maple dominated deciduous woodlands. Often, colonies are located at the bottom of south facing slopes (COSEWIC, 2000).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2000. COSEWIC assessment and update status report on the American Ginseng (<i>Panax quinquefolius</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 17 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Black Ash	<i>Fraxinus nigra</i>	Vascular plants	END	THR	S4	NHIC	Predominantly a wetland species of swamps, floodplains and fens. Has an intermediate light requirement and a tendency toward greater abundance in more alkaline sites. Most sites in which it is dominant are flood prone, where its high tolerance of seasonal flooding appears to offer a competitive advantage. Also occurs widely in moist upland forests, but generally at lower densities than in wet areas (COSEWIC, 2018).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2018. COSEWIC assessment and status report on the Black Ash <i>Fraxinus nigra</i> in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp. (http://www.registrelep-sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1).
Blue Ash	<i>Fraxinus quadrangulata</i>	Vascular plants	THR	THR	S2?	MNRF Species Occurrence Mapping	Found in 3 habitat types; floodplains and river valleys where Blue Ash grows in rich soils in association with other tree species; shallow soils on alvar and limestone on the Lake Erie islands; and stabilized beaches at Point Pelee National Park, and Fish Point on Pelee Island (COSEWIC 2014)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2014. COSEWIC assessment and status report on the Blue Ash (<i>Fraxinus quadrangulata</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 58 pp.
Butternut	<i>Juglans cinerea</i>	Vascular plants	END	END	S2?	MNRF Species Occurrence Mapping	Occur in rich moist sites, that are well-drained, often found along stream banks or gravelly sites. Butternut is shade intolerant (COSEWIC, 2003b).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2003. COSEWIC assessment and status report on the butternut (<i>Juglans cinerea</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.
Common Hoptree	<i>Ptelea trifoliata</i>	Vascular plants	THR	SC	S3	MNRF Species Occurrence Mapping	Occurs nearly entirely along or near the Lake Erie shoreline. Often found in areas of natural disturbance where it forms part of the outer edge of shoreline woody vegetation (COSEWIC 2015)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2015. COSEWIC assessment and status report on the Common Hoptree (<i>Ptelea trifoliata</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 33 pp.
Dense Blazing Star	<i>Liatris spicata</i>	Vascular plants	THR	THR	S2	MNRF Species Occurrence Mapping	Occurs in open tallgrass prairies. It can grow in a range of moisture regimes from dry to very moist (COSEWIC 2010)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2010. COSEWIC assessment and status report on the Dense Blazing Star (<i>Liatris spicata</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 23 pp.
Hill's Pondweed	<i>Potamogeton hillii</i>	Vascular plants	SC	SC	S2S3	MNRF Species Occurrence Mapping	Occur in cold clear calcareous streams, ponds, and ditches, which are alkaline in nature (COSEWIC 2005c).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2005c COSEWIC assessment and update status report on the Hill's Pondweed (<i>Potamogeton hillii</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 19 pp.
Lakeside Daisy	<i>Tetraneuris herbacea</i>	Vascular plants	SC	THR	S3	MNRF Species Occurrence Mapping	Commonly found in alvar habitats, but occasionally occurs in prairies and cliffs. Habitat is seasonally wet in spring and fall and moderately drought-like in the summer (COSEWIC 2002)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2002. COSEWIC assessment and status report on the Lakeside Daisy (<i>Hymenoxys herbacea</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 24 pp.

Common name	Scientific name	Group	SARO	COSEWIC	S-rank	Background sources	Habitat requirements	Suitable habitat in study area	Field studies completed/ required	Observed by AA	Reference
Smooth Yellow False Foxglove	<i>Aureolaria flava</i>	Vascular plants	THR	THR	S2?	MNRF Species Occurrence Mapping	Inhabits a variety of dry upland woods including escarpment slopes, oak hummocks, oak woodlands, and oak savannas. Primarily associated with Oak species. (COSEWIC 2018)	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC. 2018. COSEWIC assessment and status report on the Yellow False Foxglove Bundle, Smooth Yellow False Foxglove (<i>Aureolaria flava</i>), Fern-leaved Yellow False Foxglove (<i>Aureolaria pedicularia</i>) and the Downy Yellow False Foxglove (<i>Aureolaria virginica</i>), in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xx + 100 pp.
Tuberous Indian Plantain	<i>Arnoglossum plantagineum</i>	Vascular plants	SC	SC	S2	MNRF Species Occurrence Mapping	Habitat includes open, sunny areas in wet calcareous soils, including wet meadows and shoreline fens (COSEWIC 2002).	No habitat matching criteria identified in study area	Site visit occurred on March 1, 2024.	None observed.	COSEWIC 2002. COSEWIC assessment and update status report on the tuberous Indian-plantain (<i>Arnoglossum plantagineum</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 11 pp.

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SPECIES AT RISK SCREENING
Proposed Residential Development

APPENDIX B
Species Found in Background Review

SOURCE	COMMON NAME	SCIENTIFIC NAME	COSSARO ¹	SARO ²	COSEWIC ³	SARA ⁴	SCHEDULE	S-RANK ⁵	G-RANK ⁶	N-RANK ⁷	AREA SENSITIVE ⁸	AREA REQUIRED ⁸	PIF SPECIES ⁹	GRCA (date unk.) ¹⁰	CITY OF GUELPH (2012) ¹¹	WELLINGTON COUNTY (Dougan & Associates, 2009) ¹²
	INSECTS															
NHIC	American Burying Beetle	<i>Nicrophorus americanus</i>	EXP	EXP	EXP	EXP	Schedule 1	SH	G2G3	NH						
iNat (2023)	Asian Lady Beetle	<i>Harmonia axyridis</i>						SNA	GNR	NNA						
iNat (2022)	Black Firefly	<i>Lucidota atra</i>						S4S5	G5	N5						
iNat (2023)	Common Aerial Yellowjacket	<i>Dolichovespula arenaria</i>						S4	G5	N5						
iNat (2023)	Common Red Soldier Beetle	<i>Rhagonycha fulva</i>						SNA	GNR	NNA						
iNat (2020)	Dogwood Spittle Bug	<i>Clastoptera proteus</i>						S5	G5	N5						
iNat (2021)	Eastern Elderberry Borer	<i>Desmocerus palliatus</i>						S4S5	G5	N5						
iNat (2021)	Emerald Ash Borer	<i>Agrilus planipennis</i>						SNA	GNR	NNA						
iNat (2020)	European Mantis	<i>Mantis religiosa</i>						SNA	GNR	NNA						
iNat (2023)	European Paper Wasp	<i>Polistes dominula</i>						SNA	GNR	NNA						
iNat (2023)	Fourteen-spotted Lady Beetle	<i>Propylea quatuordecimpunctata</i>						SNA	GNR	NNA						
iNat (2023)	Goldenrod Leaf Beetle	<i>Trirhabda canadensis</i>						S4S5	G5	N5						
iNat (2022)	Green Immigrant Leaf Weevil	<i>Polydrusus formosus</i>						SNA	GNR	NNA						
iNat (2020)	Green-striped Grasshopper	<i>Chortophaga viridifasciata</i>						S4	G5	N5						
iNat (2023)	Japanese Beetle	<i>Popillia japonica</i>						SNA	GNR	NNA						
iNat (2020)	Meadow Spittlebug	<i>Philaenus spumarius</i>						SNA	GNR	NNA						
iNat (2021)	Milkweed Leaf Beetle	<i>Labidomera clivicollis</i>						S4S5	G5	N5						
iNat (2021)	Narrow-headed Marsh Fly	<i>Helophilus fasciatus</i>						S5	G5	N5						
iNat (2023)	Pale Green Assassin Bug	<i>Zelus luridus</i>						SNR	GNR	NU						
iNat (2021)	Red Milkweed Beetle	<i>Tetraopes tetrophthalmus</i>						S5	G5	N5						
iNat (2020)	Rough Hermit Beetle	<i>Osmoderma scabra</i>						S4S5	G5	N5						
iNat (2020)	Serrate Dark Fishfly	<i>Nigronia serricornis</i>						SNR	GNR	NNR						
iNat (2023)	Seven-spotted Lady Beetle	<i>Coccinella septempunctata</i>						SNA	GNR	NNA						
iNat (2022)	Six-spotted Tiger Beetle	<i>Cicindela sexguttata</i>						S5	G5	N5						
iNat (2023)	Spotted Lady Beetle	<i>Coleomegilla maculata</i>						S4S5	G5	N5						
iNat (2019)	Striped Cucumber Beetle	<i>Acalymma vittatum</i>						S4S5	G5	N5						
iNat (2021)	Tomentose Burying Beetle	<i>Nicrophorus tomentosus</i>						S4S5	G5	N5						
iNat (2023)	Two-striped Grasshopper	<i>Melanoplus bivittatus</i>						S5	G5	N5						

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iNat (2021)	White-spotted Sawyer Beetle	<i>Monochamus scutellatus</i>						S5	G5	N5						
iNat (2021)	American Harlequin	<i>Xanthogramma flavipes</i>						S4	G5	N4						
iNat (2015)	Ashgray blister beetle	<i>Epicauta fabricii</i>						SU	GNR	NU						
iNat (2023)	Black-footed Click Beetle	<i>Corymbitodes tarsalis</i>						S4S5	G5	N5						
iNat (2020)	Bronze Ground Beetle	<i>Carabus nemoralis</i>						SNA	GNR	NNA						
iNat (2022)	Cambium Curculio	<i>Conotrachelus anaglypticus</i>						SU	GNR	N4N5						
iNat (2023)	Canada Thistle Bud Weevil	<i>Larinus carlinae</i>						SNA	GNR	NNA						
iNat (2022)	Carolina Pine Sawyer	<i>Monochamus carolinensis</i>						S4	GNR	N4						
iNat (2022)	Cocklebur Weevil	<i>Rhodobaenus quinquepunctatus</i>						S4S5	GNR	N4N5						
iNat (2023)	Colorado Potato Beetle	<i>Leptinotarsa decemlineata</i>						S4S5	G5	N5						
iNat (2022)	Four-lined Plant Bug	<i>Poecilocapsus lineatus</i>						S4	GNR	NNR						
iNat (2023)	Green Stink Bug	<i>Chinavia hilaris</i>						S5	GNR	NNR						
iNat (2022)	Hairy-eyed Bee-mimic Fly	<i>Mallota posticata</i>						S4	G5	N4						
iNat (2019)	Large Milkweed Bug	<i>Oncopeltus fasciatus</i>						S4S5	GNR	NNR						
iNat (2023)	Least Stripetail	<i>Isoperla nana</i>						SU	G5	NU						
iNat (2023)	Mexican Bean Beetle	<i>Epilachna varivestis</i>						S4S5	GNR	N4N5						
iNat (2023)	Narrow-banded Pond Fly	<i>Sericomyia militaris</i>						S5	G5	N5						
iNat (2022)	Common Water Strider	<i>Aquarius remigis</i>						S4S5	GNR	NNR						
iNat (2023)	Oystershell Scale	<i>Lepidosaphes ulmi</i>						SU	GNR	NU						
iNat (2023)	Plum Curculio	<i>Conotrachelus nenuphar</i>						SU	G5	N5						
iNat (2023)	Pustulated Carrion Beetle	<i>Nicrophorus pustulatus</i>						S4S5	G5	N5						
iNat (2020)	Roesel's Bush-cricket	<i>Roeseliana roeselii</i>						SNA	GNR	NNA						
iNat (2020)	Short-tailed Aphideater	<i>Eupeodes pomus</i>						S4	G4G5	N4N5						
iNat (2004)	Shortwing Snowfly	<i>Allocaupnia vivipara</i>						S4S5	G5	N4N5						
iNat (2023)	Small Milkweed Bug	<i>Lygaeus kalmii</i>						S4S5	GNR	N4						
iNat (2023)	Twice-stabbed Lady Beetle	<i>Chilocorus stigma</i>						S4S5	G5	N5						
iNat (2019)	Two-striped Planthopper	<i>Acanalonia bivittata</i>						S5?	GNR	NNR						
iNat (2019)	Western Corn Rootworm Beetle	<i>Diabrotica virgifera</i>						S4S5	GNR	N4N5						

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	BEES															
iNat (2023)	Western Honey Bee	<i>Apis mellifera</i>						SNA	GNR	NNA						
iNat (2021)	Two-spotted Bumble Bee	<i>Bombus bimaculatus</i>						S5	G5	N5						
iNat (2021)	Northern Amber Bumble Bee	<i>Bombus borealis</i>						S5	G4G5	N5						
iNat (2023)	Common Eastern Bumble Bee	<i>Bombus impatiens</i>						S5	G5	N5						
iNat (2019)	Red-belted Bumble Bee	<i>Bombus rufocinctus</i>						S5	G5	NNR						
NHIC	Yellow-banded Bumble Bee	<i>Bombus terricola</i>	SC	SC	SC	SC	Schedule 1	S3S4	G2G4	N4?						
iNat (2019)	Ligated Furrow Bee	<i>Halictus ligatus</i>						S5	G5	N5						
iNat (2021)	Pruinose Squash Bee	<i>Peponapis pruinosa</i>						S2S3	G5	N2N3						
	BUTTERFLIES & MOTHS															
OBA (2022)	Least Skipper	<i>Ancyloxypha numitor</i>						S5	G5	N5						
OBA (2020)	Arctic Skipper	<i>Carterocephalus palaemon</i>						S5	G5	N5						
OBA (2020), iNat (2019)	Silver-spotted Skipper	<i>Epargyreus clarus</i>						S4	G5	N5						
OBA (2022)	Wild Indigo Duskywing	<i>Erynnis baptisiae</i>						S4	G5	N4						x
OBA (1982)	Juvenal's Duskywing	<i>Erynnis juvenalis</i>						S5	G5	N5						
OBA (2022)	Dun Skipper	<i>Euphyes vestris</i>						S5	G5	N5						
OBA (2022), iNat (2022)	Hobomok Skipper	<i>Poanes hobomok</i>						S5	G5	N5						
OBA (1980)	Long Dash Skipper	<i>Polites mystic</i>						S5	G5	N5						
OBA (2021), iNat (2021)	European Skipper	<i>Thymelicus lineola</i>						SNA	G5	NNA						
OBA (2021)	Northern Azure	<i>Celastrina lucia</i>						S5	G5	N5						
OBA (2021), iNat (2021)	Summer Azure	<i>Celastrina neglecta</i>						S5	G5	N5						
OBA (2021)	Eastern Tailed Blue	<i>Cupido (Everes) comyntas</i>						S5	G5	N5						
OBA (2021), iNat (2021)	Harvester	<i>Feniseca tarquinius</i>						S4	G4	N5						
OBA (2022), iNat (2023)	Silvery Blue	<i>Glaucopsyche lygdamus</i>						S5	G5	N5						
OBA (2020)	Banded Hairstreak	<i>Satyrium calanus</i>						S4	G5	N4N5						
OBA (2020)	Milbert's Tortoiseshell	<i>Aglais milberti</i>						S5	G5	N5						
OBA (1982)	Meadow Fritillary	<i>Boloria bellona</i>						S5	G5	N5						
OBA (2021), iNat (2020)	Common Wood-Nymph	<i>Cercyonis pegala</i>						S5	G5	N5						
OBA (2022), iNat (2022)	Common Ringlet	<i>Coenonympha tullia</i>						S5	G5	N5						

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OBA (2022), iNat (2023), NHIC email correspondence	Monarch	<i>Danaus plexippus</i>	SC	SC	END	SC	Schedule 1	S2N,S4B	G5	N3B,NNRM						
OBA (2021), iNat (2019)	Baltimore Checkerspot	<i>Euphydryas phaeton</i>						S4	G4	N5						
OBA (2021), iNat (2019)	Northern Pearly-Eye	<i>Enodia anthedon</i>						S5	G5	N5						
OBA (2021), iNat (2021)	Appalachian Brown	<i>Lethe appalachia</i>						S4	G4	N4N5						
OBA (1980)	Eyed Brown	<i>Lethe eurydice</i>						S5	G4	N5						
iNat (2019)	American Snout	<i>Libytheana carinenta</i>						SNA	G5	NNA						
OBA (2022)	Viceroy	<i>Limenitis archippus</i>						S5	G5	N5						
iNat (2023)	White Admiral	<i>Limenitis arthemis arthemis</i>						S5	G5T5	N5						
iNat (2023)	Red-spotted Purple	<i>Limenitis arthemis astyanax</i>						S5	G5T5	N5						
OBA (2022), iNat (2023)	Little Wood-Satyr	<i>Megisto cymela</i>						S5	G5	N5						
OBA (2022), iNat (2023)	Mourning Cloak	<i>Nymphalis antiopa</i>						S5	G5	N5						
OBA (2022)	Compton Tortoiseshell	<i>Nymphalis l-album</i>						S5	G5	N5						
OBA (2022), iNat (2023)	Northern Crescent	<i>Phyciodes cocyta</i>						S5	G5	N5						
OBA (2022), iNat (2021)	Eastern Comma	<i>Polygonia comma</i>						S5	G5	N5						
OBA (2020)	Question Mark	<i>Polygonia interrogationis</i>						S5	G5	N5B,N4N5M						
OBA (2022), iNat (2022)	Great Spangled Fritillary	<i>Speyeria cybele</i>						S5	G5	N5						
OBA (2021), iNat (2020)	Red Admiral	<i>Vanessa atalanta</i>						S5B	G5	N5B,N5M						
OBA (2020)	Painted Lady	<i>Vanessa cardui</i>						S5B	G5	N5B,N5M						
OBA (2017), iNat (2023)	American Lady	<i>Vanessa virginiensis</i>						S5	G5	N5B,N5M						
OBA (2022)	Giant Swallowtail	<i>Papilio cresphontes</i>						S4	G5	N4					x	
OBA (2022)	Eastern Tiger Swallowtail	<i>Papilio glaucus</i>						S5	G5	N4						
OBA (2022), iNat (2023)	Black Swallowtail	<i>Papilio polyxenes</i>						S5	G5	N5						
OBA (1999)	Orange Sulphur	<i>Colias eurytheme</i>						S5	G5	N5B,N5M						
OBA (1982)	Mustard White	<i>Pieris oleracea</i>						S4	G4G5	N5						
OBA (2022)	Cabbage White	<i>Pieris rapae</i>						SNA	G5	NNA						
iNat (2021)	Confused Haploa	<i>Haploa confusa</i>						S4S5	G5	N4N5						
iNat (2023)	Virginia Ctenucha	<i>Ctenucha virginica</i>						S5	G5	N5						
iNat (2013)	White-spotted Prominent	<i>Nadata gibbosa</i>						S5	G5	N5						
iNat (2023)	White-marked Tussock Moth	<i>Orgyia leucostigma</i>						S5	G5	N4N5						

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iNat (2020)	Nessus Sphinx	<i>Amphion floridensis</i>						S5	G5	N5						
iNat (2019)	Spotted Tussock Moth	<i>Lophocampa maculata</i>						S5	G5	N5						
iNat (2022)	Two-lined Wainscot Moth	<i>Leucania commoides</i>						S4?	G5	N5						
iNat (2023)	Cecropia Moth	<i>Hyalophora cecropia</i>						S4S5	G5	N5						
iNat (2020)	Milkweed Tussock Moth	<i>Euchaetes egle</i>						S4	G5	N4						
iNat (2020)	The Asteroid	<i>Cucullia asteroides</i>						S5?	G5	N4N5						
iNat (2022)	Salt Marsh Moth	<i>Estigmene acrea</i>						S4S5	G5	N5						
iNat (2022)	Ipsilon Dart	<i>Agrotis ipsilon</i>						SNA	G5	NUB,NUM						
iNat (2019)	Pandorus Sphinx	<i>Eumorpha pandorus</i>						S5	G5	N5						
iNat (2023)	Hummingbird Clearwing	<i>Hemaris thysbe</i>						S5	G5	N5						
iNat (2023)	Northern Pine Sphinx	<i>Lapara bombycoides</i>						S5	G5	N5						
iNat (2021)	Spongy Moth	<i>Lymantria dispar</i>						SNA	G5	NNA						
iNat (2022)	Forest Tent Caterpillar Moth	<i>Malacosoma disstria</i>						S5	G5	N5						
iNat (2019)	Banded Tussock Moth	<i>Halysidota tessellaris</i>						S5	G5	N5						
iNat (2022)	Euphorbia Sphinx	<i>Hyles euphorbiae</i>						SNA	G5	NNA						
iNat (2023)	Isabella Tiger Moth	<i>Pyrrharctia isabella</i>						S5	G5	N5						
iNat (2022)	Peppered Moth	<i>Biston betularia</i>						S5	G5	N5						
iNat (2022)	Fall Webworm	<i>Hyphantria cunea</i>						S5	G5	N5						
iNat (2023)	Polyphemus Moth	<i>Antheraea polyphemus</i>						S5	G5	N5						
iNat (2020)	Impressed Dagger Moth	<i>Acronicta impressa</i>						S5	G5	N5						
iNat (2022)	Brown-bordered Cucullia	<i>Cucullia convexipennis</i>						S4S5	G5	N5						
iNat (2023)	Eastern Tent Caterpillar Moth	<i>Malacosoma americanum</i>						S5	G5	N5						
iNat (2021)	Eight-spotted Forester	<i>Alypia octomaculata</i>						S5	G5	N5						
iNat (2023)	Grapevine Epimenis	<i>Psychomorpha epimenis</i>						S4	G5	N3N5						
iNat (2022)	Flame-shouldered Dart	<i>Ochropleura implecta</i>						S5?	G5	N5						
iNat (2023)	Ailanthus Webworm Moth	<i>Atteva aurea</i>						S4S5	G5	NNR						
iNat (2019)	Bride Underwing Moth	<i>Catocala neogama</i>						S4S5	G5	N4N5						
iNat (2021)	Giant Leopard Moth	<i>Hypercompe scribonia</i>						S3S4	G5	N3N4						
iNat (2022)	Green Pug	<i>Pasiphila rectangulata</i>						SNA	G5	NNA						
iNat (2019)	Hickory Tussock Moth	<i>Lophocampa caryae</i>						S5	G5	N4N5						

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iNat (2022)	Large Yellow Underwing	<i>Noctua pronuba</i>						SNA	GNR	NNA						
iNat (2022)	Raspberry Pyrausta Moth	<i>Pyrausta signatalis</i>						S4S5	G5	NNR						
iNat (2022)	Spiny Oak-slug Moth	<i>Euclea delphinii</i>						S4S5	G5	NNR						
iNat (2015)	Spotted Grass Moth	<i>Rivula propinqualis</i>						S5	G5	N5						
iNat (2022)	White-spotted Sable	<i>Anania funebris</i>						S5?	GNR	NNR						
iNat (2021)	White-striped Black	<i>Trichodezia albovittata</i>						S5?	G5	N5						
iNat (2022)	Black-letter Darts	<i>Xestia c-nigrum</i>						S5	G5	N5						
iNat (2023)	Bog Lygropia Moth	<i>Lygropia rivulalis</i>						S4S5	GNR	NNR						
iNat (2022)	Dimorphic Snout	<i>Hypena bijugalis</i>						S4	G5	N5						
iNat (2022)	Green Leuconycta Moth	<i>Leuconycta diptheroides</i>						S5	G5	N5						
iNat (2022)	Large Aspen Tortrix	<i>Choristoneura confictana</i>						S5	G5	N5						
iNat (2022)	Large Mossy Glyph	<i>Protodeltote muscosula</i>						S5	G5	N5						
iNat (2022)	Little Virgin Tiger Moth	<i>Apantesis virguncula</i>						S4S5	G5	N5						
iNat (2022)	Three-lined Balsa Moth	<i>Balsa tristrigella</i>						S5	G5	N5						
iNat (2023)	Yellow Slant-line	<i>Tetracis crocallata</i>						S5?	G5	N5						
	DRAGONFLIES & DAMSELFLIES															
iNat (2019)	Stream Bluet	<i>Enallagma exsulans</i>						S5	G5	N5						
iNat (2021)	River Bluet	<i>Enallagma anna</i>						S3	G5	N3						x
iNat (2023)	Eastern Forktail	<i>Ischnura verticalis</i>						S5	G5	N5						
iNat (2021)	Shadow Darner	<i>Aeshna umbrosa</i>						S5	G5	N5						
iNat (2019)	Lance-tipped Darner	<i>Aeshna constricta</i>						S5	G5	N5						
iNat (2020)	Powdered Dancer	<i>Argia moesta</i>						S5	G5	N5						
iNat (2022)	Common Whitetail	<i>Plathemis lydia</i>						S5	G5	N5						
iNat (2023)	Ebony Jewelwing	<i>Calopteryx maculata</i>						S5	G5	N5						
iNat (2022)	River Jewelwing	<i>Calopteryx aequabilis</i>						S5	G5	N5						
	AMPHIBIANS															
ORAA (2019), iNat (2023)	American Toad	<i>Anaxyrus americanus</i>						S5	G5	N5						
ORAA (2019), iNat (2022)	Gray Treefrog	<i>Hyla versicolor</i>						S5	G5	N5						
ORAA (2019)	Spring Peeper	<i>Pseudacris crucifer</i>						S5	G5	N5						

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ORAA (2017)	Western Chorus Frog - Great Lakes / St. Lawrence - Canadian Shield Population	<i>Pseudacris triseriata pop. 2</i>	NL	NAR	THR	THR	Schedule 1	S4	G5TNR	N4					x	
ORAA (2012)	American Bullfrog	<i>Lithobates catesbeianus</i>						S4	G5	N5	✓			x	x	
ORAA (2018), iNat (2022)	Green Frog	<i>Lithobates clamitans</i>						S5	G5	N5						
ORAA (2007)	Pickereel Frog	<i>Lithobates palustris</i>		NAR	NAR			S4	G5	N5				x	x	
ORAA (2017), iNat (2023)	Northern Leopard Frog	<i>Lithobates pipiens</i>		NAR	NAR			S5	G5	N5						
ORAA (2017)	Wood Frog	<i>Lithobates sylvaticus</i>						S5	G5	N5						
ORAA (2015), iNat (2021)	Eastern Red-backed Salamander	<i>Plethodon cinereus</i>						S5	G5	N5						
iNat (2021)	Red-spotted Newt	<i>Notophthalmus viridescens viridescens</i>						S5	G5	N5				x	x	
	SNAKES AND LIZARDS															
NHIC, ORAA (2013), iNat (2023)	Milksnake	<i>Lampropeltis triangulum</i>	NAR	NAR	SC	SC	Schedule 1	S4	G5T5	N3					x	
ORAA (2014), iNat (2019)	DeKay's Brownsnake	<i>Storeria dekayi</i>		NAR	NAR			S5	G5T5	N5				x	x	
ORAA (2017), iNat (2019)	Red-bellied Snake	<i>Storeria occipitomaculata occipitomaculata</i>						S5	G5	N5				x	x	
ORAA (2018), iNat (2021)	Eastern Gartersnake	<i>Thamnophis sirtalis sirtalis</i>						S5	G5T5	N5						
	TURTLES															
NHIC, ORAA (2019), iNat (2023)	Snapping Turtle	<i>Chelydra serpentina</i>	NL	SC	SC	SC	Schedule 1	S4	G5T5	N4						
NHIC, ORAA (2019), iNat (2020)	Midland Painted Turtle	<i>Chrysemys picta marginata</i>	NAR	NAR	SC	SC	Schedule 1	S4	G5T5	N4						
NHIC	Northern Map Turtle	<i>Graptemys geographica</i>	SC	SC	SC	SC	Schedule 1	S3	G5	N3	✓				x	
	BIRDS															
OBBA, eBird (2024)	Canada Goose	<i>Branta canadensis</i>						S5	G5	N5B,N5N,N5M			CP			
OBBA	Mute Swan	<i>Cygnus olor</i>						SNA	G5	NNA						
OBBA	Trumpeter Swan	<i>Cygnus buccinator</i>		NAR	NAR			S4	G4	N5B,N3N,N5M				x	x	
OBBA, eBird (2022)	Wood Duck	<i>Aix sponsa</i>						S5B, S3N	G5	N5B,N4N5N,N5M						
OBBA	Blue-winged Teal	<i>Anas discors</i>						S3B,S4M	G5	N5B,N5M			CP		x	
OBBA	Northern Shoveler	<i>Anas clypeata</i>						S4B,S4N,S5M	G5	N5B,N5N,N5M				x	x	
OBBA	Gadwall	<i>Anas strepera</i>						S4B,S4N,S5M	G5	N5B,N5N,N5M			CP	x	x	
OBBA, eBird (2024), iNat (2022)	Mallard	<i>Anas platyrhynchos</i>						S5	G5	N5B,N5N,N5M						
OBBA, eBird (2024), iNat (2021)	American Black Duck	<i>Anas rubripes</i>						S4	G5	N5B,N5N,N5M			CP		x	

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OBBA	Northern Pintail	<i>Anas acuta</i>						S5B,S4N	G5	N5B,N5N,N5M	✓			CP	x	x
OBBA	Green-winged Teal	<i>Anas crecca</i>						S4B,S4N,S5M	G5	N5B,N5N,N5M					x	x
OBBA	Lesser Scaup	<i>Aythya affinis</i>						S4B,S4N,S5M	G5	N5B,N5N,N5M				CP	x	x
OBBA, eBird (2022)	Bufflehead	<i>Bucephala albeola</i>						S5	G5	N5B,N5N,N5M						
iNat (2021)	Common Goldeneye	<i>Bucephala clangula</i>						S5	G5	N5B,N5N,N5M	✓					
OBBA, eBird (2022), iNat (2021)	Hooded Merganser	<i>Lophodytes cucullatus</i>						S5	G5	N5B,N5N,N5M				CP		x
OBBA, eBird (2024), iNat (2021)	Common Merganser	<i>Mergus merganser</i>						S5	G5	N5B,N5N,N5M	✓				x	x
NHIC email correspondence	Northern Bobwhite	<i>Colinus virginianus</i>	NL	END	END	END	Schedule1	S1?B	G4G5	N1B,NNRM			✓	CP		x
OBBA, eBird (2023)	Wild Turkey	<i>Meleagris gallopavo</i>						S5	G5	N5						
OBBA, eBird (2023)	Ruffed Grouse	<i>Bonasa umbellus</i>						S5	G5	N5				CP		
OBBA	Pied-billed Grebe	<i>Podilymbus podiceps</i>						S4B,S2N	G5	N5B,N4N5N,N5M				CP		x
OBBA	Rock Pigeon	<i>Columba livia</i>						SNA	G5	NNA						
OBBA, eBird (2024)	Mourning Dove	<i>Zenaidura macroura</i>						S5	G5	N5B,N5N,N5M						
OBBA, eBird (2021)	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>						S4S5B	G5	N5B,N5M			✓	CP	x	x
OBBA, eBird (2023)	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>						S4B	G5	N4B,NUM					x	x
OBBA, eBird (2023)	Common Nighthawk	<i>Chordeiles minor</i>	SC	SC	SC	THR	Schedule1	S4B	G5	N4B,N3M				CP		x
OBBA, NHIC, eBird (2021)	Chimney Swift	<i>Chaetura pelagica</i>	THR	THR	THR	THR	Schedule1	S3B	G4G5	N4BN3M			✓			x
OBBA, eBird (2023), iNat (2023)	Ruby-throated Hummingbird	<i>Archilochus colubris</i>						S5B	G5	N5B,N5M				CP		
OBBA	Virginia Rail	<i>Rallus limicola</i>						S4S5B	G5	N5B,NUM,N5M				CP		
OBBA	Sora	<i>Porzana carolina</i>						S5B	G5	N5B,N5M				CP		x
OBBA	Common Gallinule	<i>Gallinula chloropus</i>						S3B	G5	N4N5B,N4N5M				CP	x	x
OBBA, iNat (2019)	Sandhill Crane	<i>Grus canadensis</i>						S5B,S3N	G5	N5B,N1N,N5M	✓	>40ha			x	x
OBBA	Killdeer	<i>Charadrius vociferus</i>						S4B	G5	N5B,N4N5N,N5M						
OBBA	Dunlin	<i>Calidris alpina</i>						S4B,S5M	G5	N4N5M,N4N,N5M						
OBBA	Semipalmated Sandpiper	<i>Calidris pusilla</i>						S2B,S4M	G5	N3N5B,NUN,N4N5M						
OBBA, eBird (2021)	American Woodcock	<i>Scolopax minor</i>						S4B	G5	N5B,N5M				CP		
OBBA	Wilson's Snipe	<i>Gallinago delicata</i>						S5B	G5	N5B,N5M				CP		
OBBA, iNat (2021)	Spotted Sandpiper	<i>Actitis macularius</i>						S5B	G5	N5B,N3N,N5M				CP		
OBBA, iNat (2021)	Solitary Sandpiper	<i>Tringa solitaria</i>						S4B,S5M	G5	N5B,N5M						
OBBA, NHIC email correspondence	Lesser Yellowlegs	<i>Tringa flavipes</i>	THR	THR	THR	NL		S3S4B,S5M	G5	N4N5B,N5M						

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OBBA	Greater Yellowlegs	<i>Tringa melanoleuca</i>						S4B,S5M	G5	N5B,N4N,N5M						
OBBA, eBird (2023)	Ring-billed Gull	<i>Larus delawarensis</i>						S5	G5	N5B,N5N,N5M					x	x
OBBA, eBird (2023), iNat (2021)	Herring Gull	<i>Larus argentatus</i>						S4B,S5N	G5	N5B,N5N,N5M					x	x
OBBA	Common Loon	<i>Gavia immer</i>		NAR	NAR			S5	G5	N5B,N5N,N5M	✓		CP		x	x
OBBA	Double-crested Cormorant	<i>Phalacrocorax auritus</i>		NAR	NAR			S5B,S4N	G5	N5M,N3N4N,N5M					x	x
OBBA	American Bittern	<i>Botaurus lentiginosus</i>						S5B	G5	N5B,N3N,N5M	✓		CP		x	x
OBBA	Least Bittern	<i>Ixobrychus exilis</i>		THR	THR	THR	Schedule1	S4B	G4G5	N4B,N3M	✓		CP			x
OBBA, eBird (2023), iNat (2023)	Great Blue Heron	<i>Ardea herodias</i>						S4	G5	N5B,N3N,N5M					x	x
iNat (2022)	Great Egret	<i>Ardea alba</i>						S2B,S3M	G5	N3B,N3M					x	x
OBBA	Green Heron	<i>Butorides virescens</i>						S4B	G5	N4N5B,N3N4N,N4N5M			CP		x	x
OBBA, eBird (2023)	Turkey Vulture	<i>Cathartes aura</i>						S5B, S3N	G5	N5B,N5M			CP			x
OBBA, eBird (2022)	Osprey	<i>Pandion haliaetus</i>						S5B	G5	N5B,N5N,N5M			CP			x
OBBA, iNat (2022)	Northern Harrier	<i>Circus cyaneus</i>		NAR	NAR			S5B,S4N	G5	N5B,N4N	✓	>30ha	✓	CP	x	x
OBBA, eBird (2023), iNat (2020)	Sharp-shinned Hawk	<i>Accipiter striatus</i>		NAR				S5	G5	N5B,N5N,N5M	✓	>30ha	CP		x	x
OBBA, eBird (2023)	Cooper's Hawk	<i>Accipiter cooperii</i>		NAR	NAR			S4	G5	N5B,N5N,N4N5M	✓	>10ha	CP		x	x
OBBA, NHIC, eBird (2023)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	NAR	NAR	NAR	NAR		S4	G5	N5B,N5N,N5M	✓		✓			x
OBBA, eBird (2022)	Broad-winged Hawk	<i>Buteo platypterus</i>						S5B	G5	N5B,N5M	✓	>100ha	CP		x	x
OBBA, eBird (2022)	Red-tailed Hawk	<i>Buteo jamaicensis</i>		NAR	NAR			S5	G5	N5B,N5N,N5M						
OBBA, eBird (2021)	Eastern Screech-Owl	<i>Megascops asio</i>		NAR	NAR			S4	G5	N4N5						
OBBA, eBird (2021)	Great Horned Owl	<i>Bubo virginianus</i>						S4	G5	N5						
OBBA, eBird (2024), iNat (2022)	Belted Kingfisher	<i>Megaceryle alcyon</i>						S5B,S4N	G5	N5B,N4N5N,N5M			✓		x	x
OBBA, NHIC	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	END	END	END	END	Schedule1	S3	G5	N4B,N3M			✓			x
OBBA, eBird (2023)	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>						S5	G5	N4B,N4N,N3M			CP		x	x
OBBA, iNat (2022)	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>						S5B,S3N	G5	N5B,N5M	✓	2-5ha	CP		x	x
OBBA, eBird (2024)	Downy Woodpecker	<i>Picoides pubescens</i>						S5	G5	N5						
OBBA, eBird (2022)	Hairy Woodpecker	<i>Picoides villosus</i>						S5	G5	N5B,N5N,NUM	✓	4-8ha			x	x
OBBA, eBird (2023)	Northern Flicker	<i>Colaptes auratus</i>						S5	G5	N5B,N5N,N5M			✓		x	x
OBBA	Pileated Woodpecker	<i>Dryocopus pileatus</i>						S5	G5	N5	✓	>40ha	CP		x	x
OBBA	American Kestrel	<i>Falco sparverius</i>						S4	G5	N5B,N1N,N5M			✓	CP	x	x
OBBA, eBird (2023)	Merlin	<i>Falco columbarius</i>		NAR	NAR			S5	G5	N5B,N5N,N5M					x	x

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OBBA, NHIC email correspondence	Peregrine Falcon	<i>Falco peregrinus</i>	SC	SC	SC	SC	Schedule1	S4	G4	N3N4B,N2N,N3N4M			✓			
OBBA, eBird (2023)	Great Crested Flycatcher	<i>Myiarchus crinitus</i>						S5B	G5	N5B,N5M						
OBBA, eBird (2023), iNat (2020)	Eastern Kingbird	<i>Tyrannus tyrannus</i>						S4B	G5	N5B,N5M			✓	CP	x	x
OBBA, eBird (2023)	Olive-sided Flycatcher	<i>Contopus cooperi</i>	SC	SC	SC	THR	Schedule1	S4B	G4	N4B,N3M				CP		x
OBBA, NHIC, eBird (2023)	Eastern Wood-Pewee	<i>Contopus virens</i>	SC	SC	SC	SC	No Schedule	S4B	G5	N5B,N5M			✓		x	x
OBBA	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>						S5B	G5	N5B,N5M					x	
OBBA, eBird (2023)	Alder Flycatcher	<i>Empidonax alnorum</i>						S5B	G5	N5B,N5M				CP		
OBBA	Willow Flycatcher	<i>Empidonax traillii</i>						S4B	G5	N5B,N5M			✓		x	x
OBBA, eBird (2021)	Least Flycatcher	<i>Empidonax minimus</i>						S5B	G5	N5B,N5M	✓	>100ha		CP	x	x
OBBA, eBird (2023), iNat (2023)	Eastern Phoebe	<i>Sayornis phoebe</i>						S5B	G5	N5B,N5M				CP		
OBBA	Yellow-throated Vireo	<i>Vireo flavifrons</i>						S4B	G5	N4N5B,N4N5M	✓	>30ha			x	x
OBBA, eBird (2021)	Blue-headed Vireo	<i>Vireo solitarius</i>						S5B	G5	N5B,N5M	✓	>100ha		CP	x	x
OBBA	Philadelphia Vireo	<i>Vireo philadelphicus</i>						S5B	G5	N5B,N5M						
OBBA	Warbling Vireo	<i>Vireo gilvus</i>						S5B	G5	N5B,N5M						
OBBA, eBird (2023)	Red-eyed Vireo	<i>Vireo olivaceus</i>						S5B	G5	N5B,N5N,N5M						
OBBA, eBird (2024), iNat (2023)	Blue Jay	<i>Cyanocitta cristata</i>						S5	G5	N5B,N5N,NNRM						
OBBA, eBird (2024), iNat (2022)	American Crow	<i>Corvus brachyrhynchos</i>						S5	G5	N5B,N5N,N5M						
OBBA	Fish Crow	<i>Corvus ossifragus</i>						S1B,S3N	G5	N1B,N3N						
OBBA, eBird (2023)	Common Raven	<i>Corvus corax</i>						S5	G5	N5					x	x
OBBA, eBird (2024), iNat (2021)	Black-capped Chickadee	<i>Poecile atricapillus</i>						S5	G5	N5				CP		
OBBA	Horned Lark	<i>Eremophila alpestris</i>						S4	G5	N5B,N5N,N5M				CP		
OBBA, NHIC email correspondence	Bank Swallow	<i>Riparia riparia</i>	THR	THR	THR	THR	No Schedule	S4B	G5	N5B,N5M			✓	CP	x	x
OBBA, eBird (2023)	Tree Swallow	<i>Tachycineta bicolor</i>						S4S5B	G5	N5B,N5M						
OBBA, eBird (2022)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>						S4B	G5	N5B,N5M				CP		
OBBA	Purple Martin	<i>Progne subis</i>						S3B	G5	N5B,N5M				CP		x
OBBA, NHIC, eBird (2022)	Barn Swallow	<i>Hirundo rustica</i>	SC	SC	THR	THR	No Schedule	S4B	G5	N3N4B,N3N4M				CP		
OBBA	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>						S4S5B	G5	N5B,N5M				CP	x	x
OBBA, eBird (2024), iNat (2021)	Golden-crowned Kinglet	<i>Regulus satrapa</i>						S5	G5	N5B,N5N,N5M				CP		x
OBBA, eBird (2022)	Ruby-crowned Kinglet	<i>Corthylio calendula</i>						S5B,S3N	G5	N5B,N5N,N5M				CP	x	x
OBBA, eBird (2023)	Cedar Waxwing	<i>Bombycilla cedrorum</i>						S5	G5	N5B,N5N,N5M						

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OBBA, eBird (2024)	Red-breasted Nuthatch	<i>Sitta canadensis</i>					S5	G5	N5B,N5N,N5M		✓	>10ha		CP	x	x
OBBA, eBird (2024)	White-breasted Nuthatch	<i>Sitta carolinensis</i>					S5	G5	N5		✓	>10ha				
OBBA, eBird (2024)	Brown Creeper	<i>Certhia americana</i>					S5	G5	N5B,N5N,N5M		✓	>30ha		CP	x	x
OBBA	Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>					S4B	G5	N4B,N4M		✓	>30ha		CP	x	x
OBBA, eBird (2023)	House Wren	<i>Troglodytes aedon</i>					S5B	G5	N5B,N5M							
OBBA, eBird (2023)	Winter Wren	<i>Troglodytes troglodytes</i>					S5B,S4N	G5	N5B,N5M		✓	>30ha			x	x
OBBA	Marsh Wren	<i>Cistothorus palustris</i>					S4B,S3N	G5	N5BN5N,N5M					CP		x
OBBA	Carolina Wren	<i>Thryothorus ludovicianus</i>					S4	G5	N4					CP	x	x
OBBA, eBird (2021)	Gray Catbird	<i>Dumetella carolinensis</i>					S5B,S3N	G5	N5B,N5M					CP		
OBBA, iNat (2022)	Brown Thrasher	<i>Toxostoma rufum</i>					S4B	G5	N5B,NUN,N5M				✓	CP	x	x
OBBA, eBird (2023)	European Starling	<i>Sturnus vulgaris</i>					SNA	G5	NNA							
OBBA, eBird (2022), iNat (2023)	Eastern Bluebird	<i>Sialia sialis</i>		NAR	NAR		S5B,S4N	G5	N5B,N5M					CP		
OBBA, eBird (2021)	Veery	<i>Catharus fuscescens</i>					S5B	G5	N5B,N5M		✓	>10ha		CP	x	x
OBBA, eBird (2023)	Swainson's Thrush	<i>Catharus ustulatus</i>					S5B	G5	N5B,N5M						x	x
OBBA, eBird (2022)	Hermit Thrush	<i>Catharus guttatus</i>					S5B,S4N	G5	N5B,NUN,N5M		✓	>100ha		CP	x	x
OBBA, NHIC, eBird (2023)	Wood Thrush	<i>Hylocichla mustelina</i>	SC	SC	THR	THR	No Schedule	S4B	G4	N4B,NUM			✓		x	x
OBBA, eBird (2024), iNat (2019)	American Robin	<i>Turdus migratorius</i>					S5	G5	N5B,N4N5N,N5M							
OBBA, eBird (2021)	House Sparrow	<i>Passer domesticus</i>					SNA	G5	NNA							
OBBA, eBird (2023)	American Pipit	<i>Anthus rubescens</i>					S4B	G5	N5B,N4N,N3M							
OBBA, eBird (2024)	House Finch	<i>Carpodacus mexicanus</i>					SNA	G5	N5							
OBBA, eBird (2024)	Purple Finch	<i>Carpodacus purpureus</i>					S5	G5	N5B,N5N,N5M					CP		
OBBA, eBird (2021)	Common Redpoll	<i>Carduelis flammea</i>					S5	G5	N5B,N5N,N5M							
OBBA, eBird (2024), iNat (Pine Siskin	<i>Carduelis pinus</i>					S5	G5	N5B,N5N,N5M						x	
OBBA, eBird (2024)	American Goldfinch	<i>Carduelis tristis</i>					S5	G5	N5B,N5N,N5M					CP		
OBBA	Snow Bunting	<i>Plectrophenax nivalis</i>					S4N	G5	N5B,N5N,N5M							
OBBA, NHIC	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	SC	SC	SC	SC	No Schedule	S4B	G5	N4N5B,N4N5M	✓	>10ha	✓	CP	x	x
OBBA, eBird (2023)	Chipping Sparrow	<i>Spizella passerina</i>					S5B,S3N	G5	N5B,N5M							
OBBA, eBird (2023)	Clay-colored Sparrow	<i>Spizella pallida</i>					S4B	G5	N5B,N5M					CP		x
OBBA, eBird (2023)	Field Sparrow	<i>Spizella pusilla</i>					S4B,S3N	G5	N4B,NUM				✓	CP	x	x
OBBA, eBird (2024)	American Tree Sparrow	<i>Spizella arborea</i>					S5	G5	N5B,N5N,N5M							

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OBBA, eBird (2024)	Dark-eyed Junco	<i>Junco hyemalis</i>					S5	G5	N5B,N5N,N5M				CP	x	x	
OBBA, eBird (2021)	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>					S5B,S3N	G5	N5B,N5N,N5M							
OBBA, eBird (2021)	White-throated Sparrow	<i>Zonotrichia albicollis</i>					S5	G5	N5B,N5N,N5M				CP			
OBBA	Vesper Sparrow	<i>Pooecetes gramineus</i>					S4B	G5	N5B,N5M			✓	CP	x	x	
OBBA, eBird (2021)	Savannah Sparrow	<i>Passerculus sandwichensis</i>					S5B,S3N	G5	N5B,N4N,N5M	✓	>50ha	✓	CP	x	x	
OBBA, eBird (2024), iNat (2022)	Song Sparrow	<i>Melospiza melodia</i>					S5	G5	N5B,N5N,N5M							
OBBA, eBird (2024)	Swamp Sparrow	<i>Melospiza georgiana</i>					S5B,S4N	G5	N5B,NUN,N5M				CP			
OBBA	Eastern Towhee	<i>Pipilo erythrophthalmus</i>					S4B,S3N	G5	N4N5B,N4M			✓	CP	x	x	
OBBA	Yellow-breasted Chat	<i>Icteria virens</i>	END	END	END	END	Schedule1	S1B	G5	N3N4B,N3N4M			✓	CP	x	x
OBBA, NHIC, iNat (2023)	Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR	THR	THR	No Schedule	S4B	G5	N5B,N4N5M	✓	>10ha	✓	CP		x
OBBA, NHIC	Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR	THR	THR	No Schedule	S4B,S3N	G5	N4B,NUM	✓	>10ha	✓	CP		x
OBBA	Orchard Oriole	<i>Icterus spurius</i>					S4B	G5	N5B,N5M				CP	x	x	
OBBA, eBird (2023)	Baltimore Oriole	<i>Icterus galbula</i>					S4B	G5	N5B,N5M			✓		x	x	
OBBA, eBird (2024), iNat (2020)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>					S5	G5	N5B,N5N,N5M							
OBBA, eBird (2023)	Brown-headed Cowbird	<i>Molothrus ater</i>					S5	G5	N5B,NUN,N5M							
OBBA	Rusty Blackbird	<i>Euphagus carolinus</i>	SC	SC	SC	SC	Schedule1	S4B,S3N	G4	N4B,NUN,N4M						
OBBA, eBird (2023)	Common Grackle	<i>Quiscalus quiscula</i>					S5	G5	N5B,NUN,N5M							
OBBA, eBird (2021)	Ovenbird	<i>Seiurus aurocapilla</i>					S5B	G5	N5B,N5M	✓	>70ha		CP	x	x	
OBBA	Northern Waterthrush	<i>Seiurus noveboracensis</i>					S5B	G5	N5B,N5M							
eBird (2021)	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	NL	SC	THR	THR	Schedule1	S3B	G4	N4B,NUM			✓	CP		x
OBBA, eBird (2023)	Blue-winged Warbler	<i>Vermivora pinus</i>					S4B	G5	N5B,N5M				✓	CP	x	x
OBBA, eBird (2021)	Black-and-white Warbler	<i>Mniotilta varia</i>					S5B	G5	N5B,N5M	✓	>100ha		CP	x	x	
OBBA	Tennessee Warbler	<i>Vermivora peregrina</i>					S5B	G5	N5B,N5M					x	x	
OBBA	Orange-crowned Warbler	<i>Vermivora celata</i>					S5B	G5	N5B,N3N,N5M							
OBBA, eBird (2022)	Nashville Warbler	<i>Vermivora ruficapilla</i>					S5B	G5	N5B,N5M				CP			
OBBA, eBird (2023)	Mourning Warbler	<i>Oporornis philadelphia</i>					S5B	G5	N5B,N5M				CP			
OBBA, eBird (2023), iNat (2023)	Common Yellowthroat	<i>Geothlypis trichas</i>					S5B,S3N	G5	N5B,N5M							
OBBA, eBird (2021)	American Redstart	<i>Setophaga ruticilla</i>					S5B	G5	N5B,N5M	✓	>100ha		CP	x	x	
OBBA, eBird (2023)	Cape May Warbler	<i>Dendroica tigrina</i>					S5B	G5	N5B,N5M							
OBBA	Northern Parula	<i>Parula americana</i>					S5B	G5	N5B,N5M	✓	>100ha			x	x	

SOURCE	COMMON NAME	SCIENTIFIC NAME	COSSARO ¹	SARO ²	COSEWIC ³	SARA ⁴	SCHEDULE	S-RANK ⁵	G-RANK ⁶	N-RANK ⁷	AREA SENSITIVE ⁸	AREA REQUIRED ⁸	PIF SPECIES ⁹	GRCA (date unk.) ¹⁰	CITY OF GUELPH (2012) ¹¹	WELLINGTON COUNTY (Dougan & Associates, 2009) ¹²
OBBA, eBird (2023)	Magnolia Warbler	<i>Dendroica magnolia</i>						S5B	G5	N5B,N5M	✓	>30ha	CP	x	x	
OBBA	Bay-breasted Warbler	<i>Dendroica castanea</i>						S5B	G5	N5B,N5M				x	x	
OBBA	Blackburnian Warbler	<i>Dendroica fusca</i>						S5B	G5	N5B,N5M	✓	>50ha	CP	x	x	
OBBA, eBird (2021)	Yellow Warbler	<i>Dendroica petechia</i>						S5B	G5	N5B,N5M						
OBBA, eBird (2020)	Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>						S5B	G5	N5B,N5M			CP			
OBBA	Blackpoll Warbler	<i>Dendroica striata</i>						S5B	G5	N5B,N5M						
OBBA, eBird (2021)	Black-throated Blue Warbler	<i>Dendroica caerulescens</i>						S5B	G5	N5B,N5M	✓	>100ha	CP	x	x	
OBBA	Western Palm Warbler	<i>Dendroica palmarum palmarum</i>						S5B	G5T5	N5B						
OBBA, eBird (2023)	Pine Warbler	<i>Dendroica pinus</i>						S5B,S3N	G5	N5B,N5M	✓	15-30ha	CP	x	x	
OBBA, eBird (2023)	Yellow-rumped Warbler	<i>Dendroica coronata</i>						S5B,S4N	G5	N5B,N4N,N5M			CP			
OBBA, eBird (2021)	Black-throated Green Warbler	<i>Dendroica virens</i>						S5B	G5	N5B,N5M	✓	>30ha		x	x	
OBBA, eBird (2023), NHIC email correspondence	Canada Warbler	<i>Wilsonia canadensis</i>	SC	SC	SC	THR	Schedule1	S4B	G5	N4B,N3M	✓	>30ha			x	
OBBA, eBird (2021)	Wilson's Warbler	<i>Wilsonia pusilla</i>						S5B	G5	N5B,N5M						
OBBA	Scarlet Tanager	<i>Piranga olivacea</i>						S5B	G5	N5B,N4N5M	✓	>20ha	CP	x	x	
OBBA, eBird (2024), iNat (2023)	Northern Cardinal	<i>Cardinalis cardinalis</i>						S5	G5	N5						
OBBA, eBird (2021)	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>						S5B	G5	N5B,N5M			✓	x	x	
OBBA, eBird (2023)	Indigo Bunting	<i>Passerina cyanea</i>						S5B	G5	N5B,N5M						
OBBA	Northern Shrike	<i>Lanius borealis</i>						S4B,S5N	G5	N5B,N5N						
OBBA	Snow Goose	<i>Anser caerulescens</i>						S5B	G5	N5B,N4N						
iNat (2013)	Greater White-fronted Goose	<i>Anser albifrons</i>						S3M	G5	N5B						
OBBA	Mountain Bluebird	<i>Sialia currucoides</i>						SNA	G5	N5B						
OBBA	Harris's Sparrow	<i>Zonotrichia querula</i>			SC	SC		S2B	G5	N4B,NUN,N5M						
	MAMMALS															
OMA, iNat (2021)	White-tailed Deer	<i>Odocoileus virginianus</i>						S5	G5	N5						
OMA	Coyote	<i>Canis latrans</i>						S5	G5	N5						
OMA	Red Fox	<i>Vulpes vulpes</i>						S5	G5	N5						
OMA	Striped Skunk	<i>Mephitis mephitis</i>						S5	G5	N5						
iNat (2021)	American Ermine	<i>Mustela richardsonii</i>						S5	G5	N5						

SOURCE	COMMON NAME	SCIENTIFIC NAME	COSSARO ¹	SARO ²	COSEWIC ³	SARA ⁴	SCHEDULE	S-RANK ⁵	G-RANK ⁶	N-RANK ⁷	AREA SENSITIVE ⁸	AREA REQUIRED ⁸	PIF SPECIES ⁹	GRCA (date unk.) ¹⁰	CITY OF GUELPH (2012) ¹¹	WELLINGTON COUNTY (Dougan & Associates, 2009) ¹²
OMA	American Mink	<i>Neovison vison</i>					S4	G5	N5							
OMA, iNat (2022)	Northern Raccoon	<i>Procyon lotor</i>					S5	G5	N5							
OMA	Big Brown Bat	<i>Eptesicus fuscus</i>					S4	G5	N5							
OMA, iNat (2023)	Virginia Opossum	<i>Didelphis virginiana</i>					S4	G5	N4N5							
OMA	Northern Short-tailed Shrew	<i>Blarina brevicauda</i>					S5	G5	N5							
iNat (2022)	Masked Shrew	<i>Sorex cinereus</i>					S5	G5	N5							
OMA	Eastern Cottontail	<i>Sylvilagus floridanus</i>					S5	G5	N5							
OMA, iNat (2024)	Beaver	<i>Castor canadensis</i>					S5	G5	N5							
OMA	Meadow Vole	<i>Microtus pennsylvanicus</i>					S5	G5	N5							
OMA, iNat (2020)	Muskrat	<i>Ondatra zibethicus</i>					S5	G5	N5							
OMA, iNat (2019)	Porcupine	<i>Erethizon dorsatum</i>					S5	G5	N5							
OMA	House Mouse	<i>Mus musculus</i>					SNA	G5	NNA							
OMA	Woodchuck	<i>Marmota monax</i>					S5	G5	N5							
OMA	Eastern Gray Squirrel	<i>Sciurus carolinensis</i>					S5	G5	N5							
iNat (2022)	Eastern Chipmunk	<i>Tamias striatus</i>					S5	G5	N5							
OMA, iNat (2020)	Red Squirrel	<i>Tamiasciurus hudsonicus</i>					S5	G5	N5							
	SLUGS AND SNAILS															
iNat (2021)	Brown-lipped Snail	<i>Cepaea nemoralis</i>					SNA	G5	NNA							
	ARACHNIDS															
iNat (2023)	Bold Jumping Spider	<i>Phidippus audax</i>					SU	GNR	NU							
iNat (2022)	Cross Orbweaver	<i>Araneus diadematus</i>					SNA	GNR	NNA							
iNat (2023)	Dark Fishing Spider	<i>Dolomedes tenebrosus</i>					S5	G5	N5							
iNat (2023)	Goldenrod Crab Spider	<i>Misumena vatia</i>					S5	G5	N5							
iNat (2022)	Yellow Garden Spider	<i>Argiope aurantia</i>					S5	G5	N5							
iNat (2021)	Brilliant Jumping Spider	<i>Phidippus clarus</i>					S5	G5	N5							
iNat (2021)	Eastern Cave Long-jawed Spider	<i>Meta ovalis</i>					S4S5	G5	N5							
	CRUSTACEANS															
iNat (2021)	Northern Clearwater Crayfish	<i>Faxonius propinquus</i>					S4	G5	N4							

Legend:

COSSARO: Committee on Species at Risk Ontario

COSEWIC: Committee on the Status of Endangered Wildlife in Canada

SARA: Species at Risk Act

ESA: Endangered Species Act NAR: Not At Risk

END: Endangered NL: Not listed

THR: Threatened DD: Data Deficient

SC: Special Concern

N- and S-Rank:

S1: Critically Imperiled—Critically imperiled in the jurisdiction (often 5 or fewer occurrences)

S2: Imperiled—Imperiled in the jurisdiction, very few populations (often 20 or fewer),

S3: Vulnerable—Vulnerable in the jurisdiction, relatively few populations (often 80 or fewer)

S4: Apparently Secure—Uncommon but not rare

S5: Secure—Common, widespread, and abundant in the jurisdiction

SX: Presumed Extirpated

SH: Possibly Extirpated (Historical)

SNR: Unranked

SU: Unrankable—Currently unrankable due to lack of information

SNA: Not Applicable—The species is not a suitable target for conservation activities

S#S#: Range Rank—Indicates a range of uncertainty about the status of the species

S#B- Breeding Status Rank

S#N- Non Breeding Status Rank

?: Indicates uncertainty in the assigned rank

References:

1. COSSARO Status Endangered Species Act, 2007 (Bill 184). Schedules 1- 5. January 25, 2023.

2. Species at Risk in Ontario List. Endangered Species Act, 2007 (Ontario Regulation 230/08). January 25, 2023.

3. COSEWIC Status COSEWIC. 2014. Canadian Species at Risk. Committee on the Status of Endangered Wildlife in Canada. January 25, 2023.

4. Endangered Species Act, 2007 (Bill 184). Schedules 1- 5. January 25, 2023.

5. Provincial Rarity Rank. NatureServe. 2023.

6. Global Rarity Rank. NatureServe. 2023.

7. National Rank. NatureServe. 2023.

8. Significant Wildlife Habitat Technical Guide. Ontario Ministry of Natural Resources. 2000. Appendix C: A list of area sensitive species and key references.

9. Ontario Partners in Flight (PIF). 2008. Ontario Landbird Conservation Plan: Lower Great Lakes/St. Lawrence Plain (North American Bird Conservation Region 13), Priorities, Objectives and Recommended Actions. Environment Canada (Ontario Region) and Ontario Ministry of Natural Resources. Final Draft, November, 2008.

10. GRCA. date unk. A Checklist of Birds in the Grand River Watershed.

G-Rank:

G1: Extremely rare globally

G1G2: Extremely rare to very rare globally

G2: Very rare globally

G2G3: Very rare to uncommon globally

G3: Rare to uncommon globally

G3G4: Rare to common globally

G4: Common globally

G4G5: Common to very common globally

G5: Very common globally; demonstrably secure

T: Denotes that the rank applies to a subspecies or variety

Source Codes

OBA: Ontario Butterfly Atlas

ORAA: Ontario Reptile and Amphibian Atlas

OMA: Ontario Mammal Atlas

OBBA: Ontario Breeding Bird Atlas

eBird: eBird

ARA: Aquatic Resource Area Survey Points

DFO: Department of Fisheries and Oceans Species at Risk Mapping

iNat: iNaturalist

NHIC: Natural Heritage Information Centre

11. City of Guelph. 2012. Locally Significant Species List

12. Dougan & Associates, with Sneil & Cecile Environmental Research. 2009. List of Significant Wildlife in Wellington County; In City of Guelph Natural Heritage Strategy - Phase 2: Terrestrial Inventory & Natural Heritage System (VOL. 2 – APPENDICES). Final Report March 2009.

SPECIES AT RISK SCREENING
Proposed Residential Development

APPENDIX C
Significant Wildlife Habitat Assessment

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
1	Waterfowl Stopover and Staging Areas (Terrestrial)	Seasonal concentration areas of animals	- Fields with Sheet water in spring (incl. agricultural)	- Mixed species aggregations of 100 or more individuals confirms SWH	Flooded field ecosite and 100-300m radius is the SWH	No habitat matching criteria identified in study area	No	None required	No
2	Waterfowl Stopover and Staging (Aquatic)	Seasonal concentration areas of animals	- Ponds, marshes, lakes, bays, coastal inlets and watercourses and reservoirs - SWTP & SWMP are not SWH	- Aggregations of 100 or more listed species for 7 days (i.e., >700 waterfowl use days) confirms SWH	Aquatic ecosite and 100m radius is the SWH	No habitat matching criteria identified in study area	No	None required	No
3	Shorebird Migratory Stopover	Seasonal concentration areas of animals	- Shorelines of Lakes, rivers, wetlands, beaches, bars; seasonally flooded, muddy, and un-vegetated shoreline habitat	- 3 or more listed species and >1000 shorebird use days, or >100 whimbrel, confirms SWH	Shoreline ecosite and 100m radius is the SWH	No habitat matching criteria identified in study area	No	None required	No
4	Raptor Wintering Area	Seasonal concentration areas of animals	- Combination of upland field and woodland habitat >20ha total (includes >15ha upland field) - Least disturbed sites, idle, fallow or lightly grazed field/meadow best	- 1 or more Short-eared Owl, or at least 10 individuals and 2 listed species for a minimum of 20 days, and 3 of 5 years, confirms SWH	Ecosite communities (field and woodland) is the SWH	No habitat matching criteria identified in study area	No	None required	No
5	Bat Hibernacula	Seasonal concentration areas of animals	- Caves, mine shafts, underground foundations, karsts. - Buildings are not SWH	- All sites with confirmed hibernating bats, confirms SWH	Ecosite and 200m radius is the SWH	No habitat matching criteria identified in study area	No	None required	No
6	Bat Maternity Colony	Seasonal concentration areas of animals	- All forested ecosites, FOD, FOC, FOM, SWD, SWM, SWC with >10/ha trees (>25cm DBH) in early stages of decay (class 1-3) - Buildings are not SWH	- >10 Big Brown Bats, >5 adult female Silver-haired Bats confirms SWH	Entire woodland or forest stand ELC ecosite containing colony is the SWH	Wooded areas present on-site	Yes	Bat habitat assessment completed. No suitable trees identified.	No
7	Turtle Wintering Area	Seasonal concentration areas of animals	- Areas with permanent water deep enough not to freeze, with mud/soft substrates	- 5 over-wintering Midland Painted Turtles, 1 or more Northern Map Turtle or Snapping Turtle confirms SWH	Mapped ELC ecosite, or deep pool element where turtles overwinter is the SWH	No habitat matching criteria identified in study area	No	None required	No
8	Reptile Hibernaculum	Seasonal concentration areas of animals	- Sites below the frost line; rock barren, crevice and cave, talus, alvar, rock piles, slopes, stone fences, and crumbling foundations	- Presence of hibernacula with minimum 5 individuals of 1 snake species/ individuals of 2 or more species confirms SWH. - Congregations of a minimum of 5 snakes of 1 species/ individuals of 2 or more snake species, near potential hibernacula on sunny warm days in spring and fall confirms SWH	Feature hibernacula is in, and 30m radius is the SWH	No habitat matching criteria identified in study area	No	None required	No
9	Colonially-nesting Bird Habitat (Cliff/bank)	Seasonal concentration areas of animals	- Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, barns	- 1 or more nest sites with 8 or more Cliff Swallow or, 50 Bank Swallow and Rough-winged Swallow pairs during the breeding season.	Colony and 50m radius around peripheral nest are the SWH	No habitat matching criteria identified in study area	No	None required	No
10	Colonially-nesting Bird Habitat (Tree/shrub)	Seasonal concentration areas of animals	- Live or dead standing trees in wetlands, lakes, islands and peninsulas, occasionally shrubby and emergent vegetation	- 5 or more active Great-blue Heron or other listed species nests	Edge of the colony plus minimum 300m radius, or extent of the forest ecosite, or entire island <15ha is the SWH	No habitat matching criteria identified in study area	No	None required	No

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
11	Colonially-nesting Bird Habitat (Ground)	Seasonal concentration areas of animals	- Rocky islands or peninsulas within a lake or large river (natural or artificial)	- >25 active nests of Herring Gull, Ring-billed Gull, >5 active nests of Common Tern, or >2 active nests of Caspian Tern. 5 or more pairs of Brewer's Blackbird. Any active nesting colony of Little Gull, Great Black-backed Gull.	Edge of colony plus min 150m radius or extent of ELC ecosite, or island <3ha is the SWH	No habitat matching criteria identified in study area	No	None required	No
12	Migratory Butterfly Stopover Area	Seasonal concentration areas of animals	- At least 10ha, with undisturbed field/meadow and forest or woodland edge habitat present, within 5km of Lake Ontario.	- Presence of Monarch use days >5000 or >3000 where there is a mix of Monarch with Painted Ladies or White Admirals	Field/meadow and forest/woodland is the SWH	No habitat matching criteria identified in study area	No	None required	No
13	Land bird Migratory Stopover Area	Seasonal concentration areas of animals	- Woodlots >5ha in size - Within 5km of Lake Ontario	- Use by >200 birds/day, with >35species, with at least 10sp recorded on 5 different survey dates.	Woodlot is the SWH	No habitat matching criteria identified in study area	No	None required	No
14	Deer Yarding Areas	Seasonal concentration areas of animals	- ELC communities providing Thermal cover (FOM, FOC, SWM, SWC, CUP2, CUP3, FOD3, CUT)	- Deer yards are managed by MNRF, available through district offices and LIO.	LIO mapping	No habitat matching criteria identified in study area	No	None required	No
15	Deer Winter Congregation Areas	Seasonal concentration areas of animals	- All forested ecosites >100ha - Conifer Plantations <50ha may be used	- Deer management is the responsibility of the MNRF. - Contact MNRF or LIO for known deer winter areas.	LIO mapping	No habitat matching criteria identified in study area	No	None required	No
16	Cliffs & Talus Slopes	Rare vegetation communities	- Cliff: vertical to near vertical bedrock >3m in height - Talus slope: rock rubble at the base of a cliff made up of coarse rocky debris	- Confirm any ELC Vegetation Type for Cliffs or Talus Slopes	Area of ELC sites: TAO, TAS, TAT, CLO, CLS, CLT	No habitat matching criteria identified in study area	No	None required	No
17	Sand Barren	Rare vegetation communities	- Exposed, sparsely vegetated & caused by lack of moisture, fires, and erosion.	- Area >0.5ha in size - Confirm any ELC vegetation Type for Sand Barren - Not dominated by exotic or introduced species	Area of ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
18	Alvar	Rare vegetation communities	- Level, mostly un-fractured calcareous bedrock feature, overlain by a thin veneer or soil	- Area >0.5ha in size - Field Studies that identify four of the five Alvar Indicator Species - Not dominated by exotic or introduced species	Area of ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
19	Old Growth Forest	Rare vegetation communities	- >30ha forests with at least 10ha interior habitat and multi-layered canopy	- Dominant Tree Species >140 years old - No recognizable signs forestry practices (old stumps)	Area of ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
20	Savannah	Rare vegetation communities	- Tall Grass Prairie Habitat with 25%-60% Tree cover - Remnant sites such as Railway Right of ways are not SWH	- No minimum size and must be restored to a natural state. - Confirm one or more savannah indicator species. - Not dominated by exotic or introduced species	Area of ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
21	Tallgrass Prairie	Rare vegetation communities	<ul style="list-style-type: none"> - Ground cover dominated by prairie grasses with <25% tree cover. - Remnant sites such as Railway Right of ways are not SWH 	<ul style="list-style-type: none"> - No minimum size and must be restored to a natural state. - Confirm one or more prairie indicator species. - Not dominated by exotic or introduced species 	Area of ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
22	Other Rare Vegetation Communities	Rare vegetation communities	<ul style="list-style-type: none"> - All Provincially Rare S1, S2, S3 Vegetation Communities (Appendix M of SWHTG) 	<ul style="list-style-type: none"> - Field Studies Confirming ELC vegetation type is a rare vegetation community 	Area of ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
23	Waterfowl Nesting Areas	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Upland Habitat, adjacent to Wetland ELC ecosites (except SWC, SWM) - Extends 120m from a wetland (>0.5ha) and any small wetlands (<0.5ha) within a cluster of at least 3. - Upland area at least 120m wide 	<ul style="list-style-type: none"> - Presence of 3 or more nesting pairs of listed species excluding Mallards - Presence of 10 or more nesting pairs including mallards - Any active Black Duck nesting site 	SWH may be greater than or less than 120m from the wetland edge and must provide enough habitat for waterfowl to successfully nest	No habitat matching criteria identified in study area	No	None required	No
24	Bald Eagle or Osprey Nesting, Foraging and Perching Habitat	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Forest communities, adjacent to riparian areas - Osprey nests usually at top of tree - Bald Eagle nest usually in super canopy tree in a notch within canopy 	<ul style="list-style-type: none"> - Studies confirm one or more active Bald Eagle or Osprey nest. - Alternate nests included in SWH. - Nests must be used annually, if found inactive, must be known inactive at least 3 years, or suspected unused for 5 years if unknown 	<ul style="list-style-type: none"> - Active nest plus 300m for OSPR - Active nest plus 400-800m for BAEA 	No habitat matching criteria identified in study area	No	None required	No
25	Woodland Raptor Nesting Habitat	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Forested communities, forested swamp communities and cultural Plantations - Natural Forested/conifer plantations >30ha with >10ha interior habitat (200m buffer) 	<ul style="list-style-type: none"> - One or more active nest of listed species 	Nest protection radius: <ul style="list-style-type: none"> - RSHA, NOGA 400m - BAOW 200m. - Broad-winged Hawk, COHA 100m - SSHA 50 	No habitat matching criteria identified in study area	No	None required	No
26	Turtle Nesting Areas	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Exposed Mineral soil (sand or gravel) adjacent (<100m) or within shallow marsh, shallow submerged, shallow floating, bog or fen communities. - Located in open sunny areas, away from roads and less prone to predation. - Municipal and provincial road shoulders are not SWH. 	<ul style="list-style-type: none"> - Confirm 5 or more nesting Midland Painted Turtles, 1 or more nesting Northern Map Turtle or Snapping Turtle 	Area or sites with exposed mineral soils, plus a radius of 30-100m around the nesting area is the SWH.	No habitat matching criteria identified in study area	No	None required	No
27	Seeps and Springs	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Areas where ground water comes to the surface. - Any forested area within the headwaters of a stream or river system 	<ul style="list-style-type: none"> - Confirm site with 2 or more seeps/springs. 	Area of ELC forest ecosite containing seep/spring is the SWH	No habitat matching criteria identified in study area	No	None required	No

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
28	Amphibian Breeding Habitat (Woodland)	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Breeding pools within woodlands - Wetland, pond, or pool >500m² within or adjacent (<120m) to a woodland. - Woodlands with permanent ponds, or those with water until mid-July more likely to be used. 	<ul style="list-style-type: none"> - Confirm Breeding population of 1 or more listed newt/salamander species, 2 or more of the listed frog species with at least 20 individuals (adults or egg masses), 2 or more of the listed frog species with call code levels of 3. - Wetland adjacent to woodlands includes travel corridor connecting features as SWH. 	Wetland area, plus 230m radius of woodland is the SWH.	No habitat matching criteria identified in study area	No	None required	No
29	Amphibian Breeding Habitat (Wetland)	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Swamp, marsh, fen, bog, open aquatic, and shallow aquatic ELC communities. - Typically isolated from woodlands (>120m) but includes larger wetlands with primarily aquatic species (bull frogs) that are adjacent to woodlands. - Wetlands >500m² - Presence of shrubs & logs - Bullfrogs require permanent water bodies and abundant emergent vegetation. 	<ul style="list-style-type: none"> - Confirm Breeding populations of 1 or more listed newt/salamander species, or 2 or more listed frog/toad species with at least 20 individuals (adults or egg masses), or 2 or more listed frog/toad species with a call code level of 3 - Or any wetland with confirmed breeding Bullfrog. 	<ul style="list-style-type: none"> - ELC ecosite and shoreline is the SWH. - Movement corridors (SWH) must be considered if this habitat is significant 	No habitat matching criteria identified in study area	No	None required	No
30	Area-sensitive Breeding Bird Habitat	Specialized habitat for wildlife	<ul style="list-style-type: none"> - Habitats where interior breeding birds are breeding. - Large mature (>60 years) forest stands or woodlots >30ha. - Forest and swamp ELC communities - Interior habitat at least 200m from edge 	<ul style="list-style-type: none"> - Presence of nesting or breeding pairs of 3 or more of the listed species - Any site with Cerulean Warbler or Canada Warbler is SWH 	ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
31	Marsh Bird Breeding Habitat	Habitats of species of conservation concern considered SWH	<ul style="list-style-type: none"> - Some meadow marsh, shallows submerged, shallow floating, mixed shallow floating, fen, and bog communities (see SWH Ecoregion guide for specifics) - Nesting occurs in wetlands, all wetland habitat is considered with presence of shallow water with emergent aquatic vegetation - Green heron at edge of water sheltered by shrubs and trees. 	<ul style="list-style-type: none"> - 5 or more nesting pairs of Sedge Wren or Marsh Wren, 1 pair of Sandhill Crane, or breeding by any combination of 5 or more of the listed species - Any Wetland with 1 or more breeding pair Black Tern, Trumpeter Swan, Green Heron or Yellow Rail 	ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
32	Open Country Bird Breeding Habitat	Habitats of species of conservation concern considered SWH	<ul style="list-style-type: none"> - Grassland area >30ha (natural & cultural fields and meadows) - Grasslands not class 1 or 2 agriculture (no row crops or intensive hay or livestock pasturing) - Mature hayfields or pasture at least 5 years old 	<ul style="list-style-type: none"> - Nesting or breeding of 2 or more of the listed species - Field with 1 or more Short-eared Owls 	Contiguous ELC ecosite is the SWH	No habitat matching criteria identified in study area	No	None required	No
33	Shrub/Early Successional Bird Breeding Habitat	Habitats of species of conservation concern considered SWH	<ul style="list-style-type: none"> - Cultural thickets, savannah, and woodland habitat - Large field area succeeding to shrub and thicket habitat >10ha in size - Patches of shrub ecosite may be complexed into larger old field ecosites for some species 	<ul style="list-style-type: none"> - Confirm nesting or breeding of 1 of the listed indicator species and at least 2 of the common species - Habitat with Yellow-breasted Chat or Golden-winged Warbler is SWH 	SWH is contiguous ELC ecosite field/thicket area	No habitat matching criteria identified in study area	No	None required	No
34	Terrestrial Crayfish	Habitats of species of conservation concern considered SWH	<ul style="list-style-type: none"> - Meadow marsh, shallow marsh, swamp thicket, deciduous swamp, and mixed swamp communities - Cultural meadow with inclusions of meadow marsh may be used - Wet edges of marshes and wet meadows should be surveyed for crayfish 	<ul style="list-style-type: none"> - Presence of 1 or more individuals of listed species or their chimneys in suitable habitat 	Area of ELC ecosite or Eco element area of meadow marsh or swamp within the larger ecosite area is the SWH	No habitat matching criteria identified in study area	No	None required	No

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
35	Special Concern & Rare Wildlife Species	Habitats of species of conservation concern considered SWH	<ul style="list-style-type: none"> - All Special concern and Provincially Rare plant and animal species - Where an element occurrence is identified within a 1 or 10km grid for a species listed, linking candidate habitat on the site must be completed to ELC ecosites 	<ul style="list-style-type: none"> - Assessment/inventory of site for identified special concern or rare species completed during time of year when species is present or easily identifiable - Habitat must be easily mapped and cover an important life stage component (specific nesting habitat, foraging) 	SWH is the finest ELC scale that protects the form and function of the habitat	Background atlas review identified 17 Special concern species within 10km of the Study Area <ul style="list-style-type: none"> - Barn Swallow (OBBA, NHIC, eBird) - Canada Warbler (OBBA, eBird) - Common Nighthawk (OBBA, eBird) - Eastern Wood-pewee (OBBA, NHIC, eBird) - Golden-winged Warbler (eBird) - Grasshopper Sparrow (OBBA, NHIC) - Harris's Sparrow (OBBA) - Olive-sided Flycatcher (OBBA, eBird) - Peregrine Falcon (OBBA) - Rusty Blackbird (OBBA) - Wood Thrush (OBBA, NHIC, eBird) - Monarch (OBA, iNat) - Yellow-banded Bumble Bee (NHIC) - Milksnake (NHIC, ORAA, iNat) - Midland Painted Turtle (NHIC, ORAA, iNat) - Northern Map Turtle (NHIC) - Snapping Turtle (NHIC, ORAA, iNat) 	No- woodlands on site are immature, sparse, and scrubby. Unlikely to provide habitat for any species of special concern.	Site visit occurred March 1, 2024.	No
36	Amphibian Movement Corridor	Animal movement corridors	<ul style="list-style-type: none"> - Corridors may occur in all ecosites associated with water. - Presence of significant amphibian breeding indicates the requirement for identifying corridors - Movement corridors between breeding habitat and summer habitat 	<ul style="list-style-type: none"> - Corridors typically include areas with native vegetation, with several layers of vegetation, unbroken by roads, waterways or waterbodies are most significant - At least 15 of vegetation on both sides of the waterway or up to 200m wide of woodland habitat with gaps of <20m - Shorter corridors are more significant than longer, but amphibians must be able to get to and from their summer breeding habitat 	Corridor is the SWH	No habitat matching criteria identified in study area	No	None required	No
37	Deer Movement Corridor	Animal movement corridors	<ul style="list-style-type: none"> - May occur in all forested ecosites. - Determined when deer wintering habitat is confirmed as SWH 	<ul style="list-style-type: none"> - Corridors at least 200m wide with gaps <20m leading to wintering habitat - Unbroken by roads and residential areas - Shorter corridors are more significant 	Corridor is the SWH	No habitat matching criteria identified in study area	No	None required	No

#	Significant wildlife habitat (SWH)	Candidate SWH type	Candidate SWH criteria	Criteria for SWH confirmation	SWH protected area	Site assessment details	Candidate SWH	Field studies required/ completed	Confirmed SWH
38	Mast Producing Areas (6E-14*) <i>*The Bruce Peninsula has an isolated and distinct population of black bears. Maintenance of large woodland tracts with mast producing tree species is important for bears.</i>	Mast producing Areas - Black Bear	All Forested habitat represented by ELC Community Series: FOM FOD Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech)	All woodlands > 30 ha with a 50% composition of these ELC Vegetation Types are considered significant: FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5	ELC community is the SWH	No habitat matching criteria identified in study area	No	None required	No
39	Lek (6E-17)	Lek – Sharp-tailed Grouse	<ul style="list-style-type: none"> - Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland. Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) - Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting. - Conifer trees within 500m are not tolerated. 	<ul style="list-style-type: none"> - Studies confirming lek habitat are to be completed from late March to June. - Any site confirmed with sharp-tailed grouse courtship activities is considered significant 	The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat.	No habitat matching criteria identified in study area	No	None required	No

SPECIES AT RISK SCREENING
Proposed Residential Development

APPENDIX D
Agency Communication



3-5 Edinburgh Road South
Guelph . Ontario
N1H 5N8

T: 519.822.6839
info@abouttng.com
www.abouttng.com

URBAN FORESTRY
ARBORIST REPORTS
MANAGEMENT PLANS
TREE PRESERVATION PLANS
TREE RISK ASSESSMENT
GIS TREE INVENTORIES
TREE APPRAISALS
MONITORING

ECOLOGICAL RESTORATION
NATURAL SYSTEMS DESIGN
HABITAT RESTORATION
EDGE MANAGEMENT PLANS
RAVINE STEWARDSHIP PLANS
NATURALIZATION PLANS
INTERPRETIVE DESIGN
MONITORING
CONTRACT ADMINISTRATION

ENVIRONMENTAL STUDIES
SUBWATERSHED STUDIES
ENVIRONMENTAL IMPACT
STATEMENTS
ECOLOGICAL LAND
CLASSIFICATION
WETLAND EVALUATION
VEGETATION ASSESSMENT
BOTANICAL INVENTORIES
WILDLIFE SURVEYS
MONITORING

LANDSCAPE ARCHITECTURE
MASTER PLANNING
RESIDENTIAL COMMUNITIES
COMMERCIAL/INDUSTRIAL
HEALTHCARE AND EDUCATION
STREETSCAPES
PARKS AND OPEN SPACES
TRAIL SYSTEMS
GREEN ROOFS
CONTRACT ADMINISTRATION

EXPERT OPINION
OMB TESTIMONY
LEGAL PROCEEDINGS
PEER REVIEW
RESEARCH
EDUCATION

March 5, 2024

Our Project #: AA22-142B
Sent by email: SAROntario@ontario.ca

Ministry of the Environment, Conservation and Parks
Permissions and Compliance Section, Species at Risk Branch

**Re: 47 Bedford Road, Guelph-Eramosa
Request for Species at Risk and Local Site Information**

To whom it may concern:

Please accept this request for Information regarding Species at Risk.

Any other possible site constraints or information would also be greatly appreciated, as it applies to a proposed development in the Township of Guelph-Eramosa (*Figure 1*). The information provided will be used to inform the Species at Risk Assessment.

Project Location

Town/City: Guelph-Eramosa

County/Region: Wellington County

UTM Coordinates: 557959.27 E 4825589.37 N

Proposed Activity

The subject property is located at 47 Bedford Road in the Township of Guelph-Eramosa, ON. The proponent is proposing a residential development.

Existing Site Conditions

The subject lands and study area contains residential properties and small woodlots (*Figure 1*).

Background Information

A thorough background search has been completed; using available resources provided online related to the subject lands and adjacent lands and is listed below:

1. Preliminary investigation through the Natural Heritage Information Centre (NHIC 2021) identified SAR records in the two 1 km x 1 km squares containing the study area (17NJ5825 and 17NJ5725), and the squares surrounding the study area (17NJ5624, 17NJ5924, 17NJ5925, 17NJ5926, 17NJ5625, 17NJ5626, 17NJ5824, 17NJ5724, 17NJ5826, and 17NJ5726). Fourteen SAR listed under the ESA and/or SARA, respectively, were identified: Barn Swallow (*Hirundo rustica*; SC, THR), Bobolink (*Dolichonyx oryzivorus*; THR, THR), Chimney Swift (*Chaetura pleagica*; THR, THR), Eastern Meadowlark (*Sturnella magna*; THR, THR), Eastern Wood-pewee (*Contopus virens*; SC, SC), Grasshopper Sparrow (*Ammodramus savannarum*; SC, SC), Red-headed Woodpecker (*Melanerpes erythrocephalus*; END, END), Wood Thrush (*Hylocichla mustelina*; SC, THR), American Burying Beetle (*Nicrophorus americanus*; EXP, EXP), Yellow-banded Bumble Bee (*Bombus terricola*; SC, SC); Milksnake (*Lampropeltis Triangulum*; NL, SC), Midland Painted Turtle (*Chrysemys picta marginata*; NL, SC), Northern Map Turtle (*Graptemys geographica*; SC, SC), Snapping Turtle (*Chelydra serpentina*; SC, SC), and Black Ash (*Fraxinus nigra*; END, THR under COSEWIC only). It should be noted that American Burying Beetle is presumed extirpated in the province.
2. A list of birds determined to be present in the 10 km x 10 km square containing the study area (17NJ52) during the 2021-2025 Ontario Breeding Bird Atlas (Cadman et. al. 2007) was compiled. It should be noted that these observations have not been assessed for breeding, and may include non-breeding, wintering and migratory individuals. This list includes 198 species; 18 of which are considered SAR under the ESA and SARA, respectively: Barn Swallow, Bobolink, Chimney Swift, Eastern Meadowlark, Eastern Wood-pewee, Grasshopper Sparrow, Red-headed Woodpecker, Wood Thrush, Bank Swallow (*Riparia riparia*; THR, THR), Canada Warbler (*Wilsonia canadensis*; SC, THR), Common Nighthawk (*Chordeiles minor*; SC, THR), Harris's Sparrow (*Zonotrichia querula*; NL, SC), Least Bittern (*Ixobrychus exilis*; THR, THR), Lesser Yellowlegs (*Tringa flavipes*; THR, NL), Olive-sided Flycatcher (*Contopus cooperi*; SC, THR), Peregrine Falcon (*Falco peregrinus*; SC, SC), Rusty Blackbird (*Euphagus carolinus*; SC, SC), and Yellow-breasted Chat (*Icteria virens*; END, END).
3. Review of the Ontario Reptile and Amphibian Atlas (Ontario Nature 2019) identified 16 species that are known to occur or have historically occurred within the 10 km x 10 km

square containing the study area (17NJ52). This list includes four species which are considered SAR under the ESA and/or SARA respectively: Milksnake, Midland Painted Turtle, Snapping Turtle, and Western Chorus Frog (Great Lakes / St. Lawrence-Canadian Shield Population; *Pseudacris triseriata* pop. 2; NAR, THR),

4. Review of the Atlas of the Mammals of Ontario (Dobbyn 1994) identified 20 species that are known to occur or have historically occurred within the 10 km x 10 km square containing the study area (17NJ52), none of which were SAR. It should be noted that other species of SAR bats could occur anywhere in Ontario.
5. Review of the Ontario Butterfly Atlas online database (Toronto Entomologists' Association, 2019) identified 47 species that are known to occur or have historically occurred within the 10 km x 10 km square containing the study area (17NJ52), including one SAR: Monarch (*Danaus plexippus*; SC, SC).
6. eBird is an online reporting system for birdwatchers managed by the Cornell Lab of Ornithology. The database was reviewed to see what bird species had been reported in the vicinity of the subject property. It should be noted that eBird observations occur year-round, and may include non-breeding, wintering and migratory individuals. The closest reporting location is Guelph-Ignatius-Old Growth Forest Trails, approximately 580 m east of the subject lands. One-hundred-and-seven species have been observed at this site. This list includes eight SAR listed under the ESA and SARA: Barn Swallow, Canada Warbler, Chimney Swift, Eastern Meadowlark, Eastern Wood-pewee, Golden-winged Warbler, Olive-sided Flycatcher, Wood Thrush, and Golden-winged Warbler (*Vermivora chrysoptera*; SC, THR).
7. iNaturalist, another self-reporting system that is not limited by taxa, was also consulted. The search was limited to a 1 km radius from the centre of the study area and only research grade reports, which are confirmed independently, were used to compile the list. Two-hundred-and-forty-eight wildlife species and 238 vascular plant, fungi, and protozoan species were identified in the search radius. This list includes five SAR: Bobolink, Monarch, Milksnake, Midland Painted Turtle, and Snapping Turtle. It should be noted that locations of SAR on iNaturalist are obscured, and as a result, these observations may not be within 1 km of the study area.

Please contact the undersigned should you require additional information of the above.
Yours truly,

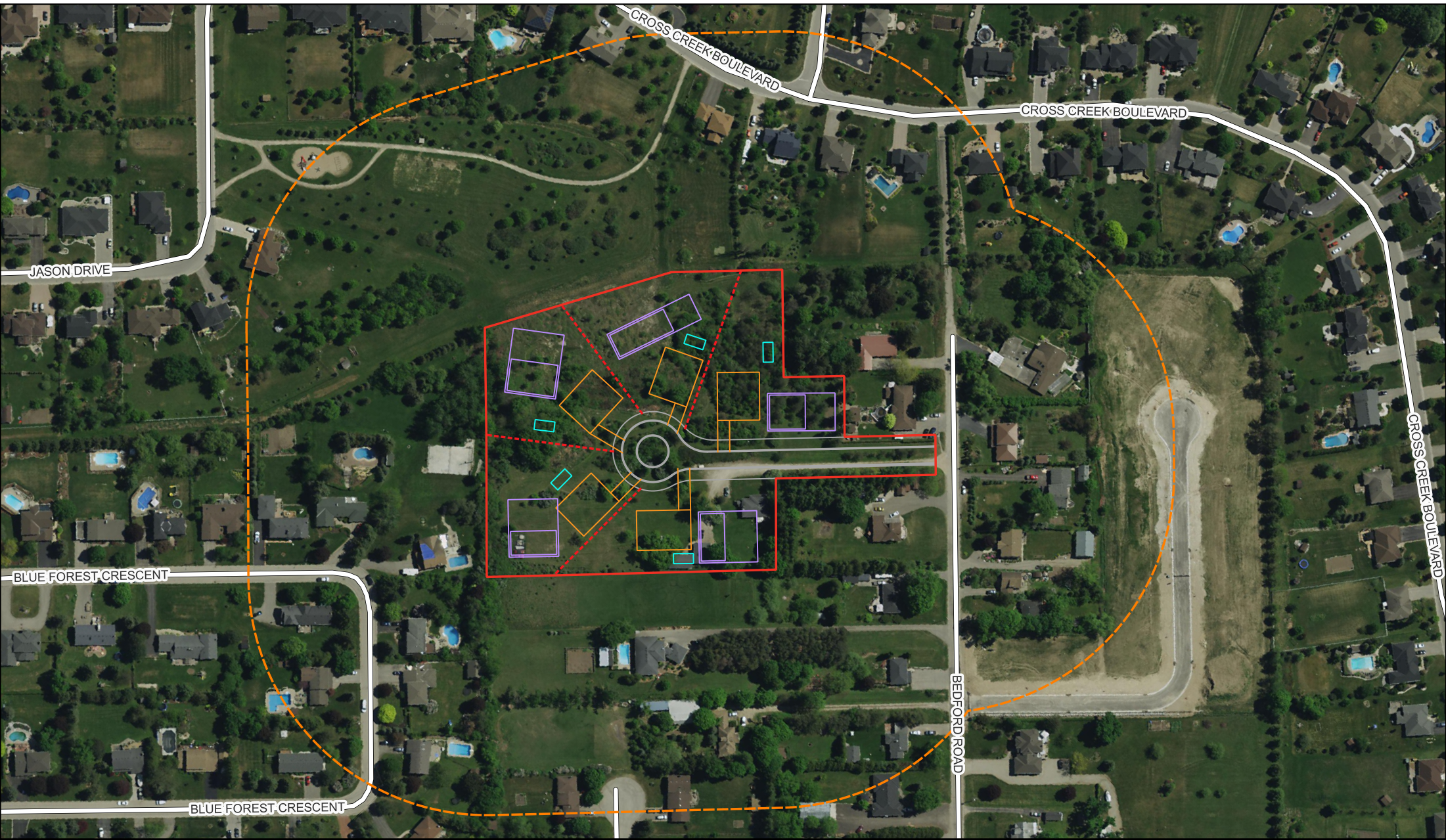
ABOUD & ASSOCIATES INC.



Heather Dixon, PhD
Aquatic Ecologist

heather@aboudtng.com

Attachment: Figure 1



LEGEND

- SUBJECT LANDS
- STUDY AREA
- PROPOSED LOTS
- PROPOSED SEPTIC
- PROPOSED ROAD
- PROPOSED DWELLINGS
- PROPOSED WASTEWATER

Information Sources:
 1. Orthophotography provided by First Base Solutions. Accessed March 2024.
 2. Roads provided by LIO Open Data. Accessed March 2024.

Title:
STUDY AREA

Project:
**47 BEDFORD ROAD
 GUELPH-ERAMOSIA, ON**



Date: MARCH 2024
 Project: AA22-142B
 Scale: 1 : 2500

ABOUD & ASSOCIATES INC.
 Consulting Arborists • Ecologists • Landscape Architects
3-6 Edinburgh Road South, Guelph, Ontario, N1H 5N8 619.822.6839 www.abouding.com

Figure No: **1**

Heather Dixon

From: Species at Risk (MECP) <SAROntario@ontario.ca>
Sent: Wednesday, March 6, 2024 10:08 AM
To: Heather Dixon
Cc: Cheryl-Anne Ross
Subject: RE: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

Caution. Outside Sender

Hi Heather,

If you would like to request information on the presence of Species at Risk you can contact the Natural Heritage Information Centre [Natural Heritage Information Centre | ontario.ca](#).

SAROntario

From: Heather Dixon <Heather@aboutdng.com>
Sent: March 5, 2024 2:13 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Cc: Cheryl-Anne Ross <Cheryl@aboutdng.com>
Subject: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Please accept the attached request for SAR information for the proposed residential development at 47 Bedford Road, Guelph-Eramosa, ON. Please contact me if you have any questions. We appreciate your prompt response to our request.

Many thanks,

Heather Dixon, PhD (she/her) . Aquatic Ecologist
ABOUD & ASSOCIATES INC. . 3-5 Edinburgh Road South . Guelph . Ontario . N1H 5N8
519.781.1581 www.aboutdng.com . heather@aboutdng.com

Aboud & Associates Inc. is located within the Between the Lakes Purchase (Treaty 3); the treaty lands and territory of the Mississaugas of the Credit.

Heather Dixon

From: NHIC-Requests (MNRF) <nhicrequests@ontario.ca>
Sent: Friday, March 8, 2024 3:54 PM
To: Heather Dixon
Subject: Re: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

Caution. Outside Sender

Hello Heather,

Thank you for the clarification. In regards to the species we track, NHIC focuses on records of the greatest conservation significance. For example, in regards to birds, we focus on records related to breeding (as opposed to a bird seen flying by overhead, etc.). Below is a summary of some additional species' information relating to the 1km squares of interest.

Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	COMMENT
Bank Swallow	Riparia riparia	S4B	THR	THR	eBird has some records for this species, but no breeding related records for the 1km squares of interest.
Canada Warbler	Cardellina canadensis	S5B	SC	SC	eBird has some records for this species, but no breeding related records for the 1km squares of interest.
Lesser Yellowlegs	Tringa flavipes	S3S4B,S5M	THR	THR	eBird has some records for this species, but no breeding related records for the 1km squares of interest.
Monarch	Danaus plexippus	S2N,S4B	SC	END	iNaturalist has some records for this species, but no migratory staging area related records for the 1km squares of interest.
Northern Bobwhite	Colinus virginianus	S1?	END	END	NHIC received a public reporting for this species, but it does not pertain to a 1km square of interest.
Peregrine Falcon	Falco peregrinus	S4	SC	NAR	eBird has some records for this species, but no breeding related records for the 1km squares of interest.

From: Heather Dixon <Heather@aboutdng.com>
Sent: Wednesday, March 6, 2024 4:00 PM
To: NHIC-Requests (MNRF) <nhicrequests@ontario.ca>
Cc: Cheryl-Anne Ross <Cheryl@aboutdng.com>
Subject: RE: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello Matthew,

We are not looking for sensitive data, but for records of any SAR that have not been added to the NHIC Make-A-Map for these squares yet. We do not need exact locations or anything beyond what would be published on the Make-a-Map.

Many thanks,

Heather Dixon, PhD (she/her) . Aquatic Ecologist
ABOUD & ASSOCIATES INC. 3-5 Edinburgh Road South . Guelph . Ontario . N1H 5N8
519.781.1581 www.aboudtng.com . heather@aboudtng.com

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From: NHIC-Requests (MNRF) <nhicrequests@ontario.ca>
Sent: Wednesday, March 6, 2024 10:53 AM
To: Heather Dixon <Heather@aboudtng.com>
Cc: Cheryl-Anne Ross <Cheryl@aboudtng.com>
Subject: Re: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

Caution. Outside Sender

Good morning Heather,

Thank you kindly for reaching out to get access to NHIC Medium Sensitive Data for the area you have provided. Access to our detailed data is provided when there is a need to know, a Sensitive Data Use License is signed, and users have taken the Data Sensitivity Training. To apply for licensed access please complete [this form](#). You will also need to complete the data sensitivity training (if you have not already).

Please let also provide a shapefile for the area of interest so that we can cut the data to your needs.

Kind regards,

Matthew, NHIC Information Officer

From: Heather Dixon <Heather@aboudtng.com>
Sent: Wednesday, March 6, 2024 3:42 PM
To: NHIC-Requests (MNRF) <nhicrequests@ontario.ca>
Cc: Cheryl-Anne Ross <Cheryl@aboudtng.com>
Subject: FW: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good morning,

We were directed to email the NHIC by the MECP for any additional SAR information related to a proposed residential development at 47 Bedford Road in the Township of Guelph-Eramosa ON, located at UTM Coordinates: 557959.27 E, 4825589.37 N. Data from NHIC Make-a-Map from the two 1 km x 1 km squares containing the study area (17NJ5825 and 17NJ5725), and the squares surrounding the study area (17NJ5624, 17NJ5924, 17NJ5925, 17NJ5926, 17NJ5625, 17NJ5626, 17NJ5824, 17NJ5724, 17NJ5826, and 17NJ5726) provided records of the following SAR:

American Burying Beetle
Bald Eagle (now delisted and ranked S4)

Barn Swallow
Black Ash
Bobolink
Chimney Swift
Eastern Meadowlark
Eastern Milksnake
Eastern Wood-pewee
Grasshopper Sparrow
Midland Painted Turtle
Northern Map Turtle
Red-headed Woodpecker
Snapping Turtle
Wood Thrush
Yellow-banded Bumble Bee

Additional species were also identified from other background sources (see attached document for more information and a map of the study area). Is there additional unpublished SAR information for the above mentioned squares available?

Many thanks,

Heather Dixon, PhD (she/her) . Aquatic Ecologist
ABOUD & ASSOCIATES INC. 3-5 Edinburgh Road South . Guelph . Ontario . N1H 5N8
519.781.1581 www.aboudtng.com . heather@aboudtng.com

Aboud & Associates Inc. is located within the Between the Lakes Purchase (Treaty 3); the treaty lands and territory of the Mississaugas of the Credit.

From: Species at Risk (MECP) <SAROntario@ontario.ca>
Sent: Wednesday, March 6, 2024 10:08 AM
To: Heather Dixon <Heather@aboudtng.com>
Cc: Cheryl-Anne Ross <Cheryl@aboudtng.com>
Subject: RE: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

Caution. Outside Sender

Hi Heather,

If you would like to request information on the presence of Species at Risk you can contact the Natural Heritage Information Centre [Natural Heritage Information Centre | ontario.ca](http://NaturalHeritageInformationCentre|ontario.ca).

SAROntario

From: Heather Dixon <Heather@aboudtng.com>
Sent: March 5, 2024 2:13 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Cc: Cheryl-Anne Ross <Cheryl@aboudtng.com>
Subject: Request for SAR Information for 47 Bedford Road, Guelph-Eramosa, ON (AA22-142B)

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Please accept the attached request for SAR information for the proposed residential development at 47 Bedford Road, Guelph-Eramosa, ON. Please contact me if you have any questions. We appreciate your prompt response to our request.

Many thanks,

Heather Dixon, PhD (she/her) . Aquatic Ecologist
ABOUD & ASSOCIATES INC. . 3-5 Edinburgh Road South . Guelph . Ontario . N1H 5N8
519.781.1581 www.aboudtng.com . heather@aboudtng.com

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SPECIES AT RISK SCREENING
Proposed Residential Development

APPENDIX E
Incidental Species

Common Name	Scientific Name	Taxa	Date	Location/Notes
American Crow	<i>Corvus brachyrhynchos</i>	Bird	March 1, 2024	
Blue Jay	<i>Cyanocitta cristata</i>	Bird	March 1, 2024	
Northern Cardinal	<i>Cardinalis cardinalis</i>	Bird	March 1, 2024	
Eastern Cottontail	<i>Sylvilagus floridanus</i>	Mammal	March 1, 2024	Scat only
Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	Mammal	March 1, 2024	

SPECIES AT RISK SCREENING
Proposed Residential Development

APPENDIX F

Site Photos



Woodpecker hole

- Urban Forestry
- Ecological Restoration
- Landscape Architecture
- Environmental Studies
- Expert Opinion

