

Secondary Plan - Rockland West

Background Review Summary

Prepared for:

J.L. Richards & Associates Limited
700 - 1565 Carling Avenue
Ottawa, Ontario
K1Z 8R1

Prepared by:

Bowfin Environmental Consulting Inc.
168 Montreal Road
Cornwall, Ontario
K6H 1B3

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List of Acronyms and Definitions

ABBO - Atlas of Breeding Birds of Ontario
ANSI – Area of Natural and Scientific Interest
BHA - Butternut Health Assessments
DBH - Diameter at breast height
DFO – Fisheries and Oceans Canada
EIS – Environmental Impact Study
ELC - Ecological Land Classification
 CUT – Cultural Thicket
 FOD – Deciduous Forest
 FOM – Mixed Forest
ESA - *Endangered Species Act* (Provincial)
GPS – Global Positioning System
 NAD 83: North American Datum 1983
 UTM: Universal Transverse Mercator
LIO - Land Information Ontario
NHIC – Natural Heritage Information Centre
NHRM - Natural Heritage Reference Manual
MTO – Ministry of Transportation Ontario
OMNR/MNRF/NDMNRF - Ontario Ministry of Natural Resources (old name)
 -Ministry of Natural Resources and Forestry (old name)
 -Ministry of Northern Development, Mines, Natural Resources, and Forestry (new name)
OP – Official Plan
OWES - Ontario Wetland Evaluation System
PPS - Provincial Policy Statement
PSW - Provincially Significant Wetland
SAR - Species at Risk (in this report they refer to species that are provincially or federally listed as endangered or threatened and receive protection under ESA or SARA)
SARA - *Species at Risk Act* (Federal)
SARO - Species at Risk in Ontario
SNC – South Nation Conservation
SWH - Significant Wildlife Habitat
SWHCS – Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E
SWHTG - Significant Wildlife Habitat Technical Guide
UCPR – United Counties of Prescott and Russell

SRANK DEFINITIONS

- S1** Critically Imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
- S2** Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

- S3** Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4** Apparently Secure; uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5** Secure; Common, widespread, and abundant in the nation or state/province.
- ?** Inexact Numeric Rank—Denotes inexact numeric rank
- SNA** Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
- S#B** Breeding
- S#N** Non-Breeding

SARA STATUS DEFINITIONS

- END** Endangered: a wildlife species facing imminent extirpation or extinction.
- THR** Threatened: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- SC** Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

SARO STATUS DEFINITIONS

- END** Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
- THR** Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
- SC** Special concern: A species with characteristics that make it sensitive to human activities or natural events.

Coefficient of Conservatism Ranking Criteria

- 0 Obligate to ruderal areas.
- 1 Occurs more frequently in ruderal areas than natural areas.
- 2 Facultative to ruderal and natural areas.
- 3 Occurs less frequent in ruderal areas than natural areas.
- 4 Occurs much more frequently in natural areas than ruderal areas.
- 5 Obligate to natural areas (quality of area is low).
- 6 Weak affinity to high-quality natural areas.
- 7 Moderate affinity to high-quality natural areas.
- 8 High affinity to high-quality natural areas.
- 9 Very high affinity to high-quality natural areas.
- 10 Obligate to high-quality natural areas.

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1.0 INTRODUCTION

The City of Clarence-Rockland is completing a Secondary Plan for lands situated to the west of Rockland. The Secondary Plan would be adopted as an amendment to the Urban Area of the City of Clarence-Rockland's Official Plan. The process is to be integrated with the Class Environmental Assessment (EA) which is required in the planning of infrastructure and environmental management.

The goals of the Secondary Plan includes addressing natural heritage features and systems. To this end, Bowfin Environmental Consulting (Bowfin) was engaged by J.L. Richards & Associates Limited to provide a review of known natural heritage features and to identify opportunities, constraints, or areas with issues that could be addressed through this process.

The study area is approximately 36 ha situated on parts of Lot 32-34, Concession 1, in the City of Clarence-Rockland. It is bordered by Highway 17 and the Ottawa River to the north, agricultural land to the south and west, and commercial area to the east (Figure 1 and Figure 2). A majority of lands have been cleared for either agriculture or development and there is an unnamed feature which flows into the Ottawa River (Figure 2).

Bowfin's review considered natural heritage features that would be protected under the *Planning Act*, *Endangered Species Act*, *Fish and Wildlife Conservation Act*, *Species at Risk Act*, and *Fisheries Act*. The natural features and areas are those as set out in the Provincial Policy Statement (PPS) (MMAH, 2020) in which there are several natural features and areas identified as needing protection. These are:

- Significant habitat of Endangered and Threatened Species (SAR);
- Significant wetlands;
- Significant coastal wetlands or coastal wetlands;
- Significant valleylands;
- Significant woodlands;
- Significant wildlife habitat;
- Significant Areas of Natural and Scientific Interest; and
- Fish habitat.

This Secondary Plan will also reference the locations of significant features along with other locally significant features (identified as part of the regions' Natural Heritage System) as identified on OP schedules A of the City of Clarence Rockland and B of the United Counties of Prescott and Russell. To protect the species and their habitats, the presence/absence of habitat for endangered (END) or threatened (THR) species are not depicted on the OP schedules. The habitat of endangered or threatened species must be determined based on the criteria outlined in

provincial guidance documents and is species-specific. The UCPR have identified all Significant Wildlife Habitat (SWH) found within the settlement areas. These are either deer wintering area or wildlife travel corridor.

The following report provides a summary of our review and a desktop assessment of the functions and values of the natural features on site. This is followed by our recommendations for natural heritage constraints and identification of natural heritage opportunities for consideration.

Figure 1: General Location of Study Area

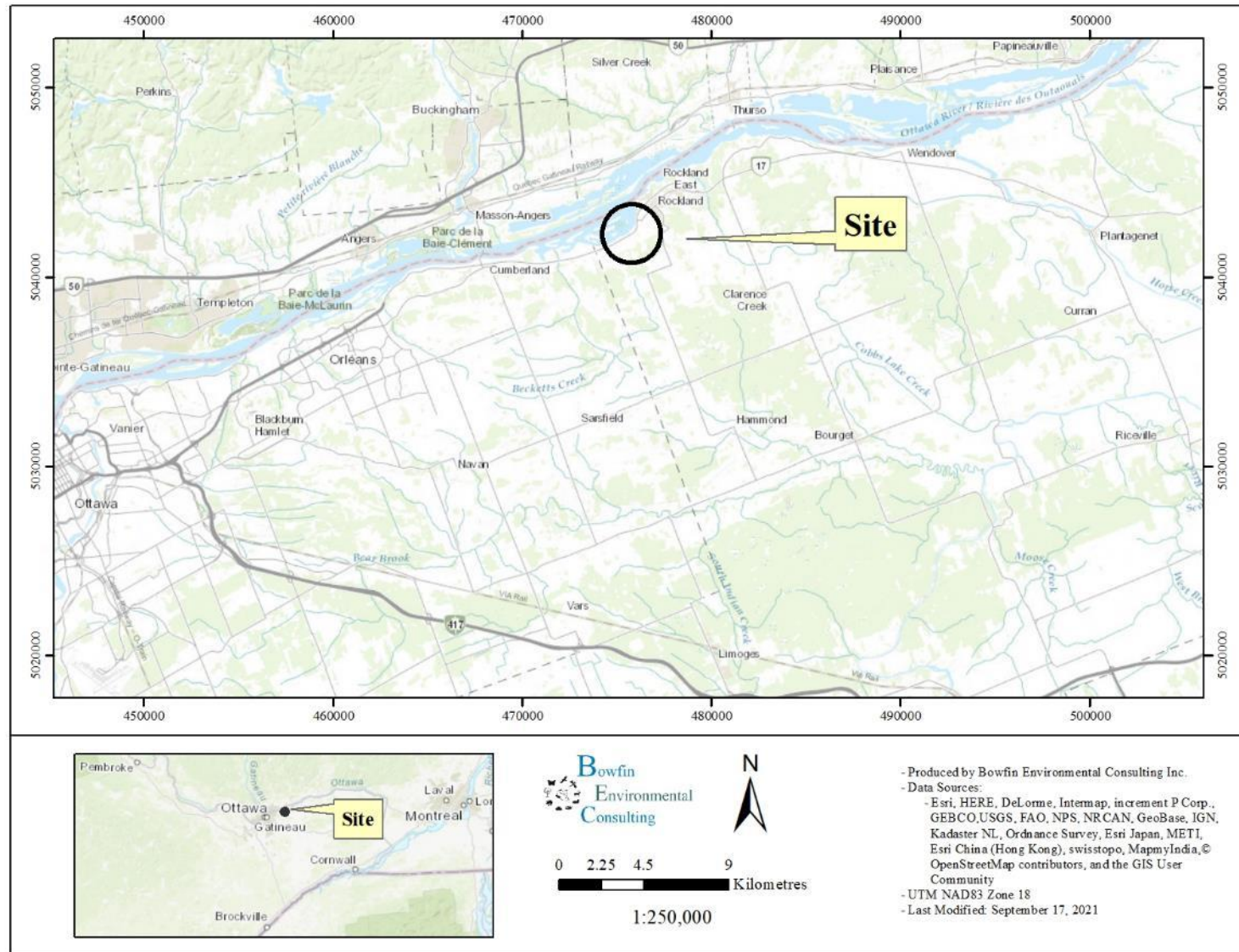
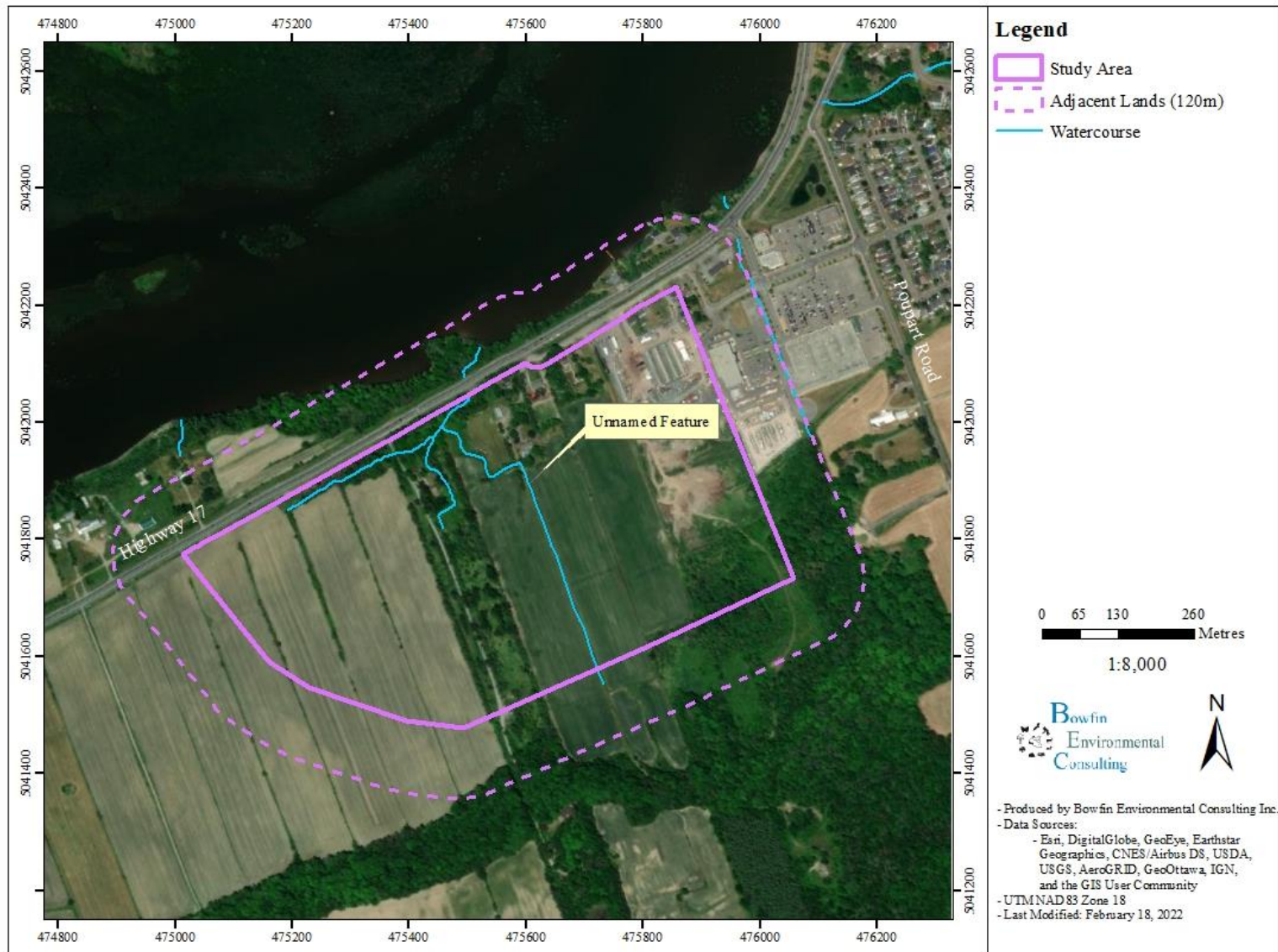


Figure 2: Study Area Detail



2.0 METHODS

2.1 Study Area

For the most part, the OP calls for an evaluation of the study area and the adjacent 120 m. This is widened when analysing the potential for species at risk (SAR) as their protected habitats vary with the species being considered.

2.2 Background Review

Information presented in the Clarence-Rockland and the United Counties of Prescott and Russell Official Plans was reviewed along with information collected from outside sources. The goal was to help inform the functions of known or potential features. Outside sources included: Natural Heritage Information Centre (NHIC) database, iNaturalist, Atlas of Breeding Birds of Ontario (ABBO), Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Mapping, Make-a-Map Land Information Ontario (LIO), and LIO databases. Information from personal knowledge and observations of the area for other unrelated projects has also been included as appropriate.

3.0 BACKGROUND INFORMATION

3.1 Location

These lands are situated of South of Highway 17, just west of Poupart Road. It is in part of Lot 32-34, Concession 1 (O.S), in the City of Clarence-Rockland (centroid - UTM 18T 475630 m E; 5042010 m N, and Latitude 45.53169 Longitude -75.31147). It is bordered by Highway 17 and the Ottawa River to the north, agricultural land to the south and west, and commercial area to the east.

3.2 Review of Official Plans and Provincial Mapping of Natural Heritage Features

The schedules associated with the Clarence-Rockland Official Plan Schedule A and UCPR Official Plan Schedule B do not identify any natural features within the study area. They do note the following within the adjacent lands:

- Fish habitat 60 m north of County Road 17, along the Ottawa River
- Candidate: Life Sciences ANSI Baie Lafontaine Islands 30 m north along County Road 17, in the Ottawa River.
- Significant woodlands 20 m south-west.

No other significant natural features are noted on the schedules, in or within 120 m of the site.

Further afield, UCPR Schedule B identifies a wildlife travel corridor (1 km south), wintering area, and provincially significant wetland (Baie Lafontaine) (290 m to the north).

Table 1: Summary of Available Background Information on the Identified Natural Features (PSW, Woodlands, Valleylands, ANSIs, ESA, SWH, and Fish Habitat)

Natural Heritage Feature	Present within Site	Present within 120 m of Site	Additional Notes
Provincially Significant Wetlands (PSW)	No		Baie Lafontaine (290 m north)
Areas of Natural and Scientific Interest (ANSIs)	No	Baie Lafontaine Islands, Candidate ANSI, Life Sciences (30 m north)	None
Habitats or species designated by ESA (Provincial)	Potential for endangered or threatened species needs to be determined following assessment of the suitable habitats in or near the site. See section 5 of this report for more information.		None
Significant Woodlands	No	Schedule B identifies significant woodlands 20 m southeast of site	None
Significant Valleylands	None identified on OP		None
Significant Wildlife Habitat (SWH)	UCPR indicates none (settlement area as such no site specific review needed during future EIS processes) City of Clarence-Rockland OP does not identify any.		None
Fish Habitat	There is one unnamed feature to the Ottawa River, with several branches extending into the Study Area as well as a pond. These along with any other aquatic feature (natural or artificial) are assumed to be fish habitat.		Ottawa River 70 m north None

Figure 3: Official Plan Schedule A (City of Clarence-Rockland)

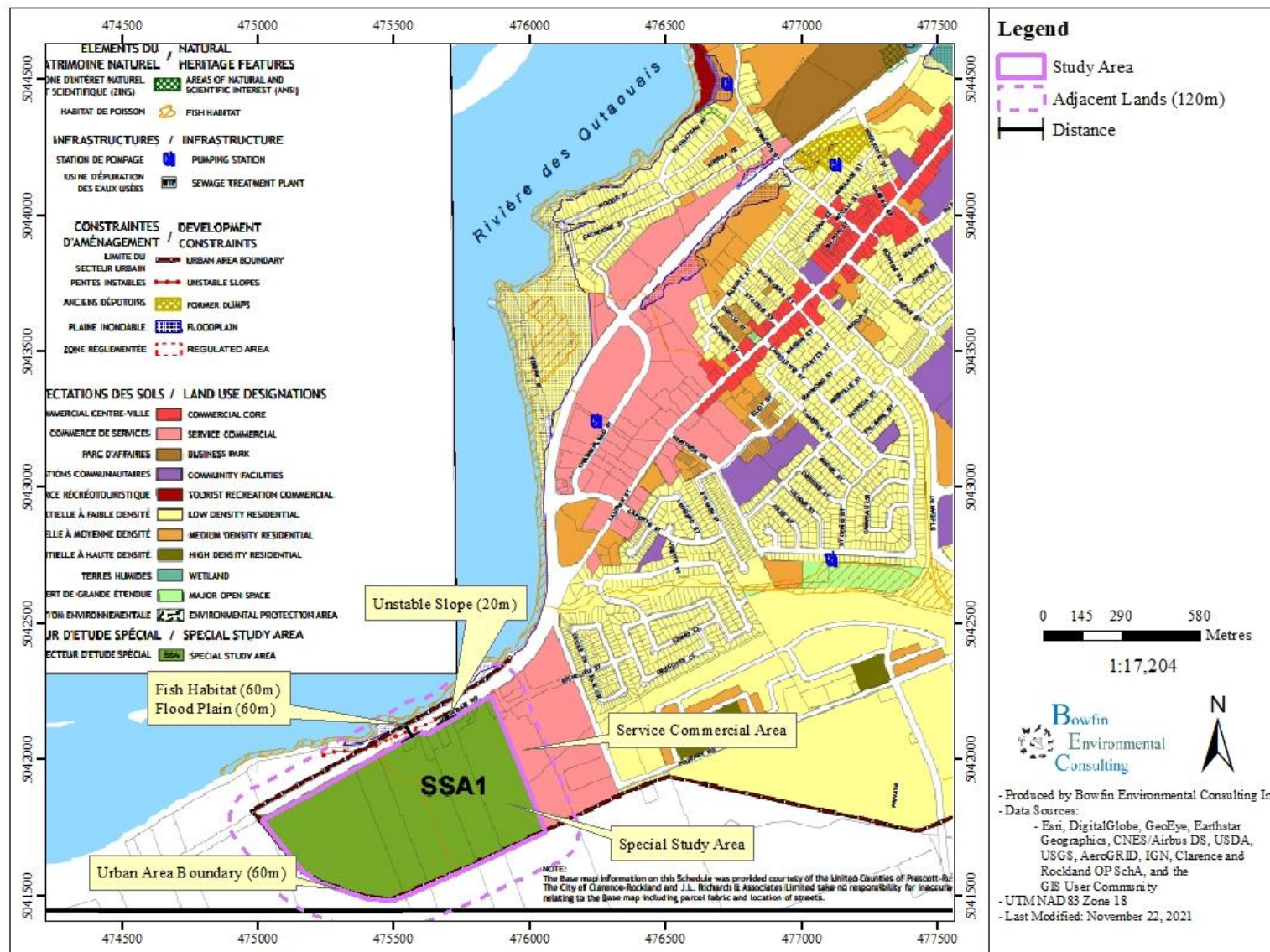
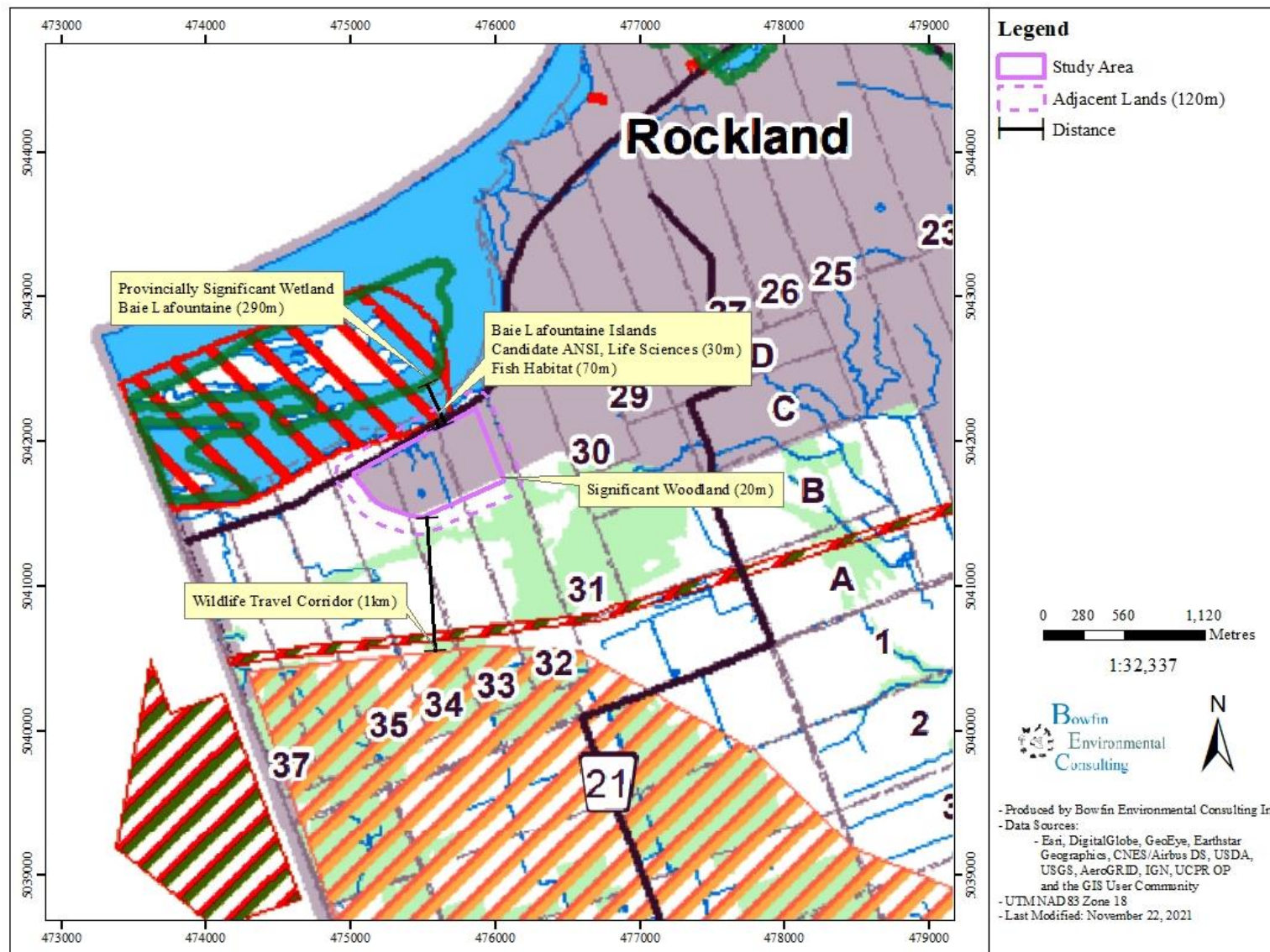


Figure 4: Official Plan Schedule B (United Counties of Prescott and Russell)

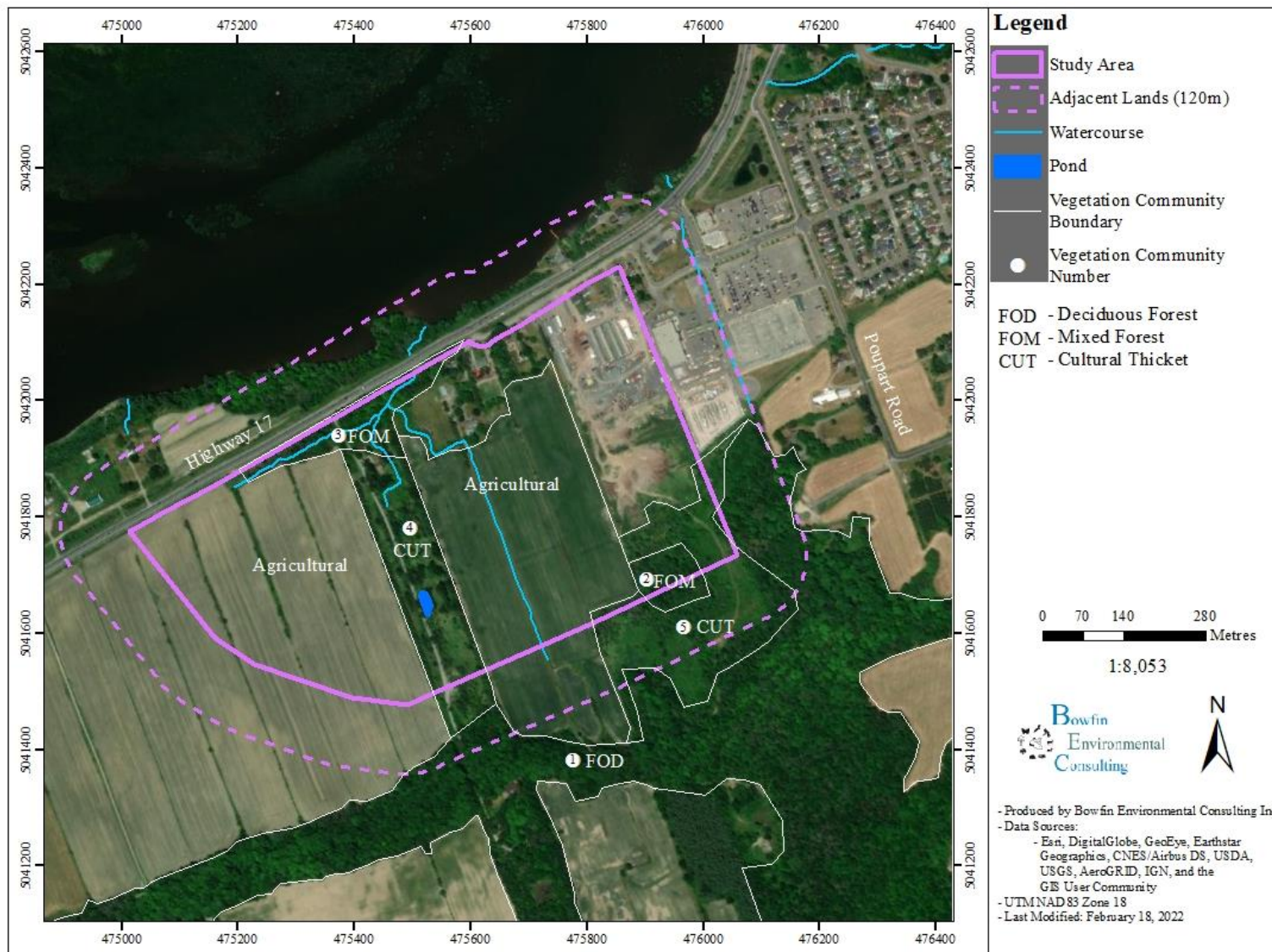


3.3 Desktop Review of Vegetation Communities

Since this was completed via a desktop review it is difficult to distinguish between very young forests or woodlands and thickets. That distinction is based on the species of woody vegetation, where tree species (any age, including seedlings) providing 35-60% cover would be woodland and those with 60% or more cover would be classed as forest. Whereas habitats that did not contain trees (of any ages) but had more than 25% cover by shrub species would be cultural thickets.

The study area is primarily agricultural fields and developed. In the center of the study area there appears to be cultural thicket community bordered by mixed forest to its north and deciduous forest to its south. A small pond feature is seen on images, immediately east of the private laneway, in the cultural thicket. Another cultural thicket could be present on the southeast corner of the study area which surrounds a deciduous forest then extends into the adjacent lands (Figure 2).

Figure 5: Desktop Vegetation Community Analysis



Deciduous Forest

Community 1

This community has a small section on the southeast side of the site and the adjacent lands but extends offsite covering an area of 120 ha. The satellite imagery suggests a closed-canopy deciduous forest dominates the site. The general feel was for a deciduous forest that provided 80% canopy cover. Much of this community forms part of the Significant Woodland as shown on the OP schedules.

Mixed Forest

Community 2

This small mixed forest is surrounded by agricultural land to the east and cultural thicket on the north, south, and west. It is entirely within the Settlement Area and appears to be separated from the above discussed Significant Woodland by a Cultural Thicket. This little community is estimated to be 1.1 ha in size. The tree canopy appears to provide around 70% canopy cover. Being within the Settlement Area, it is not part of the Significant Woodland layer.

Community 3

This narrow 2.2 ha community borders the Highway 17 to the north and Community 4 to the south. There is a single lot development immediately south of this community. On its western side is a mixed patch which is separated from the eastern side by a driveway. On the east is a narrow strip of conifers along the north separated from a patch of deciduous trees to the south by an area cleared for power lines. The community is in the Settlement Area and is not part of a Significant Woodland. While narrow (width between 20 m and 85 m), the background mapping does show potential fish habitat travelling through this community as such the vegetation may provide buffer to fish habitat.

Cultural Thicket

Community 4

This 4.8 ha community runs down the center of the site between agricultural fields. It has coniferous hedgerows on its eastern and western edges with patchy shrub cover in between. There are a few pockets of what appears to be trees species (deciduous forest or cultural woodlands), but overall this appears to be an old agricultural field that is naturalizing. There is a pond and a fish habitat (watercourse) shown within this community in the OP schedules.

Community 5

This 7.0 ha cultural thicket community is on the southeastern edge of site. It borders agricultural fields to the northwest and deciduous forest to the southeast. Review of the satellite images for

the area notes this is also an old agricultural field that is naturalizing. It has been listed as a thicket but depending on the actual species may form part of a woodland or forest.

3.4 Fish Habitat and Fish Communities

As shown on Figure 6, the background review identified the Ottawa River and one unnamed feature flowing into the Ottawa River. LIO identified 75 species as occurring this section of the Ottawa River (Table 2).

There was no information available on the tributary (labelled as Unnamed Feature) to the Ottawa River's classification or its fish community.

The DFO National Aquatic Species at Risk Mapping (NASAR) also indicates that there are no recordings of federal endangered, threatened, or special concern in this area (Appendix A).

Table 2: Background Fish Community Information from LIO Databases

Species Name	Scientific Name	Trophic Class	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Ottawa River	Reference
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	nonfeeding, herbivore	cool	SNR	SC	SC	Y	LIO, 2018
Silver Lamprey	<i>Ichthyomyzon unicuspis</i>	Parasite, herbivore/ detritivore	cool	S3	SC	SC	Y	LIO, 2018
American Brook Lamprey	<i>Lethenteron appendix</i>	nonparasitic filterer, adults do not feed, herbivore	cold	S3			Y	LIO, 2018
Lake Sturgeon	<i>Acipenser fulvescens</i>	invertivore herbivore	cool	S2	END		Y	LIO, 2018
Longnose Gar	<i>Lepisosteus osseus</i>	carnivore	warm	S4			Y	LIO, 2018
American Eel	<i>Anguilla rostrata</i>	invertivore carnivore	cool	S1?	END		Y	LIO, 2018
Alewife	<i>Alosa pseudoharengus</i>	planktivore	cold	SNA			Y	LIO, 2018
American Shad	<i>Alosa sapidissima</i>	planktivore	cool	S1			Y	LIO, 2018
Mooneye	<i>Hiodon tergisus</i>	invertivore	cool	S4			Y	LIO, 2018
Brown Trout	<i>Salmo trutta</i>	invertivore carnivore	cold/cool	SNA			Y	LIO, 2018
Cisco (Lake Herring)	<i>Coregonus artedii</i>	planktivore invertivore	cold	S5			Y	LIO, 2018
Rainbow Smelt	<i>Osmerus mordax</i>	invertivore carnivore	cold	S5			Y	LIO, 2018
Northern Pike	<i>Esox lucius</i>	carnivore	cool	S5			Y	LIO, 2018
Muskellunge	<i>Esox masquinongy</i>	carnivore	warm	S4			Y	LIO, 2018
Central Mudminnow	<i>Umbra limi</i>	invertivore	cool	S5			Y	LIO, 2018
Spotfin Shiner	<i>Cyprinella spiloptera</i>	invertivore herbivore	warm	S4			Y	LIO, 2018
Common Carp	<i>Cyprinus carpio</i>	invertivore detritivore	warm	SNA			Y	LIO, 2018
Cutlip Minnow	<i>Exoglossum maxillingua</i>	invertivore	warm	S1S2	THR	SC	Y	LIO, 2018
Brassy Minnow	<i>Hybognathus hankinsoni</i>	planktivore detritivore	cool	S5			Y	LIO, 2018
Eastern Silvery Minnow	<i>Hybognathus regius</i>	herbivore detritivore	warm	S2	NAR		Y	LIO, 2018
Common Shiner	<i>Luxilus cornutus</i>	invertivore	cool	S5			Y	LIO, 2018

Species Name	Scientific Name	Trophic Class	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Ottawa River	Reference
Northern Pearl Dace	<i>Margariscus nachtriebi</i>	invertivore carnivore	cool	S5			Y	LIO, 2018
Golden Shiner	<i>Notemigonus crysoleucas</i>	invertivore herbivore	cool	S5			Y	LIO, 2018
Emerald Shiner	<i>Notropis atherinoides</i>	planktivore	cool	S5			Y	LIO, 2018
Blackchin Shiner	<i>Notropis heterodon</i>	invertivore	cool	S4	NAR		Y	LIO, 2018
Spottail Shiner	<i>Notropis hudsonius</i>	invertivore planktivore	cool	S5			Y	LIO, 2018
Rosyface Shiner	<i>Notropis rubellus</i>	invertivore detritivore herbivore	warm	S4	NAR		Y	LIO, 2018
Sand Shiner	<i>Notropis stramineus</i>	invertivore detritivore	warm	S4			Y	LIO, 2018
Mimic Shiner	<i>Notropis volucellus</i>	invertivore herbivore	warm	S5			Y	LIO, 2018
Northern Redbelly Dace	<i>Chrosomus eos</i>	invertivore planktivore	cool	S5			Y	LIO, 2018
Finescale Dace	<i>Chrosomus neogaeus</i>	invertivore planktivore	cool	S5			Y	LIO, 2018
Bluntnose Minnow	<i>Pimephales notatus</i>	detritivore	warm	S5	NAR		Y	LIO, 2018
Fathead Minnow	<i>Pimephales promelas</i>	detritivore invertivore	warm	S5			Y	LIO, 2018
Western Blacknose Dace	<i>Rhinichthys obtusus</i>	invertivore	cool	S5			Y	LIO, 2018
Longnose Dace	<i>Rhinichthys cataractae</i>	invertivore	cool	S5			Y	LIO, 2018
Creek Chub	<i>Semotilus atromaculatus</i>	invertivore carnivore	cool	S5			Y	LIO, 2018
Fallfish	<i>Semotilus corporalis</i>	invertivore carnivore	cool	S4			Y	LIO, 2018
Longnose Sucker	<i>Catostomus catostomus</i>	invertivore	cold	S5			Y	LIO, 2018
White Sucker	<i>Catostomus commersonii</i>	invertivore detritivore	cool	S5			Y	LIO, 2018
Quillback	<i>Carpoides cyprinus</i>	invertivore detritivore	cool	S4			Y	LIO, 2018
Silver Redhorse	<i>Moxostoma anisurum</i>	invertivore	cool	S4			Y	LIO, 2018
River Redhorse	<i>Moxostoma carinatum</i>	invertivore	cool	S2	SC	SC	Y	LIO, 2018

Species Name	Scientific Name	Trophic Class	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Ottawa River	Reference
Shorthead Redhorse	<i>Moxostoma macrolepidotum</i>	invertivore	warm	S5			Y	LIO, 2018
Greater Redhorse	<i>Moxostoma valenciennesi</i>	invertivore	warm	S3			Y	LIO, 2018
Yellow Bullhead	<i>Ameiurus natalis</i>	invertivore carnivore	warm	S4			Y	LIO, 2018
Brown Bullhead	<i>Ameiurus nebulosus</i>	invertivore herbivore carnivore	warm	S5			Y	LIO, 2018
Channel Catfish	<i>Ictalurus punctatus</i>	invertivore carnivore	warm	S4			Y	LIO, 2018
Stonecat	<i>Noturus flavus</i>	invertivore carnivore	warm	S4			Y	LIO, 2018
Tadpole Madtom	<i>Noturus gyrinus</i>	invertivore planktivore	warm	S4			Y	LIO, 2018
Margined Madtom	<i>Noturus insignis</i>	invertivore	warm	SU			Y	LIO, 2018
Trout-perch	<i>Percopsis omiscomaycus</i>	invertivore carnivore	cold	S5			Y	LIO, 2018
Burbot	<i>Lota lota</i>	invertivore carnivore	cold	S5			Y	LIO, 2018
Banded Killifish	<i>Fundulus diaphanus</i>	invertivore planktivore	cool	S5	NAR		Y	LIO, 2018
Brook Silverside	<i>Labidesthes sicculus</i>	planktivore invertivore	warm	S4			Y	LIO, 2018
Brook Stickleback	<i>Culaea inconstans</i>	planktivore invertivore	cool	S5			Y	LIO, 2018
Ninespine Stickleback	<i>Pungitius pungitus</i>	planktivore	cool	S5			Y	LIO, 2018
Mottled Sculpin	<i>Cottus bairdii</i>	invertivore	cool	S5			Y	LIO, 2018
Slimy Sculpin	<i>Cottus cognatus</i>	invertivore	cold	S5			Y	LIO, 2018
Rock Bass	<i>Ambloplites rupestris</i>	invertivore carnivore	cool	S5			Y	LIO, 2018
Pumpkinseed	<i>Lepomis gibbosus</i>	invertivore carnivore	warm	S5			Y	LIO, 2018
Bluegill	<i>Lepomis macrochirus</i>	invertivore	warm	S5			Y	LIO, 2018
Northern Sunfish	<i>Lepomis peltastes</i>	invertivore	warm	S3	SC	SC	Y	LIO, 2018
Smallmouth Bass	<i>Micropterus dolomieu</i>	invertivore carnivore	cool	S5			Y	LIO, 2018

Species Name	Scientific Name	Trophic Class	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Ottawa River	Reference
Largemouth Bass	<i>Micropterus salmoides</i>	invertivore carnivore	warm	S5			Y	LIO, 2018
White Crappie	<i>Pomoxis annularis</i>	invertivore carnivore	warm	S4			Y	LIO, 2018
Black Crappie	<i>Pomoxis nigromaculatus</i>	invertivore carnivore	cool	S4			Y	LIO, 2018
Iowa darter	<i>Etheostoma exile</i>	invertivore	cool	S5			Y	LIO, 2018
Fantail Darter	<i>Etheostoma flabellare</i>	invertivore	cool	S4			Y	LIO, 2018
Johnny Darter	<i>Etheostoma nigrum</i>	invertivore	cool	S5			Y	LIO, 2018
Tessellated Darter	<i>Etheostoma olmstedii</i>	invertivore	cool	S4	NAR		Y	LIO, 2018
Yellow Perch	<i>Perca flavescens</i>	invertivore carnivore	cool	S5			Y	LIO, 2018
Logperch	<i>Percina caprodes</i>	invertivore	warm	S5			Y	LIO, 2018
Sauger	<i>Sander canadensis</i>	invertivore carnivore	cool	S4			Y	LIO, 2018
Walleye	<i>Sander vitreus</i>	invertivore carnivore	cool	S5			Y	LIO, 2018
Freshwater Drum	<i>Aplodinotus grunniens</i>	invertivore carnivore	warm	S5			Y	LIO, 2018
Number of Species							75	
Y	Represents a species present in the respective watercourse							

(DFO, 2019; Bowfin, 2018; Eakins, 2018; LIO, 2018; MNRF, 2017; MTO, 2006)

Status Updated: October 2, 2018

SRANK DEFINITIONS

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

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

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

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

- S5 Secure, Common, widespread, and abundant in the nation or state/province.
SNR Unranked, Nation or state/province conservation status not yet assessed.
SU Unrankable, Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

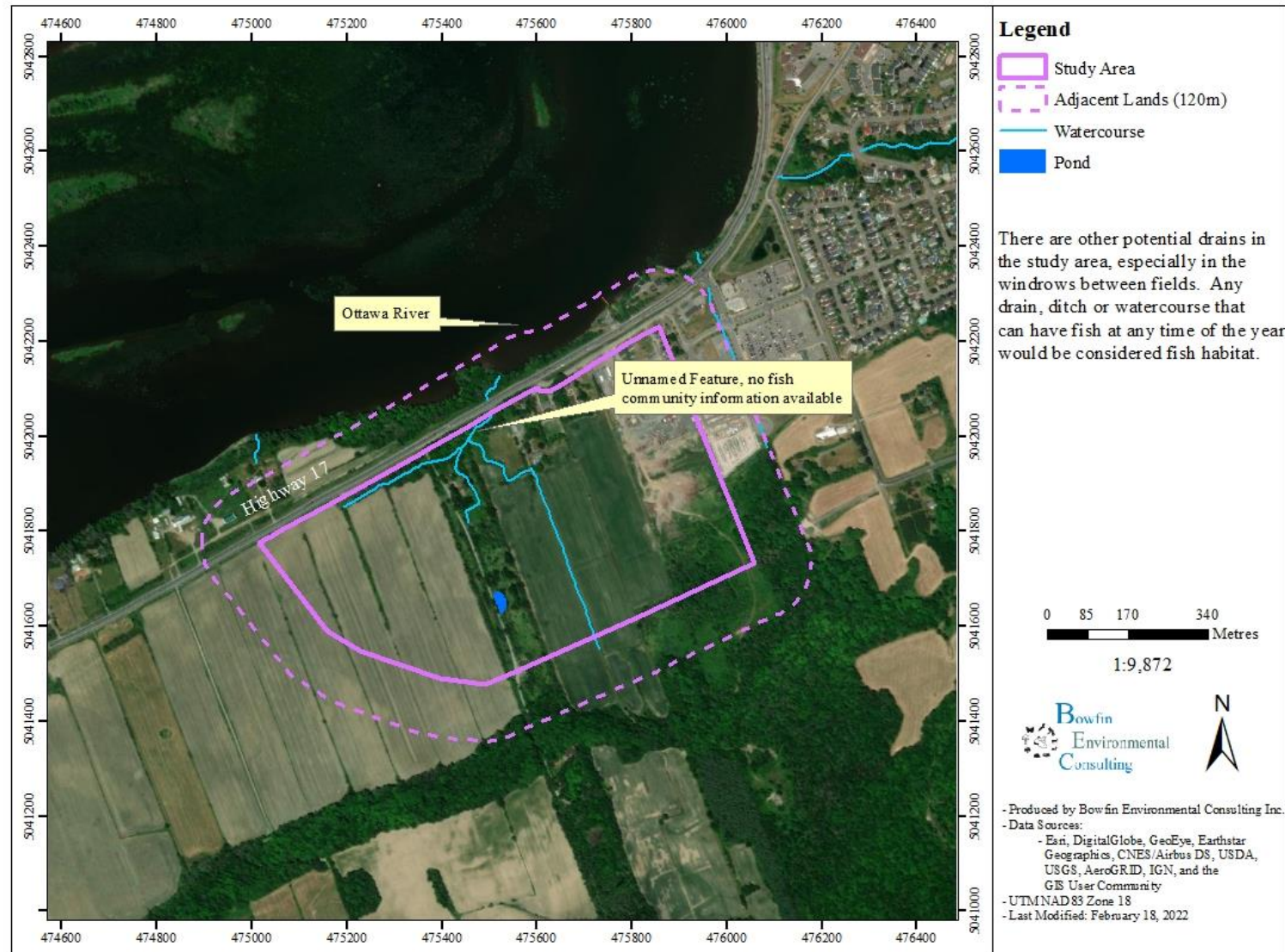
SARO STATUS DEFINITIONS

- END Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
SC Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

SARA STATUS DEFINITIONS

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

Figure 6: Background Fish Community and Habitat



4.0 REVIEW OF NATURAL HERITAGE FEATURES

The desktop review found that **none** of the following features were identified in the study area:

- provincially significant wetlands
- unevaluated wetlands
- coastal wetlands
- valleylands
- identified significant wildlife habitat
- Significant woodlands
- ANSIs

The UCPR identifies a significant woodland in the adjacent lands to the south of the proposed collector road. UCPR notes that only wildlife corridors and deer wintering yards are considered significant wildlife area in this area, and these are absent from the study area and adjacent lands.

Future Environmental Impact Studies (EIS) that will be required for proponents wishing to work within the study area will need to also look at the adjacent lands. With that in mind, the desktop identified significant woodlands to the south and, fish habitat, PSW, and an ANSI to the north of County Road 17 (in/on the Ottawa River).

The only identified **potential natural heritage features in the study area were:**

- Fish habitat in two identified watercourses and, while not mapped, any other permanent or seasonal ditch/drain that is connected to downstream fish habitat. If the pond is connected to downstream habitat, then it too could provide direct fish habitat. Confirmation of all potential fish habitat would require a site investigations.

Finally, with respect to Endangered and Threatened species/habitat, this will be an aspect that will need to be assessed by site specific investigations. However, we note that there maybe some opportunities associated with Endangered and Threatened that the City may wish to investigate now. These are discussed further in the sections below.

4.1 Endangered and Threatened Species

4.1.1 Species Discussion

Terrestrial and wetland Endangered and Threatened Species at Risk, on private land, are protected under provincial *Endangered Species Act* (ESA). It is noted that bird species protected under the *Species at Risk Act* (SARA) are protected by the *Migratory Bird Convention Act* (MBCA) on private lands. Fish (fish and mussels) Endangered and Threatened species are

protected in all watercourses under ESA and SARA. To identified potential opportunities, databases were consulted to create a list of Endangered and Threatened species that would be considered for this study area. It is important to note that this is based on the species listed in Ontario Regulation 230/08 (last updated August 1, 2018). The purpose of this section is to consider the habitats in the study area and make recommendations on opportunities. The opportunities could involve the dedication of property or purchasing property that could be used to support endangered and threatened species and their habitat. It is noted that when this is done, and implemented, these lands would be subject to constraints under ESA, as applicable to the species.

As discussed in the methods, the list was compiled using various sources. The NHIC database provides information available to the public on those SAR documented as occurring within the general area. It should be noted that not all information for all species is available to the public. Furthermore, the absence of a recording does not necessarily indicate that the species is absent from the area. The purpose of the NHIC database is to serve as a guide to help determine the potential species which may occur within the project area. The background review included looking at the list of birds observed as part of the Atlas of Breeding Birds of Ontario (ABBO) and any SAR species listed on these lists were considered as potentially occurring within the study area. Added to this list were species that based on personal experience, often occur within the general area. Species that would be restricted to the Ottawa River are not included (i.e. hickorynut (a mollusc), lake sturgeon, American eel and cutlip minnow (all fish)). The resulting list includes 11 SAR: 6 birds (eastern whip-poor-will, chimney swift, bank swallow, barn swallow, bobolink, and eastern meadowlark), 4 mammals (little brown myotis, northern myotis, eastern small-footed myotis, and the tri-colored bat), and 1 plant (butternut) (Table 3).

Birds

Through the background review, five species of birds were listed as potentially occurring: eastern whip-poor-will, chimney swift, barn swallow, bobolink, and eastern meadowlark. These species are discussed below.

Eastern Whip-poor-will

The whip-poor-will is a well camouflaged species can be found in a multitude of forest types. Its requirements consist of areas that are semi-open forests or sites with a closed forest intermixed with other open habitats. It also needs some areas with little ground cover. Its minimum habitat size requirement is 9 ha (COSEWIC, 2009b). The *General Habitat Description for Eastern Whip-poor-will* (MNR on-line document) indicates that the protected habitat for this species includes three categories:

Category 1 known nests and 20 m of the nest

- | | |
|------------|--|
| Category 2 | the area between 20 m and 170 m from the nest or the approximate centre of the defended territory |
| Category 3 | the area of suitable habitat between 170 m and 500 m of the nest or approximate centre of the defended territory |

While the presence of eastern whip-poor-will in the UCPR is low, it is known to occur much further to the south and east of Rockland. There is very little woodlands in the study area, and these have mostly been impacted by the previous clearing activity and consist of very young, regenerating stands. Any woodland or treed area (regardless of whether it is classed as a significant woodland could provide habitat to this species. Typically the minimum stand size is roughly 9 ha, but this is not a firm rule. While the remnant stands within the study area are too small, those in the adjacent lands are appropriate. These include the lands that would need to be cleared for the Collector Road. If the species is present, this could result in restrictions on land uses in the study area. The restrictions would be dependent on the approximate location of the defended territories in relation to the study area (see distances associated with the Category 1-3 habitats).

Chimney Swift

There are no occurrences noted for this species within 10 km; its nearest sightings are by Sarsfield and Navan. The Chimney Swift can often be found in developed areas and prefers to utilize structures such as large (>50 cm diameter) trees or man-made structures such as chimneys for its nesting habitat (COSEWIC, 2007). The use of large trees is now considered a rare event and the documented occurrences have all been in trees that were <1 km from a waterbody (large enough to be shown on 1:50,000 topographical maps) (COSEWIC, 2007). While this Study Area is within 1 km of the Ottawa River, there appear to be few trees. That said, the woodland to be disturbed for the Collector Road would need to be investigated for this species. It is noted that Category 1 Chimney Swift habitat is the nesting structure (tree or chimney) and 90 m surrounding the structure (COSEWIC, 2007). Note that there is no Category 2 or 3 for this species.

Barn Swallow

The barn swallow can often be found nesting on man-made structures. Due to the structures on site this species nesting habitat could be present. Surveys would be required prior to impacting this species or its nest.

- | | |
|------------|--|
| Category 1 | The nest |
| Category 2 | Area within 5 m of the nest. |
| Category 3 | Area between 5 m and 200 m of the nest |

Bobolink (*Dolichonyx oryzivorus*)

This species is grassland-breeding-bird typically requiring a minimum of 4 ha of uncut meadow or field. The *Bobolink General Habitat Description* (OMNRF, 2018) indicates that the protected habitat for this species includes three categories:

- | | |
|------------|--|
| Category 1 | known nests and 10 m of the nest |
| Category 2 | the area between 10 m and 60 m from the nest or the approximate centre of the defended territory |
| Category 3 | the area of continuous suitable habitat between 60 m and 300 m of the nest or approximate centre of the defended territory |

This is a commonly observed species in UCPR. The background images showed that there were no meadow communities and much of the study area cropland which are not considered breeding habitat while under active agricultural uses. As such, this species and its habitat are considered absent while the lands are under active agricultural uses.

Eastern Meadowlark

Like the bobolink, this is a grassland breeding birds requiring a minimum of 4 ha of uncut meadow or field. The *General Habitat Description for Eastern Meadowlark* (OMNRF, 2018) indicates that the protected habitat for this species includes three categories:

- | | |
|------------|---|
| Category 1 | known nests and 10 m of the nest |
| Category 2 | the area between 10 m and 100 m from the nest or the approximate centre of the defended territory |
| Category 3 | the area of continuous suitable habitat between 100 m and 300 m of the nest or approximate centre of the defended territory |

This is a commonly observed species in UCPR. The background images showed that there were no meadow communities and much of the study area cropland which are not considered breeding habitat while under active agricultural uses. As such, this species and its habitat are considered absent while the lands are under active agricultural uses.

Bats

The potential SAR bats within the general area are: little brown myotis, northern myotis, eastern small-footed myotis and tri-colored bat. There are three types of habitats required by bats: hibernation, maternity sites and day-roost sites. The latter is not considered critical habitat.

These four bats species prefer to hibernate in caves or mines. They can hibernate in buildings but that is rare for these species (COSEWIC, 2013a). No caves or mines were present.

The northern myotis tends to prefer larger expanses of older forests (late successional or primary forests) and chose maternity sites in snags that are in the mid-stage of decay. They prefer habitat with intact interior habitat and is shown to be negatively correlated with edge habitat (Menzel et al., 2002; Broders et al., 2006; Yates et al., 2006; OMNRF, 2015). This habitat is absent from the study area.

The recovery strategy for the eastern small-footed myotis indicates that the preferred maternity habitat of this species consists of open rock habitats and that it rarely uses old buildings as roosting/maternity sites (Humphrey, 2017). There was no suitable rocky habitat present. Based on this information, this species' maternity sites are considered absent.

The Atlas of Mammals of Ontario (Dobbyn, 1994) suggests that the tri-colored bat is not present within this part of Ontario however, the NatureServe mapping in the COSSARO (2015) includes all of southeastern Ontario. Though there is also a new recording of a potential individual across the river in Quebec on iNaturalist. They prefer caves for hibernacula and use old trees or buildings for summer maternity colonies (COSEWIC 2013). Based on this information, this species is considered to have a low potential of occurring, unless suitable habitat is bound in the ridge of the adjacent lands.

Finally, the little brown myotis has a potential for using the study area for maternity sites. Current guidance from MECP for this area is that habitat is not a limiting factor and that provided that avoidance measures can be implemented, that there would be no contravention of ESA for the removal of maternity or candidate maternity habitat. Note that this recommendation is subject to change.

There also remains the potential for various species to utilise the trees on-site for day-roosts. The current bat active season is April 1 to September 30 and restrictions to activities that could impact these species are in force during this period. Also note that should the ridge line provide cavities in rock, then there could be a potential for hibernacula (or as mentioned above breeding habitat for tri-colored bat). These are very sensitive and strictly protected. That habitat is outside of the study area but within the adjacent lands.

Plants

Butternuts

This species is common in UCPR. Butternut is listed as an endangered species federally signifying that it is at risk of becoming Extinct or Extirpated in Ontario and in Canada. Butternut is a shade intolerant species that is often found along edge habitats on rich, moist, well-drained loams or well-drained gravels (COESWIC, 2003). The butternut is threatened by a canker for

which there is no known control (COESWIC, 2003). There is a potential for butternuts in any habitat that is not under active crop uses or mowed.

4.1.2 SAR Conclusion

The background review were able to confirm the lack of suitable habitat for some of the potential SAR for the area. Those that remain are:

- Eastern whip-poor-will could use the deciduous forests to the southeast
- Chimney swifts and barn swallow could use the structures on site
- Bobolink and eastern meadowlark only if any of the agricultural fields are planted in hay or cereal crop, and ESA would apply if they were left fallow.
- Potential for bats remain in the larger forested areas and larger individual trees as well as in the ridge line is caves are present.
- Butternuts in any communities that are not actively and annually maintained through mowing or crops

Table 3: Summary of Potential SAR

Common Name	Scientific Name	Preferred Habitat	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	References	MECP Guidelines/Triggers for Review	Brought Forward (Yes/No)
BIRDS								
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Rock or sand barrens with scattered trees, savannahs, old burns or other disturbed sites in a state of early to mid-forest succession, or open conifer plantations.	S4B	THR	THR	COSEWIC, 2013; Menzel et al., 2002; Broders et al., 2006; OMNRF, 2015	Forests to the south east may provide habitat for this species	Yes
Chimney Swift	<i>Chaetura pelagica</i>	Cities, towns, villages, rural, and wooded areas.	S4B, S4N	THR	THR	COSEWIC 2007a	May use structures within the study area	Yes
Bank Swallow	<i>Riparia riparia</i>	This species nests within vertical banks, with a preference for sand-silt substrate. Nesting sites may be near open upland habitats.	S4B	THR	THR	Eder 2002	No suitable banks within the study area	No
Barn Swallow	<i>Hirundo rustica</i>	Open or semi-open lands: farms, field, marshes.	S4B	SC	THR	COSEWIC 2017	May use structures within the study area	Yes
Bobolink	<i>Dolichonyx oryzivorus</i>	Primarily in forage crops, and grassland habitat.	S4B	THR	THR	COSEWIC 2010	May occur if agricultural fields are planted in hay or cereal crop but are only protected under the Act if not in active use	Yes
Eastern Meadowlark	<i>Sturnella magna</i>	Fields, meadows and prairies.	S4B	THR	THR	COSEWIC 2011		
MAMMALS								
Little Brown Myotis	<i>Myotis lucifugus</i>	Buildings, attics, roof crevices and loose bark on trees or under bridges. Always roost near waterbodies.	S4	END	END	COSEWIC 2013a	MECP recommends the use of avoidance timing window for clearing of trees (>10 cm in diameter) if this can be accomplished then no impacts.	Yes
Northern Myotis	<i>Myotis septentrionalis</i>	Older (late successional or primary forests) with large interior habitat.	S3	END	END	COSEWIC 2013a, Broders et al, 2006, Menzel et al. 2002		

Common Name	Scientific Name	Preferred Habitat	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	References	MECP Guidelines/Triggers for Review	Brought Forward (Yes/No)
Eastern Small-footed Myotis	<i>Myotis leibii</i>	Found within deciduous or coniferous forests in hilly areas.	S2, S3	END		Eder 2002	potential to offer more sensitive bat habitat if caves/crevices are present.	
Tri-colored Bat	<i>Perimyotis subflavus</i>	Prefers shrub habitat or open woodland near water.	S3?	END	END	COSEWIC 2013a		
PLANTS								
Butternut	<i>Juglans cinerea</i>	Variety of sites, grows best on well-drained fertile soils in shallow valleys and on gradual slopes	S2?	END	END	COSEWIC 2003	May be present in any communities outside of the crop or mowed lawns	Yes

Status Updated August 1, 2020

SRANK DEFINITIONS

- S1** Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
- S2** Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
- S3** Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4** Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- ?** Inexact Numeric Rank—Denotes inexact numeric rank
- S#S#** Range Rank, A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
- S#B** Breeding

SARO STATUS DEFINITIONS

- END** Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
- THR** Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
- SC** Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

SARA STATUS DEFINITIONS

- END** Endangered, a wildlife species facing imminent extirpation or extinction.

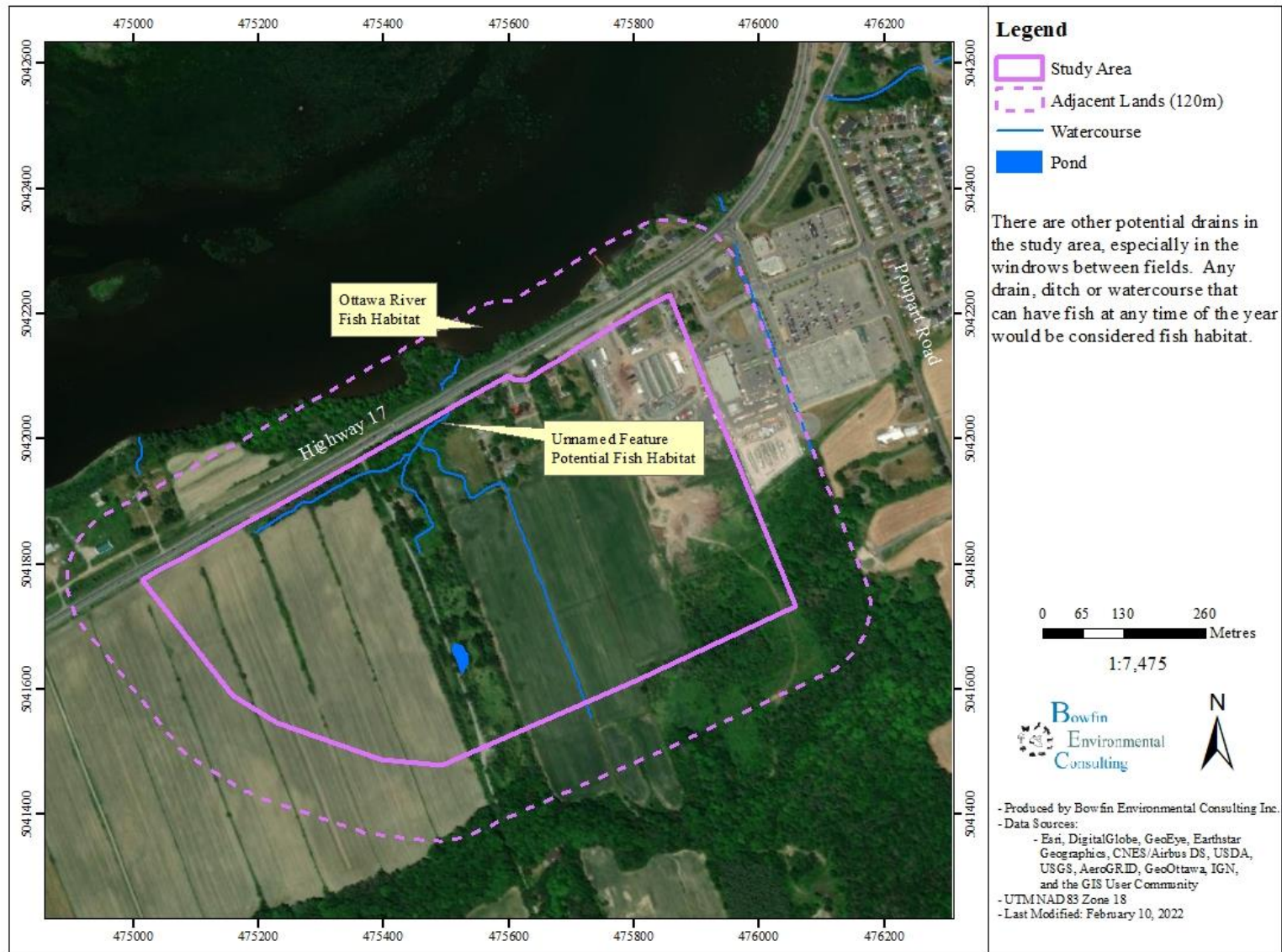
THR Threatened, a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
SC Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

4.2 Fish Habitat

The potential fish habitat within the study area includes the Unnamed Feature, its branches, the pond (if connected to fish habitat), and any smaller (not identified herein) agricultural drains/ditches. The potential use of these by fish, any species, at any time of the year, is unknown. They have all assumed to be fish habitat.

The PPS states that development will not take place within fish habitat unless provincial and federal requirements are met (PPS, 2020). The NHRM specifies that the minimum natural vegetation buffer to fish habitat can be reduced from 30 m to 15 m for warm water systems and to 20 m for cool water systems.

Figure 7: Potential Fish Habitat



4.4 Areas of Natural and Scientific Interest

The Baie Lafontaine Islands, Candidate ANSI, Life Sciences are located 30 m north of the site, in the adjacent lands. The information provided by LIO is summarized below (Table 4). As it is across Highway 17 and listed as non sensitive it is unlikely to be affected by any work conducted in the Study Area. It overlaps with the Baie Fontaine provincially significant wetland which is located 290 m north of site.

Table 4: ANSI Information

Name	Type	Significance	Sensitivity
Baie Lafontaine Islands	Candidate, Life Sciences	Regional	Non-Sensitive

5.0 CONSTRAINTS and OPPORTUNITIES

There are two larger communities that are naturalizing; the old agricultural field that was labelled as Cultural Thicket (labelled as Opportunity A on Figure 8), and the Cultural Thicket/Forest on the southeast side (labelled as Opportunity C). Opportunity A also has the pond feature. In addition, there is the setback from what is labelled the Unnamed Features which are assumed to be fish habitat (Opportunity B). The functions of these three opportunities should be carefully considered and are discussed below.

The following comments are based on the evaluation process under the *Natural Heritage Reference Manual* (OMNR, 2005) on the **suitability of opportunities as Significant Woodland**.

- A separation of 20 m in canopy between the opportunities and the existing Significant Woodland to the south would create a separation in stands.
- If the collector road is 20 m wide or greater, then the value of any woodland to the north would be based on that stand and a minimum size to be considered. The available area is <5 ha for all three opportunities. In this area the existing cover is 26%. As such, the minimum stand size is 20 ha for the size criteria. Also note that the minimum width of a treed area to be considered part of a woodland stand is 40-60 m (depending on the size of the stand).
- Functions such as proximity, linkages, water protection, and woodland diversity all have a minimum stand size to be considered significant. The woodland interior for an area with 26% cover is stated as 2 ha in the NHRM, which none of these will meet (after a 100 m edge is removed). And the NHRM is not as clear on the other functions, simply provides an example of 0.5-20.0 ha. The recent guideline from the City of Ottawa suggest a minimum size of 5 ha in areas with 26% cover (see the City of Ottawa's

Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment).

- For the opportunities labelled as A and B, the north end includes an existing single lot and there is the County Road 17. The County Road, and the proposed Collector Road, make a linkage function for wildlife (apart from birds) undesirable because of the potential for road mortality. Options for wildlife passage culverts for smaller species at County Road 17 and the collector road could be explored.
- Based on the above, the opportunities would not likely result in a Significant Woodland being created.

The potential to create habitat for Endangered or Threatened species is another opportunity. The species most suitable for these lands would be Butternut. An area could be set aside for compensation habitat to be used by the City or Developers. Other jurisdictions have used this opportunity to help attract developers. To be suitable, the location of the Butternut plantings would need to be determined in advance and meet the minimum requirements under the Ontario Regulations 242/08. Currently this O.Reg states (April 1, 2021):

- “i. the soil must be greater than one metre deep, moist but well-drained and have a fine to medium texture with a recognizable organic layer and with a pH ranging from 6.8 to 7.2, and*
- ii. the area must provide full sunlight conditions to the butternut seedlings.*
- 6. *In order to avoid a monoculture of butternut, the person shall plant deciduous trees and shrubs that are not butternut seedlings and that are native to the area in which the seedlings are planted in such numbers to ensure that there are an equal number of butternut trees and other native Ontario species in the area.*
- 8. *No more than 200 butternut seedlings shall be planted in a hectare.*
- 9. *Butternut seedlings must be planted at least,*
 - i. three metres from other planted butternut seedlings,*
 - ii. two metres from other trees or shrubs that are likely to be the same height or shorter than the butternut tree at full growth,*
 - iii. four metres from other trees or shrubs that are likely to be taller than the butternut tree at full growth,*
 - iv. five metres from the canopy drip line of trees that are greater than four metres in heights at the time of planting, and*
 - v. 100 metres from a highway consisting of two or more lanes in either direction.”*

Further, the Category Habitat for Butternuts extend 50 m (radius) from the planting. As such, a protected buffer for the plantings would be required. Note that the protected buffer for the companion trees would be much smaller, simply sufficient to protect their critical root zones.

What may be more appropriate in this location is:

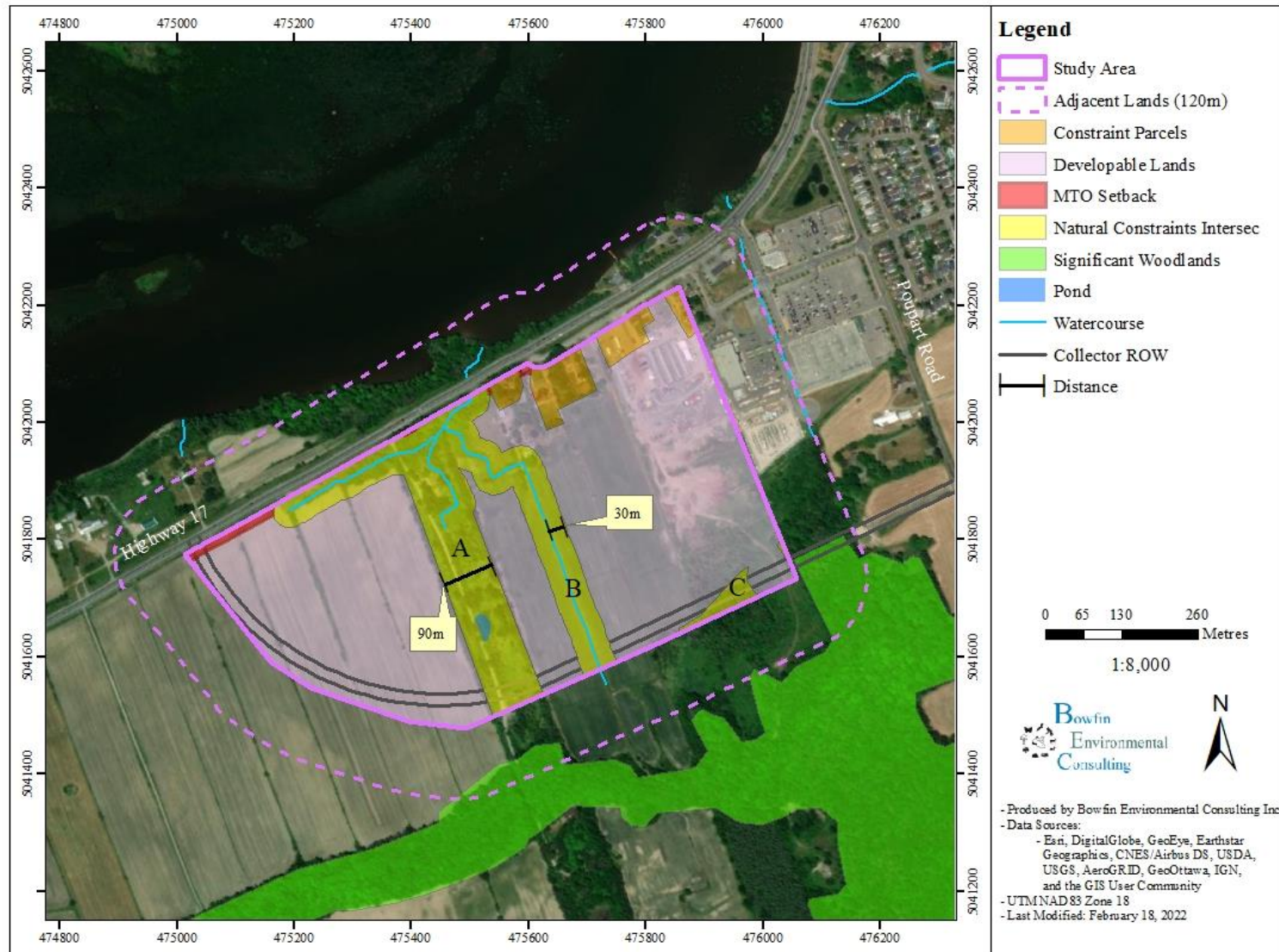
- Opportunities A and B also provide protection to possible fish habitat. The guidelines for constraints is 30 m (NRHF; OMNR, 2005) with an ability to reduce this to 15 m for warm-water features and 20 m for cool water system. It is recommended that this Secondary Plan determine whether 15 m or 20 m, as appropriate, would be acceptable

and publish this within the Plan to provide clear guidance. Of course, if upon investigations, these features are found not to contain fish at anytime of year, then the minimum buffers would no longer apply in terms of Fish Habitat.

- Opportunities A and B would both, likely benefit, from a landscaping plan that would be focused on native species (including native herbaceous seed mixes). This would line up nicely with the UPCR policy 5.5.6 with respect to Vegetation Cover. A minimum buffer could be established, regardless of the presence of fish, to serve as protection to the water quality. It may be necessary to indicate whether the potential for relocating these features and constraints would be acceptable (this would be acceptable from a Fish Habitat perspective provided that it was approved by DFO).
- Any of these communities could be enhanced with native species and vegetation including natural meadow communities including those that include butterflies such as Monarch.
- As mentioned above, while the opportunities would not meet the Significant Woodland criteria, safe linkages for small mammals could still be created between the Ottawa River and the Significant Woodland south of the site if the County Road 17 culverts offer Small Mammal/Reptile Passage. This could help discourage wildlife from crossing that busy roadway. If this is completed during the widening, then any culverts that may be placed in the Collector Road could also consider small mammal passage.

In conclusion, other than the Fish Habitat, there are no confirmed natural constraints. Again, the presence of Endangered or Threatened Species or their Habitat is not mapped or confirmed, though a list of potential species is discussed herein. But three opportunities for enhancements are shown. The City is encouraged to consider these areas for enhancements. This could be combined with more of an Urban Park type of landscapes but one with native species and communities.

Figure 8: Constraints and Opportunities



I trust that this report will meet your requirements. Should you have any questions or comments, please contact the undersigned.

Sincerely,

Michelle Lavictoire, Biologist

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Appendix A: Background Information

Atlas of the Breeding Birds of Ontario

Squares: 18VR74, 18VR64, 18VR63, 18VR73

Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
Canada Goose	<i>Branta canadensis</i>	Probable	S5	no status	no status
Wood Duck	<i>Aix sponsa</i>	Confirmed	S5	no status	no status
Gadwall	<i>Anas strepera</i>	Probable	S4	no status	no status
American Black Duck	<i>Anas rubripes</i>	Probable	S4	no status	no status
Mallard	<i>Anas platyrhynchos</i>	Confirmed	S5	no status	no status
Northern Shoveler	<i>Anas clypeata</i>	Possible	S4	no status	no status
Northern Pintail	<i>Anas acuta</i>	Possible	S5	no status	no status
Green-winged Teal	<i>Anas crecca</i>	Probable	S4	no status	no status
Blue-winged Teal	<i>Anas discors</i>	Probable	S4	no status	no status
Lesser Scaup	<i>Aythya affinis</i>	Probable	S4	no status	no status
Hooded Merganser	<i>Lophodytes cucullatus</i>	Possible	S5B,S5N	no status	no status
Common Merganser	<i>Mergus merganser</i>	Probable	S5B,S5N	no status	no status
Gray Partridge	<i>Perdix perdix</i>	Possible	SNA	no status	no status
Ruffed Grouse	<i>Bonasa umbellus</i>	Confirmed	S4	no status	no status
Wild Turkey	<i>Meleagris gallopava</i>	Confirmed	S5	no status	no status
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Possible	S4B, S4N	no status	no status
American Bittern	<i>Botaurus lentiginosus</i>	Confirmed	S4B	no status	no status
Great Blue Heron	<i>Ardea herodias</i>	Confirmed	S4	no status	no status
Green Heron	<i>Butorides virescens</i>	Probable	S4B	no status	no status
Turkey Vulture	<i>Cathartes aura</i>	Possible	S5B	no status	no status
Osprey	<i>Pandion haliaetus</i>	Confirmed	S5B	no status	no status
Northern Harrier	<i>Circus cyaneus</i>	Confirmed	S4B	no status	no status
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Possible	S5	no status	no status
Cooper's Hawk	<i>Accipiter cooperii</i>	Confirmed	S4	no status	no status
Northern Goshawk	<i>Accipiter gentilis</i>	Possible	S4	no status	no status
Broad-winged Hawk	<i>Buteo platypterus</i>	Possible	S5B	no status	no status
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Probable	S5	no status	no status
American Kestrel	<i>Falco sparverius</i>	Confirmed	S4	no status	no status
Virginia Rail	<i>Rallus limicola</i>	Confirmed	S5B	no status	no status
Sora	<i>Porzana carolina</i>	Probable	S4B	no status	no status
American Coot	<i>Fulica americana</i>	Possible	S4B	no status	no status
Killdeer	<i>Charadrius vociferus</i>	Confirmed	S5B, S5N	no status	no status
Spotted Sandpiper	<i>Actitis macularia</i>	Confirmed	S5	no status	no status
Upland Sandpiper	<i>Bartramia longicauda</i>	Confirmed	S4B	no status	no status
Common Snipe	<i>Gallinago delicata</i>	Probable	S5B	no status	no status
American Woodcock	<i>Scolopax minor</i>	Probable	S4B	no status	no status
Black Tern	<i>Chlidonias niger</i>	Confirmed	S3B	SC	no status

Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
Rock Pigeon	<i>Columba livia</i>	Confirmed	SNA	no status	no status
Mourning Dove	<i>Zenaida macroura</i>	Confirmed	S5	no status	no status
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Confirmed	S5B	no status	no status
Eastern Screech-Owl	<i>Megascops asio</i>	Possible	S4	no status	no status
Great Horned Owl	<i>Bubo virginianus</i>	Confirmed	S4	no status	no status
Short-eared Owl	<i>Asio flammeus</i>	Confirmed	S2N, S4B	SC	SC
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	Possible	S4	no status	no status
Whip-poor-will	<i>Caprimulgus vociferus</i>	Possible	S4B	THR	THR
Chimney Swift	<i>Chaetura pelagica</i>	Possible	S4B, S4N	THR	THR
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Probable	S5B	no status	no status
Belted Kingfisher	<i>Ceryle alcyon</i>	Confirmed	S4B	no status	no status
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Confirmed	S5B	no status	no status
Downy Woodpecker	<i>Picoides pubescens</i>	Confirmed	S5	no status	no status
Hairy Woodpecker	<i>Picoides villosus</i>	Confirmed	S5	no status	no status
Northern Flicker	<i>Colaptes auratus</i>	Probable	S4B	no status	no status
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Probable	S5	no status	no status
Eastern Wood-Pewee	<i>Contopus virens</i>	Confirmed	S4B	SC	SC
Alder Flycatcher	<i>Empidonax alnorum</i>	Probable	S5B	no status	no status
Willow Flycatcher	<i>Empidonax traillii</i>	Probable	S5B	no status	no status
Least Flycatcher	<i>Empidonax minimus</i>	Probable	S4B	no status	no status
Eastern Phoebe	<i>Sayornis phoebe</i>	Confirmed	S5B	no status	no status
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Confirmed	S4B	no status	no status
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Confirmed	S4B	no status	no status
Blue-headed Vireo	<i>Vireo solitarius</i>	Possible	S5B	no status	no status
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	Confirmed	S4B	no status	no status
Warbling Vireo	<i>Vireo gilvus</i>	Probable	S5B	no status	no status
Red-eyed Vireo	<i>Vireo olivaceus</i>	Confirmed	S5B	no status	no status
Blue Jay	<i>Cyanocitta cristata</i>	Confirmed	S5	no status	no status
American Crow	<i>Corvus brachyrhynchos</i>	Confirmed	S5B	no status	no status
Common Raven	<i>Corvus corax</i>	Confirmed	S5	no status	no status
Horned Lark	<i>Eremophila alpestris</i>	Probable	S5B	no status	no status
Purple Martin	<i>Progne subis</i>	Confirmed	S3S4B	no status	no status
Tree Swallow	<i>Tachycineta bicolor</i>	Confirmed	S4B	no status	no status
Bank Swallow	<i>Riparia riparia</i>	Confirmed	S4B	THR	THR
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Confirmed	S4B	no status	no status
Barn Swallow	<i>Hirundo rustica</i>	Confirmed	S4B	THR	THR
Black-capped Chickadee	<i>Poecile atricapilla</i>	Confirmed	S5	no status	no status
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Probable	S5	no status	no status
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Confirmed	S5	no status	no status
Brown Creeper	<i>Certhia familiaris</i>	Possible	S5B	no status	no status
House Wren	<i>Troglodytes aedon</i>	Confirmed	S5B	no status	no status

Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
Winter Wren	<i>Troglodytes troglodytes</i>	Probable	S5B	no status	no status
Marsh Wren	<i>Cistothorus palustris</i>	Probable	S4B	no status	no status
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Possible	S5B	no status	no status
Eastern Bluebird	<i>Sialia sialis</i>	Confirmed	S5B	no status	no status
Veery	<i>Catharus fuscescens</i>	Probable	S4B	no status	no status
Swainson's Thrush	<i>Catharus ustulatus</i>	Confirmed	S4B	no status	no status
Hermit Thrush	<i>Catharus guttatus</i>	Probable	S5B	no status	no status
Wood Thrush	<i>Hylocichla mustelina</i>	Probable	S4B	SC	THR
American Robin	<i>Turdus migratorius</i>	Confirmed	S5B	no status	no status
Gray Catbird	<i>Dumetella carolinensis</i>	Confirmed	S4B	no status	no status
Brown Thrasher	<i>Toxostoma rufum</i>	Probable	S4B	no status	no status
European Starling	<i>Sturnus vulgaris</i>	Confirmed	SNA	no status	no status
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Confirmed	S5B	no status	no status
Nashville Warbler	<i>Vermivora ruficapilla</i>	Confirmed	S5B	no status	no status
Yellow Warbler	<i>Dendroica petechia</i>	Confirmed	S5B	no status	no status
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Confirmed	S5B	no status	no status
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	Probable	S5B	no status	no status
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Confirmed	S5B	no status	no status
Black-throated Green Warbler	<i>Dendroica virens</i>	Probable	S5B	no status	no status
Blackburnian Warbler	<i>Dendroica fusca</i>	Possible	S5B	no status	no status
Pine Warbler	<i>Dendroica pinus</i>	Probable	S5B	no status	no status
Black-and-white Warbler	<i>Mniotilta varia</i>	Probable	S5B	no status	no status
American Redstart	<i>Setophaga ruticilla</i>	Confirmed	S5B	no status	no status
Ovenbird	<i>Seiurus aurocapillus</i>	Confirmed	S4B	no status	no status
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Possible	S5B	no status	no status
Mourning Warbler	<i>Oporornis philadelphia</i>	Probable	S4B	no status	no status
Common Yellowthroat	<i>Geothlypis trichas</i>	Confirmed	S5B	no status	no status
Canada Warbler	<i>Wilsonia canadensis</i>	Possible	S4B	SC	THR
Chipping Sparrow	<i>Spizella passerina</i>	Confirmed	S5B	no status	no status
Field Sparrow	<i>Spizella pusilla</i>	Probable	S4B	no status	no status
Vesper Sparrow	<i>Pooecetes gramineus</i>	Possible	S4B	no status	no status
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Confirmed	S4B	no status	no status
Song Sparrow	<i>Melospiza melodia</i>	Confirmed	S5B	no status	no status
Swamp Sparrow	<i>Melospiza georgiana</i>	Confirmed	S5B	no status	no status
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Confirmed	S5B	no status	no status
Dark-eyed Junco	<i>Junco hyemalis</i>	Possible	S5B	no status	no status
Scarlet Tanager	<i>Piranga olivacea</i>	Confirmed	S4B	no status	no status
Northern Cardinal	<i>Cardinalis cardinalis</i>	Confirmed	S5	no status	no status
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Confirmed	S4B	no status	no status
Indigo Bunting	<i>Passerina cyanea</i>	Probable	S4B	no status	no status
Bobolink	<i>Dolichonyx oryzivorus</i>	Confirmed	S4B	THR	THR

Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Confirmed	S4	no status	no status
Eastern Meadowlark	<i>Sturnella magna</i>	Confirmed	S4B	THR	THR
Common Grackle	<i>Quiscalus quiscula</i>	Confirmed	S5B	no status	no status
Brown-headed Cowbird	<i>Molothrus ater</i>	Confirmed	S4B	no status	no status
Baltimore Oriole	<i>Icterus galbula</i>	Confirmed	S4B	no status	no status
Purple Finch	<i>Carpodacus purpureus</i>	Probable	S4B	no status	no status
House Finch	<i>Carpodacus mexicanus</i>	Confirmed	SNA	no status	no status
Pine Siskin	<i>Carduelis pinus</i>	Possible	S4B	no status	no status
American Goldfinch	<i>Carduelis tristis</i>	Confirmed	S5B	no status	no status
House Sparrow	<i>Passer domesticus</i>	Confirmed	SNA	no status	no status

Status Updated March 25, 2021

SRANK DEFINITIONS

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

S5 Secure, Common, widespread, and abundant in the nation or state/province.

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

S#B Breeding

S#N Non-Breeding

SARO STATUS DEFINITIONS

THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

SC Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

SARA STATUS DEFINITIONS

THR Threatened, a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

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

Species of Conservation Value

Common Name	Scientific Name	Preferred Habitat	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
INSECTS					
Monarch	<i>Danaus plexippus</i>	Old fields, meadows, roadsides confined to places where milkweed sp. grow.	S2N, S4B	SC	SC
Elusive Clubtail	<i>Stylurus notatus</i>	Occur along streams or shores of large lakes.	S2	none	none
REPTILES					
Snapping Turtle	<i>Chelydra serpentina</i>	Exclusively aquatic, except when females nest. Found in lakes, marshes, large rivers, large ponds, slow streams, with abundant vegetation, soft bottom substrate, and stagnant water.	S2N, S4B	SC	none
BIRDS					
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Associated with large lakes and rivers. Frequently observed on dead branches overlooking water.	S3S4B	SC	SC
Red-necked Phalarope	<i>Phalaropus lobatus</i>		S3B	SC	none
Black Tern	<i>Chlidonias niger</i>	Breed in freshwater marshes.	S4B	SC	SC
Eastern Wood-Pewee	<i>Contopus virens</i>	Breed mostly in mature and intermediate-age deciduous and mixed forests having an open understory.	S4B	SC	THR
Wood Thrush	<i>Hylocichla mustelina</i>	Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches.	S4B	SC	SC
Evening Grosbeak	<i>Coccothraustes vespertinus</i>		S1	none	none
PLANTS					
Large Purple-fringed Orchid	<i>Platanthera grandiflora</i>	Moist habitat, deciduous or coniferous forest and swamps, grassy meadows and ditches.	S2N, S4B	SC	SC

Status Updated March 25, 2021

SRANK DEFINITIONS

- S1** Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
- S2** Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
- S3** Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4** Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S#S#** Range Rank, A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
- S#B** Breeding
- S#N** Non-Breeding

SARO STATUS DEFINITIONS

- SC** Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

SARA STATUS DEFINITIONS

- THR** Threatened, a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- SC** Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

DFO Aquatic Species at Risk Mapping

