



## MEMO

**TO:** City of Orillia  
**FROM:** WSP  
**SUBJECT:** Natural Heritage Constraints Analysis of the Focused Study Areas – Orillia Settlement Area Boundary Expansion  
**DATE:** November 2022

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### 1 INTRODUCTION

This City of Orillia is undertaking a technical evaluation to consider a Settlement Area Boundary Expansion (SABE) under the Growth Plan for the Greater Golden Horseshoe, to accommodate community and employment growth to the year 2051. A preliminary assessment of natural heritage constraints was completed to assist in determining two Focused Study Areas as part of the Phase 1 Background Memo. The subsequent technical evaluation builds on this preliminary assessment, providing a detailed, desktop assessment of potential natural heritage constraints in and within 120m of each Focused Study Area (FSA), shown on **Figure 1**. The North Focused Study Area is located north of Orillia, bound to the north by Division Road, to the east by Burnside Line and to the west by the midway point of Fairgrounds Road and Uthoff Line within the Township of Severn. The West Focused Study Area is located west of Orillia, bound to the north by Bass Lake Side Road E, to the west by Line 13 N and the south by Side Road 15 & 16 E within the Township of Oro-Medonte.

#### Glossary of Key Acronyms

The following provides a glossary of certain technical acronyms used throughout this Memo:

- FSA – Focused Study Area
- SABE – Settlement Area Boundary Expansion
- ANSI – Areas of Natural and Scientific Interest
- ESA – Environmentally Sensitive / Significant Area
- PSW – Provincially Significant Wetland
- EIS – Environmental Impact Study
- SAR – Species at Risk
- NHS – Natural Heritage System

### 2 APPROACH

This technical evaluation outlines the potential for natural heritage constraints in the Focused Study Areas identified for the Orillia SABE. This desktop assessment was completed through review of available secondary source information and is intended to provide an understanding of potential ecological constraints and limitations for development, should the settlement boundary expand into each of the Focused Study Areas. Database tools used in this assessment include:



- Natural Heritage Information Centre Database (NHIC)
- Aquatic Species at Risk Mapping, Fisheries and Oceans Canada (DFO (Department of Fisheries and Oceans))
- Fish ON-Line, Ministry of Natural Resources and Forestry
- eBird, Cornell Lab of Ornithology
- Ontario Breeding Bird Atlas (OBBA)
- Reptile and Amphibian Atlas, Ontario Nature
- Atlas of the Mammals of Ontario
- Google Earth imagery
- Land Information Ontario (LIO, Province of Ontario)

Potential natural heritage constraints identified in this technical evaluation should be confirmed through detailed field investigations as part of a updates to the City's Official Plan, Secondary Plan exercises, or sub-watershed studies, or as part of a detailed Environmental Impact Study during the development application process.

### 3 POLICY OVERVIEW

Federal, provincial, regional, and municipal natural heritage mapping were incorporated into this assessment to identify designated features such as provincially or locally significant woodlands, Areas of Natural and Scientific Interest (ANSIs), Environmentally Sensitive / Significant Areas (ESAs), Provincially Significant Wetlands (PSW), and watercourses. Policies and guidelines considered in this assessment include the Provincial Policy Statement (PPS) (2020), Growth Plan for the Greater Golden Horseshoe (GGH) (2020), Simcoe County Official Plan (2016), *Conservation Authorities Act* (1990), *Federal Fisheries Act* (1985), *Endangered Species Act* (2007), and *Species at Risk Act* (2002).

#### 3.1 PROVINCIAL POLICY STATEMENT (2020)

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The Provincial Policy Statement (PPS 2020) is an overarching policy document for the Province of Ontario which provides policy direction on matters pertaining to land use planning and development. The PPS directs that development and site alteration are not permitted within Significant wetlands and Coastal Wetlands. Similarly, the PPS directs that development and site alteration are not permitted in Significant woodlands, Significant valleylands, significant wildlife habitat, significant Areas of Natural and Scientific Interest (ANSI), unless it can be demonstrated that there will be no negative impact to the feature or its function. Additionally, the PPS directs that development and site alteration are not permitted in fish habitat or the habitat of endangered or threatened species, except in accordance with provincial and federal requirements. The PPS also directs that development and site alteration are not permitted on adjacent lands, defined as lands within 120 m of a significant natural feature, 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. As such, a natural heritage evaluation and/or hydrological evaluation, such as an Environmental Impact Study (EIS), is required for development applications within 120 m of a significant natural heritage feature.

The PPS applies to all lands in the province of Ontario, including within Growth Plan Settlement Area boundaries.



### 3.2 A PLACE TO GROW: GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE (2020)

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A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020) Growth Plan includes mapping of a *Natural Heritage System* (NHS) to protect the region's natural heritage and biodiversity. The Natural Heritage System for the Growth Plan includes Core Areas, such as Key Natural Heritage Features and Key Hydrological Features, and the natural corridors between them. The Natural Heritage System for the Growth Plan excludes lands within settlement area boundaries that were approved and in effect as of July 1, 2017. Within settlement areas, provincial mapping of the NHS for the Growth Plan does not apply until it has been implemented in the applicable upper-or single tier Official Plan. For settlement area boundary expansion, Section 2.2.8, 3 e) of the Growth Plan directs that key hydrologic areas and the Natural Heritage System for the Growth Plan should be avoided where possible; the preliminary assessment of natural heritage constraints considered the presence of Growth Plan Natural Heritage System in determining the Focused Study Areas.

### 3.3 SIMCOE COUNTY OFFICIAL PLAN (2016)

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Simcoe County is currently undertaking an Official Plan Review. The in-force County of Simcoe Official Plan (2016) captures Natural Heritage and Hydrologic as the Greenlands layer on Schedule 5.1a. Development and site alteration is restricted in Greenlands designated areas, in particular Section 3.3.15 of the in-force County policy directs that development and site alteration shall not be permitted in significant wetlands and significant coastal wetlands, and that development and site alteration shall not be permitted in significant woodlands, significant valleylands, significant wildlife habitat, significant areas of natural and scientific interest and coastal wetlands, unless it have been demonstrated that there will be no negative impacts on the natural heritage features or their ecological functions.

Section 3.8.18 of the in-force Simcoe County Official Plan directs that when considering a settlement area expansion within the Greenlands designation, and where expansion into the Rural designation is not a reasonable alternative, the location of the expansion shall be in accordance with the policies of Section 3.3.15 i) and ii).

### 3.4 LAKE SIMCOE PROTECTION ACT (2008)

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The *Lake Simcoe Protection Act* (2008) provides a legislative framework for the protection and restoration of Lake Simcoe through promoting a consistent approach to protecting, improving, or restoring natural features critical to the overall health of the watershed. The Lake Simcoe Protection Act restricts development and site alteration to the shoreline of Lake Simcoe, but also to key natural heritage and hydrological features, including permanent and intermittent tributary streams, wetlands, significant woodlands, significant valleylands, and natural areas abutting Lake Simcoe and lakes other than Lake Simcoe.

The Lake Simcoe Protection Plan area includes the southern half of the West FSA, starting just south of Langman Marsh and extending all the way to the shores of Lake Simcoe.

### 3.5 TOWNSHIP OF SEVERN OFFICIAL PLAN (2010)

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The Township of Severn Official Plan (2010) outlines policies for the protection of Natural Heritage Features and Natural Hazards. The policies are generally consistent with the Simcoe County Official Plan. The South of Division Road Secondary Plan is specifically applicable to the North FSA. The South of Division Road Secondary Plan Schedule A9 identifies Environmental Protection Areas, and policy text directs that no development shall be permitted within identified areas of extreme environmental sensitivity and development in adjacent areas shall be



limited to that of a low-density nature. The Secondary Plan also directs that an Environmental Impact Statement (EIS) is required for permitted uses within the Environmental Protection designation, and all development or site alteration within 50 metres of the Environmental Protection designation. Further, an EIS is required within 120 metres of provincially significant wetlands, the habitat of threatened or endangered species or hazardous lands. The secondary Plan notes that the boundaries of the Environmental Protection designation are approximate, and it is the intent of this secondary plan that their precise location be determined, in consultation with the Ministry of Natural Resources, at the time of the township's consideration of development applications.

### 3.6 TOWNSHIP OF ORO-MEDONTE OFFICIAL PLAN (2001)

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The Township of Oro-Medonte Official Plan (2001) outlines policies for the protection of Natural Heritage Features and their functions. The Plan outlines land use designations, development restrictions and permitted uses for Natural Core Areas, Corridor Areas, Oro-Moraine Core Areas, and Oro-Moraine Corridor Areas, all of which are generally consistent with the in-force provincial policy statement at the time of Plan approval. The Natural Core and Corridor Areas are split into Environmental Protection 1 and 2, with enhanced protections for wetlands, provincially significant Areas of Natural and Scientific Interest, Significant Wildlife Habitat, and other areas that have been determined to be environmentally significant as a result of a development review process. The Plan indicates that development that requires *Planning Act* approval may be subject to preparation of an environmental impact study (EIS) and Management Plan.

### 3.7 CONSERVATION AUTHORITIES ACT, 1990

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The North FSA is within the Nottawasaga River watershed, though located outside of the Nottawasaga Valley Conservation Authority (NVCA) jurisdictional boundaries. The West FSA is split between the Nottawasaga River and the Lake Simcoe Watersheds, under jurisdictional boundaries of the NVCA (Ontario Regulation 172/06) and Lake Simcoe Region Conservation Authority (LSRCA; Ontario Regulation 179/06). Ontario Regulations 172/06 and 179/06 regulate development, interference with Wetlands and Alterations to Shorelines and Watercourses. To ensure that development has regard for flooding and erosion hazard features and the natural environment, while conforming to watershed development policies, NVCA and LSRCA are authorized under Section 28 of the *Conservation Authorities Act* to implement and enforce their own regulations; under the regulations, no person shall undertake development or permit another person to undertake development in or on the areas within the jurisdiction of a Conservation Authority. Lands included in the settlement boundary expansion area would still be subject to the *Conservation Authorities Act*, and a permit application for development within regulated lands typically requires an EIS to demonstrate no negative impacts to the feature(s).

### 3.8 FISHERIES ACT, 1985

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The focus of the *Fisheries Act* is to protect the productivity of recreational, commercial, and Aboriginal fisheries by focusing protection on real and significant threats to the fisheries and the habitat that supports them. The Act sets clear standards and guidelines for routine projects. This applies to work being conducted in or near waterbodies that support fish that are part of or that support a commercial, recreational, or Aboriginal fishery. The Act was most recently updated in August 2019.

In the North FSA, mapped watercourses include Silver Creek and its tributaries, as well as the North River and its tributaries. In the West FSA, mapped watercourses include Bluff's Creek and its tributaries. Development or site alteration proposed within 30m of any watercourse should be reviewed under the *Fisheries Act*.



### 3.9 ENDANGERED SPECIES ACT, 2007 AND SPECIES AT RISK ACT, 2002

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Species at Risk (SAR) are species designated under the provincial *Endangered Species Act, 2007* (ESA) or under the federal *Species at Risk Act, 2002* (SARA) as either Extirpated (EX), Endangered (END), Threatened (THR) or Special Concern (SC) depending on level of risk. Under Federal and/or Provincial legislation, species and their habitat are required to be protected if listed as END or THR. There is no legal protection for species ranked as Special Concern or conservation status ranks by the NHIC including provincially rare (S-Rank). However, their preservation, when found, is encouraged to assist with preserving Ontario's biodiversity. SARA only applies to federal lands, or if on private lands, it only applies to aquatic or migratory bird species.

Activities with potential for indirect or direct impacts to SAR habitat, including activities associated with restoration and/or enhancement activities, should be reviewed by regulatory agencies and may require permitting or approvals under SARA and/or the ESA.

### 3.10 ECOLOGICAL SPECIAL INTEREST GROUPS IN AND AROUND ORILLIA

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Special interest groups in and around the Town of Orillia include the Severn Sound Environmental Association and the Orillia Wetland Watchers. A brief summary of the organizations and their activities is provided.

#### **The Severn Sound Environmental Association**

The Severn Sound Environmental Association was founded in 1997 and is a Joint Service Board under Section 202 of the Municipal Act. They are self-described as a partnership between federal, provincial and municipal partners to support the completion of the Severn Sound Remedial Action Plan and to provide a local, community-based environmental office in the Severn Sound area<sup>1</sup>. The group works with local municipalities, provincial and federal groups with the intention of sustaining environmental quality and ensuring protection of Severn Sound and its tributaries. The Severn Sound Environmental Association has no legislative mandate.

#### **Orillia Wetland Watchers**

The Orillia Wetland Watchers are a recently formed special interest group with a focus on raising awareness about the importance of natural heritage features in and around the Town of Orillia<sup>2</sup>. Wetland mapping provided by the group is sourced from Land Information Ontario and is shown on Figures 1 and 2 as evaluated non-significant, and not evaluated per OWES. The Orillia Wetland Watchers group has no legislative mandate.

## 4 NATURAL HERITAGE CHARACTERIZATION

The combined area of the North and West FSAs is 2,695 ha. Natural Heritage features and applicable policies are discussed below for each of the FSAs. The North FSA is an approximately 700 ha area located north of the City of Orillia. The northern limit is Division Road, to the east by Burnside Line and to the west by the midway point of Fairgrounds Road and Uhthoff Line; the residential area of Hawkrigde Crescent/ Hawkrigde Lane is excluded from the North FSA. The West Focused Study Area is an approximately 1995 ha area located west of Orillia. The West FSA is bound to the north by Bass Lake Side Road E, to the west by Line 13 N and the south by Side Road 15 & 16 E.

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<sup>1</sup> <https://www.severnsound.ca/about>

<sup>2</sup> For more information, visit the website at <http://stopsprawlorillia.ca/orillia-wetland-watchers/>



## 4.1 FISHERIES AND AQUATIC RESOURCES

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A general description of available fisheries information and aquatic resources is provided for context and guidance. For example, many designations under applicable policies require fish community and thermal regime determination to establish protection under the respective policies. The information provided below is based on a desktop review of available information; detailed site investigation will be required to confirm/and or provide enough detail for proper review under the *Fisheries Act*, the Conservation Authorities Act, the Simcoe County Official Plan, and the city of Orillia Official Plan will be required for development activities proposed within 120m of a watercourse.

### 4.1.1 NORTH FSA

Silver Creek is located along the eastern portion of the FSA, with two tributaries extending into the south-west corner. DFO Aquatic SAR mapping did not identify critical habitat for SAR in Silver Creek or its tributaries within the North FSA. MNR (Ministry of Natural Resources and Forestry) records of fish species in Silver Creek include Brook Trout, Brown Trout, and Rainbow Trout, which suggests a cold-water system. Silver Creek outlets to the North River and eventually into Georgian Bay near Waubaushene, Ontario.

### 4.1.2 WEST FSA

The tributaries to Bass Lake and associated wetlands of Langman's Marsh are located in the northern area of the West FSA. DFO Aquatic SAR mapping did not identify critical habitat in these tributaries, however there is a species record of Grass Pickerel (Special Concern) associated with Bass Lake and its tributaries. MNR records of fish species in the tributaries to Bass Lake suggest a cool and warm water baitfish, including Bluntnose Minnow, Central Mudminnow, Common Shiner, and White Sucker. These tributaries to Bass Lake may also be providing a migratory corridor for Brook Trout from Bass Lake to spawning areas.

Mill Creek, Orillia Filtration wetlands and its tributaries are located in the central portion of the West FSA and drain into Lake Simcoe, just south of Orillia. DFO Aquatic SAR mapping did not identify critical habitat or SAR records in these tributaries. MNR records of fish species in the tributaries suggest a diverse, warm water community, including baitfish and sportfish including Northern Pike and Brook Trout.

Bluff's Creek, its tributaries and associated wetlands drain into Lake Simcoe. DFO Aquatic SAR mapping did not identify critical habitat or SAR records in these tributaries. MNR records of fish species in the tributaries suggest a diverse, cool water community, including baitfish and sportfish including Northern Pike, Rainbow Trout, and Brook Trout.

## 4.2 TERRESTRIAL RESOURCES

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A desktop assessment of vegetation was completed using aerial satellite imagery, SOLRIS (Southern Ontario Land Resource Information System) data, and applicable policy mapping and/or Official Plan schedules. A high-level desktop assessment of anticipated wildlife and wildlife habitat was completed, based on the desktop assessment of vegetation communities along with records of species from online database tools noted in **Section 2.2**. Terrestrial resources identified in this technical evaluation should be field-verified and detailed site investigations are recommended to confirm details, inform evaluation of significance criteria, and to determine the applicability of relevant policies. Field investigations, including vegetation community determination using Ecological Land Classification provides the basis for assessment of suitable habitat for SAR and/ or whether SWH (Significant Wildlife Habitat) may be present, which in turn will inform the potential for development constraints. Where development or site alteration is planned adjacent to large, forested areas, an evaluation of those natural features



using the Natural Heritage Reference Manual<sup>3</sup> as well as the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E<sup>4</sup> should be completed. Features protected by the PPS, such as Significant Woodlands, Significant Valleylands, and Significant Wildlife Habitat are not necessarily mapped or designated.

#### **4.2.1 NORTH FSA**

The North FSA consists of the Hawk Ridge Golf and Country Club, agricultural fields, an active aggregate pit (Orillia Pit 48) operated by Walker Aggregates and a conifer plantation to the east, the Silver Creek swamp, several unevaluated wetlands, evaluated, non-provincially significant wetlands, and at least two large, wooded areas which appear to meet the size criteria for Significant Woodlands under the Natural Heritage Reference Manual<sup>5</sup>.

The wildlife species expected to be present are primarily common species. For avifauna, this includes species typically associated with forest edge or shrub habitats such as American Goldfinch, American Robin, Black-capped Chickadee, Cedar Waxwing, European Starling, Song Sparrow, while smaller wetland patches may provide habitat for Common Yellowthroat and Red-winged Blackbird. Avifauna associated with agricultural fields and cultural meadows typically include Killdeer, Savannah Sparrow, and Field Sparrow. The forested habitats and riparian forest areas may support a more diverse avifauna community, including American Redstart, Baltimore Oriole, Hairy Woodpecker, Red-eyed Vireo. Common, disturbance-tolerant mammal species may also be present in the areas in or immediately adjacent to the sites, including Raccoon, Grey Squirrel, and White-tailed Deer; there is a mapped Winter Deer yard, immediately east of Burnside Line. In the predominantly agricultural areas, herpetofauna species expected to be present are limited to common disturbance tolerant species (e.g., Eastern Garter Snake, Green Frog, Northern Leopard Frog). The Silver Creek swamp is likely providing higher-quality aquatic habitat for amphibian, bird and mammal habitat and movement opportunities. There is a record of Significant Wildlife Habitat, Colonial Waterbird Nesting Area, associated with the Silver Creek Swamp.

#### **4.2.2 WEST FSA**

The West FSA consists largely of active agricultural land, with two residential subdivisions, the Langman Marsh PSW, the Orillia Filtration wetlands, the Bluff's Creek PSW, and several unevaluated wetlands and evaluated non-provincially significant wetlands, and least three large, wooded areas which appear to meet the size criteria for Significant Woodlands under the Natural Heritage Reference Manual<sup>6</sup>.

The wildlife species expected to be present are primarily common species. For avifauna, this includes species typically associated with forest edge or shrub habitats such as American Goldfinch, American Robin, Black-capped Chickadee, Cedar Waxwing, European Starling, Song Sparrow, while smaller wetland patches may provide habitat for Common Yellowthroat and Red-winged Blackbird. Avifauna associated with agricultural fields and cultural meadows typically include Killdeer, Savannah Sparrow, and Field Sparrow. The forested habitats and treed wetlands

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<sup>3</sup> Ministry of Natural Resources and Forestry, Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Second Edition). Available at: <https://www.ontario.ca/document/natural-heritage-reference-manual>

<sup>4</sup> Ministry of Natural Resources and Forestry, Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. Available at: <https://www.ontario.ca/document/significant-wildlife-habitat-ecoregional-criteria-schedules-ecoregion-6e>

<sup>5</sup> Ministry of Natural Resources and Forestry, Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Second Edition). Available at: <https://www.ontario.ca/document/natural-heritage-reference-manual>

<sup>6</sup> Ministry of Natural Resources and Forestry, Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Second Edition). Available at: <https://www.ontario.ca/document/natural-heritage-reference-manual>



may support a more diverse avifauna community, including American Redstart, Baltimore Oriole, Hairy Woodpecker, Red-eyed Vireo. Common, disturbance-tolerant mammal species may also be present in the areas in or immediately adjacent to the sites, including Raccoon, Grey Squirrel, and White-tailed Deer. In the predominantly agricultural areas, herpetofauna species expected to be present are limited to common disturbance tolerant species including Eastern Garter snake, Green Frog, Northern Leopard Frog. The Langman Marsh PSW, Bluff's Creek PSW, and Orillia Filtration wetlands are likely providing higher-quality aquatic habitat for amphibian, bird and mammal habitat and movement opportunities. There is a record of Significant Wildlife Habitat, Colonial Waterbird Nesting Area, associated with Langman Marsh.

### 4.3 SPECIES AT RISK

A desktop screening for SAR was completed using the resources noted in **Section 2.2**. Only those species listed as Threatened or Endangered under either the ESA and/or SARA Schedule 1 receive species and/or habitat protection, however protection of species listed as Special Concern is encouraged. Note that while protection of the habitat of Special Concern species is not directed under the ESA, this is a criterion that impacts designation of Significant Wildlife Habitats, which are protected under the Provincial Policy Statement, and may impact site development. Records of SAR were cross referenced with aquatic and terrestrial resources to determine the potential for habitat of SAR in each land parcel.

Species at risk known to occur in or within 1 km of the FSAs were evaluated against available habitat to determine the likelihood that they may be present in the FSA. Species with a moderate or high potential to occur are highlighted below. Note that the absence of SAR records does not preclude potential to be present at the site. Development and site alteration within 120 m of natural heritage features, particularly those noted in this discussion of SAR, should include a field assessment to identify SAR or their habitats.

There are 27 records of Threatened or Endangered SAR known to occur in the North FSA, and 25 records of Threatened or Endangered SAR known to occur in the West FSA. In addition to utilization of online database tools listed in Section 2, two additional Endangered trees, Butternut and Black Ash, were included for the North FSA, based on WSP's experience in this geographical area and the presence of potentially suitable habitat. The SAR, details regarding habitat requirements and the potential for occurrence in each of the FSAs are provided in **Appendix A**.

A desktop assessment of habitat availability in both the North and West FSAs identified moderate to high potential for ten (10) SAR to occur. These species are identified in **Table 1** with their potential habitat areas.

*Table 1. Species at Risk with potential to occur in the Focused Study Areas.*

SPECIES	ESA STATUS	POTENTIAL HABITAT
<b>Barn Swallow</b> ( <i>Hirundo rustica</i> )	Threatened*	Accessory buildings with overhanging ledges near agricultural fields in both FSAs
<b>Blanding's Turtle</b> ( <i>Emydoidea blandingii</i> )	Threatened	Silver Creek swamp in the North FSA, Bluff's Creek PSW and Langman's Marsh PSW in the West FSA, as well as corridors connecting wetlands to other wetlands.
<b>Bobolink</b> ( <i>olichonyx oryzivorus</i> )	Threatened	Open grassland areas and margins, such as lands adjacent to agricultural fields, which are abundant in both FSAs.





SPECIES	ESA STATUS	POTENTIAL HABITAT
<b>Black Ash</b> ( <i>Fraxinus nigra</i> )	Endangered	Treed areas of the Silver Creek swamp in the North FSA, as well as treed areas of the Langman Marsh PSW and Bluff's Creek PSW, evaluated and unevaluated treed wetlands in the West FSA.
<b>Butternut**</b> ( <i>Juglans cinerea</i> )	Endangered	Forests with moist, well-drained soil and along streams; often associated with agricultural hedgerows, which are abundant in both FSAs.
<b>Eastern Meadowlark</b> ( <i>Sturnella Magna</i> )	Threatened	Open grassland areas and margins, such as lands adjacent to agricultural fields, which are abundant in both FSAs.
<b>Eastern Small-footed Bat</b> ( <i>Myotis leibii</i> )  <b>Little Brown Bat</b> ( <i>Myotis lucifugus</i> )  <b>Northern Long-eared Bat</b> ( <i>Myotis septentrionalis</i> )  <b>Tri-colored Bat</b> ( <i>Perimyotis subflavus</i> )	Endangered	Day and maternity roosting occur in forest habitats with cavity trees / mature trees with loose bark, particularly when forests are associated with foraging habitat such as wetland or meadow, such as in forested areas of the Silver Creek swamp in the North FSA and wooded areas surrounding Langman's Marsh and Bluff's Creek PSWs (Provincially Significant Wetlands) in the West FSA.
Eastern Whip-poor-will ( <i>Antrostomus vociferus</i> ),	Threatened	Potential for nesting habitat in semi-open forests or patchy forests with clearings, which appear abundant in both FSAs.

\*Barn Swallow is anticipated to be listed as Special Concern under the ESA in September 2022.

\*\* There are no records of Butternut trees or Black Ash in or within 120m of the North FSA, however based on WSP's experience working in this geographic area, these species have been included with a moderate potential to occur.

There is one record of a Restricted Species listed in the NHIC database for the North FSA. Restricted species are typically particularly vulnerable, and records are made available by the Ministry of Environment, Conservation, and Parks (MECP) on a project-specific basis to individuals with SAR sensitivity training. For a complete list of all SAR with potential to occur in or within 120 m of this land parcel, and habitat potential, refer to the SAR Screening Table in **Appendix A**.

#### 4.4 DESIGNATED AREAS

Designated Areas refer to natural heritage features and areas which have been mapped or otherwise identified in policy documents as having specific protections. For the FSA areas, these include features mapped and protected under the PPS, Simcoe County Official Plan, Township of Severn Official Plan, NVCA, and LSRCA. The GGH designations are also discussed, to address the terms of the Settlement Boundary Expansion under the GGH.



#### **4.4.1 NORTH FSA**

The Growth Plan NHS designation covers a substantial proportion of the North FSA, primarily associated with wetlands and densely wooded areas, Silver Creek, and its tributaries; but also includes some agricultural field and an aggregate pit.

Simcoe County Greenlands designations are associated with Silver Creek and Silver Creek Swamp.

The Township of Severn Official Plan (2010) shows a Local Wetlands designation in the Silver Creek swamp area, between Division Road and Uthoff Line, as well as in the area of an unevaluated wetland near Uthoff Line and Murphy Road, just north of the Orillia boundary. The South of Division Road Secondary Plan Schedule A9 identifies several areas designated Environmental Protection, primarily in the area of Silver Creek and associated wetlands.

There are no Conservation Authority regulated lands in the North FSA.

#### **4.4.2 WEST FSA**

The Growth Plan NHS designation connects Langman Marsh to Bluff's Creek and the associated wetland complex, which includes several areas of PSW. The Growth Plan NHS wraps around the city boundary and extends to the shore of Lake Simcoe.

Simcoe County Greenlands are associated with the areas surrounding Langman Marsh, Bluff's Creek and the Bluff's Creek wetlands complex. There are Rural designated lands south of the Lake Simcoe Protection Act boundary to Highway 11, as well as immediately adjacent to the west city boundary.

There are NVCA regulated lands associated with Langman Marsh, from Bass Lake Road to Oro-Medonte Line 15. Development and site alteration within NVCA regulated lands is subject to permitting under Ontario Regulation 172/06, which typically requires a setback of at least 30 m.

There are LSRCA regulated lands associated with Mill Creek and the Orillia Filtration wetlands, south of Langman Drive, and one pocket of wetland north of Langman Drive. Development and site alteration within LSRCA regulated lands is subject to permitting under Ontario Regulation 179/06, which typically requires a setback of at least 30 m.

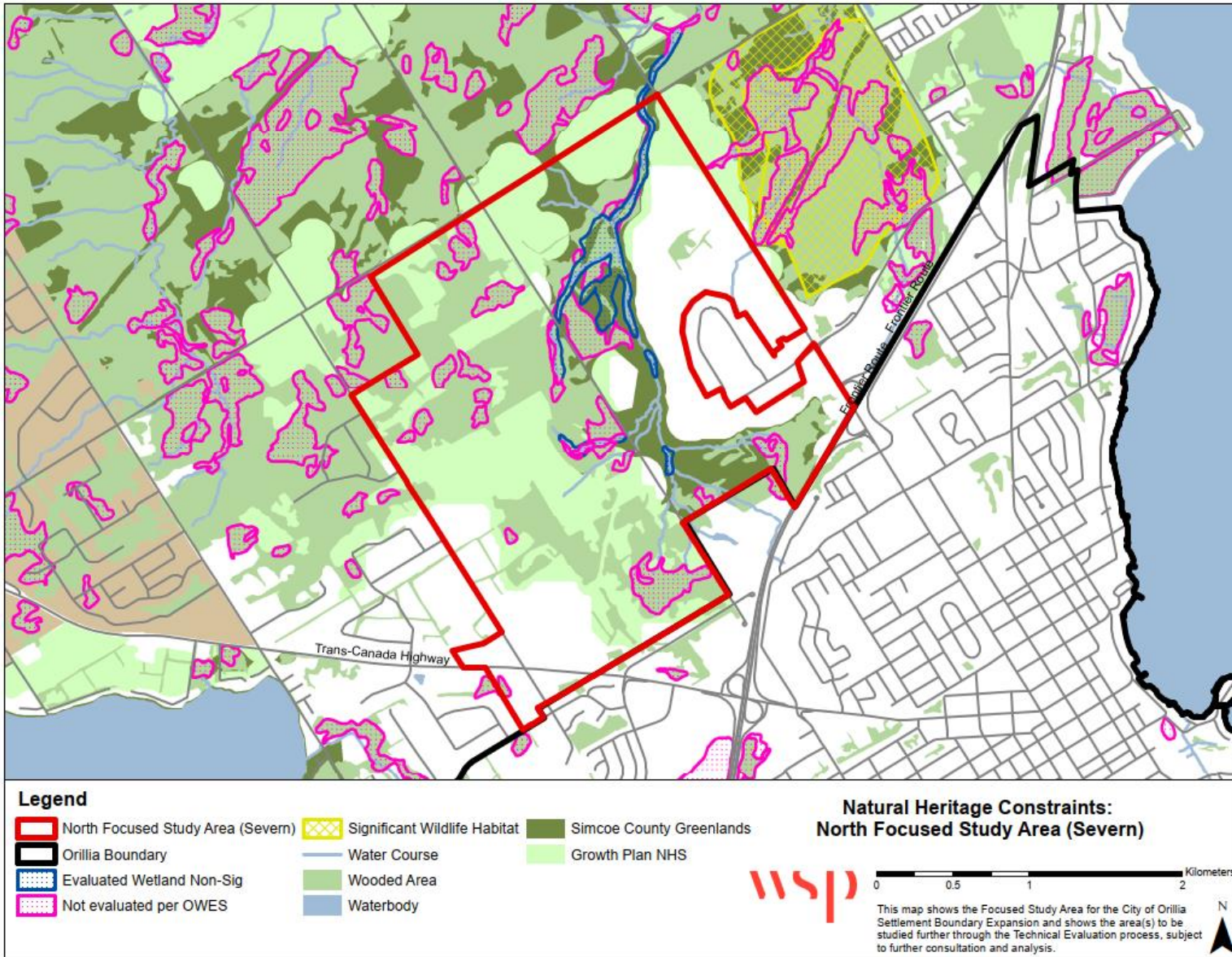


Figure 1. Natural Heritage Features and Designations in the North Focused Study Area (Severn).

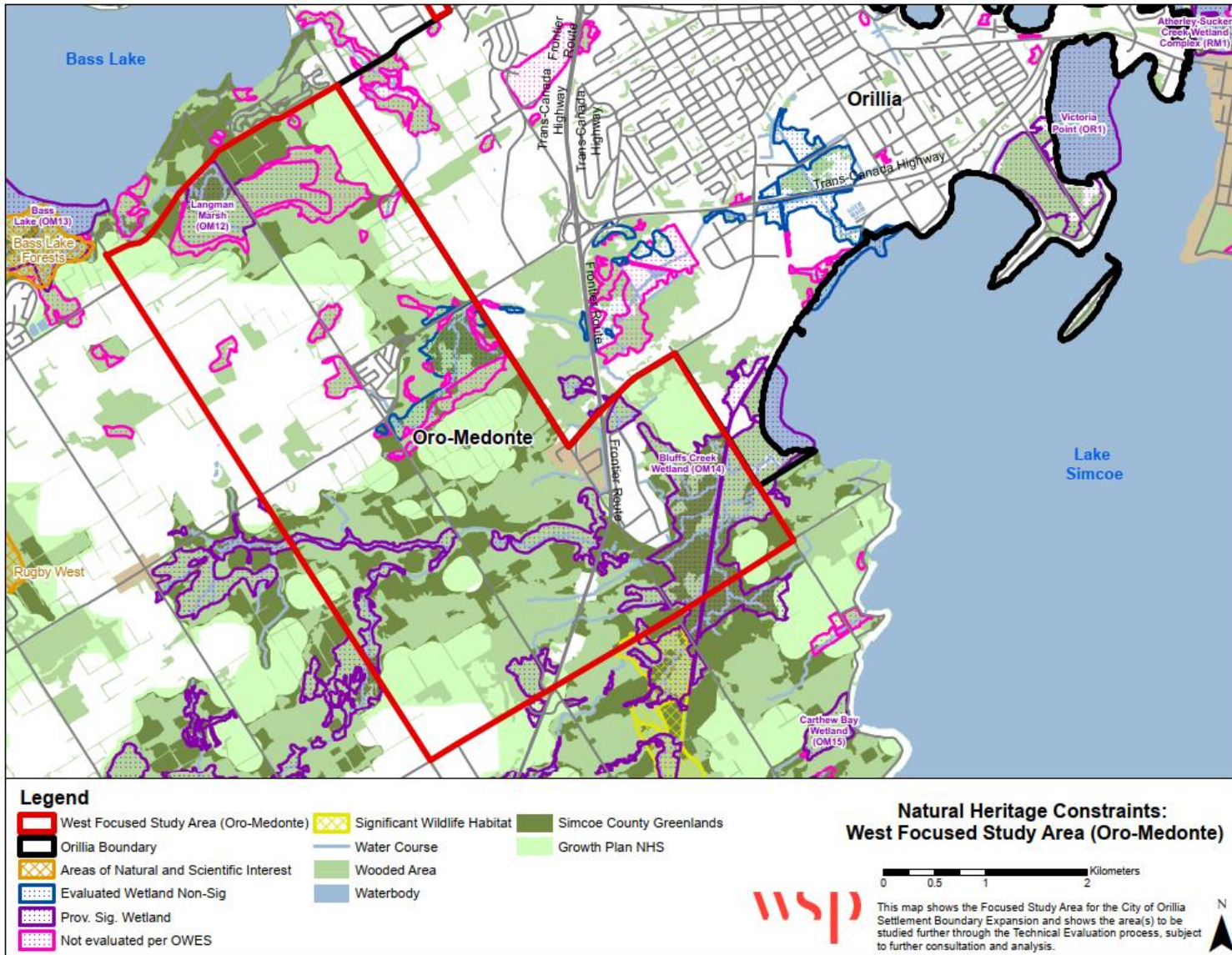


Figure 2. Natural Heritage Features and Designations in the West Focused Study area (Oro-Medonte).



## 5 SUMMARY OF NATURAL HERITAGE VALUES

The remaining potential Natural Heritage development constraints in the FSAs are summarized in Table 2 and mapped on Figure 3. Features identified as **High Constraint** to development are mapped features which have restrictive development and site alteration policy in place, that is no development or site alteration is permitted under the PPS. In **Moderate Constraint** areas, development or site alteration proposed within 120m would require that an EIS demonstrate no negative impact to the feature or its function, with limits and setbacks determined on a feature-by-feature basis. Not all features that would pose a moderate constraint are mapped but rather would be identified during an EIS. Areas identified as **Potential Constraint** may contain natural heritage features or values that restrict development or site alteration. Note that not all constraints are mappable at this time, for example agricultural fields are not identified as potential constraint to development, however if left fallow, may provide habitat for Species at Risk birds such as Bobolink, which are known to occur in the Orillia area.

When the Growth Plan settlement boundary has been expanded, Growth Plan natural heritage system policy, as well as natural heritage policy for the Township of Severn and the Township of Oro-Medonte would no longer apply within the Settlement Area Boundary Expansion lands. Simcoe County Official Plan policies would apply until such time as the Settlement Area Boundary Expansion lands are brought into the City of Orillia Official Plan. The PPS, Lake Simcoe Region Conservation Authority, Nottawasaga Conservation Authority, and Lake Simcoe Protection Plan policies would remain applicable. For development proposed within 120m of natural heritage features, Environmental Impact Study requirements including field investigations, boundary delineation, determination of buffers and approvals/permits from relevant reviewing agencies is expected to be required. The details of an EIS/and/or permits required would be determined through field investigation, consultation with stakeholders, and development details.



Table 2. Summary of Potential Constraints in the Focused Study Areas.

CONSTRAINT	FEATURE (S)	COMMENT
High	PSWs, Watercourses	<p>Under the PPS, development/site alteration is not permitted in Provincially Significant Wetlands. An EIS is required for works within 120m, and the PSW may be subject to a 30m setback buffer.</p> <p>Watercourses are protected under the federal <i>Fisheries Act</i>. Development or site alteration within 30m of a watercourse must be reviewed under the Act. Watercourses with a warm thermal regime are subject to a 15m setback, while watercourses with a cold thermal regime are subject to a 30m setback.</p> <p>Note that a conservative setback of 30m has been applied to high-constraint features in Figure 3. Limits and buffers would be confirmed as part of an EIS and may increase or decrease on a site-specific basis.</p>
Moderate	Simcoe County Greenlands, unevaluated and evaluated non-significant wetlands, NVCA and LSRCA regulated lands, significant wildlife habitat, significant woodlands, significant valleylands	<p>An EIS to demonstrate no negative impact to the feature and its function is anticipated to be required where development or site alteration is proposed within 120m of moderate constraint areas, with limits and setbacks determined on a feature-by-feature basis.</p>
Potential	Wooded areas (mapped by LIO)	<p>A desktop screening of land parcels in this designation is recommended to determine whether an EIS should be completed prior to land development.</p> <p><b>Note:</b> Agricultural fields, particularly if left fallow, can provide habitat for species at risk and may present a constraint to development. These should also be examined on a site-specific basis as part of the development application process.</p>

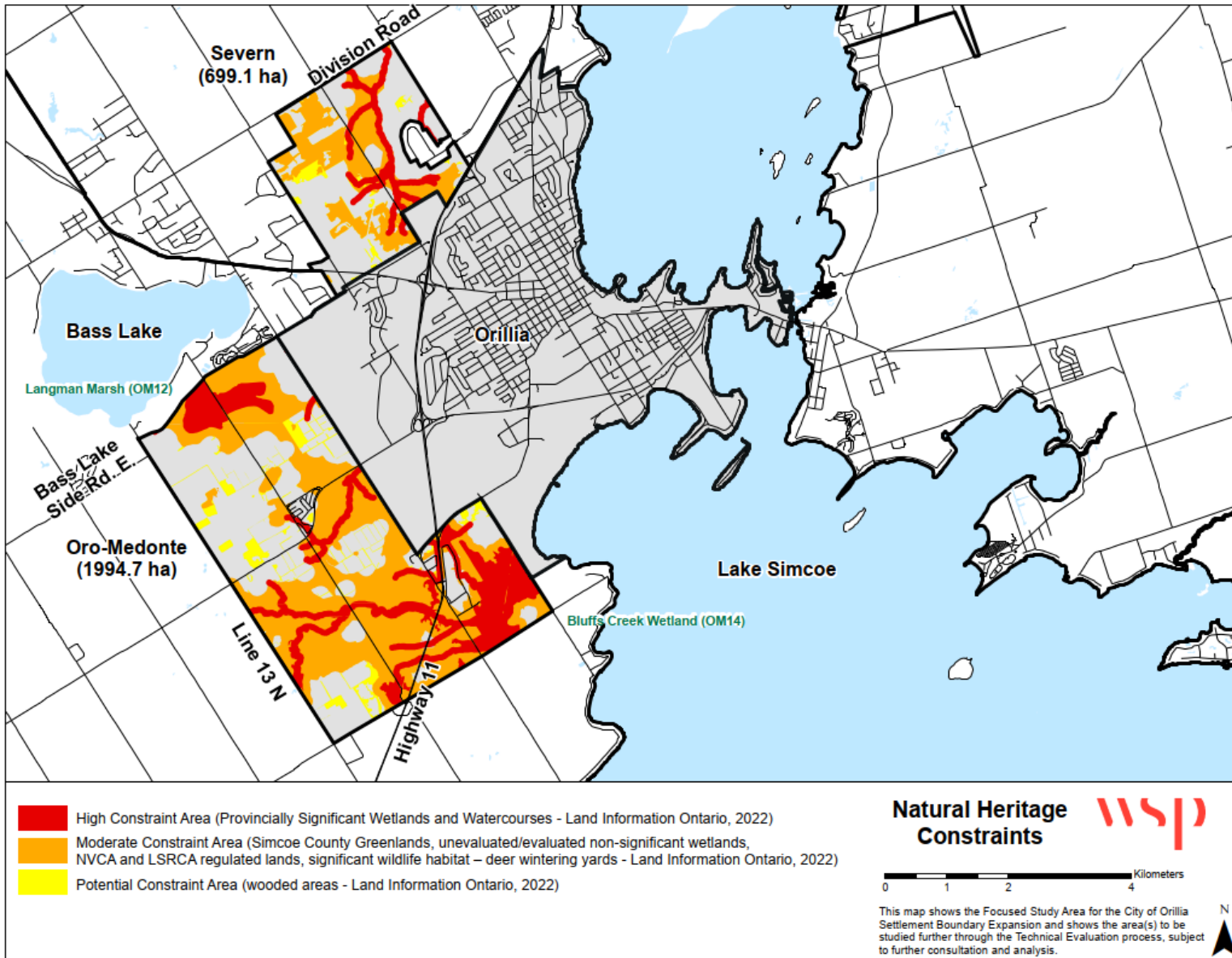


Figure 3. Potential Constraints in the Focused Study Areas.