February 17, 2023

# Lake Simcoe Conservation Preserve Stewardship Plan

### Prepared for

Lake Simcoe Region Conservation Authority

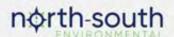




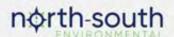


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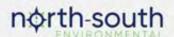
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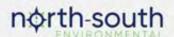
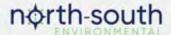


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### 1. Introduction

The Lake Simcoe Region Conservation Authority (the Conservation Authority) acquired several properties in March 2022 through a donation of significant ecological and agricultural lands. The land holdings comprising the Lake Simcoe Conservation Preserve total an area of 360 hectares in the Town of Georgina (the 'Subject Lands') (**Figure 1**). The properties are located north of the Keswick urban area within the Georgina Creeks sub-watershed.

The Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) which designates the property as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land. The Conservation Authority is in the process of developing a long-term plan that will provide direction for the development and future management of the Lake Simcoe Conservation Preserve.

A Baseline Documentation Report (N.S.E. 2023) has been prepared to document the existing site conditions of the Lake Simcoe Conservation Preserve, identify significant ecological features, develop priority management actions, and provide high-level stewardship recommendations for managing the conservation area. Mapping provided in the Baseline Documentation Report includes: vegetation community mapping, photo documentation, species and habitat incidental observations, invasive species observations, site disturbances, and historic aerial imagery.

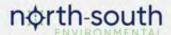
The purpose of this Stewardship Plan is to summarize those existing conditions and provide more detailed recommended stewardship actions for each of the four properties comprising the Lake Simcoe Conservation Preserve.

**Property 1 – Deer Park Road** is a 200-ha property dominated by deciduous and mixed swamps (60%), with deciduous and coniferous upland forests. A meadow marsh / cultural thicket complex is succeeding in lands formerly cleared for development (17% cover).

**Property 2 – Boyers Road** is a 97-ha property largely comprised of agricultural fields (58%). Cultural meadows, woodlands and thickets, marshes, mixed forests, and swamps also occur. Crescent Creek, an intermittent stream which forms part of the Georgina Creek subwatershed, is identified by Land Information Ontario (LIO) as crossing Property 2, through marsh communities.

**Property 3 – The Queensway** is a 11-ha property comprised mostly of agricultural fields (80%), with cultural meadow, deciduous forest, and deciduous swamp.

**Property 4 - Varney Road** is a 52-ha property featuring agricultural fields in the eastern half of the property, with woodlands, forests, swamps and meadows. Georgina Creek, another intermittent stream forming part of the Georgina Creek subwatershed, is identified by LIO as bisecting the east side of Property 4, through marsh communities, draining west to Lake Simcoe.



### 1.1. Conservation Goals

The Conservation Authority is in the process of developing a long-term plan that will provide direction for the development and future management of this conservation property. The plan will assess the existing natural heritage and cultural features, identify areas to restore and enhance the natural heritage features and functions on the landscape, and where appropriate develop walking trails, other compatible passive recreational uses and continued agricultural uses (if appropriate). The long-term plan will be prepared in consultation with the public, municipal and private stakeholders, and Indigenous communities.

Development of the long-term Master Plan for the Lake Simcoe Conservation Preserve will take a few years to undertake subject to confirmation of funding support, completion of environmental studies, and public engagement.

The goals of the Authority are to protect, enhance and restore these lands for future generations until such time as the long-term plan is prepared in the coming years.

The Conservation Goals are to:

- Manage the lands for conservation and natural heritage protection for future generations
- Promote natural succession and where appropriate rehabilitate / enhance existing natural features and ecological functions
- Expand and enhance wetland, forest and grassland features
- Control and manage the impacts of invasive species to protect native species and habitats

### 1.2. Permitted Land Uses

The Lake Simcoe Conservation Preserve is the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which designated the Subject Lands as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land as follows:

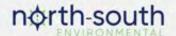
### Use of Land

"Every use of land and every erection, location or use of any building or structure is prohibited on the lands described, except,

- a) Forest, fish and wildlife management
- b) Conservation and flood or erosion control projects
- c) Infrastructure
- d) Passive recreation, and
- e) Buildings or structures associated with the uses set out in clauses (a) to (d)"

### **Terms of Use**

1) "Every use of land and every erection, location or use of any building or structure shall be in accordance with the M.Z.O.



- 2) Nothing in the M.Z.O. prevents the use of any land, building or structure for any use prohibited by the M.Z.O. if the land, building or structure is lawfully so used on the day the M.Z.O. comes into force (April 1, 2022)
- 3) Nothing in the M.Z.O. prevents the reconstruction of any building or structure that is damaged or destroyed by causes beyond the control of the owner if the dimensions of the original building or structure are not increased and its original use is not altered
- 4) Nothing in the M.Z.O. prevents the strengthening or restoration to a safe condition of any building or structure"

### 1.3. Report Prepared By

This Stewardship Plan was prepared by North South Environmental Inc. (N.S.E.), based on secondary source information and site visits by completed by Field Ecologists, Grace Pitman and Patrick Strzalkowski, on October 5, 6 and 7, 2022. The report has been authored by Izabela van Amelsvoort, Senior Ecologist and Project Manager.

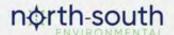
Izabela van Amelsvoort - B.Sc. (Env.), M.F.C., Senior Ecologist

Izabela is a terrestrial ecologist with a specialization in botany with over 13 years of professional experience. She has a strong background in forestry, botany and zoology and is well versed in flora and fauna of the Great Lakes/St. Lawrence, Carolinian (including tallgrass prairie), and Boreal regions of Ontario. Izabela has considerable experience with restoration projects and management plans for both tallgrass prairie and woodland ecosystems in Southern Ontario. In her role a project manager, she has participated in and supervised other staff in field work programs designed to characterize natural areas, identify constraints and opportunities related to both ecological restoration and development, as well as providing direction for management of natural areas, such as invasive species management and ecological restoration.

Grace Pitman – B.Sc., M.Sc., Ecologist

Grace Pitman is an ecologist and has been working in the ecological and environmental fields since 2010. She was previously employed at Nature Conservancy of Canada (NCC) and Wildlife Preservation Canada. Grace has a diverse background comprised from academic research, restoration ecology, and land planning and management.

Grace has experience with restoration ecology applying techniques to restore former agricultural fields to tall grass prairie and successional meadows. Additionally, she has facilitated the creation of inland wetlands and assisted with the development of visitor facilities to appreciate restored landscapes. Grace has extensive knowledge and experience managing and controlling invasive species on both restored and non-restored landscapes. She has also been instrumental in developing and implementing long-term property management plans.



### Patrick Strzalkowski - B.Sc., M.Sc., Senior Ecologist

As an ecologist at N.S.E., Patrick focuses on botanical inventories, including dedicated surveys for Species at Risk, in a variety of areas, such as wetlands, deciduous forests and urban areas.

Patrick assisted in teaching proper techniques for plant identification, including grasses and sedges. Patrick also has worked on projects involving species at risk in Ontario, helping to better understand the impacts that invasive species have on threatened populations. As a member of the Field Botanists of Ontario, Patrick is determined to further develop his expertise in botanical identification across all taxa.

### 2. Deer Park Road (Property 1)

### 2.1. Property Information

Area	200 h.a.
Legal Description	Parts of Lots 23, 24 and 25, 65R-2903, Blocks 1, 2 and 5, Concession 3,
	Town of Georgina
Instrument Number	P.I.N. 03498-0003 (L.T.), 03498-0005 (L.T.), 03498-0006 (L.T.)
Survey	Plan 65M-2903 (1991)
Landowner	Lake Simcoe Region Conservation Authority
Roll Number	1970 000 12194 999 0000, 1970 000 121 95000 0000
<b>Emergency Number</b>	26530 Woodbine Avenue, 851 Metro Road North, and 655 Varney Road
Farm 911	

### 2.2. Directions and Access

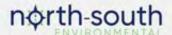
From Keswick, follow north on Woodbine Avenue for approximately 4 km, just past Deer Park Drive. The property is located on the west side of Woodbine Avenue, framed approximately by Varney Road along its western boundary, Metro Road North along the northern boundary, and Deer Park Drive along the southern boundary. Access is available from a pull off at 26530 Woodbine Avenue, off Metro Road opposite Wolford Gate Rd (851 Metro Road North) and along the east side of Varney Road approximately 0.5 km north of Deer Park Road (655 Varney Road).

### 2.3. Municipal and Provincial Planning Information

### 2.3.1. Land Use Designations

### 2.3.1.1. York Region Official Plan (2010; 2022 Consolidation)

According to the York Region Official Plan (2010; 2022 Consolidation), a portion of the property is mapped as part of the Regional Greenlands System. The Greenlands System consists of core areas, corridors and linkages which are protected from development and site alteration (policies under Section 2.0).



### 2.3.1.2. Town of Georgina Official Plan (2016; 2020 Consolidation)

According to the Town of Georgina Official Plan (2016; 2020 Consolidation), the property is mapped as Town and Villages land use (Schedule A1) and is designated Environmental Protection Area. The property includes key natural heritage features and/or key hydrologic features, which may include woodlands, wetlands, and portions of the Greenlands System (Schedules B1 and B2).

### **2.3.2. Zoning**

As per the Town of Georgina Zoning Bylaw 500 (2013), the property is zoned Low Density Urban Residential and Open Space. However, as of April 1, 2022, the Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which supersedes the Georgina Zoning Bylaw. The M.Z.O. designates the property as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land.

### 2.3.3. Additional Designations

### 2.3.3.1. Greenbelt Plan (2017)

The Subject Lands are designated Protected Countryside under the Greenbelt Plan (2017). Property 1 is also designated as Towns and Villages.

### 2.3.3.2. Lake Simcoe Watershed Natural Heritage System

According to the Natural Heritage System & Restoration Strategy for the Lake Simcoe Watershed (L.S.R.C.A. 2018), portions of Property 1 are identified as Natural Heritage System Core and are subject to the policies set out in the strategy.

### 2.4. Ecoregion Context, Physiography and Soils

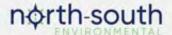
The Subject Lands are located in Ecodistrict 6E-6, known as the Barrie Ecodistrict, within the Lake Simcoe-Rideau Ecoregion 6E.

The Subject Lands are located within the Lake Simcoe Basin and include portions of sand plain, till plain (drumlinized) and scattered drumlins running in a southwest to northeast direction (Chapman and Putnam, 1984). The surficial geology of the area has been mapped on a regional basis by Barnett et al., 1991. This mapping shows the general area of the properties to be underlain by the Newmarket Till (Simcoe lobe), undifferentiated till, and Glaciolacustrine deposits consisting of sand, gravelly sand, and gravel.

The Soil Map of York County indicates the Subject Lands are generally underlain by clay loam, loam, and sandy loam soils with poor to imperfect drainage and smooth to gently sloping topography (Agriculture Canada and Ministry of Agriculture & Food, 1977).

### 2.5. Significant Areas

No Areas of Natural and Scientific Interest (A.N.S.I's) occur on the Subject Lands.



### 2.5.1. Provincially Significant Wetland

The Paradise Beach-Island Grove Provincially Significant Wetland (P.S.W.) Complex occurs on the property. The wetlands on the property consist of swamp and marsh (**Figure 2**).

### 2.5.2. Watercourses and Waterbodies

An unnamed ephemeral / intermittent stream was identified and mapped on the property during field investigations (**Figure 2**).

### 2.6. Ecological Land Classification

A total of 19 vegetation community types were mapped on Property 1 (**Figure 2**). The property is dominated by deciduous and mixed swamp communities (more than 60% cover). The most common community type is a patchwork of Poplar and Conifer Mixed Mineral Swamps (SWM3-2). The other common swamp communities, listed in descending order of area, are Green Ash Mineral Swamp (S.W.D.2-2), Black Ash Mineral Swamp (S.W.D.2-1), Poplar Mineral Deciduous Swamp (S.W.D.4-5) and Trembling Aspen Organic Deciduous Swamp (S.W.D.7). The rest of the wooded areas are an equal split of deciduous and coniferous forests (collectively 12% cover). These include Dry-Fresh Sugar Maple Forest (F.O.D.5-1), Moist Poplar Forest (F.O.D.8-1) and Moist White Cedar Forests (F.O.C.4 and F.O.C.4-1). The next largest community is the Mineral Meadow Marsh (M.A.M.2) / Cultural Thicket (C.U.T.) complex which occurs in lands previously cleared for road construction (17% cover). Two agricultural fields (IAG) (2% cover) and a few cultural meadows (C.U.M.) (3% cover) are present in the west and southwest. Two small areas of residential area encroachment (ANTH1 and ANTH2) occur in the west and northeast. An additional boundary encroachment is located around the property boundary at 779 Metro Road including an A.T.V. trail (ANTH3). Detailed community descriptions are available in the in the Baseline Document Report (N.S.E. 2023).

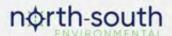
### 2.7. Wildlife Habitat

Targeted species-specific surveys (Breeding Bird Surveys and Amphibian Calling Surveys) were undertaken in 2022 by the Conservation Authority, and Dillon in 2012 (Dillon, 2015). Incidental fauna species were noted by N.S.E. in 2022.

A total of 104 fauna species were recorded on Property 1. A complete list of fauna is provided in the Baseline Document Report (N.S.E. 2023). Of the 104 species, there were a total of 9 amphibian species, 2 reptile species, 76 bird species, 8 mammal species, and 8 insect species. Additionally, several terrestrial crayfish burrows were observed, however no individuals were seen to determine the species.

### 2.8. Species of Interest

Two Species at Risk (SAR) flora were recorded, including Black Ash (*Fraxinus nigra*) and Butternut (*Juglans cinerea*), both provincially Endangered. Black Ash was common in the swamp understories but has been heavily impacted from Emerald Ash Borer (*Agrilus planipennis*). It is no longer common in the canopy, commonly replaced by Maple and Poplar trees with an increase of invasive species in the



understory due to increased light penetration (open canopy). Invasive species are discussed under **Section 2.9.1**, below.

A total of four SAR fauna were recorded, including Barn Swallow (*Hirundo rustica*), a provincially Threatened species, and Eastern Wood-pewee (*Contopus virens*), Wood Thrush (*Hylocichla mustelina*) and Monarch (*Danaus plexippus*), all provincially listed as Special Concern.

Additionally, Dillon (2015) reported the presence of Blue-spotted/Jefferson Salamander Complex (*Ambystoma laterale/ jeffersonianum*); however, it is unclear whether genetic testing was undertaken to determine whether the individual was a Jefferson Salamander dependent unisexual (listed as Endangered by both SARO and SARA), or a Blue-spotted dependent unisexual (not-at-risk). Conservation Authority staff observed a Blue-spotted Salamander in 2022.

### 2.9. Threats and Disturbances

### 2.9.1. Invasive Species

The following dominant invasive plant species were observed on Property 1. Note, as described in the B.D.R. (N.S.E. 2023), a complete inventory of invasive species was not conducted, however, where small patches exist, which offer opportunities for control to reduce the spread of invasives, they have been identified in **Table 2**, below.

### Dog-strangling Vine

Dog-Strangling Vine (*Vincetoxicum rossicum*) was observed in nearly all treed communities (forest and swamp; FO, SW) as well as thickets (C.U.T.), and was often the most dominant or one of the most abundant ground cover species. Patch size and density ranged from clumps of patches to extensive and widespread patches.

### • Common Buckthorn

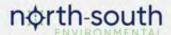
Common Buckthorn (*Rhamnus cathartica*) ranged from occasional to abundant in the ground and understory layers in treed communities (forest, swamp, woodland; FO, SW, C.U.W.). Similarly, patch density ranged from scattered at low density throughout a vegetation community, to high density and well-established thick patches.

### Tartarian Honeysuckle

Similar to the distribution to Common Buckthorn, Tartarian Honeysuckle (*Lonicera tatarica*) ranged from occasional to abundant in the ground and understory layers in treed communities (forest, swamp, woodland; FO, SW, C.U.W.). Patch density ranged from scattered at low density throughout a vegetation community, to high density and well-established thick patches.

### Multiflora Rose

Multiflora Rose (*Rosa multiflora*) was only observed once on this property, a small (1x1 m) patch in a cultural woodland (C.U.W.).



### Common Reed

Common Reed (*Phragmites australis*) was observed in four isolated patches, all occurring in the previously cleared areas that form rings near the centre of the property, classified as meadow marsh and cultural thicket (M.A.M.2/C.U.T.). The isolated patches range from approximately 2 to 200 m<sup>2</sup>.

### Japanese Barberry

Japanese Barberry (*Berberis thunbergii*) was observed in four isolated patches, all occurring in forest or forested swamp (FO, SW). Patches were low density and ranged in approximate size from 1 to 8 m<sup>2</sup>.

### 2.9.2. Human Impacts

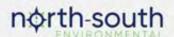
Documented human impacts include A.T.V. and presumed snowmobile trails, tree and brush clearing, hunt stands, dumping, party spot/campsite, and culverts.

Property 1 has experienced extensive clearing within the areas that were proposed residential sections (Dillon, 2015). These areas were likely cleared to make way for machinery and in anticipation of construction of the previously proposed Maple Lake Estates development. These trails and laneways have filled in with vegetation over time, however, the ruts are still present. The repeated clearing of vegetation within formerly forested swamp communities has changed these communities significantly, resulting in drier meadow marsh / thicket communities. Other trails present on the property included snowmobile / A.T.V. trails. Trails and other anthropogenic features are described below.

There were no buildings located on Property 1. **Table 1** summarizes examples of trails, structures and signage, including initial stewardship considerations. Locations are illustrated on **Figure 3**.

Table 1. Trails, Structure, and Signage on Property 1

### Initial Stewardship Trail, Structure, & Signage **Photos Examples** Recommendations A.T.V. Tracks No immediate action -A.T.V. tracks (with evident Depending on outcomes of future land use A.T.V. ruts) occur within the previously proposed planning, it is recommended that trails development and vegetation clearing areas. Additionally, be formalized for passive an A.T.V./snowmobile trail recreational use where runs from Woodbine Ave in a appropriate, or otherwise north-south orientation. be decommissioned and left to succeed, or continuing into Property 2. A small, looped A.T.V. trail restored to natural occurs at Deer Park Drive. condition. If formalized, Approximately 15,418 m of should consider A.T.V. tracks are present. remediation of ruts to remove liability risks



Trail, Structure, & Signage Examples	Photos	Initial Stewardship Recommendations
Photo: M.A.M.2/C.U.T. community		associated with trip / fall hazards.
		Signage clearly stating permitted and prohibited uses should be placed, and where present, maintained, at all trail entrances / access points.
Laneways Laneway, distinguished from A.T.V. tracks / trails by greater width (and in most cases evidence of use by tractors / trucks) to enter Deer Park Road property from Woodbine Ave. Approximately 638 m of laneway is present on the property. Some sections were only grass and no placed substrate, other sections had gravel.  Photo: M.A.M.2/C.U.T. community facing towards Woodbine Ave (top), and another section of the same laneway farther into the property showing gravel substrate (bottom).		No immediate action – Depending on outcomes of future land use planning, it is recommended that trails be formalized for passive recreational use and/or maintenance access where appropriate, or otherwise be decommissioned and left to succeed, or restored to natural condition. Where decommissioned, access barriers may be required at the ends of wider trails to prevent vehicular access. Future land use planning may also consider use / upgrade of these laneways as public access / access to parking.

# Trail, Structure, & Signage Examples

### Trails

No formal trails are present. Three narrow not-well compacted trails were noted. These are presumed to be deer trails due to the abundance of evidence of deer use (e.g., tracks, browse, scat), however, likely people use them as well. Photo: M.A.M.2/C.U.T. community edge of SWM3-2

### **Photos**



# Initial Stewardship Recommendations

No action required – wildlife trails. If public use of these trails is determined to be an issue (determined through observation or use of game cameras), consideration may be given to installation of access deterents at the start / end of these trails (e.g., signage, thorny vegetation, etc.) at the time as trail use planning.

No immediate action for culverts along laneway – these culverts currently function to facilitate overland water flow.

Should trails or laneways which cross these culverts be decomissioned as part of future land use planning, culverts may be capaidered for removal.

considered for removal.

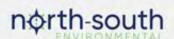
Action recommended for culvert in F.O.D.8-1 – Removal of the culvert is recommended. Clear culverts to ensure they are functioning.

### Culvert

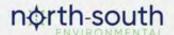
Three metal culverts were noted on the property. Two culverts occur along the laneway entrance from Woodbine Ave. Another metal culvert was found in a wet area of F.O.D.8-1 - this culvert does not support any trails and was possibly used to alter drainage during previous site clearing / development.

Photo: One of the culverts along laneway from Woodbine Ave top), culvert in F.O.D.8-1 (bottom).





Trail, Structure, & Signage Examples	Photos	Initial Stewardship Recommendations
Hunt Stands (Deer Blinds) Two hunt stands were noted on the property, as well as a third location where a ladder was noted (used for access to hunt stands).		Action recommended – It is recommended that existing deer stands be decommissioned as soon as possible, and that ongoing monitoring be undertaken to ensure new deer hunt stands are not erected. Hunt stand material which does not decompose (e.g., metal) or which may be toxic (e.g., pressure treated wood) should be removed from site and disposed of accordingly.
Signage & Markers A wooden stake marker with flagging tape was observed in the SWM3-2 community.		Signage indicating prohibition of hunting on the conservation lands should be considered, and where present, maintained.  Action recommended – Removal of wooden stakes (likely remnants from previous development activities / studies) is recommended.



# Trail, Structure, & Signage Examples

### Rock Pile

Rock piles were found on Property 1. Possibly old rock walls or boundary markers.

### **Photos**



# Initial Stewardship Recommendations

No action required – these rock piles may function to provide wildlife habitat; removal is not recommended.

# Residential Yard Encroachment

Encroachment of residential yards occurs in three small areas in the west, northeast and north. In the case of the western encroachment, shed structures have been placed within the property lines of Property 1.

Top Photo: 681 Varney Road at property line. Bottom Photo: 779 Metro Road where stakes indicate property boundary.



Action recommended – It is recommended that Conservation Authority staff speak to the landowners of these adjacent properties to discuss property lines and removal of structures. Clear delineation of property boundaries may be appropriate in some locations.

### Trail, Structure, & Signage **Examples**

### Garbage / Dumping

Some dumping was noted on the property. There are three main areas, including one with a cement pad (possible remnants of a former structure) and evidence of a campsite / party spot located in the cultural woodland (C.U.W.1) on the south property boundary (top photo). The second was located near Deer Park Drive where a sofa and car seat were found, and the third near the entrance from Woodbine Ave with a bed frame and mattress (bottom photo).

### **Photos**



# Recommendations

Action recommended -It is recommended that material be removed and disposed of appropriately. Signage to discourage dumping may also be considered; if possible, enforcement and potential charges through by-law enforcement may be an additional action to consider.

**Initial Stewardship** 

Crushing and removal of cement material may also be considered, which may discourage use of the location as a possible campsite / party spot. Soil amelioration would likely be required to support any active or passive restoration.



### **Wood Pile**

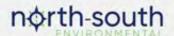
An area of piled wood was found in the cleared area near the laneway from Woodbine Ave. Presumably this area was used to pile the removed trees and vegetation with the bulk of the trees being moved off property or chipped as few currently remain.



### Action Considerations –

This site is easily accessible for vehicles along existing laneways. Natural regeneration of vegetation in this area is inhibited by the depth of woody debris / mulch remaining. However, the site may also serve to provide snake nesting habitat.

Restoration may be considered. Material may be removed from the area and either piled to create habitat opportunities or spread elsewhere (e.g.,



Trail, Structure, & Signage	Photos	Initial Stewardship
Examples		Recommendations
		rotting logs which can
		contribute to wildlife
		habitat). Soil amelioration
		activities may also be
		considered (e.g., mixing of
		mulched wood with added
		soil).

### 2.10. Stewardship Recommendations

The following stewardship actions are recommended for Property 1. While recommendations are provided, it is understood that implementation will be dependent on time, resources and prioritization of activities. To assist in decision-making, stewardship actions have been ranked based on priority: High, Medium, Low. Approximate recommended timeframes for undertaken these actions is as follow: High – within 12 months; Medium – within 13-24 months; Low – within 24+ months. Priority is assigned in consideration with the existing impact / potential benefit to the natural features and their functions (e.g., wildlife habitat functions).

Recommended stewardship actions are summarized in Appendix 2.

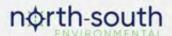
### 2.10.1. Garbage Removal

Some dumping was noted, with three main areas including one with a cement pad (likely evidence of a former structure) used as a possible of a campsite / party spot located in the cultural woodland (C.U.W.1) on the south property boundary. The second was located near Deer Park Drive where a sofa and car seat were found and the third near the entrance from Woodbine Ave with a bed frame and mattress.

### **Action Priority: Medium**

It is recommended that garbage material be removed and disposed of appropriately. Although instances of dumping may decrease following the planned installation of gates and fences, signage to discourage dumping may also be considered and placed in areas perceived to have a greater risk for the activity. If possible, enforcement and potential charges through by-law enforcement may be an additional action to consider.

Crushing and removal of the cement material may also be considered, which may discourage use of the location as a possible campsite / party spot. Soil amelioration would likely be required to support any active or passive restoration.



### 2.10.2. Encroachment Management

### 2.10.2.1. Residential Yard Encroachment

Encroachment of residential yards occurs in three areas in the west, north and northeast. In the case of the western encroachment, shed structures have been placed within the Subject Lands.

### **Action Priority: High**

It is recommended that Conservation Authority staff speak to the landowners of these adjacent properties to discuss property lines, fencing and removal of structures/stored items. Clear delineation of property boundaries is appropriate for all locations.

2.10.2.2. Trails

As described in **Table 1** above, A.T.V., snowmobile and other trails occur throughout the property.

**Action Priority: Low - Medium** (to be undertaken following future land use planning)

If it is intended that public use / access be initiated prior to the completion of the Management Plan for the conservation lands, trail stewardship is recommended to manage use and access as an interim approach to trails management. These actions may include closure / covering of undesired trails, signage and formalizing desirable trails.

Future land use planning will provide a comprehensive plan with respect to trails – proposed trail alignments, trail widths and design, trail density, etc. It is recommended that trails be formalized for passive recreational use where appropriate, or otherwise be decommissioned and left to succeed, or restored to natural condition based on the conclusions and recommendations of the forthcoming Management Plan.

Signage clearly stating permitted and prohibited uses should be placed at all trail entrances / access points.

### 2.10.3. Other Disturbances

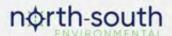
2.10.3.1. Culvert

### **Action Priority: Medium**

Stewardship action is recommended for the culvert which occurs in F.O.D.8-1. This culvert does not support any trails / laneways and was possibly used to alter drainage during previous site clearing / development. Removal of the culvert is recommended, having consideration for any potential hydrologic changes to the area.

### 2.10.3.2. Hunt Stands (Deer Blinds)

Two hunt stands were noted on Property 1, as well as a third location where a ladder was noted (used for access to hunt stands).



### **Action Priority: High**

It is recommended that existing deer stands be decommissioned as soon as possible, and that ongoing monitoring be undertaken to ensure new deer hunt stands are not erected. Hunt stand material which does not decompose (e.g., metal) or which may be toxic (e.g., pressure treated wood) should be removed from site and disposed of accordingly. Signage indicating prohibition of hunting on the conservation lands should be considered, and where present, maintained.

### 2.10.3.3. Signage & Markers

A wooden stake marker with flagging tape was observed in the SWM3-2 community.

### Action Priority: Medium (due to ease of action)

Removal of wooden stakes (likely remnants from previous development activities / studies) is recommended. Although these stakes have no impact on the community, medium priority has been identified due to ease of action. Removal of this and other stakes (if found) could be undertaken opportunistically as they are found.

### 2.10.3.4. Wood Pile

An area of piled wood was found in the cleared area near the laneway from Woodbine Ave. Presumably this area was used to pile the removed trees and vegetation with the bulk of the trees being moved off property or chipped as few currently remain.

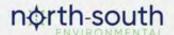
### **Action Priority: Low - Medium**

Natural regeneration of vegetation in this area is inhibited by the depth of woody debris / mulch remaining. Depending on the features contribution to wildlife habitat (e.g., snake oviposition / nesting sites), action may be considered. Material may be removed from the area and either piled to create habitat opportunities or spread elsewhere (e.g., rotting logs which can contribute to wildlife habitat in neighbouring communities). Soil amelioration activities may also be considered (e.g., mixing of mulched wood with additional soil). Given the proximity of this area to existing laneways, vehicular access (to aid in the restoration efforts) is possible.

### 2.10.4. Invasive Species Management

Recommended stewardship actions for invasive species management are summarized in **Table 2**. Prioritization of invasive species management considers the following:

- Protection of areas where invasive species are absent or just appearing
- Control small, younger, outlier populations first
- Protect rare species and communities, as well as important habitats (Anderson, 2012 a, b, c)
- Cost and effort based on infestation size, location and need for restoration (in most cases), restoration of treatment areas by planting / seeding native species makes them more resilient to future invasions.



For example, a newer and smaller population in a more sensitive habitat is likely identified as a high priority for management. Alternatively larger, well-established patches in less-sensitive areas are typically considered to be a low priority due to the amount of effort required to control and low potential success of eradicating the species. The recommended management priority for these well-established populations (currently identified as 'low' to 'medium' priority), may be revisited at later land use planning stages, depending on management objectives to revisit potential management opportunities in the context of future restoration planning and/or land management.

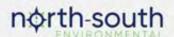
As previously described, invasive species mapping undertaken during field surveys does not reflect a complete inventory. Mapping involved those populations which were incidentally encountered. Where previously unmapped invasive species patches / populations are encountered, management prioritization should follow the approach described above.

Where invasive species formed the dominant cover within a vegetation community, separate mapping was not undertaken. Invasive species mapping focused on small patches which would present good opportunities for control / to prevent further spread **Figure 4**. **Table 2** summarized vegetation communities where invasive species were dominant, as well as individually captured patches, as described above.

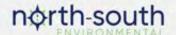
Details on invasive control methodology, including control methods, timing, effort, etc. are provided in **Section 6**.

Table 2. Invasive Species Mapping / Presence on Property 1.

Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority		
Mapped Patches	S				
I.S.5	Japanese Barberry	Single plant, 1 m tall	High – isolated patch		
I.S.11	Japanese Barberry	2x2m patch, in fruit, 1.5 m tall	High – isolated patch		
I.S.19	Japanese Barberry	4x2m patch, 1.5 m tall	High – isolated patch		
I.S.37	Japanese Barberry	1 individual on edge of creek, 1 m tall	High – isolated patch		
I.S.21	Multiflora rose	1x1m patch	High – isolated patch		
I.S.1	Common Reed	5x10 m, not very dense	High – isolated patch		
I.S.8	Common Reed	10x20 m patch	High – isolated patch		
I.S.10	Common Reed	10x10 m patch	High – isolated patch		
I.S.20	Common Reed	2x1m patch	High – isolated patch		
I.S.9	Tartarian Honeysuckle	Very dense patch at least 20x20 m. Growing up to 4 m tall.	Low – large patch, well established		
<b>Vegetation Com</b>	Vegetation Communities				
S.W.D.2-1 (I.S.13)	Dog-strangling Vine	Common groundcover, widespread. Scattered patches throughout the	<b>Medium</b> – established population requiring extensive		



Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
		community. Often climbing on Common Buckthorn.	work, moderate quality habitat (wetland)
S.W.D.2-1 (I.S.12)	Common Buckthorn	Dominant and widespread understory species, common in the ground layer	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.D.2-1 (I.S.15)	Tartarian Honeysuckle	Patchy understory and ground cover, dense when present	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.M.3-2 (I.S.17 / I.S.18 / I.S.3 / I.S.4)	Dog-strangling Vine	Widespread patches of dominant groundcover	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.M.3-2 (I.S.2 / I.S.18 / I.S.3 / I.S.4)	Common Buckthorn	Widespread and dominant in the understory. Common in ground layer.	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.M.3-2 (I.S.2 / I.S.7)	Tartarian Honeysuckle	Scattered dense patches, common in the understory	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.D.4-5	Dog-strangling Vine	Widespread and dominant groundcover	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.D.4-5	Common Buckthorn	Widespread and abundant in the understory	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.D.7 (Ash/Trembling Aspen)	Common Buckthorn	Widespread and dominant in understory	Medium – established population requiring extensive work, moderate quality habitat (wetland)
F.O.D.8-1	Dog-strangling Vine	Widespread and dominant groundcover	<b>Low</b> – established population requiring extensive work
F.O.D.8-1	Common Buckthorn	Widespread and dominant in the understory, widespread and common in the groundcover	Low – established population requiring extensive work
F.O.C.4-1	Dog-strangling Vine	Abundant and widespread in the groundcover, often the only species	<b>Low</b> – established population requiring extensive work



Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
S.W.D.7 (Ash/Trembling Aspen)	Tartarian Honeysuckle	Scattered patches in the groundcover and understory	Low – established population requiring extensive work
M.A.M.2/C.U.T. (I.S.6)	Tartarian Honeysuckle	Common understory species along edge of the trail	<b>Low</b> – established population requiring extensive work
M.A.M.2/C.U.T. (I.S.6)	Dog-strangling Vine	Abundant to dominant ground layer species along the edge of the trail	<b>Low</b> – established population requiring extensive work
M.A.M.2/C.U.T. (I.S.6)	Common Buckthorn	Abundant to dominant understory species along the edge of the trail	<b>Low</b> – established population requiring extensive work
C.U.W.1 (Dry- fresh Mixed)	Dog-strangling Vine	Widespread and abundant in the groundcover	<b>Low</b> – established population requiring extensive work
C.U.W.1 (Dry- fresh Mixed)	Common Buckthorn	Widespread and abundant in the understory	<b>Low</b> – established population requiring extensive work

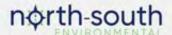
### 3. Boyers Road (Property 2)

### 3.1. Property Information

Area	97 ha	
Legal Description	Parts of Lots 21, 22, and 23, Concession 3, 65R-3920, Part 1 and 65R-	
	40140, Part 1, Town of Georgina	
Instrument Number	PIN 03499-0005 (LT), 03499-0025 (LT)	
Survey	Plan 65R-3920 (1981) and 65R-40140 (2022)	
Landowner	Lake Simcoe Region Conservation Authority	
Roll Number	1970 000 121 23950 0000	
<b>Emergency Number</b>	403 The Queensway North, 26040 Woodbine Avenue	
Farm 911		

### 3.2. Directions and Access

From Keswick, follow north on Woodbine Avenue for approximately 3 km, just past Boyers Road. The property is located on the west side of Woodbine Avenue, framed approximately by The Queensway North along its western boundary, Deer Park Drive along the northern boundary, and Boyers Road along the southern boundary. Access is available at the northwest corner of The Queensway North and Deer Park Road (403 The Queensway North) and the west side of Woodbine Avenue at 26040 Woodbine Avenue (farm access).



### 3.3. Municipal and Provincial Planning Information

### 3.3.1. Land Use Designations

### 3.3.1.1. York Region Official Plan (2010; 2022 Consolidation)

According to the York Region Official Plan (2010; 2022 Consolidation), a portion of the property is mapped as part of the Regional Greenlands System. The Greenlands System consists of core areas, corridors and linkages which are protected from development and site alteration (policies under Section 2.0). The property also falls under the Agriculture Policy Area.

### 3.3.1.2. Town of Georgina Official Plan (2016; 2020 Consolidation)

According to the Town of Georgina Official Plan (2016; 2020 Consolidation), the property is designated in part as Environmental Protection Area and Agricultural Protection Area (Schedule A2). The property includes key natural heritage features and/or key hydrologic features, which may include woodlands, wetlands, and portions of the Greenlands System (Schedules B1 and B2).

### 3.3.2. **Zoning**

As per the Town of Georgina Zoning Bylaw 500 (2013), the property is zoned Rural, Estate Residential and Open Space. However, as of April 1, 2022, the Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which supersedes the Georgina Zoning Bylaw. The M.Z.O. designates the Subject Lands as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land.

### 3.3.3. Additional Designations

### 3.3.3.1. Greenbelt Plan (2017)

The Subject Lands are designated Protected Countryside under the Greenbelt Plan (2017). Property 2 is also overlapped by the Natural Heritage System.

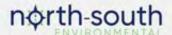
### 3.3.3.2. Lake Simcoe Watershed Natural Heritage System

According to the Natural Heritage System & Restoration Strategy for the Lake Simcoe Watershed (L.S.R.C.A. 2018), portions of the property are identified as Natural Heritage System Core and are subject to the policies set out in the strategy. Additionally, two local linkages are identified in the southeast extent of the property, subject to refinement.

### 3.4. Ecoregion Context, Physiography and Soils

The Subject Lands are located in Ecodistrict 6E-6, known as the Barrie Ecodistrict, within the Lake Simcoe-Rideau Ecoregion 6E.

The Subject Lands are located within the Lake Simcoe Basin and include portions of sand plain, till plain (drumlinized) and scattered drumlins running in a southwest to northeast direction (Chapman and Putnam, 1984). The surficial geology of the area has been mapped on a regional basis by Barnett et al.,



1991. This mapping shows the general area of the properties to be underlain by the Newmarket Till (Simcoe lobe), undifferentiated till, and Glaciolacustrine deposits consisting of sand, gravelly sand, and gravel.

The Soil Map of York County indicates the Subject Lands are generally underlain by clay loam, loam, and sandy loam soils with poor to imperfect drainage and smooth to gently sloping topography (Agriculture Canada and Ministry of Agriculture & Food, 1977).

### 3.5. Significant Areas

No Areas of Natural and Scientific Interest (ANSIs) occur on the Subject Lands.

### 3.5.1. Provincially Significant Wetland

The Paradise Beach-Island Grove P.S.W. Complex occurs on the property. The wetlands on the property consist of swamp and marsh (Figure 5).

### 3.5.2. Watercourses and Waterbodies

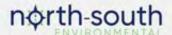
Crescent Creek, an intermittent stream which forms part of the Georgina Creek subwatershed, is identified by Land Information Ontario (LIO) as crossing the property, through marsh communities (**Figure 5**). Results of October 2022 field surveys describe a poorly defined channel which, at the time, had no flowing water.

### 3.6. Ecological Land Classification

A total of 19 vegetation community types were mapped on Property 2 (**Figure 5**). The property is largely composed of agricultural fields, which make up 58% of the property area. Cultural Meadows (10% cover), wetland marshes (6% cover) and hedgerows border these fields. The largest intact communities are in the northeast, which is composed swamp (14% cover) and forest (7% cover) communities. These include a large White Cedar and Hardwood Mineral Mixed Swamp (SWM1-1), a Willow Swamp Thicket (SWT2-2), Moist White Cedar Forest (F.O.C.4), Fresh White Cedar Mixed Forests (F.O.M.4 & F.O.M.4-2), Fresh Sugar Maple Forest (F.O.D.5), Deciduous Swamp (S.W.D.). Other wooded areas include a Fresh Sugar Maple and Basswood Forest (F.O.D.5-6) in the southeast, a Scots Pine Cultural Plantation (CUP3-3) on the eastern edge and scattered Cultural Woodlands (C.U.W.). There is also a Cultural Thicket (C.U.T.) in the southeast. Detailed community descriptions are available in the Baseline Document Report (N.S.E. 2023).

### 3.7. Wildlife Habitat

Targeted species-specific surveys (Breeding Bird Surveys and Amphibian Calling Surveys) were undertaken in 2022 by the Conservation Authority. Incidental fauna species were noted by N.S.E. in 2022.



A total of 54 fauna species were recorded on Property 2. A complete list of fauna is provided in the Baseline Document Report (N.S.E. 2023). Of the 54 species, there was a total of 3 amphibian species, 46 bird species, and 5 mammal species.

### 3.8. Species of Interest

One SAR flora was recorded, Black Ash listed provincially as Endangered. Black Ash was common in the swamp understories but has been heavily impacted from Emerald Ash Borer. It is no longer common in the canopy, commonly replaced by Maple and Poplar trees with an increase of invasive species in the understory due to increased light penetration (open canopy). Invasive species are discussed under **Section 3.9.1**, below.

A total of three SAR fauna were recorded, including Barn Swallow, provincially listed/ designated as Threatened, and Eastern Wood-pewee and Wood Thrush, both provincially listed/ designated as Special Concern.

### 3.9. Threats and Disturbances

### 3.9.1. Invasive Species

The following Invasive plant species were observed on Property 2. Note, as described in the B.D.R. (N.S.E. 2023), a complete inventory of invasive species was not conducted, however, where small patches were observed, which offer opportunities for control to reduce the spread of invasives, they have been identified in **Table 4**, below.

### Black Locust

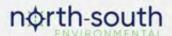
Black Locust (*Robinia pseudoacacia*) populations were localized to two areas. Firstly, a Black Locust cultural woodland (C.U.W.1) with Black Locust dominant in the canopy, subcanopy, and occasionally in the understory. The second area was a hedgerow between agricultural fields north of the cultural woodland where it likely spread from, with Black Locust dominant in the canopy, sub-canopy and occasionally in the understory.

### Dog-strangling Vine

Dog-strangling Vine is common throughout the entire property. Dog-strangling Vine was widespread and often the dominant ground and understory species in the cultural woodland, cultural meadow, several forest communities (F.O.D., F.O.M.), hedgerow, and mixed swamp (SWM1-1) communities.

### Garlic Mustard

Garlic Mustard (*Alliaria petiolata*) was observed in two cultural woodlands (C.U.W.), one large widespread and dense patch (~20 x 15 m) in the woodland on the northwest side of the property. It was also observed in the Black Locust cultural woodland as a common ground cover with scattered dense patches.



### Common Buckthorn

Common Buckthorn ranged from common to widespread in the understory layer of several communities including cultural woodlands (C.U.W.), and deciduous and mixed forest communities (F.O.D., F.O.M.). It was dominant in sub-canopy and/or understory layer in deciduous forest (F.O.D.5) and a hedgerow.

### • Common Reed

Common Reed was only observed in one location, near Deer Park Road in the mixed swamp community (SWM1-1). The patch was a dense stand, approximately 10 x 2 m in size.

### Purple Loosestrife

Purple Loosestrife (*Lythrum salicaria*) was observed in only one community, where it was abundant and scattered widely along the edge of the cattail shallow marsh (MAS2-1) located at the southwest side of the property.

### Scots Pine

Scots Pine (*Pinus sylvestris*) was observed on the east side of the property where it formed a large dense stand (~0.27 ha) of cultural plantation (CUP3-3) and scattered saplings have spread to the cultural meadow (C.U.M.1).

### Tartarian Honeysuckle

Tartarian Honeysuckle was observed in two communities with scattered patches in the understory of deciduous forest (F.O.D.5) and cultural woodland (C.U.W.).

### 3.9.2. Human Impacts

Documented human impacts include A.T.V. and presumed snowmobile trails, hunt stands, fences, dumping, and a trench/drainage ditch. No encroachment from residential yards was noted, however, several instances of dumping were noted on the west side of the property. Based on the dumped materials and the locations, it is presumed to be from the former landowner(s) and agricultural uses.

There were no buildings located on Property 2. **Table 3** summarizes the various types of human impacts observed. Locations are illustrated on **Figure 6**.

Table 3. Trails, Structure, and Signage on Property 2.

Trail, Structure, & Signage	Photos	Initial Stewardship
Examples		Recommendations
A.T.V. Tracks A.T.V. tracks (with evident A.T.V. ruts) from Property 1 continue south crossing Deer Park Road and into a small, treed section of the property before continuing into the cultural meadow and thicket swamp on the northeast side and then out to Woodbine Ave. There is also a small, looped A.T.V. track in the northwest corner of the cultural meadow, which may have originated from agricultural purposes. In total, there are approximately 1,590 m of A.T.V. tracks.		No immediate action – Depending on outcomes of future land use planning, it is recommended that trails be formalized for passive recreational use where appropriate, or otherwise be decommissioned and left to succeed, or restored to natural condition. Where decommissioned, access barriers may be required at the ends of wider trails to prevent vehicular access.
Photo: An overgrown section of A.T.V. track through thicket swamp, with ruts still evident.		Signage clearly stating permitted and prohibited uses should be placed at all trail entrances / access points
Trails No formal trails are present. Dirt path trail noted in the mixed forest (F.O.M.4-2) adjacent to the small shallow marsh (MAS2-4), which is likely used to access pond and hunt stand.  Photo: Trail in F.O.M.4-2 through a section of white cedars.		No immediate action – Depending on outcomes of future land use planning, it is recommended that trails be formalized for passive recreational use where appropriate, or otherwise be decommissioned and left to succeed, or restored to natural condition.  Signage clearly stating permitted and prohibited uses should be placed at all trail entrances / access points

# Trail, Structure, & Signage Examples

### **Hunt Stands (Deer Blinds)**

Four hunt stands were found on the property, three of which are near the small wetland in the northeast forested swamp. The fourth, which consisted of pieces of wood nailed to a tree to act as rungs of a ladder, was presumed to be a hunt stand or part of one, and was found in the cultural woodland near The Queensway N. All are made of wood, and most are in poor to fair condition.

Photo: Hunt stand in a willow in the mixed swamp (SWM1-1) to the west of the shallow marsh (MAS2-4).

### **Photos**



# Initial Stewardship Recommendations

Action recommended -It is recommended that existing deer stands be decommissioned as soon as possible, and that ongoing monitoring be undertaken to ensure new deer hunt stands are not erected. Hunt stand material which does not decompose (e.g., metal) or which may be toxic (e.g., pressure treated wood) should be removed from site and disposed of accordingly.

Signage indicating prohibition of hunting on the conservation lands should be considered, and where present, maintained.

### **Metal Monitoring Well**

One metal, locked, utility pole, likely a monitoring well installed during previous site investigations, was found on the property, located on the edge of an agricultural field and cultural woodland on the west side of the property.



# No immediate action – Depending on management and monitoring objectives, the groundwater monitoring well may be retained or removed. Unless serving a monitoring purpose, the well should be properly decommissioned to ensure there is no contamination, etc. (depending on the depth of the well, etc.).

# Trail, Structure, & Signage Examples

### Fences

Six sections of fencing were observed on the property. Fencing was constructed out of wood (white cedar) (top photo) and/or page wire (bottom photo). All fencing, except for a small section in the cultural woodland to the west, was near an agricultural field edge.

### **Photos**



# Initial Stewardship Recommendations

Action recommended – It is recommended that, due to risk to wildlife, wire fences be removed and disposed of appropriately. Removal of cedar fences, which have begun to rot in place, is considered optional.



### Signage & Markers

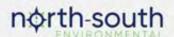
Two wooden stakes painted orange with a reflector on the top were observed along the A.T.V./snowmobile track on the east side of the property. In addition, a metal stake was found near a white cedar tree in the swamp thicket (SWT2-2) on the east side.

Photos: Wooden stake (top), metal stake (bottom)

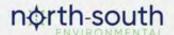


### Action recommended – Removal of stakes is recommended unless confirmed to be surveyors

SIB.



Trail, Structure, & Signage Examples	Photos	Initial Stewardship Recommendations
Rock Pile A rock pile was found in the cultural meadow (C.U.M.1) on the southwest side of the property near The Queensway N. Rocks were likely removed and piled from the adjacent agricultural field.	[No photo – rocks completely covered in vegetation, only felt by foot and heard]	No action required – these rock piles may function to provide wildlife habitat; removal is not recommended.
Trench / Drainage Ditch An overgrown trench was found in the meadow marsh (M.A.M.2) community that is between several agricultural fields.		No action required – This trench was likely created decades ago; current surrounding vegetation has adapted to any hydrological changes.



# Trail, Structure, & Signage Examples Garbage / Dumping Several instances of dumping were noted on the west side o

Several instances of dumping were noted on the west side of the property. Based on the dumped materials and the locations, it is presumed to be from the former landowner(s) and agricultural uses

### **Photos**





# Initial Stewardship Recommendations

Action recommended – It is recommended that material be removed and disposed of appropriately. Although dumping is noted to likely be from former landowners, signage to discourage dumping may also be considered; if possible, enforcement and potential charges through by-law enforcement may be an additional action to consider.

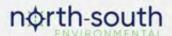
### 3.10. Stewardship Recommendations

The following stewardship actions are recommended for Property 2. While recommendations are provided, it is understood that implementation will be dependent on time, resources, and prioritization of activities. To assist in decision-making, stewardship actions have been ranked based on priority: High, Medium, Low. Approximate recommended timeframes for undertaken these actions is as follow: High – within 12 months; Medium – within 13-24 months; Low – within 24+ months. Priority is assigned in consideration with the existing impact / potential benefit to the natural features and their functions (e.g., wildlife habitat functions).

Recommended stewardship actions are summarized in **Appendix 2**.

### 3.10.1. Garbage Removal

Several instances of dumping were noted on the west side of the property. Based on the dumped materials and the locations, it is presumed to be from the former landowner(s) and agricultural uses.



### **Action Priority: Medium**

It is recommended that material be removed and disposed of appropriately. Although dumping is noted to likely be from former landowners, signage to discourage dumping may also be considered and placed in areas perceived to have a greater risk for the activity. If possible, enforcement and potential charges through by-law enforcement may be an additional action to consider for any future active illegal dumping.

### 3.10.2. Encroachment Management

3.10.2.1. Trails

As described in **Table 3** above, A.T.V. and other trails occur throughout the property.

**Action Priority: Medium – Low** (to be undertaken following future land use planning)

If it is intended that public use / access be initiated prior to the completion of the Management Plan for the subject property, trail stewardship is recommended to manage use and access as an interim approach to trails management. These actions may include closure / covering of undesired trails, signage and formalizing desirable trails.

Future land use planning will provide a comprehensive plan with respect to trails – proposed trail alignments, trail widths and design, trail density, etc. It is recommended that trails be formalized for passive recreational use where appropriate, or otherwise decommissioned and left to succeed or restored to natural condition based on the conclusions and recommendations of the forthcoming Management Plan.

Signage clearly stating permitted and prohibited uses should be placed at all trail entrances / access points.

### 3.10.3. Other Disturbances

3.10.3.1. Fences

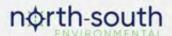
Six sections of fencing were observed on Property 2. Fencing was constructed out of wood (white cedar) and/or page wire. All fencing except for a small section in the cultural woodland to the west, was near an agricultural field edge.

### **Action Priority: Medium**

Due to the potential risk of harm to wildlife, it is recommended that wire fences be removed and disposed of appropriately. Removal of cedar fences, which have begun to rot in place, is considered optional.

3.10.3.2. Hunt Stands (Deer Blinds)

Four hunt stands were found on Property 2, three of which near the small wetland in the northeast forested swamp. The fourth, pieces of wood nailed to a tree to act as rungs of ladder, was presumed to



be a hunt stand or part of one, was found in the cultural woodland near The Queensway N. All are made of wood, and most are in poor to fair condition.

### **Action Priority: High**

It is recommended that existing deer stands be decommissioned as soon as possible, and that ongoing monitoring be undertaken to ensure new deer hunt stands are not erected. Hunt stand material which does not decompose (e.g., metal) or which may be toxic (e.g., pressure treated wood) should be removed from site and disposed of accordingly. Signage indicating prohibition of hunting on the conservation lands should be considered.

### 3.10.3.3. Signage & Markers

Two wooden stakes painted orange with a reflector on the top were observed along the A.T.V./snowmobile track on the east side of the property. In addition, a metal stake was found near a white cedar tree in the swamp thicket (SWT2-2) on the east side.

### Action Priority: Medium (due to ease of action)

Removal of stakes/markers is recommended, unless confirmed to be surveyors SIB. Although these stakes have no impact on the community, medium priority has been identified due to ease of action. Removal of this and other stakes (if found) could be undertaken opportunistically as they are found.

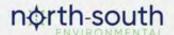
### 3.10.4. Invasive Species Management

Recommended stewardship actions for invasive species management are summarized in **Table 4.** Prioritization of invasive species management considers the following:

- Protection of areas where invasive species are absent or just appearing
- Control small, younger, outlier populations first
- Protect rare species and communities, important habitats (Anderson, 2012 a, b, c)
- Cost and effort based on infestation size, location and need for restoration (in most cases), restoration of treatment areas by planting / seeding native species makes them more resilient to future invasions.

For example, a newer and smaller population in a more sensitive habitat is likely identified as a high priority for management. Alternatively larger, well-established patches in less-sensitive areas are typically considered to be a low priority due to the amount of effort required to control and low potential success of eradicating the species. The recommended management priority for these well-establish populations (currently identified as 'low' to 'medium' priority), may be revisited at later land use planning stages, depending on management objectives to revisit potential management opportunities in the context of future restoration planning and/or land management.

As previously described, invasive species mapping undertaken during field surveys does not reflect a complete inventory. Mapping involved those populations which were incidentally encountered. Where



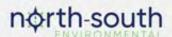
previously unmapped invasive species patches / populations are encountered, management prioritization should follow the approach described above.

Where invasive species formed the dominant cover within a vegetation community, separate mapping was not undertaken. Invasive species mapping focused on small patches which would present good opportunities for control / to prevent further spread **Figure 7**. **Table 4** summarizes vegetation communities where invasive species were dominant, as well as individually captured patches, as described above.

Details on invasive control methodology, including control methods, timing, effort, etc. are provided in **Section 6**.

Table 4. Invasive Species Mapping / Presence on Property 2.

Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
Mapped Patches	3	•	
I.S.27	Dog-strangling Vine	8x20 patch, dense, in C.U.M.1-1	<b>Low</b> – established population in low quality habitat
I.S.28	Dog-strangling Vine	5x5 patch growing on meadow species	<b>Low</b> – established population in low quality habitat
I.S.29	Garlic Mustard	20x15m dense patch, in Hedgerow	Low – established population in low quality habitat
I.S.25	Common Reed	10x2 m, in road ditch	High – isolated patch
<b>Vegetation Com</b>	munities		
S.W.M.1-1 (I.S.35)	Dog-strangling Vine	Widespread and abundant understory species	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.M.1-1	Common Buckthorn	Widespread and common understory species	Medium – established population requiring extensive work, moderate quality habitat (wetland)
C.U.M.1-1	Dog-strangling Vine	Scattered patches, common groundcover species	<b>Low</b> – established population requiring extensive work
F.O.D.5-6 (I.S.32)	Dog-strangling Vine	Widespread and dominant groundcover	<b>Low</b> – established population requiring extensive work
F.O.D.5-6	Common Buckthorn	Widespread and abundant understory species	<b>Low</b> – established population requiring extensive work
F.O.M.4 (I.S.33)	Dog-strangling Vine	Widespread and abundant groundcover	Low – established population requiring extensive work
F.O.M.4	Common Buckthorn	Widespread and common understory species	Low – established population requiring extensive work
F.O.D.5 (I.S.26)	Dog-strangling Vine	Widespread and dominant groundcover	Low – established population requiring extensive work



Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
F.O.D.5 (I.S.36)	Common Buckthorn	Widespread and abundant understory	<b>Low</b> – established population requiring extensive work
F.O.D.5	Tartarian Honeysuckle	Scattered patches in understory	Low – established population requiring extensive work
C.U.P.3-3	Scots Pine	Dominant species in canopy, sub- canopy, and understory	<b>Low</b> – established population requiring extensive work, low quality habitat
Hedgerow	Common Buckthorn	Widespread and dominant sub- canopy and understory species	<b>Low</b> – established population requiring extensive work, low quality habitat
Hedgerow (I.S.30)	Black Locust	Common in the canopy and sub- canopy	<b>Low</b> – established population requiring extensive work, low quality habitat
Hedgerow	Dog-strangling Vine	Widespread and abundant in the groundcover	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.1 (Black Locust Forest) (I.S.31)	Black Locust	Dominant in the canopy, sub- canopy. Occasional in the understory	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.1 (Black Locust Forest) (I.S.23)	Common Buckthorn	Scattered individuals, occasional in the sub-canopy and understory	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.1 (Black Locust Forest) (I.S.23)	Garlic Mustard	Scattered patches, common in the groundcover	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.1 (Black Locust Forest) (I.S.23)	Dog-strangling Vine	Widespread and common in the understory and groundcover	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.	Tartarian Honeysuckle	Patches in understory, common	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.	Common Buckthorn	Abundant throughout understory and sub-canopy	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W. (I.S.22)	Dog-strangling Vine	Widespread and abundant in the groundcover	Low – established population requiring extensive work, low quality habitat
C.U.W.	Garlic Mustard	Scattered patches, common in the groundcover	Low – established population requiring extensive work, low quality habitat
M.A.M.2-1 (I.S24)	Purple Loosestrife	Widespread, abundant in the understory	Low – established population requiring extensive work

## 4. The Queensway (Property 3)

## 4.1. Property Information

Area	11 ha
Legal Description	Parts of Lots 22 and 23, Concession3, 65R-14638, Part 2, Town of Georgina
Instrument Number	PIN 03499-004 (LT)
Survey	Plan 65R-14638 (1990)
Landowner	Lake Simcoe Region Conservation Authority
Roll Number	1970 000 12602 000 0000
<b>Emergency Number</b>	430 The Queensway North
Farm 911	

#### 4.2. Directions and Access

From Keswick, follow north on The Queensway North for approximately 2.5 km, just past Boyers Road. The property is located on the west side of The Queensway North. Access is available at the northeast corner of the property at Deer Park and The Queensway North (430 The Queensway North) and southeast corner of the property east side of The Queensway North (farm access).

## 4.3. Municipal and Provincial Planning Information

## 4.3.1. Land Use Designations

### 4.3.1.1. York Region Official Plan (2010; 2022 Consolidation)

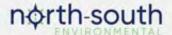
According to the York Region Official Plan (2010; 2022 Consolidation), a portion of the property is mapped as part of the Regional Greenlands System. The Greenlands System consists of core areas, corridors and linkages which are protected from development and site alteration (policies under Section 2.0). The property also falls under the Agriculture Policy Area.

#### 4.3.1.2. Town of Georgina Official Plan (2016; 2020 Consolidation)

According to the Town of Georgina Official Plan (2016; 2020 Consolidation), the property is designated in part as Environmental Protection Area and Agricultural Protection Area (Schedule A2). The property also includes key natural heritage features and/or key hydrologic features, namely woodlands, wetlands and portions of the Greenlands System (Schedules B1 and B2).

#### 4.3.2. **Zoning**

As per the Town of Georgina Zoning Bylaw 500 (2013), the property is zoned Rural. However, as of April 1, 2022, the Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which supersedes the Georgina Zoning Bylaw. The M.Z.O. designates the Subject Lands as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land.



## 4.3.3. Additional Designations

#### 4.3.3.1. Greenbelt Plan (2017)

The Subject Lands are designated Protected Countryside under the Greenbelt Plan (2017). Property 3 is also overlapped by the Natural Heritage System.

### 4.3.3.2. Lake Simcoe Watershed Natural Heritage System

According to the Natural Heritage System & Restoration Strategy for the Lake Simcoe Watershed (L.S.R.C.A. 2018), the property does not contain Natural Heritage System Core Features.

## 4.4. Ecoregion Context, Physiography and Soils

The Subject Lands are located in Ecodistrict 6E-6, known as the Barrie Ecodistrict, within the Lake Simcoe-Rideau Ecoregion 6E.

The Subject Lands are located within the Lake Simcoe Basin and include portions of sand plain, till plain (drumlinized) and scattered drumlins running in a southwest to northeast direction (Chapman and Putnam, 1984). The surficial geology of the area has been mapped on a regional basis by Barnett et al., 1991. This mapping shows the general area of the properties to be underlain by the Newmarket Till (Simcoe lobe), undifferentiated till, and Glaciolacustrine deposits consisting of sand, gravelly sand, and gravel.

The Soil Map of York County indicates the Subject Lands are generally underlain by clay loam, loam, and sandy loam soils with poor to imperfect drainage and smooth to gently sloping topography (Agriculture Canada and Ministry of Agriculture & Food, 1977).

## 4.5. Significant Areas

No Areas of Natural and Scientific Interest (ANSIs) occur on the Subject Lands.

### 4.5.1. Provincially Significant Wetland

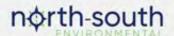
The North Keswick P.S.W. Complex occurs on the property. The wetlands on the property consist of deciduous swamp (**Figure 8**).

#### 4.5.2. Watercourses and Waterbodies

No watercourses or waterbodies are present on Property 3.

## 4.6. Ecological Land Classification

A total of five vegetation community types were mapped on Property 3 (**Figure 8**). The property is mostly agricultural field, with 80% coverage, with the remaining 20% consisting of natural cover. Agricultural fields are surrounded by hedgerows of deciduous tree species. In the northwest corner, Cultural Meadows (C.U.M.1), Deciduous Forest (F.O.D.) and three Deciduous Swamp (S.W.D.) types are



present. Detailed community descriptions are available in the in the Baseline Document Report (N.S.E. 2023).

#### 4.7. Wildlife Habitat

Targeted species-specific surveys (Breeding Bird Surveys and Amphibian Calling Surveys) were undertaken in 2022 by the Conservation Authority. Incidental fauna species were noted by N.S.E. in 2022.

A total of 26 fauna species were recorded on Property 3. A complete list of fauna is provided in the Baseline Document Report (N.S.E. 2023). Of the 26 species, there was a total of 1 amphibian species and 25 bird species.

## 4.8. Species of Interest

One SAR flora was recorded, Butternut, listed provincially as Endangered.

A total of two SAR fauna were recorded, including Barn Swallow, provincially listed/ designated as Threatened, and Eastern Wood-pewee, provincially listed/ designated as Special Concern.

#### 4.9. Threats and Disturbances

## 4.9.1. Invasive Species

The following Invasive plant species were observed on Property 3. Note, as described in the B.D.R. (N.S.E. 2023), a complete inventory of invasive species was not conducted, however, where small patches exist, which offer opportunities for control to reduce the spread of invasives, they have been identified in **Table 5**, below.

#### Dog-strangling Vine

Dog-strangling Vine was only observed in the cultural meadow (C.U.M.1) communities and where it was widespread and common in ground layer.

#### Lily of the Valley

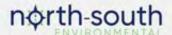
Lily of the Valley (*Convallaria majalis*) was observed in the cultural woodland (C.U.W.) where it was dominant and formed a dense widespread patch.

#### • Tartarian Honeysuckle

Tartarian Honeysuckle was widespread and common in understory of the cultural woodland (C.U.W.).

#### • Common Buckthorn

Common Buckthorn was widespread and dominant in understory of the cultural woodland (C.U.W.).



## 4.9.2. Human Impacts

Documented human impacts were very minimal on Property 3 which only included collapsed wooden fencing. There were no buildings, A.T.V./snowmobile tracks, trails, or signage located on Property 3. **Table 5** summarizes the fencing. Locations are illustrated on **Figure 9**.

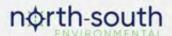


Table 5. Trails, Structures, and Signage for Property 3.

Trail, Structure, & Signage	Photos	Initial Stewardship Recommendations
Fences The remains of cedar wooden fencing were found in the cultural woodland that is located between the cultural meadow and the northern agricultural field.		No immediate action – Removal of cedar fences, which have begun to rot in place, is considered optional.

## 4.10. Stewardship Recommendations

The following stewardship actions are recommended for Property 3. While recommendations are provided, it is understood that implementation will be dependent on time, resources, and prioritization of activities. To assist in decision-making, stewardship actions have been ranked based on priority: High, Medium, Low. Approximate recommended timeframes for undertaken these actions is as follow: High – within 12 months; Medium – within 13-24 months; Low – within 24+ months. Priority is assigned in consideration with the existing impact / potential benefit to the natural features and their functions (e.g., wildlife habitat functions).

Recommended stewardship actions are summarized in **Appendix 2**.

#### 4.10.1. Other Disturbances

#### 4.10.1.1. Fences

The remains of cedar wooden fencing were found in the cultural woodland that is located between the cultural meadow and the northern agricultural field.

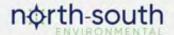
#### **Action Priority: Low**

Removal of cedar fences, which have begun to rot in place, is considered optional.

#### 4.10.2. Invasive Species Management

Recommended stewardship actions for invasive species management are summarized in **Table 6.** Prioritization of invasive species management considers the following:

- Protection of areas where invasive species are absent or just appearing
- Control small, younger, outlier populations first



- Protect rare species and communities, important habitats (Anderson, 2012 a, b, c)
- Cost and effort based on infestation size, location and need for restoration (in most cases), restoration of treatment areas by planting / seeding native species makes them more resilient to future invasions.

For example, a newer and smaller population in a more sensitive habitat is likely identified as a high priority for management. Alternatively larger, well-established patches in less-sensitive areas are typically considered to be a low priority due to the amount of effort required to control and low potential success of eradicating the species. The recommended management priority for these well-establish populations (currently identified as 'low' to 'medium' priority), may be revisited at later land use planning stages, depending on management objectives to revisit potential management opportunities in the context of future restoration planning and/or land management.

As previously described, invasive species mapping undertaken during field surveys does not reflect a complete inventory. Mapping involved those populations which were incidentally encountered. Where previously unmapped invasive species patches / populations are encountered, management prioritization should follow the approach described above.

Where invasive species formed the dominant cover within a vegetation community, separate mapping was not undertaken. Invasive species mapping focused on small patches which would present good opportunities for control / to prevent further spread (**Figure 10**). **Table 6** summarizes vegetation communities where invasive species were dominant, as well as individually captured patches, as described above.

Details on invasive control methodology, including control methods, timing, effort, etc. are provided in **Section 6**.

Table 6. Invasive Species Mapping / Presence on Property 3.

Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
Vegetation C	ommunities		
C.U.W. (I.S.26)	Lily of the Valley	Patchy but dominant when present. Uncommon in ground cover	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W. (I.S.26)	Tartarian honeysuckle	Widespread and common in understory	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.	Common Buckthorn	Widespread and dominant in understory	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.M.1	Dog-strangling Vine	Widespread and common in the groundcover	Low – established population requiring extensive work, low quality habitat

## 5. Varney Road (Property 4)

## 5.1. Property Information

Area	52 ha
Legal Description	524 Varney Rd, Parts of Lots 21 and 22, Concession 2 and 3, 65R-29665 Part 1 and 2, Town of Georgina
Instrument Number	PIN 03496-0189 (LT), 03496-0190 (LT)
Survey	Plan 65R-29665, Part 1 and Part 2 (2007)
Landowner	Lake Simcoe Region Conservation Authority
Roll Number	1970 000 12525 000 0000
Emergency Number Farm 911	524 Varney Road

#### 5.2. Directions and Access

From Keswick, follow north on The Queensway North for approximately 2.5 km, making a jog west along Boyers Road, to head north on Varney Road. The property is located on the west side Varney Road. Access is available along the west side of Varney Road at 524 Varney Road (farm access).

## 5.3. Municipal and Provincial Planning Information

### 5.3.1. Land Use Designations

#### 5.3.1.1. York Region Official Plan (2010; 2022 Consolidation)

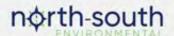
According to the York Region Official Plan (2010; 2022 Consolidation), a portion the property is mapped as part of the Regional Greenlands System, and also fall under the Agriculture Policy Area.

### 5.3.1.2. Town of Georgina Official Plan (2016; 2020 Consolidation)

According to the Town of Georgina Official Plan (2016; 2020 Consolidation), the property is designated in part as Environmental Protection Area and Agricultural Protection Area (Schedule A2). The property also includes key natural heritage features and/or key hydrologic features, which include woodlands, wetlands, watercourses, and portions of the Greenlands System (Schedules B1 and B2).

#### 5.3.2. **Zoning**

As per the Town of Georgina Zoning Bylaw 500 (2013), Property 4 is zoned Rural. However, as of April 1, 2022, the Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which supersedes the Georgina Zoning Bylaw. The M.Z.O. designates the Subject Lands as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land.



## 5.3.3. Additional Designations

#### 5.3.3.1. Greenbelt Plan (2017)

The Subject Lands are designated Protected Countryside under the Greenbelt Plan (2017). Property 4 is also overlapped by the Natural Heritage System.

### 5.3.3.2. Lake Simcoe Watershed Natural Heritage System

According to the Natural Heritage System & Restoration Strategy for the Lake Simcoe Watershed (L.S.R.C.A. 2018), portions of Property 4 are identified as Natural Heritage System Core and are subject to the policies set out in the strategy.

## 5.4. Ecoregion Context, Physiography and Soils

The Subject Lands are located in Ecodistrict 6E-6, known as the Barrie Ecodistrict, within the Lake Simcoe-Rideau Ecoregion 6E.

The Subject Lands are located within the Lake Simcoe Basin and include portions of sand plain, till plain (drumlinized) and scattered drumlins running in a southwest to northeast direction (Chapman and Putnam, 1984). The surficial geology of the area has been mapped on a regional basis by Barnett et al., 1991. This mapping shows the general area of the properties to be underlain by the Newmarket Till (Simcoe lobe), undifferentiated till, and Glaciolacustrine deposits consisting of sand, gravelly sand, and gravel.

The Soil Map of York County indicates the Subject Lands are generally underlain by clay loam, loam, and sandy loam soils with poor to imperfect drainage and smooth to gently sloping topography; portions of Property 4 are underlain by well drained loam-sandy loam (Agriculture Canada and Ministry of Agriculture & Food, 1977).

## 5.5. Significant Areas

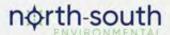
No Areas of Natural and Scientific Interest (ANSIs) occur on the Subject Lands.

### 5.5.1. Provincially Significant Wetland

The North Keswick P.S.W. Complex occurs on the property. The wetlands on the property consist of swamp and marsh (**Figure 11**).

#### 5.5.2. Watercourses and Waterbodies

Georgina Creek, another intermittent stream forming part of the Georgina Creeks subwatershed, is identified by LIO as bisecting the east side of the property, through marsh communities, draining west to Lake Simcoe (**Figure 11**). Results of October 2022 field surveys describe a poorly defined channel which, at the time, had no flowing water.



## 5.6. Ecological Land Classification

A total of 16 vegetation community types were mapped on Property 4 (Figure 11). The property also has a high percentage of agricultural field coverage (41% cover); however, it is restricted to the eastern half of the property. The remainder of the property is comprised of natural cover, including forests (30%) cover), swamps (9% cover) and cultural meadows (9% cover). Cultural Woodlands (C.U.W.), Deciduous Forests (F.O.D.), Deciduous Swamps (S.W.D.), Cultural Meadows (C.U.M.1), Hedgerows and Meadow Marshes (M.A.M.2) border agricultural fields. There is a small Floating-leaved Duckweed Pond (SAF1-3), this feature appears to be of anthropogenic origin, constructed sometime after 1970. This pond lies between two Cultural Woodlands in the east. These Cultural Woodlands act as a path from Varney Road, which borders the property to the east. The western half is forests, swamps and meadow. The most common forest communities are Moist White Cedar (F.O.C.4-1), Fresh Maple and Beech (F.O.D.5-2), Fresh-Moist White Cedar and Hardwood Mixed (F.O.M.7-2), and Fresh-Moist Sugar Maple-Hardwood Deciduous Forest (F.O.D.6-5). The swamps are White Cedar and Hardwood Mixed Swamp (SWM1-1) and two Green Ash Mineral Swamps (S.W.D.2-2). A former agricultural field is now a Cultural Meadow (C.U.M.1), which is bordered to the west by a Mineral Mash (M.A.M.2), Meadow Marsh (MAS) and Willow Swamp Thicket (SWT2-2). Detailed community descriptions are available in the in the Baseline Document Report (N.S.E. 2023).

#### 5.7. Wildlife Habitat

Targeted species-specific surveys (Breeding Bird Surveys and Amphibian Calling Surveys) were undertaken in 2022 by the Conservation Authority. Incidental fauna species were noted by N.S.E. in 2022.

A total of 48 fauna species were recorded on Property 4. A complete list of fauna is provided in the Baseline Document Report (N.S.E. 2023). Of the 48 species, there was a total of 2 amphibian species, 42 bird species, 1 mammal species, and 2 insect species. Additionally, several terrestrial crayfish burrows were observed, however no individuals were seen to determine the species.

## 5.8. Species of Interest

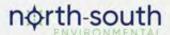
Two SAR flora were recorded, including Black Ash and Butternut, both provincially Endangered.

A total of three SAR fauna were recorded, including Barn Swallow, provincially Threatened, and Eastern Wood-pewee and Monarch, both provincially Special Concern.

#### 5.9. Threats and Disturbances

#### 5.9.1. Invasive Species

The following Invasive plant species were observed on Property 4. Note, as described in the B.D.R. (N.S.E. 2023), a complete inventory of invasive species was not conducted however, where small patches exist, which offer opportunities for control to reduce the spread of invasives, they have been identified in **Table 7**, below.



#### Dog-strangling Vine

Two notable extensive and dense populations were observed and mapped. One population was in the Maple-Beech Forest (F.O.D.5-2) where it was dominant ground cover species with very few other species, and the second was a large dense patch (~20 x 20 m) in the cultural woodland (C.U.W.) along the laneway from Varney Road. Dog-strangling Vine was also observed in the cultural meadow (C.U.M.), three treed communities (F.O.D.6-5, F.O.M.7-2, S.W.D.), and hedgerows where it was generally widespread and ranged from abundant to dominant in the ground layer.

#### Japanese Barberry

Two small dense, localized patches  $(1 - 15 \text{ m}^2)$  of Japanese Barberry were found in the two main deciduous forest communities (F.O.D.6-5, F.O.D.5-2).

#### Common Reed

One dense and isolated patch (~20 x10 m) of Common Reed was observed on the edge of the pond (SAF1-3) that extended into the cultural meadow (C.U.M.1-1).

#### European Black Alder

One large (~15 x 25 m) and dense patch of European Alder (*Alnus glutinosa*) was found in the Green Ash Swamp (S.W.D.2-2), growing amongst standing dead ash trees. The trees were approximately 5 m in height.

#### • Common Buckthorn

Widespread distribution of Common Buckthorn was found in hedgerow, cultural woodland (C.U.W.), conifer and mixed forest (F.O.C.4-1, F.O.M.7-2) and mixed swamp (SWM1-1) where it ranged from common to abundant in ground cover, understory, and sub-canopy layers.

In addition, Common Buckthorn was widespread and dominant in the subcanopy and common in understory and ground layer in deciduous swamp (S.W.D.).

#### Tartarian Honeysuckle

Tartarian Honeysuckle was found in scattered patches in the hedgerows separating agricultural fields, where it was common in understory and ground layer.

#### • Purple Loosestrife

Purple Loosestrife was widespread and ranged from common to abundant in the ground cover of two swamp communities; thicket swamp (SWT2-2) and deciduous swamp (S.W.D.2-2).

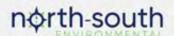
#### 5.9.2. Human Impacts

Documented human impacts include A.T.V. tracks, hunt stands, fencing, evidence of equestrian use, stone wall entrance, and dumping. No encroachment from residential yards or adjacent agricultural farms were noted, however, a few dumping locations were observed. Dumping included a pop-up trailer, cinder blocks, bags of cement, and miscellaneous garbage with metal and tires.

There were no buildings located on Property 4. **Table 7** summarizes examples of trails, structures and signage. Locations are illustrated on **Figure 12**.

Table 7. Trails, Structure	, and Signage	for Property 4.
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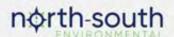
Table 7. Trails, Structure, and Signage for Property 4.				
Trail, Structure, & Signage	Photos	Initial Stewardship		
Examples		Recommendations		
A.T.V. Tracks A.T.V. tracks (with evident A.T.V. ruts) were documented around and through the cultural meadow (C.U.M.) that was previously an agricultural field. Ruts were still present; however, it did not appear there was recent use.  Photo: Faint A.T.V. tracks (ruts present) in and around the most western cultural meadow.		No immediate action – Depending on outcomes of future land use planning, it is recommended that trails be formalized for passive recreational use where appropriate, or otherwise be decommissioned and left to succeed, or restored to natural condition.  Signage clearly stating permitted and prohibited uses should be placed at all trail entrances / access		
Laneways Farm laneway, distinguished from A.T.V. tracks / trails by greater width, runs through several communities starting from Varney Road west to provide access to the adjacent agricultural fields. The laneway ends at the cultural meadow (C.U.M.), which was formerly an agricultural field. The laneway is more established closer to Varney Road with sparse gravel. More western sections are covered in grass. Approximately 1,089 m of laneway is present.  Photo: Section closer to Varney Road in the cultural woodland showing sparse gravel (top) and a section more west in the cultural meadow (bottom).		No immediate action – Depending on outcomes of future land use planning, it is recommended that trails be formalized for passive recreational use where appropriate, or otherwise be decommissioned and left to succeed, or restored to natural condition. Future land use planning may also consider use / upgrade of these laneways as public access / access to parking. Where decommissioned, access barriers may be required at the ends of wider trails to prevent vehicular access.  Signage clearly stating permitted and prohibited		



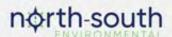
Trail, Structure, & Signage Examples	Photos	Initial Stewardship Recommendations
		uses should be placed at all trail entrances / access points.
Fences Two sections of fencing were found on the property. Page wire fencing and a few wooden posts were found on the edge of the White Cedar Coniferous Forest (F.O.C.4-1) where the laneway cuts through the community and leads to the cultural meadow. Another section of fencing comprised of only cedar wood was noted in the northern White Cedar Coniferous Forest (F.O.C.4-1) community and was approximately 20m in length.  Photo: Page wire and cedar (top), cedar fencing (~20m) (bottom).Cedar wood fence.		Action recommended – Due to risk of potential harm to wildlife, it is recommended that wire fences be removed and disposed of appropriately. Removal of cedar fences, which have begun to rot in place, is considered optional.
Photo: Page wire and cedar (top), cedar fencing (~20m)		



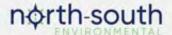
Trail, Structure, & Signage	Photos	Initial Stewardship
Examples		Recommendations
Hunt Stands (Deer Blinds) Five hunt stands were located on the property: two by N.S.E. and 3 by Conservation Authority staff. The first located by N.S.E. staff was made out of wood and in a sugar maple, on the edge of the Maple-Beech Forest (F.O.D.5-2), agricultural field and hedgerow. The second hunt stand was found in the interior of the same community, constructed as a wooden platform in a dead standing tree approximately 10-15m up. No ladder was found.  Three other hunt stands were recorded by Conservation Authority staff around the perimeter of the western cultural meadow (formerly agricultural field).  Photo: Hunt stand in sugar maple on edge of agricultural field (top), hunt stand in dead standing tree in Maple-Beech forest interior (F.O.D.5-2) (bottom).		Action recommended — It is recommended that existing deer stands be decommissioned as soon as possible, and that ongoing monitoring be undertaken to ensure new deer hunt stands are not erected. Hunt stand material which does not decompose (e.g., metal) or which may be toxic (e.g., pressure treated wood) should be removed from site and disposed of accordingly.  Signage indicating prohibition of hunting on the conservation lands should be considered, and where present, maintained.
Signage & Markers		Action recommended –
Black metal trail markers attached to Eastern White Cedar trees in community F.O.C.4-1.		Removal of existing trail markers is recommended. (Trail design and wayfinding should be
Photo: Two metal markers attached to Eastern White Cedar trees.		considered as part of future land use planning).



Trail, Structure, & Signage Examples	Photos	Initial Stewardship Recommendations
Stone Wall Start of farm laneway marked with stone wall entrance off of Varney Road.  Photo: Stone wall property entrance.		No immediate action – Could be enhanced and used as entrance gateway for public access. Negligible benefits of removal are not worth the effort. Monitoring may be considered to address risk of vandelism / graffiti.
Garbage / Dumping A few dumping locations were noted. Dumping included a pop-up trailer (top photo), cinder blocks (middle photo), bags of cement, and miscellaneous garbage with metal and tires (bottom photo).		Action recommended – It is recommended that material be removed and disposed of appropriately. Signage to discourage dumping may also be considered.  Cinder block, which are overgrown with vegetation, may have begun to serve a wildlife habitat function and should be considered for retention.



Trail, Structure, & Signage Examples	Photos	Initial Stewardship Recommendations



## 5.10. Stewardship Recommendations

The following stewardship actions are recommended for Property 4. While recommendations are provided, it is understood that implementation will be dependent on time, resources and prioritization of activities. To assist in decision-making, stewardship actions have been ranked based on priority: High, Medium, Low. Approximate recommended timeframes for undertaken these actions is as follow: High – within 12 months; Medium – within 13-24 months; Low – within 24+ months. Priority is assigned in consideration with the existing impact / potential benefit to the natural features and their functions (e.g., wildlife habitat functions).

Recommended stewardship actions are summarized in Appendix 2.

#### 5.10.1. Garbage Removal

A few dumping locations were noted. Dumping included a pop-up trailer, cinder blocks, bags of cement, and miscellaneous garbage with metal and tires.

#### **Action Priority: Medium**

It is recommended that material be removed and disposed of appropriately. Signage to discourage dumping may also be considered. If possible, enforcement and potential charges through by-law enforcement may be an additional action to consider.

Cinder blocks, which are overgrown with vegetation, may have begun to serve a wildlife habitat function and should be considered for retention.

#### 5.10.2. Encroachment Management

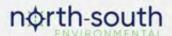
5.10.2.1. Trails

As described in **Table 7** above, A.T.V. and other trails occur throughout the property.

**Action Priority: Medium – Low** (to be undertaken following future land use planning)

If it is intended that public use / access be initiated prior to the completion of the Management Plan for the subject property, trail stewardship is recommended to manage use and access as an interim approach to trails management. These actions may include closure / covering of undesired trails, signage and formalizing desirable trails.

Future land use planning will provide a comprehensive plan with respect to trails – proposed trail alignments, trail widths and design, trail density, etc. It is recommended that trails be formalized for passive recreational use where appropriate, or otherwise decommissioned and left to succeed or restored to natural condition based on the conclusions and recommendations of the forthcoming Management Plan.



Signage clearly stating permitted and prohibited uses should be placed at all trail entrances / access points.

#### 5.10.3. Other Disturbances

#### 5.10.3.1. Fences

Two sections of fencing were found on Property 4. Page wire fencing and a few wooden posts were found on the edge of the White Cedar Coniferous Forest (F.O.C.4-1) where the laneway cuts through the community and leads to the cultural meadow. Another section of fencing comprised of only cedar wood was noted in the northern White Cedar Coniferous Forest (F.O.C.4-1) community and was approximately 20m in length.

#### **Action Priority: Medium**

Due to risks of potential harm to wildlife, it is recommended that wire fences be removed and disposed of appropriately. Removal of cedar fences, which have begun to rot in place, is considered optional.

## 5.10.3.2. Hunt Stands (Deer Blinds)

Five hunt stands were located on Property 4: two by N.S.E. and 3 by Conservation Authority staff. The first located by N.S.E. staff was made out of wood and in a sugar maple, on the edge of the Maple-Beech Forest (F.O.D.5-2), agricultural field and hedgerow. The second hunt stand was found in the interior of the same community, constructed as a wooden platform in a dead standing tree approximately 10-15m up. No ladder was found.

#### **Action Priority: High**

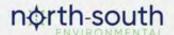
It is recommended that existing deer stands be decommissioned as soon as possible, and that ongoing monitoring be undertaken to ensure new deer hunt stands are not erected. Hunt stand material which does not decompose (e.g., metal) or which may be toxic (e.g., pressure treated wood) should be removed from site and disposed of accordingly. Signage indicating prohibition of hunting on the conservation lands should be considered.

## 5.10.3.3. Signage & Markers

Two black metal trail markers were noted attached to Eastern White Cedar trees in community F.O.C.4-1.

#### **Action Priority: Low**

Removal of existing trail markers is recommended. Trail design and wayfinding should be considered as part of future land use planning.



## 5.10.4. Invasive Species Management

Recommended stewardship actions for invasive species management are summarized in **Table 8.** Prioritization of invasive species management considers the following:

- Protection of areas where invasive species are absent or just appearing
- Control small, younger, outlier populations first
- Protect rare species and communities, important habitats (Anderson, 2012 a, b, c)
- Cost and effort based on infestation size, location and need for restoration (in most cases), restoration of treatment areas by planting / seeding native species makes them more resilient to future invasions.

For example, a newer and smaller population in a more sensitive habitat is likely identified as a high priority for management. Alternatively larger, well-established patches in less-sensitive areas are typically considered to be a low priority due to the amount of effort required to control and low potential success of eradicating the species. The recommended management priority for these well-establish populations (currently identified as 'low' to 'medium' priority), may be revisited at later land use planning stages, depending on management objectives to revisit potential management opportunities in the context of future restoration planning and/or land management.

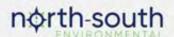
As previously described, invasive species mapping undertaken during field surveys does not reflect a complete inventory. Mapping involved those populations which were incidentally encountered. Where previously unmapped invasive species patches / populations are encountered, management prioritization should follow the approach described above.

Where invasive species formed the dominant cover within a vegetation community, separate mapping was not undertaken. Invasive species mapping focused on small patches which would present good opportunities for control / to prevent further spread **Figure 13**. **Table 8** summarized vegetation communities where invasive species were dominant, as well as individually captured patches, as described above.

Details on invasive control methodology, including control methods, timing, effort, etc. are provided in **Section 6**.

Table 8. Invasive Species Mapping / Presence on Property 4.

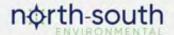
Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
Mapped Pate	hes		
I.S.43	Japanese Barberry	small, dense patch, 3x5 m	High – isolated patch
I.S.41	Japanese Barberry	Small, dense patch, 1x1 m	High – isolated patch
I.S.45	Common Reed	20x10 m, to shoreline of pond, extends back into a C.U.M.	High – isolated patch



Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
I.S.40	European Black Alder	15x25 m patch, 5 m tall	High – isolated patch, has potential to spread through regenerating swamp
Vegetation C	ommunities		_
S.W.D.2-2	Purple Loosestrife	Widespread and common in the groundcover	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.D.	Dog-strangling Vine	Widespread and dominant in the groundcover	Medium – established population requiring extensive work, moderate quality habitat (wetland)
S.W.D.	Common Buckthorn	Widespread and dominant in the sub-canopy, common in the understory and groundcover	Medium – established population requiring extensive work, moderate quality habitat (wetland)
SWM1-1	Common Buckthorn	Widespread and abundant in the understory	Medium – established population requiring extensive work, moderate quality habitat (wetland)
C.U.W. (I.S.38)	Dog-strangling Vine	Widespread and dominant groundcover	<b>Low</b> – established population requiring extensive work, low quality habitat
C.U.W.	Common Buckthorn	Widespread and common in understory	Low – established population requiring extensive work, low quality habitat
Hedgerow	Dog-strangling Vine	Widespread and dominant in the groundcover	Low – established population requiring extensive work, low quality habitat
Hedgerow	Common Buckthorn	Widespread and abundant in understory and sub-canopy	Low – established population requiring extensive work, low quality habitat
Hedgerow	Tartarian Honeysuckle	Scattered patches, common in the understory and groundcover	Low – established population requiring extensive work, low quality habitat
F.O.C.4-1 (East of C.U.M.1)	Dog-strangling Vine	Widespread and dominant in groundcover. Often only species present.	Low – established population requiring extensive work
F.O.C.4-1 (North of C.U.M.1)	Common Buckthorn	Widespread and common in the understory and groundcover	Low – established population requiring extensive work



Patch / Community ID	Species	Patch Size / Density or Dominance / Cover in Community	Management Priority
F.O.C.4-1 (North of C.U.M.1)	Dog-strangling Vine	Widespread and dominant groundcover	Low – established population requiring extensive work
SWT2-2	Purple	Widespread and abundant in the	Low – established population
(I.S.39)	Loosestrife	groundcover	requiring extensive work
F.O.D.6-5	Dog-strangling Vine	Widespread and abundant in the groundcover	<b>Low</b> – established population requiring extensive work
F.O.M.7-2	Dog-strangling Vine	Widespread and dominant groundcover	<b>Low</b> – established population requiring extensive work
F.O.M.7-2	Common Buckthorn	Widespread and abundant in the groundcover and understory	<b>Low</b> – established population requiring extensive work
F.O.D.5-2	Dog-strangling	Widespread and dominant in the	<b>Low</b> – established population
(I.S.44)	Vine	groundcover	requiring extensive work



## 6. Detailed Invasive Species Management Methodology

Stewardship recommendations for the Subject Lands have identified patches of Common Reed, Japanese Barberry, European Black Alder, and Multiflora Rose as high priority for management. Patches of these species were identified as smaller / isolated, where control would be most effective to contain spread.

Although Dog-strangling Vine, Common Buckthorn, Garlic Mustard, Tatarian Honeysuckle, Black Locust, and Purple Loosestrife were identified on the Subject Lands, due to the widespread extent of established populations, and the high effort / resources required for effective management, control of these species was identified as a low to moderate priority.

## 6.1. Populations Identified as High Priority for Management

Stewardship recommendations for the Subject Lands have identified 14 invasive species patches for control, consisting of the following species: Common Reed, (Properties 1, 2 and 4), Japanese Barberry (Properties 1 and 4), European Black Alder (Property 4), and Multiflora Rosa (Property 1).

Locations of these patches have been consolidated on **Figure 14**. **Table 9** provides a summary of these patches, as well as recommended control measures. Details of control methods are provided in the following sections.

General timing windows for recommended treatments have been provided below. Some occur within the active breeding season of many taxa. It is recommended that a qualified biologist conduct surveys to determine potential impact / harm to flora and fauna species prior to any invasive species control.

Although recommended control measures are considered effective, treatment may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication). Annual invasive species monitoring should be conducted to document treatment efficacy and identify recurring or new populations requiring ongoing treatment (see **Section 8**).

Table 9. Invasive Species Populations Identified as High Priority for Management

Patch ID	Property	Species	Notes	Recommended Treatment	Timing	Approx. Effort*
I.S.5	Property 1	Japanese Barberry	Single plant, 1 m tall	Cut then Herbicide	Fall	1/4 day
I.S.11	Property 1	Japanese Barberry	2x2m patch, in fruit, 1.5 m tall	Cut then Herbicide	Fall	½ day
I.S.19	Property 1	Japanese Barberry	4x2m patch, 1.5 m tall	Cut then Herbicide	Fall	½ day
I.S.37	Property 1	Japanese Barberry	1 individual on edge of creek, 1 m tall	Cut then Herbicide	Fall	1/4 day
I.S.21	Property 1	Multiflora rose	1x1m patch	Cut then Herbicide	July - September	¼ day

Patch ID	Property	Species	Notes	Recommended Treatment	Timing	Approx. Effort*
I.S.1	Property 1	Common Reed	5x10 m, not very dense	Herbicide	Late summer/ early fall	½ day
I.S.8	Property 1	Common Reed	10x20 m patch	Herbicide	Late summer/ early fall	<1 day
I.S.10	Property 1	Common Reed	10x10 m patch	Herbicide	Late summer/ early fall	<1 day
I.S.20	Property 1	Common Reed	2x1m patch	Herbicide	Late summer/ early fall	¼ day
I.S.25	Property 2	Common Reed	10x2 m, in road ditch	Herbicide	Late summer/ early fall	½ day
I.S.43	Property 4	Japanese Barberry	small, dense patch, 3x5 m	Cut then Herbicide	Fall	½ day
I.S.41	Property 4	Japanese Barberry	Small, dense patch, 1x1 m	Cut then Herbicide	Fall	¼ day
I.S.45	Property 4	Common Reed	20x10 m, to shoreline of pond, extends back into a C.U.M.	Herbicide where over dry land; Cutting where in standing water	Late summer/ early fall; Mid-summer	1 day
I.S.40	Property 4	European Black Alder	15x25 m patch, 5 m tall	Cut then Herbicide	Fall	<1 day

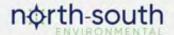
<sup>\*</sup> Approximate effort reflects effort for first treatment. As described, treatment may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication)

#### 6.1.1. Common Reed

#### Dry Sites (Water table below ground surface)

The most effective management of Common Reed is through manual cutting (for small populations in soft substrate) and / or herbicide treatment, either with glyphosate or imazapyr (Nichols, 2020). Manual cutting is recommended in areas of soft substate (e.g., sandy soils). Given the growing condition of Common Reed on the Subject Lands, use of herbicide is considered the most suitable / effective. Herbicide should be applied no more than once annually according to application rates on the product label (glyphosate or imazapyr). Although treatment efficacy is high, application may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication).

The timing of application is best in the late summer and early fall when there is reduced wildlife activity and when native flora is going dormant, reducing chance of unintentional harm due to spray drift (Nichols, 2020).



### Wet Sites (Water above ground surface)

Selective manual cutting of Common Reed beneath the waterline can effectively drown the plant by inhibiting the supply of oxygen to lower plant parts (Nichols, 2020). Cutting can be undertaken using brush cutters or a spade. Cutting in water depths 30 cm or more, coincides with greater efficacy of control (Nichols, 2020).

Cutting is most effective during the primary growth stage of Common Reed before seed heads develop (mid-summer). Depending upon water depths, follow-up control may be repeated throughout the growing season. Cutting can also be effective on dead stalks during late winter or early spring (Nichols 2020). Although treatment efficacy is high (in optimal water depths), application may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication).

Alternatively, water-safe herbicide treatment may be considered (e.g., Imazapyr, Habitat Aqua; use in accordance with product label).

### **6.1.2.** Japanese Barberry

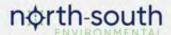
Cutting paired with herbicide application is the most effective treatment, pairing manual removal with chemical control (M.D.N.R. 2012). Selective herbicide application (without spray) means little impact to surrounding vegetation. For cut stump applications, triclopyr or glyphosate are recommended (application rate should follow product labels). Herbicide should be applied immediately following cutting.

This treatment may be used in any season except during periods of heavy sap flow in spring when sap is flowing upwards. Fall may be most effective (M.D.N.R. 2012). Although treatment efficacy is high, application may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication).

#### 6.1.3. European Black Alder

Cutting is the preferred control method for adult European Black Alder (Anderson, 2013). Cutting must be done in conjunction with herbicide treatment to the stump to prevent re-sprouting. Otherwise, the Alder will re-sprout multiple stems with dense branches. Selective herbicide application (without spray) means little impact to surrounding vegetation. Herbicide should be applied within five minutes of cutting to ensure it is absorbed. For cut stump applications, triclopyr or glyphosate are recommended (application rate should follow product labels).

The best time for control / herbicide application is during the fall, as the trees will take up the herbicide better as it prepares for winter (Anderson, 2013). Although treatment efficacy is high, application may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication).



#### 6.1.4. Multiflora Rose

Multiflora rose can vigorously resprout if disturbed, for this reason, manual removal is not recommended. Stem cutting coupled with herbicide application is most effective. Selective herbicide application (without spray) means little impact to surrounding vegetation (Warne 2018). Stems should be cut as close to the ground as possible and painted immediately (within minutes) with herbicide to kill the roots. For cut stump applications, triclopyr or glyphosate are recommended (application rate should follow product labels).

Treatment is recommended later in the growing season (July through September) or during the dormant season; it is not effective during spring/sap flow (Warne 2018). Although treatment efficacy is high, application may need to be repeated annually until the population is eradicated (there is no estimated timeframe for eradication).

## 6.2. Populations Identified as Low-Medium Priority for Management

Although Dog-strangling Vine, Common Buckthorn, Garlic Mustard, Tatarian Honeysuckle, Black Locust, and Purple Loosestrife were identified on the Subject Lands, due to the widespread extent of established populations, and the high effort / resources required for effective management, control of these species was identified as a low to moderate priority.

General guidelines for management of these species have been included for future consideration.

Should treatment of these extensive populations be pursued, it is recommended that a restoration plan be developed. Restoration will increase the resilience of the area to future invasions. Restoration should consider soil rehabilitation (e.g., Dog-strangling Vine changes soils chemistry by adding nitrogen to the soil), seeding (including consideration for cover crop) and planting.

### 6.2.1. Dog-strangling Vine

For small to medium infestations, a combination of clipping, mowing and herbicide application is recommended (Anderson, 2012a). To be most effective clipping / mowing should be done just after the dog-strangling vine flowers (June/July) and before it produces seed pods (late July/August).

#### 6.2.2. Common Buckthorn

Cutting, followed by application of herbicide to prevent resprouting is recommended. A precise application of herbicide from a small hand-pump bottle can be done at any time of the year, although late spring/early summer is the most effective time. For cut stump applications, triclopyr or glyphosate are recommended (application rate should follow product labels). If infestations are large, it is recommended that the most prolific seed producers are removed first; the fruit-bearing trees can be identified in late autumn (Anderson, 2012b).



#### 6.2.3. Garlic Mustard

For small to medium infestations, a combination of pulling, mowing / cutting, and herbicide application is recommended (Anderson, 2012c). Hand pulling must be repeated more than once and is more likely to be successful when followed with replanting with native species. While mowing reduces soil disturbance, it would have to be repeated throughout the season as plants can flower / seed more than once. Herbicides are best applied in spring or late fall when other plants are dormant.

### 6.2.4. Tartarian Honeysuckle

The most effective management for honeysuckle shrubs is cutting of stems, followed by herbicide application to the freshly cut stumps. The shrubs are horizontally cut at or near ground level, and herbicide is immediately applied to the cut stump (Tassie and Sherman 2014). For cut stump applications, triclopyr or glyphosate are recommended (application rate should follow product labels).

#### 6.2.5. Black Locust

Cutting may be used to eradicate Black Locust. In this case, repeated cutting of stems including new stems must be done every growing season for several years in order to exhaust the root system. Combining this method with herbicide application can be effective (Warne, 2016a). For cut stump applications, triclopyr or glyphosate are recommended (application rate should follow product labels).

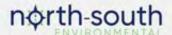
## 6.2.6. Purple Loosestrife

For infestations smaller than 0.5 ha, mechanical / chemical control is recommended (Warne, 2016b). Pulling small, individual plants is feasible; pulling large plants is very difficult. Hand pulling is most effective when a stand is under two years old. Most herbicides may be applied when surface water is not present. If water is present, consider use of Imazapyr, Habitat Aqua herbicide (follow directions on the label).

## 6.3. Disposal of Plant Material

Woody invasive plant material does not pose a significant risk of regrowth / re-establishment. As such, cut woody material can be chipped, pieced up and burned as firewood, piled to create habitat (wood piles) or composted (e.g., municipal composting facilities). All reproductive material must be removed from the woody material prior to any of the options listed being used. All reproductive material should be placed into black garbage bags (thick, black, industrial grade) and taken to a landfill for disposal.

Herbaceous plant material, especially any reproductive material (e.g., seed heads / pods, roots and vegetative material for some species) should also be bagged (black industrial grade garbage bags). Bags should be left in the sun until the plant material has decayed and is no longer viable (1-3 weeks). After this period, the bagged material is to be removed from the site and taken to a landfill for disposal, or burned where appropriate.



## 7. Land Use Management

The Conservation Authority is in the process of developing a long-term plan that will provide direction for the development and future management of this conservation property. The plan will assess the existing natural heritage and cultural features, identify areas to restore and enhance the natural heritage features and functions on the landscape, and where appropriate develop walking trails, other compatible passive recreational uses and continued agricultural uses (if appropriate). The long-term plan will be prepared in consultation with the public, municipal and private stakeholders, and Indigenous communities.

Development of the long-term Master Plan for the Lake Simcoe Conservation Preserve will take a few years to undertake, subject to confirmation of funding support, completion of environmental studies, and public engagement.

This Stewardship Plan provides high-level management recommendations / considerations which reflect Conservation Goals for this conservation preserve. The goals of the authority are to protect, enhance and restore these lands for future generations until such time as the long-term plan is prepared in the coming years.

The Conservation Goals are to:

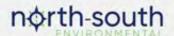
- Manage the lands for conservation and natural heritage protection for future generations
- Promote natural succession and where appropriate rehabilitate / enhance existing natural features and ecological functions
- Expand and enhance wetland, forest and grassland features
- Control and manage the impacts of invasive species to protect native species and habitats

Separate opportunities and constraints mapping will also be developed to inform decision making related to land use management. Constraints are informed based on existing form and function (sensitivity) of features / vegetation communities surveyed during field investigations, in consideration with the above management objectives for the conservation preserve, and relative to desired opportunities for use, which includes passive recreation and ongoing agriculture.

Opportunities for restoration / rehabilitation and passive recreation uses will be mapped as a series of layers, including areas most suitable for protection, restoration, enhancement, passive recreation, programmatic opportunities, parking / user access, and agriculture. Certain communities / areas may provide more than one type of opportunity, to be prioritized based on management objectives.

#### 7.1. Restoration and Enhancement

Restoration can enhance ecological function and diversity of features on the landscape, and may include actions such as invasive species management, tree planting, creation of new habitat types / features, seeding for diversification, etc. This section provides consideration for restoration and enhancement



opportunities on the Subject Lands. Suitable / recommended areas for undertaking the following restoration actions will be illustrated on the opportunity and constraints mapping.

#### 7.1.1. Sensitive Areas for Protection and/or Enhancement

Areas most suitable for protection and / or enhancement include:

- Uncommon features on the landscape
- Features which are sensitive to anthropogenic activities
- Buffers to sensitive features (e.g., watercourses and P.S.W's)
- Features / areas which are in a relatively undisturbed state, representing the best quality habitat on the Subject Lands

Examples of these features may include Provincially Significant Wetlands (P.S.W.), other wetlands, vegetation communities with a high proportion of native species, and sensitive Significant Wildlife Habitat (S.W.H.) Types (e.g., Terrestrial Crayfish Habitat).

These areas may be most suited for protection / enhancement (to be retained in their natural state), with no or limited trails (e.g., limited only to a boardwalk required as a trail connector). Opportunities for enhancement may consider habitat feature implementation, habitat diversification (e.g., habitat structures), overseeding for diversification, etc. to further their biodiversity potential.

## 7.1.2. Priority Areas for Restoration / Enhancement

Priority areas for restoration may include:

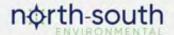
- Areas where restoration activities will have the greatest benefit to effort ratio (e.g., filling in forest gaps to create more interior woodland habitat)
- Areas which still have low invasive species where management would be most effective in eradicating / stopping spread
- Areas which are adjacent to and provide a supportive function to Sensitive Areas / Areas for Protection that should: a) minimize risk to highest function / highest sensitivity areas, and b) to enhance and build upon those highest value areas (E.g., buffers to watercourses and P.S.W's).

The Conservation Authority may consider restoration of buffers to watercourses (15-metre buffers for warmwater streams occurring with the Subject Lands) and wetlands (30-metre buffers for P.S.W's) which are not currently in a state of natural vegetation (e.g., agricultural fields).

#### 7.1.3. Possible Restoration Areas

Additional restoration opportunities / areas may include:

 Areas which, following restoration / habitat creation, have the potential to create the right conditions for Significant Wildlife Habitat



- For example, this may include the creation of meadow and shrub habitat to support the following S.W.H. Types: Open Country Breeding Bird Habitat, Shrub / Early Successional Breeding Bird Habitat, Raptor Wintering Areas (currently missing upland meadow / thicket component of criteria), or creation of meadow habitat to support pollinator species (including Monarch)
- Areas affected by invasive species, which are currently identified as low to moderate priority due to the level of effort required to manage / eradicate their established populations
- Areas affected by Emerald Ash Borer (reduced forest canopy due to dead / dying Ash trees)
- Areas affected by human disturbance (e.g., dumping, informal trails) which are recommended for restoration / management

#### 7.2. Passive Recreation

If it is intended that public use / access be initiated prior to the completion of the Management Plan for the conservation lands, trail stewardship is recommended to manage use and access as an interim approach to trails management. These actions may include closure / covering of undesired trails, signage and formalizing desirable trails.

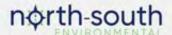
Future land use planning will provide a comprehensive plan with respect to trails – proposed trail alignments, trail widths and design, trail density, etc. It is recommended that trails be formalized for passive recreational use where appropriate, or otherwise decommissioned and left to succeed, or restored to natural condition based on the conclusions and recommendations of the forthcoming Management Plan.

Generally, only areas of highest sensitivity to impact from passive access (e.g., areas where access could create impacts / mortality, introduce invasive species to sensitive areas, or where high sensitivity species occur) would be excluded from consideration.

Signage is recommended to be installed along property boundaries and near access points to identify the Subject Lands as conservation lands and to identify permitted and prohibited uses (e.g., to discourage informal trail creation, off-leash dogs, etc.). Additional nature interpretation / appreciation signage may also be considered.

## 7.3. Other Existing Uses - Agriculture

All properties contain active agricultural fields which are on lease to farmers (current crop production includes soy and corn, with one field on Property 4 planted with Perennial Ryegrass). The Canada Land Inventory (C.L.I.) provides a soil capability classification system for agriculture. As described in the Baseline Documentation Report (N.S.E. 2023), all existing agricultural fields overlap with Capability Class 1 (capable of sustained use for growing common field crops; all or most crops grown). As such, existing agricultural fields are considered suitable / productive for ongoing cultivation. Recommendations on crop selection are beyond the scope of this report.



It is recommended that any agricultural uses follow best management practices to minimize impacts on water resources and surrounding natural features (e.g., refer to *Best Management Practices for Crop Production* published by the Ontario Ministry of Agricultural and Foods).

Unfarmed portions of Property 1 overlap with Capability Class 3 (capable of sustained use for growing common field crops) with Sub-class W (excessive wetness). Unfarmed portions of Property 4 overlap with Capability Class 3 with Sub-class S (undesirable soil structure, low fertility, and/or low moisture holding capacity). These portions of the Subject Lands also support natural forest, swamp and other wetland features. It is not recommended that any new agricultural production be undertaken in these areas.

## 8. Monitoring Recommendations

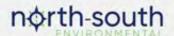
It is recommended that periodic monitoring be undertaken to document the following:

- Ongoing encroachment / public use and disturbance
  - o Including the reappearance of hunt stands, further encroachment from backyards, new trails being developed, etc.
- Change in diversity of flora and fauna, or habitat condition
- Comprehensive invasive species mapping, including future change in distribution or density of invasive species
- Annual invasive species monitoring, specifically at sites where control measures have been implemented (effectiveness of any invasive species management)
- Positive impact monitoring to assess and track stewardship actions
- Other changes to existing conditions

As described, a complete inventory of invasive species was not conducted. It is recommended that comprehensive invasive species mapping, including patch size and density, be undertaken as part of future monitoring activities.

Results of monitoring efforts should be used to inform the need for adaptive management. For example, where encroachment is identified, it may be determined that additional mitigation measures are required, such as increased signage or public outreach, to curb these impacts.

Monitoring should be undertaken at least once annually. **Table 10** describes methodology associated with the above monitoring objectives, including frequency and estimate of effort required. Although **Section 6**, has typically identified one recommended approach to invasive species management (per species), should it be chosen to compare efficacy of different management techniques (e.g., manual vs. chemical control), it is recommended that formalized test plots be established to compare the success of treatments.



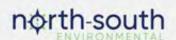
**Table 10. Monitoring Recommendations for Ongoing Management.** 

Monitoring Objective	Monitoring Methodology	Frequency	Approximate Effort Required
Encroachment	Observation of: - Deer stands - Garbage dumps - Boundary (yard) encroachments - New informal trails	Once or twice annually	Property 1: 1 day Property 2: 1 day Property 3: ½ day Property 4: 1 day
Invasive Species – Efficacy of management	Return to treatment sites to record patch size / density of remaining or returned invasive species	Once annually, or depending on recommendation associated with chosen treatment type (refer to Section 6)	Property 1: 1 day Property 2: 1 day Property 3: ½ day Property 4: 1 day
Invasive Species - Identification of new populations	Surveys meandering through vegetation community to document presence of invasive species (patch size and density)	Once annually	Property 1: 2+ days Property 2: 1 day Property 3: ½ day Property 4 – 1 day
Change in diversity of flora and fauna, or condition of habitat	Consider: - Botanical inventory (plots may be considered for tracking change) - Confirmation of E.L.C. boundaries / communities - Amphibian calling surveys - Breeding bird surveys - Identification of habitat features - Other targeted wildlife surveys	Once every 5 years, unless associated with specific stewardship action (e.g., restoration, enhancement, habitat creation)	Dependent on types of wildlife- specific surveys undertaken

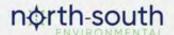
Depending on the outcomes of future land use planning, and the identification of areas for restoration, enhancement, the following monitoring may be considered (**Table 11**):

Table 11. Monitoring Recommendations Associated with Restoration / Enhancement Actions

Monitoring Objective	Monitoring Methodology	Frequency	Approximate Effort Required
Establishment of seeded / planted species	<ul> <li>Health / survivorship of planted stock</li> <li>Diversity and density of seeded stock</li> <li>Competition from invasive species</li> </ul>	Once annually until established	Site dependent



Monitoring Objective	Monitoring Methodology	Frequency	Approximate Effort Required
Establishment of habitat types (e.g., Open County or Shrub Breeding Bird Habitat; Pollinator habitat)	Depending on habitat type: - Breeding bird surveys - Pollinator surveys	Once annually until established	Site dependent
Use of installed habitat structures / features (e.g., nesting structures for birds, hibernacula)	Dependent on type of habitat structure	Once annually until established	Site and habitat dependent



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Warne, A. 2016b. Purple Loosestrife (*Lythrum salicaria*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

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# 10. List of Maps

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# Figure 1 | Lake Simcoe CP Study Area

## Legend

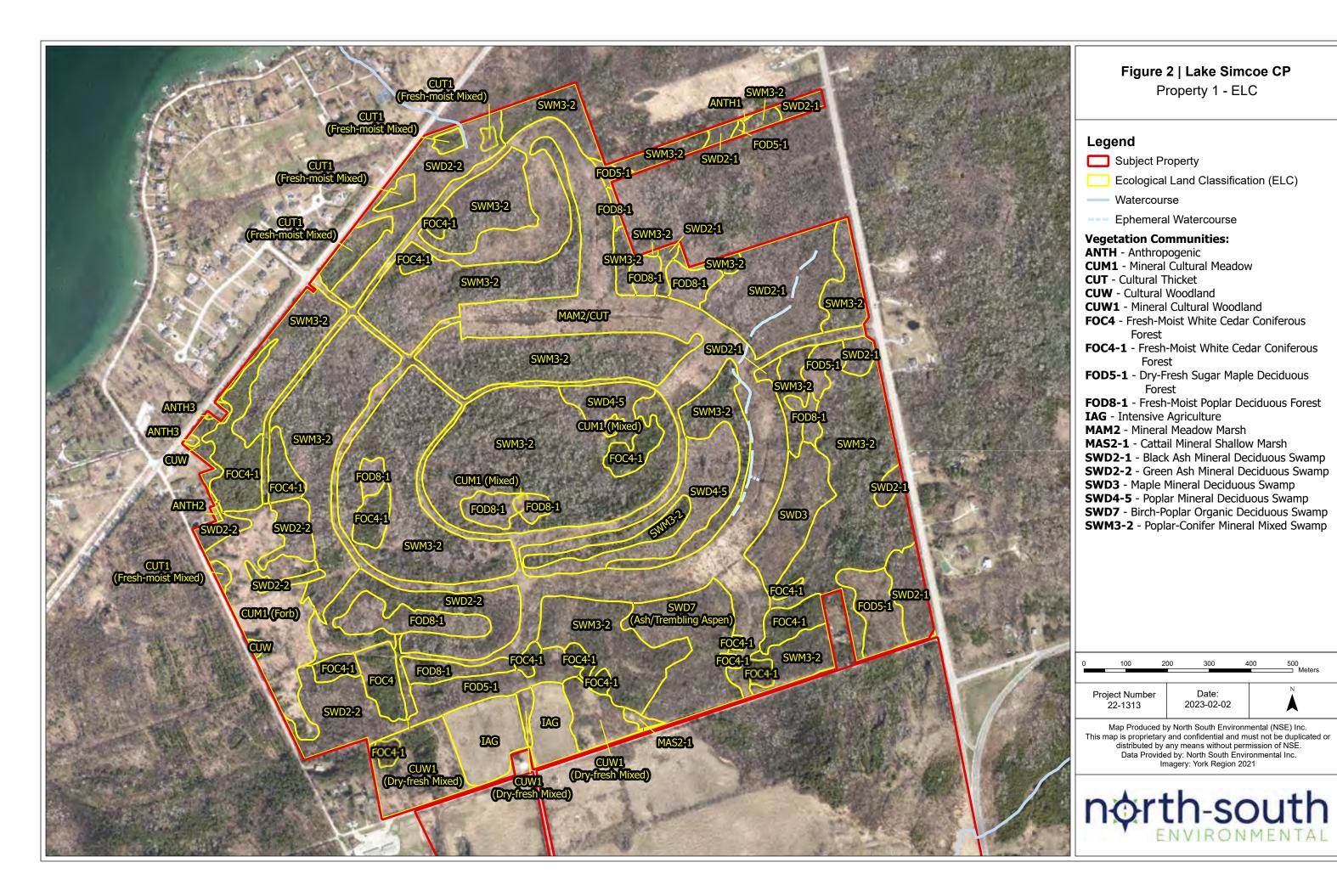
Subject Property

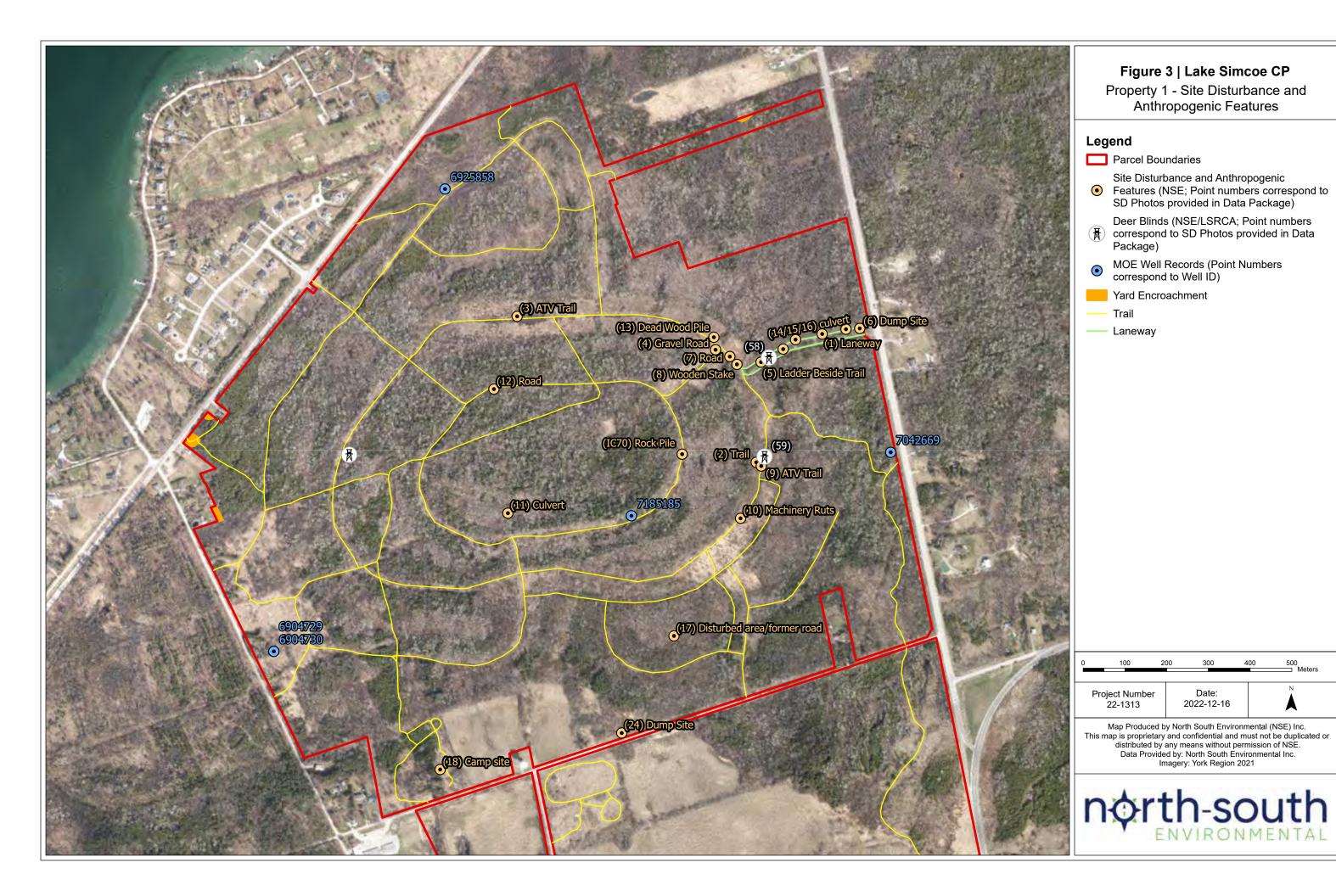
0 500 1,000 1,500 2,000 2,500 Meters

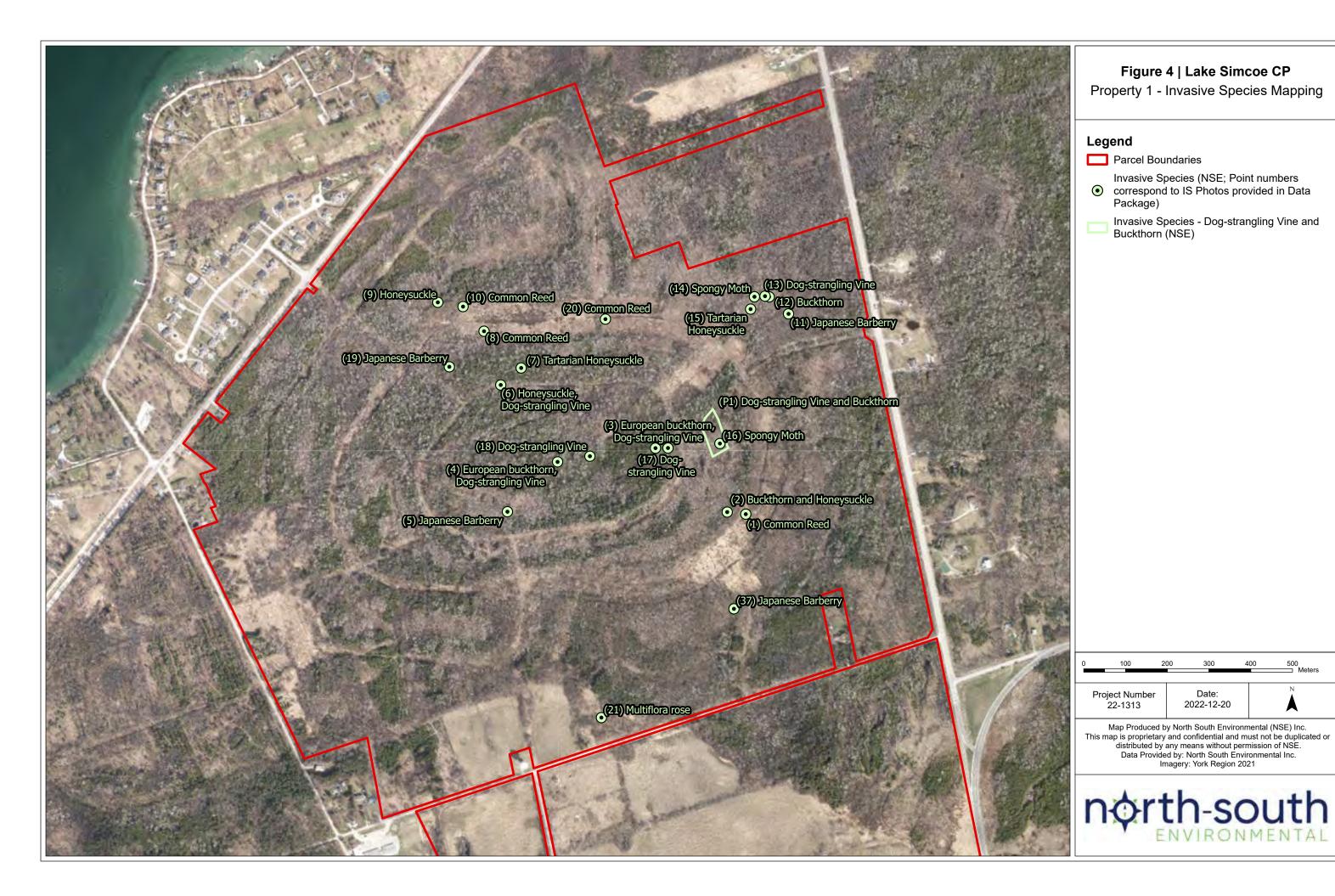
Project Number 22-1313 Date: 2022-12-16

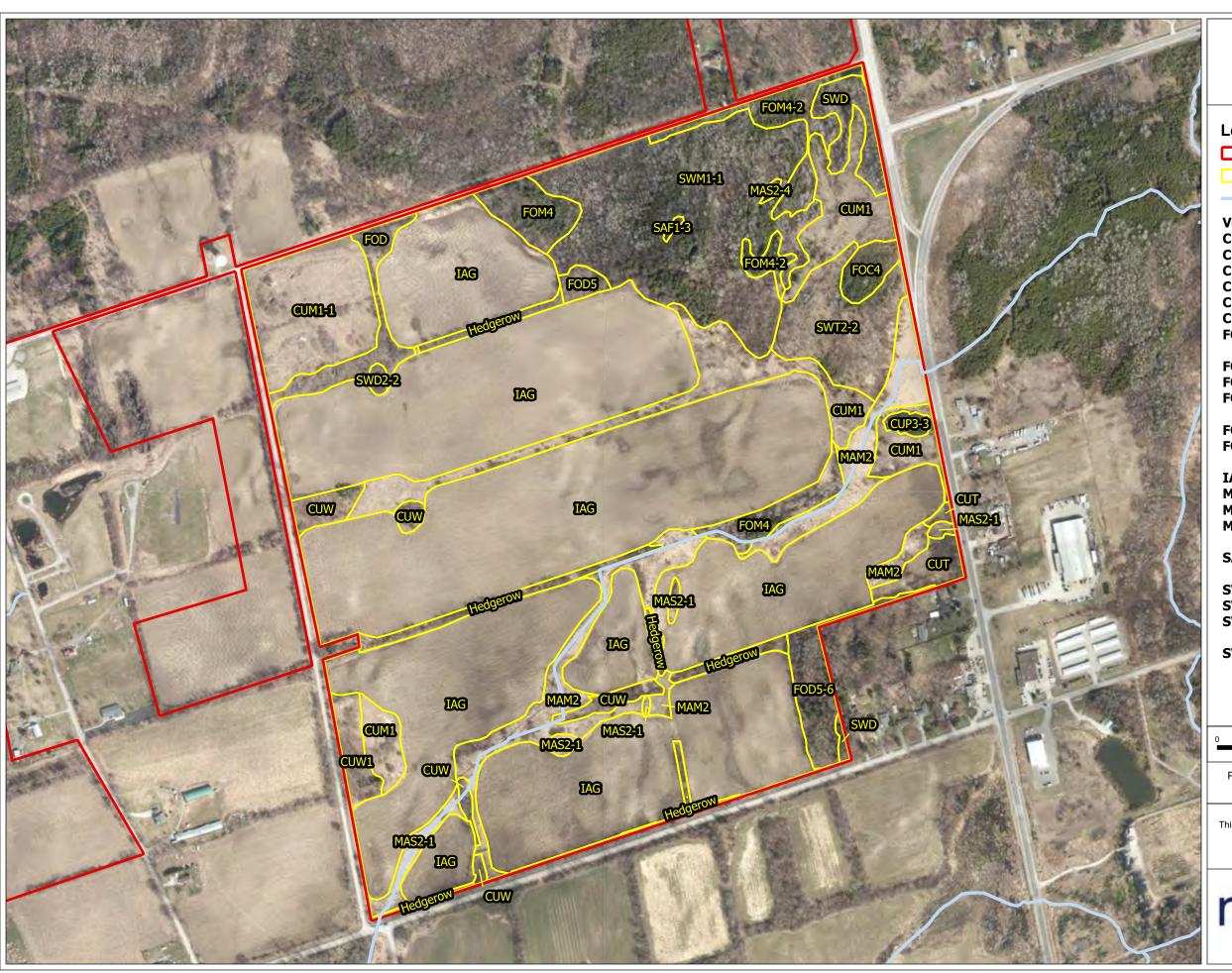
Map Produced by North South Environmental (NSE) Inc.
This map is proprietary and confidential and must not be duplicated or distributed by any means without permission of NSE.
Data Provided by: North South Environmental Inc.
Imagery: York Region 2021











### Figure 5 | Lake Simcoe CP

Property 2 - ELC

#### Legend

Subject Property

Ecological Land Classification (ELC)

Watercourse

#### **Vegetation Communities:**

**CUM1** - Mineral Cultural Meadow

**CUM1-1** - Dry-Moist Old Field Meadow

**CUT** - Cultural Thicket

**CUP3-3** - Scotch Pine Coniferous Plantation

**CUW** - Cultural Woodland

**CUW1** - Mineral Cultural Woodland

**FOC4** - Fresh-Moist White Cedar Coniferous Forest

**FOD** - Deciduous Forest

**FOD5** - Dry-Fresh Sugar Maple Deciduous Forest

FOD5-6 - Dry-Fresh Sugar Maple-Basswood Deciduous Forest

**FOM4** - Dry-Fresh White Cedar Mixed Forest

FOM4-2 - Dry-Fresh White Cedar-Poplar Mixed Forest

**IAG** - Intensive Agriculture

MAM2 - Mineral Meadow Marsh

**MAS2-1** - Cattail Mineral Shallow Marsh

MAS2-4 - Broad-leaved Sedge Mineral Shallow Marsh

**SAF1-3** - Duckweed Floating-leaved Shallow Aquatic

**SWD** - Deciduous Swamp

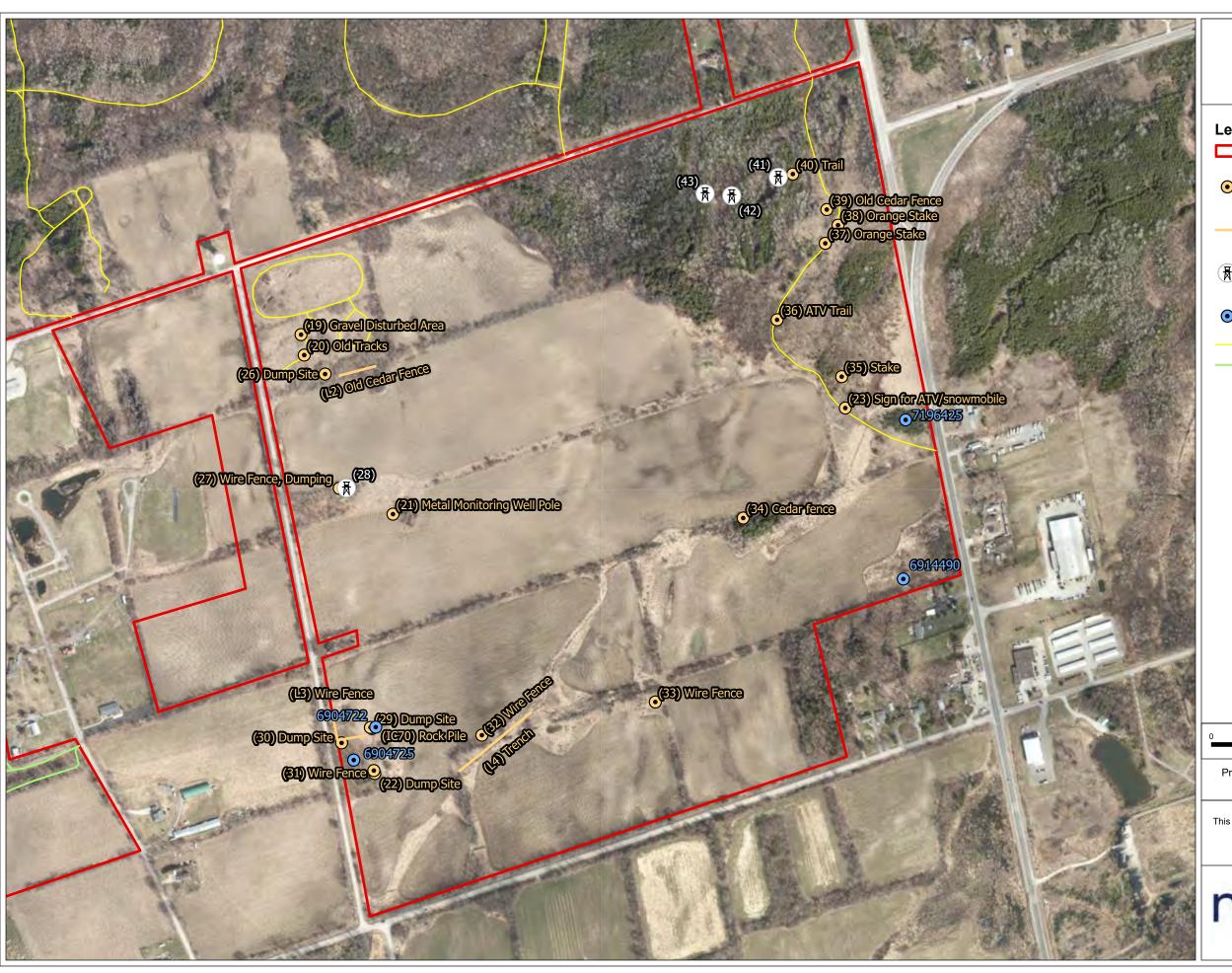
**SWD2-2** - Green Ash Mineral Deciduous Swamp

**SWM1-1** - White Cedar - Hardwood Mineral Mixed Swamp

**SWT2-2** - Willow Mineral Thicket Swamp

	0	100	200	300	400 Meters
		ject Number 22-1313	Date: 2023-02-0	2	N
90			•		





#### Figure 6 | Lake Simcoe CP

Property 2 - Site Disturbance and Anthropogenic Features

#### Legend

Parcel Boundaries

Site Disturbance and Anthropogenic

Features (NSE; Point numbers correspond to SD Photos provided in Data Package)

Site Disturbance and Anthropogenic Features (NSE)

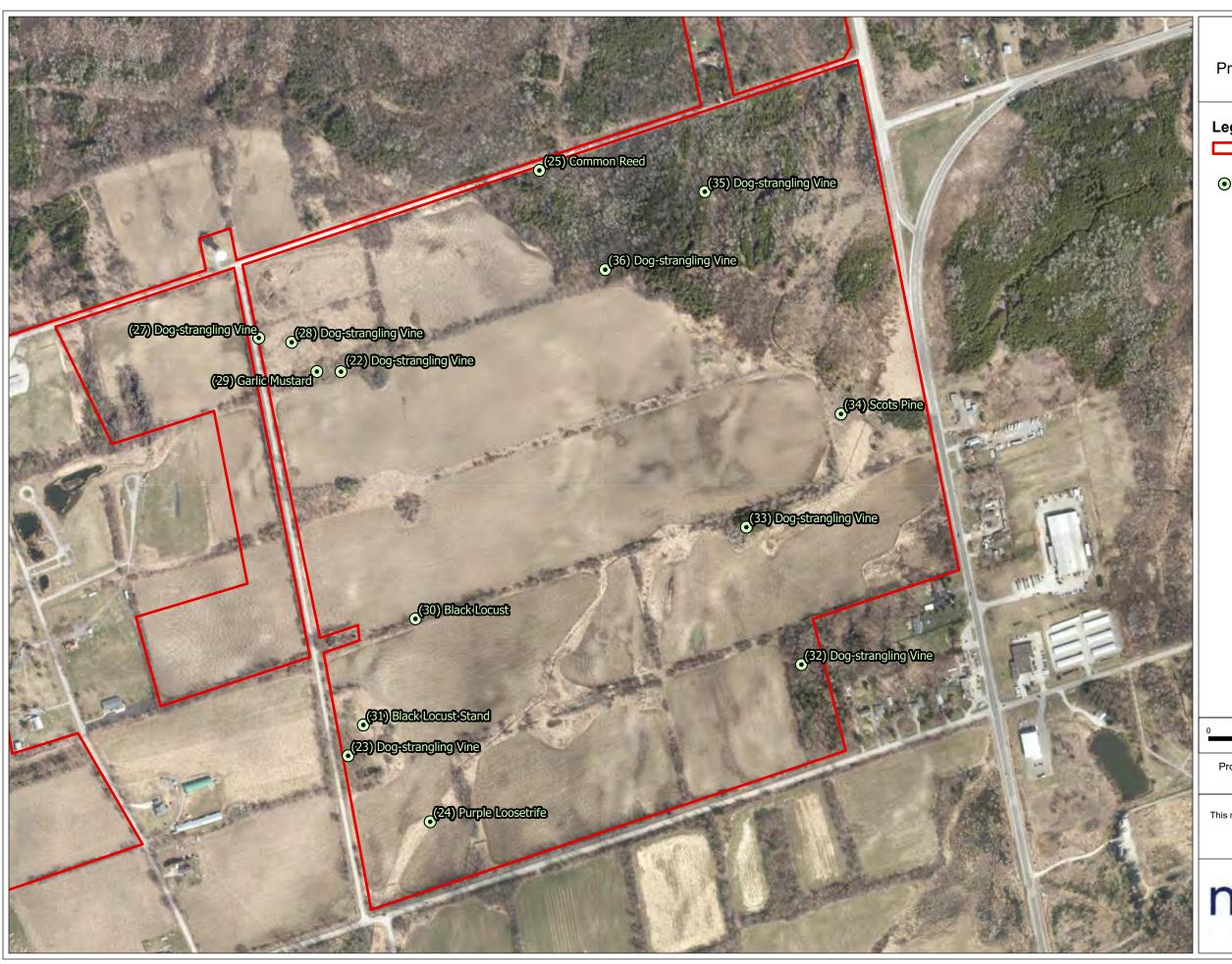
Deer Blinds (NSE/LSRCA; Point numbers correspond to SD Photos provided in Data

MOE Well Records (Point Numbers correspond to Well ID)

Laneway

Project Number 22-1313 Date: 2022-12-16





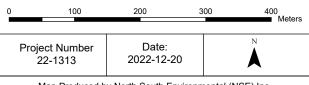
### Figure 7 | Lake Simcoe CP

Property 2 - Invasive Species Mapping

#### Legend

Parcel Boundaries

Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)







## Figure 8 | Lake Simcoe CP

Property 3 - ELC

#### Legend

Subject Property

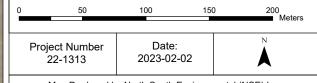
**Ecological Land Classification** 

Watercourse

**Vegetation Communities: CUM1** - Mineral Cultural Meadow

**CUW** - Cultural Woodland

**IAG** - Intensive Agriculture **SWD** - Deciduous Swamp







### Figure 9 | Lake Simcoe CP

Property 3 - Site Disturbance and Anthropogenic Features

#### Legend

Parcel Boundaries

Site Disturbance and Anthropogenic
Features (NSE; Point numbers correspond to SD Photos provided in Data Package)

MOE Well Records (Point Numbers correspond to Well ID)

— Trail

0 50 100 150 200 Meters

Project Number 22-1313 Date: 2022-12-16





### Figure 10 | Lake Simcoe CP

Property 3 - Invasive Species Mapping

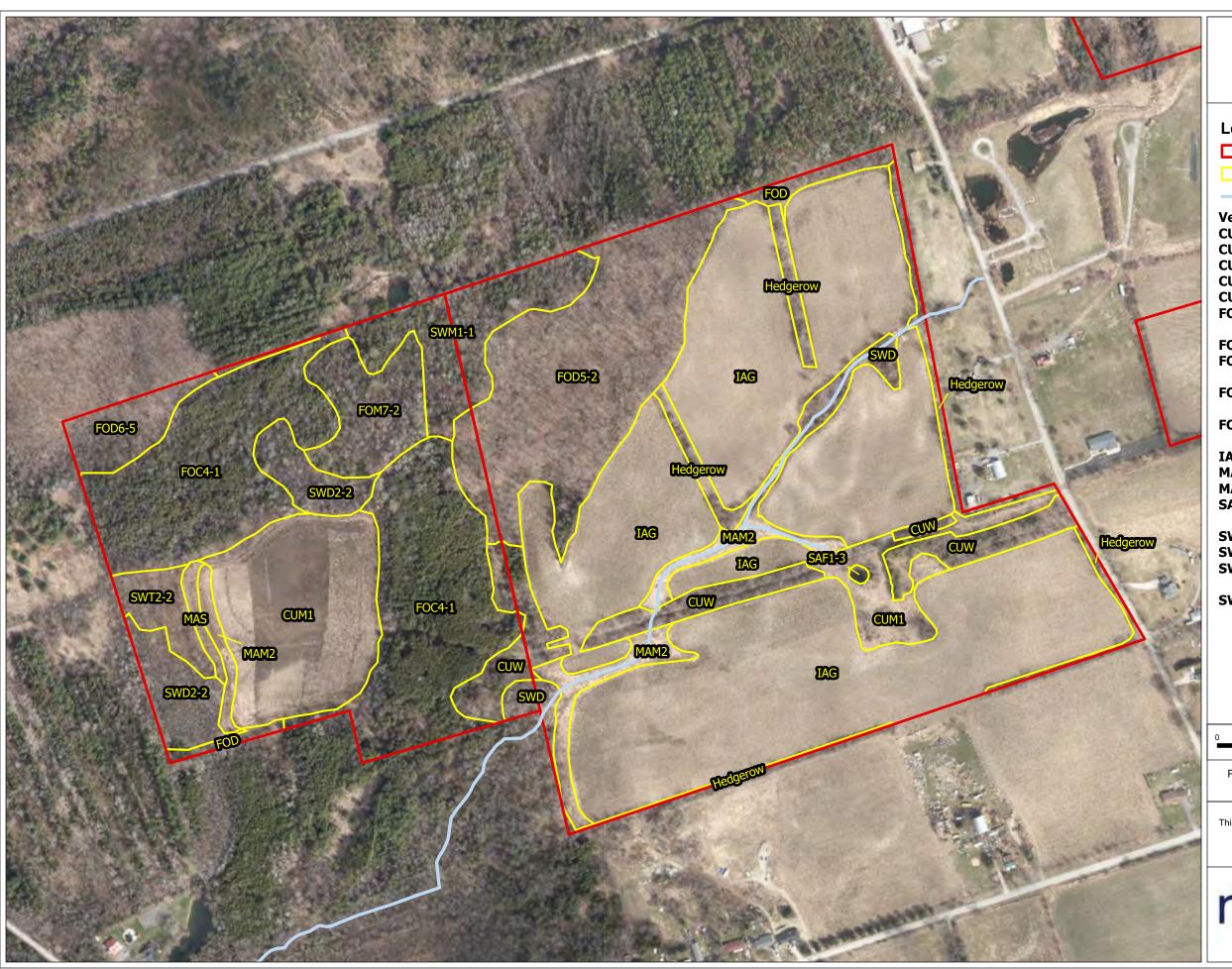
#### Legend

Parcel Boundaries

Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)

0	50	100	150	200 Meters
	ect Number 22-1313	Date: 2022-12-2	0	N





# Figure 11 | Lake Simcoe CP Property 4 - ELC

#### Legend

Subject Property

Ecological Land Classification (ELC)

Watercourse

#### **Vegetation Communities:**

**CUM1** - Mineral Cultural Meadow

**CUT** - Cultural Thicket

**CUP** - Cultural Plantation

**CUW** - Cultural Woodland

**CUW1** - Mineral Cultural Woodland

**FOC4-1** - Fresh-Moist White Cedar Coniferous Forest

**FOD** - Deciduous Forest

**FOD5-2** - Dry-Fresh Sugar Maple-Beech Deciduous Forest

**FOD6-5** - Fresh-Moist Sugar Maple-Hardwood Deciduous Forest

**FOM7-2** - Fresh-Moist White Cedar-Harwood Mixed Forest

**IAG** - Intensive Agriculture

MAM2 - Mineral Meadow Marsh

MAS - Shallow Marsh

**SAF1-3** - Duckweed Floating-leaved Shallow Aquatic

**SWD** - Deciduous Swamp

**SWD2-2** - Green Ash Mineral Deciduous Swamp

**SWM1-1** - White Cedar - Hardwood Mineral Mixed Swamp

**SWT2-2** - Willow Mineral Thicket Swamp

0 50 100 150 200 250 Meters

Project Number 22-1313

Date: 2023-02-02

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### Figure 12 | Lake Simcoe CP

Property 4 - Site Disturbance and **Anthropogenic Features** 

#### Legend

Parcel Boundaries

Site Disturbance and Anthropogenic

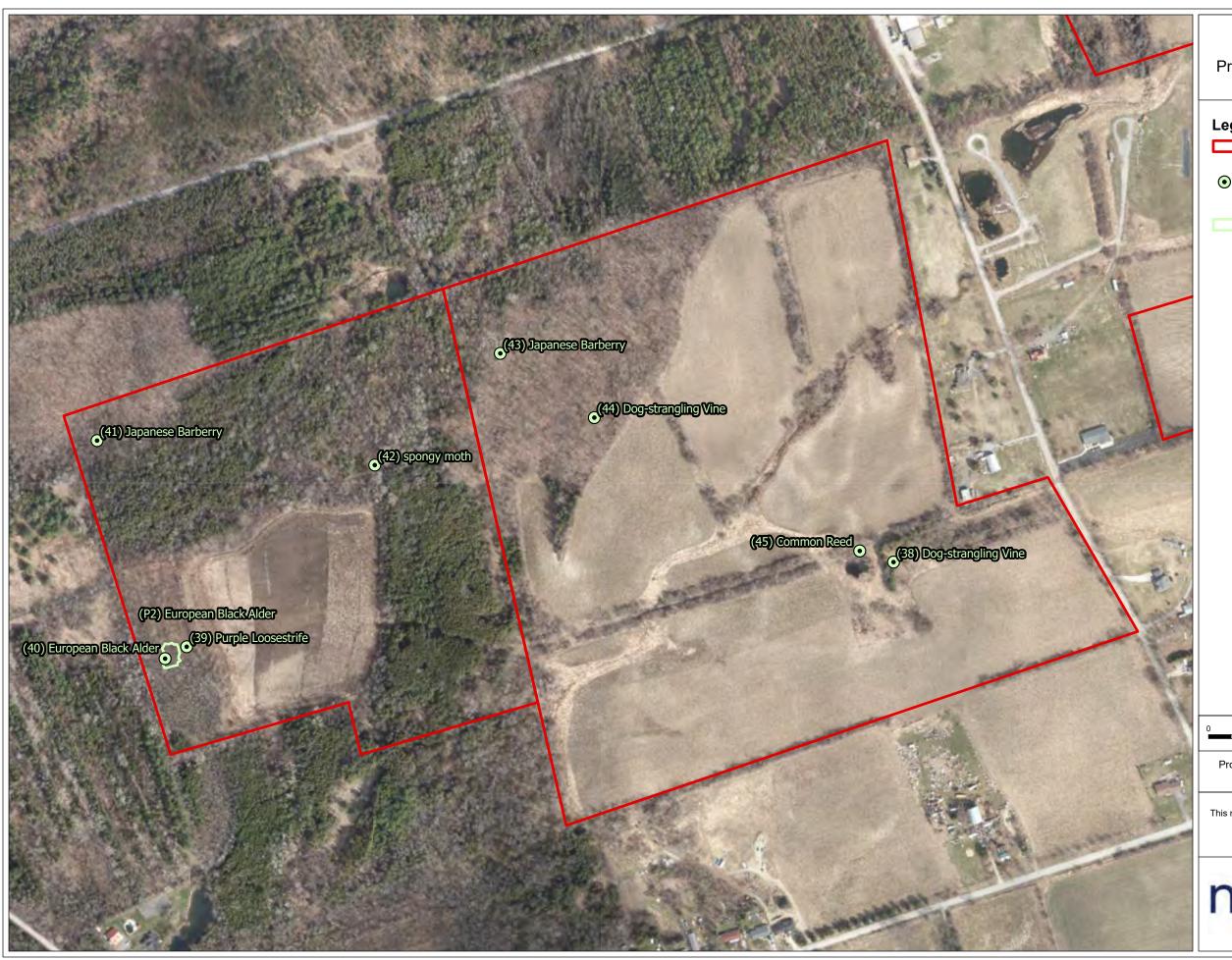
- Features (NSE; Point numbers correspond to SD Photos provided in Data Package)
- Deer Blinds (NSE/LSRCA; Point numbers correspond to SD Photos provided in Data Package)
- MOE Well Records (Point Numbers correspond to Well ID)

Trail

Laneway

0	50	100	150	200	250 Meters
Pro	oject Num 22-1313	ber	Date: 2022-12-	16	×





### Figure 13 | Lake Simcoe CP

Property 4 - Invasive Species Mapping

#### Legend

Parcel Boundaries

Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)

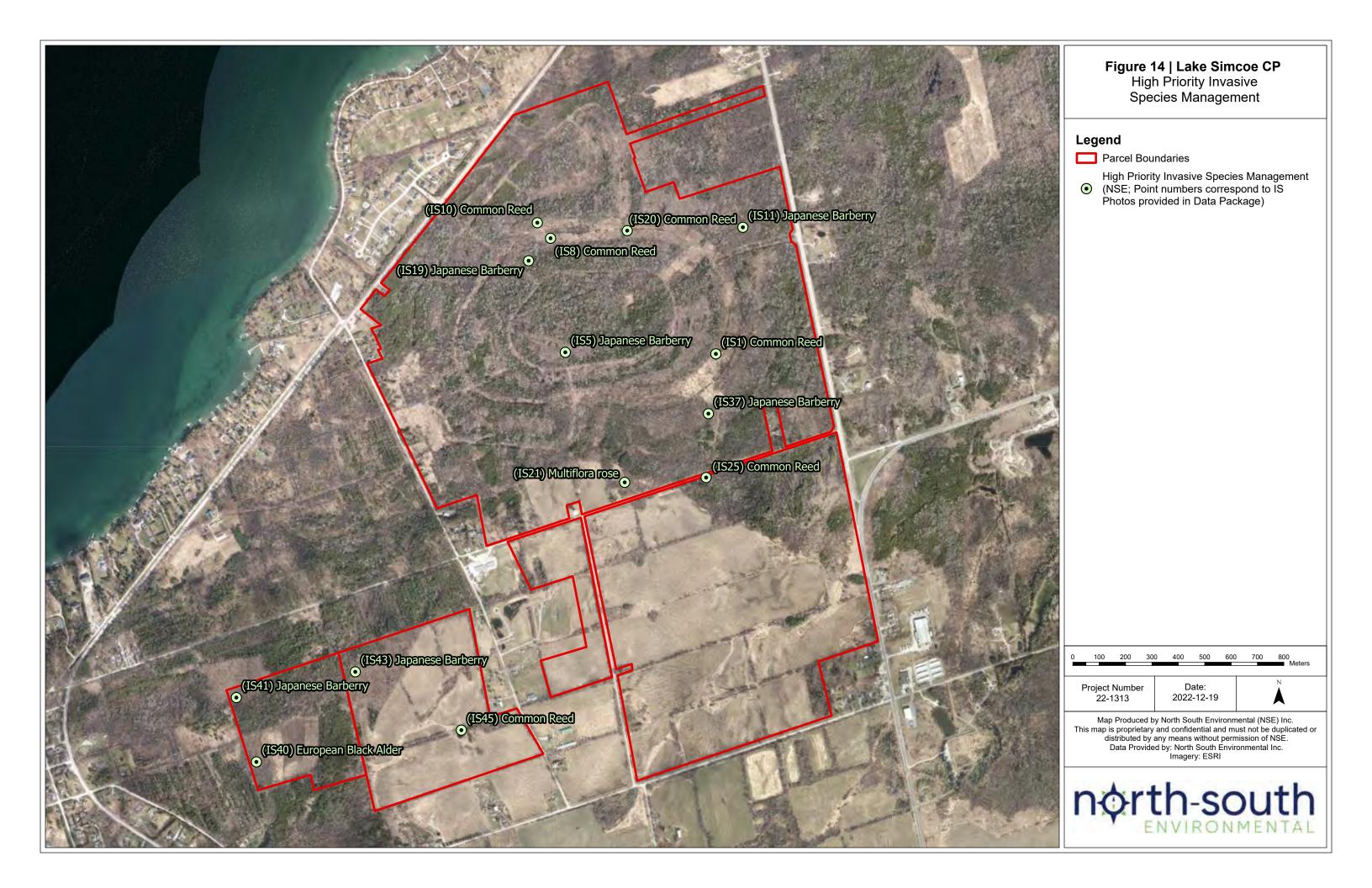
Invasive Species - European Black Alder (NSE)

0 50 100 150 200 250 Meters

Project Number 22-1313 202

Date: 2022-12-20







**APPENDIX 1 |** Ministry Zoning Order (M.Z.O.)

#### **ONTARIO REGULATION 251/22**

made under the

#### PLANNING ACT

Made: April 1, 2022 Filed: April 1, 2022 Published on e-Laws: April 1, 2022 Printed in *The Ontario Gazette*: April 16, 2022

#### ZONING ORDER - TOWN OF GEORGINA, REGIONAL MUNICIPALITY OF YORK

#### Application

 This Order applies to lands in the Town of Georgina, Regional Municipality of York, being the lands identified as Environmental Protection Area and marked with hatching lines on a map numbered 257 and filed at the Toronto office of the Ministry of Municipal Affairs and Housing located at 777 Bay Street.

#### Use of land

- Every use of land and every erection, location or use of any building or structure is prohibited on the lands described in section 1, except,
  - (a) forest, fish and wildlife management;
  - (b) conservation and flood or erosion control projects;
  - (c) infrastructure;
  - (d) passive recreation uses; and
  - (e) buildings and structures associated with the uses set out in clauses (a) to (d).

#### Terms of use

- (1) Every use of land and every erection, location or use of any building or structure shall be in accordance with this Order.
- (2) Nothing in this Order prevents the use of any land, building or structure for any use prohibited by this Order if the land, building or structure is lawfully so used on the day this Order comes into force.
- (3) Nothing in this Order prevents the reconstruction of any building or structure that is damaged or destroyed by causes beyond the control of the owner if the dimensions of the original building or structure are not increased and its original use is not altered.
  - (4) Nothing in this Order prevents the strengthening or restoration to a safe condition of any building or structure.

#### Commencement

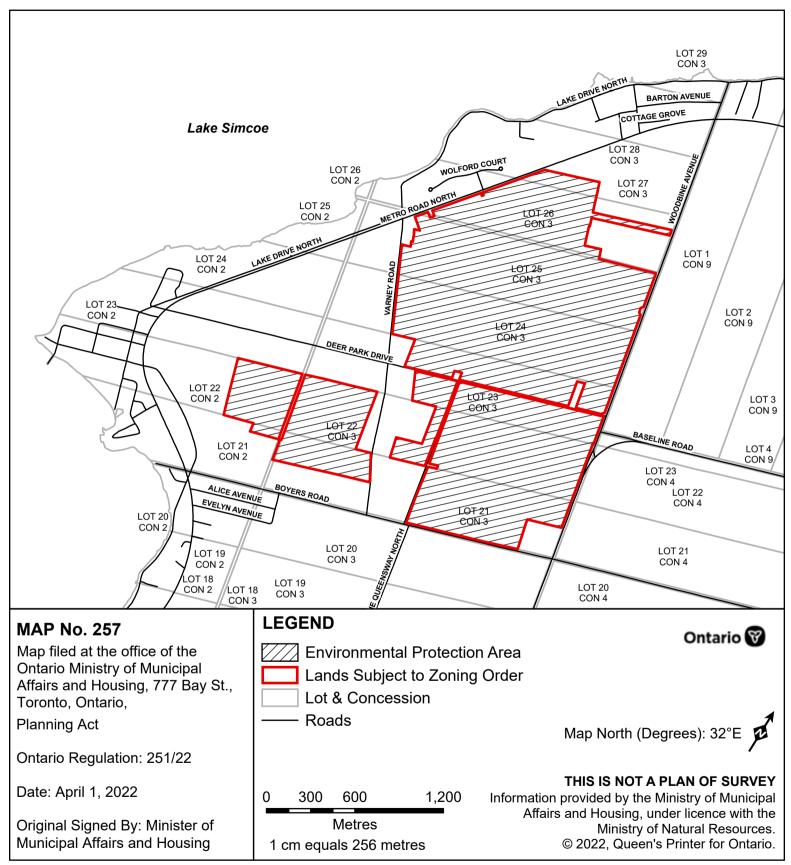
4. This Regulation comes into force on the day it is filed.

Made by:

STEVE CLARK Minister of Municipal Affairs and Housing

Date made: April 1, 2022

Part of Lots 21 and 22, Concession 2, and Part of Lots 21- 27, Concession 3, Town of Georgina, Regional Municipality of York



Map Description: This is map no. 257 referred to in a Minister's Zoning Order. It shows lands which are located in Part of Lots 21 and 22, Concession 2, and Part of Lots 21-27, Concession 3, Town of Georgina, Regional Municipality of York. We are committed to providing accessible customer service (https://www.ontario.ca/page/accessible-customer-service-policy).

On request, we can arrange for accessible formats and communications supports.

Please contact MMAH by email (mininfo@ontario.ca) for regulation details.



APPENDIX 2	Summary	of Stewardship	Recommendations
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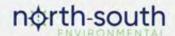


Table A. Summary of High Priority Stewardship Actions

No.	Issue	Notes	Recommended Action	Approx. Effort
1	Residential Encroachment	Yard encroachment occurs in three areas	<ul> <li>Conversations with landowners re.</li> <li>property lines / fending / removal of structures</li> <li>Clear delineation of property boundaries</li> </ul>	2+ days, depending on landowner response
1, 2, & 4	Hunt Stands (Deer Blinds)	Several locations noted	<ul> <li>Existing stands decommissions –</li> <li>removal / proper disposal of materials</li> <li>Ongoing monitoring to ensure no new structures erected</li> <li>Installation / maintenance of signage</li> </ul>	~2 days for removal of material

Table B. Summary of Medium-Low Priority Stewardship Actions

No.	Issue		Recommended Action	Priority
ALL	Trails	A.T.V, snowmobile	- Trail stewardship: closures, deterrents,	Medium-
		and other trails	formalization, as appropriate	Low
ALL	Garbage	Concentrated areas of	- Removal / proper disposal of garbage	Medium
		dumping	- Signage places at perceived high-risk areas	
1, 2	Signage /	Wooden / metal	- Removal / proper disposal, unless confirmed to be	Medium
	Markers	stakes	surveyors S.I.B.	
1	Wood Pile	Area of piled wood / mulch inhibiting natural restoration	- Depending on contribution to wildlife habitat, action may be considered, including: redistribution of woody material, soil amelioration, restoration.	Low- Medium
1	Culvert	Culvert in F.O.D8-1	- Removal, having consideration for any potential hydrologic changes to the area	Medium
2, 4	Fences	Both wood and wire fences occur	- Removal / proper disposal of wire fences (due to potential risk of harm to wildlife)	Medium (for wire fences)