

# Property Management Plan for Nicholson's Point Woods Nature Reserve



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Prepared for: Rideau Waterway Land Trust

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Directors

Preserving special places in our community

# Acknowledgements and Disclaimers

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#### Disclaimer:

The information provided in this document contains the best available knowledge and is subject to modification based on new information.

Scale bars in all figures are intended to provide context and should not be used to measure exact distances between locations.

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# 1 MISSION STATEMENT

# 1.1 VISION, MISSION, AND GUIDING PRINCIPLES

The Rideau Waterway Land Trust's (RWLT) vision is that "Nature has a future because our communities care." Its mission is "To preserve important natural lands and habitat in the Rideau Corridor and foster a healthy future for our communities."

RWLT uses the following guiding principles:

- We focus on the preservation of important land that supports plants, animals, and clean water.
- Our actions are inclusive and for the benefit of the community.
- We welcome the participation of those who appreciate the importance of nature.
- We strive for the right balance between access and the protection of conservation values.
- We partner with other organizations on mutually beneficial activities.

#### 1.2 GENERAL GUIDELINES FOR MANAGEMENT PLAN

- The primary objective is the conservation of biodiversity.
- Use of properties owned and managed by the RWLT will be restricted to activities that are consistent with its mission statement, guiding principles and property-specific guidelines and attributes.
- Signage will be carefully planned to encourage only compatible activities. Signs at suitable access points will indicate:
  - o Property ownership
  - o Emergency contact name and telephone number

# 1.3 SITE INFORMATION USED FOR THIS MANAGEMENT PLAN

This Management Plan is based on:

- 2008 "Information for Donation of Nicholson's Point Woods to qualify as Ecologically Significant Land under the EcoGift Program (Criteria) of Environment Canada"
- Property monitoring report from 2010
- 2019 eBird report by Gerard Phillips
- Site visits in 2020, 2021 and 2022 by RWLT staff biologists

# 2 PROPERTY MANAGEMENT PLAN SUMMARY

# 2.1 Property Information

Nicholson's Point Woods Nature Reserve is a large mostly forested parcel of land located west of Amherstview, ON. The property encompasses most of the naturally vegetated land located south of Highway 33 on Nicholson's Point, a peninsula that juts into Lake Ontario. Approximately 30% of the property is shrubby open areas, while the remaining 70% of the property is forest. There are a number of narrow trails present on the property (Figure 1) that are mainly used by residents of the Point for passive recreation.



Figure 1: Nicholson's Point Woods NR (shaded areas represent forest)

#### 2.1.1 Location

Nicholson's Point Woods Nature Reserve is located about 7 km west of Kingston and 3 km west of Amherstview, in Loyalist Township (Figure 2). The property is bounded by Highway 33/Bath Road on the northern periphery, while the majority of the rest of the perimeter is delineated by the curving Nicholson Point Road.

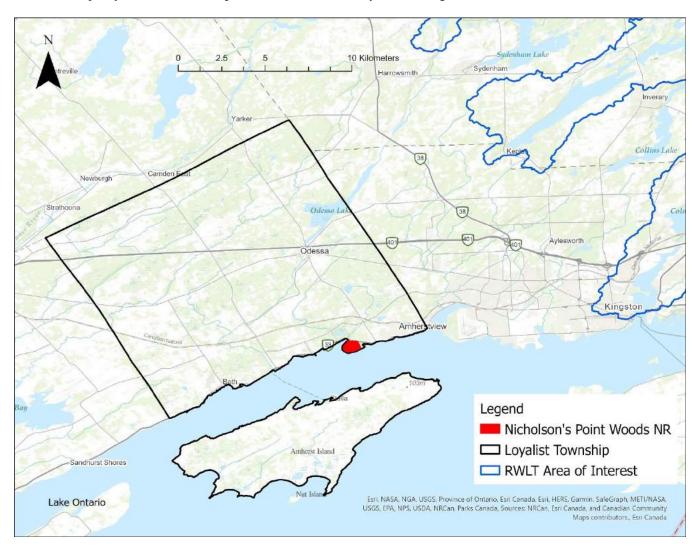


Figure 2: Regional Locator Map – Location of Nicholson's Point Woods NR relative to Loyalist Township and RWLT Area of Interest

#### 2.1.2 Property Area

Nicholson's Point Woods Nature Reserve is 58.96 hectares (145.7 acres) and is made up of a single parcel.

# 2.1.3 Securement Type/ Year

| PROPERTY              | ASSESSMENT          | AREA       | YEAR     | ACQUISITION | <b>PURCHASE</b> |
|-----------------------|---------------------|------------|----------|-------------|-----------------|
| <b>IDENTIFICATION</b> | <b>ROLL NUMBER</b>  | (HECTARES) | ACQUIRED | TYPE        | PRICE           |
| NUMBER (PIN)          |                     |            |          |             |                 |
| 45132-0168 (LT)       | 11 04 010 080 19810 | 58.96      | 2008     | Donation    | N/A             |

# 2.1.4 Key Local Partners

- 1. Neighbours
- 2. Loyalist Township
- 3. Cataraqui River Conservation Authority

# 2.2 BIODIVERSITY VALUES

A brief summary can be found below, with further details in Section 5.2: Biological Features.

|              | Number of Species | Notes   |
|--------------|-------------------|---|
| Bird         | 51                | Including 9 forest interior species                       |
| Invertebrate | 10                | Including 1 Species at Risk                               |
| Mammal       | 8                 | Including coyote, red fox, raccoon, and white-tailed deer |
| Plant        | 64                | Including 29 non-native species                           |
| Tree/Shrub   | 49                | Including 4 non-native species                            |

# 2.3 Conservation Targets and Threats

# 2.3.1 Conservation Targets/ Overall Viability Assessment

| Target   | Viability | Comments   |
|--|-----------|--|
| Forest Fair There are just over 40 hectares of forest, which |           | There are just over 40 hectares of forest, which are considered Significant  |
|  |           | Woodland. Due to pockets of shrubland and open areas, there is minimal   |
|  |           | interior forest habitat available to edge-intolerant bird species. However, some   |
|  |           | interior breeding bird species have been recorded on the property. The forest is   |
|  |           | also cut off from other natural areas by roads and residential neighbourhoods.   |
| Shrubland  | Fair      | The shrublands on the property are large, allowing them to provide habitat to many shrubland birds and other species. However, over half the plant species present in these areas are not native to Ontario, and some such as wild parsnip and dog strengling vine page a significent threat to human and acceptation. |
|  |           | and dog-strangling vine pose a significant threat to human and ecosystem health.   |

<sup>\*</sup>Note: Contact information for key partners can be found in Appendix C: Contact Information for Key Local Partners

## 2.3.2 Highest Threats

| T1 .   |          |
|--------|----------|
| Threat | Comments |

# Invasive, Non-Native Plants and Animals

There are records of numerous invasive, non-native plants on the property that negatively impact all Conservation Targets. Some of these species are very aggressive and require immediate attention and management to prevent harm to the ecological integrity of the property. Approximately 50% of herbaceous species recorded were non-native.

#### Climate Change

An assessment of this property revealed that climate change could have serious impacts on the ecology of the property by compounding existing threats like invasive, non-native plants, putting new stresses on Conservation Targets, and introducing new threats to the property such as pests and disease.

# 2.4 CONSERVATION MANAGEMENT GOAL AND OBJECTIVES

#### 2.4.1 Goal

It is RWLT's goal to maintain the ecological integrity of the property with the following vision:

A thriving ecosystem of forest and shrubland where the birds sing from the trees, cottontails shelter in the shrubs, and monarch butterflies sip nectar from the plentiful flowers.

# 2.4.2 Objectives

RWLT will maintain the ecological integrity of the property with the following objectives:

- 1. Maintain and improve shrubland habitat for monarch butterflies and other key shrubland species
- 2. Keep invasive species from spreading beyond 2021 limits
- 3. Perform targeted studies to better record the species at risk currently making use of the property

# 2.5 FIVE-YEAR BUDGET SUMMARY

The total cost to implement this management plan is approximately \$20,000 over five years or \$4,000 per year. For information related to stewardship budgeting beyond the scope of the five years covered by this plan, including the plan update scheduled for 2026, please see Section 8.3. All cost calculations are based on rates from 2021 and are subject to change.

# 2.5.1 Property-Specific Actions

| Description  |   | Cost                  | Frequency |
|--|---|-----------------------|-----------|
| Monarch Butterfly<br>Research and<br>Restoration               | Perform tasks intended to improve habitat suitability and knowledge of monarch butterflies on the property  • Map and remove dog-strangling vine  • Remove wild parsnip to facilitate safe work in shrubland  • Monitor shrubland for monarch caterpillars  • Monitor forest and shrubland for presence of adult monarch butterflies, and potential for use as staging area  • Determine need for additional wildflowers and milkweed plantings | \$1300                | 2022      |
| Community "Friends<br>of" Group/<br>Neighbourhood<br>Relations | Schedule education and events to maintain good relations with neighbours and local stewardship of the property  • Events (invasive species pulls, guided hikes, education, etc)  • Management of "Friends of" group   | \$780                 | Annually  |
|  |   | Total Over 5<br>Years | \$5,200   |

# 2.5.2 Universal Actions

| Description  Property Taxes and Insurance | <ul> <li>Register property under CLTIP CCL</li> <li>Maintain insurance policy</li> <li>Liaise with<br/>municipalities/MNDMNRF/MPAC</li> </ul>       | <b>Cost</b> \$1,335 | Frequency Annually |
|---|---|---------------------|--------------------|
| Property Signage                          | Maintain and replace signage as needed, assuming 10 year replacement period   | \$410               | Every 10 years     |
| <b>Property Maintenance</b>               | Perform tasks as needed to keep property in good condition ecologically and functionally  Remove invasive species  Remove unauthorized construction | \$190               | Annually           |

| Annual Monitoring    | <ul> <li>Conduct annual monitoring visit and complete form</li> <li>Where appropriate, this visit can also include the following:         <ul> <li>Invasive species inventory</li> <li>Record incidental SAR</li> </ul> </li> <li>Record all species encountered</li> </ul> | \$440                 | Annually      |
|----------------------|---|-----------------------|---------------|
| Bi-Annual Monitoring | Bi-Annual Monitoring (in addition to annual monitoring)  • Breeding Bird Surveys  • Amphibian Surveys   | \$168                 | Every 2 years |
| Reports and Database | <ul> <li>Draft any invasive species or SAR reports</li> <li>Update species database</li> <li>Plan visits</li> </ul>   | \$760/year            | On-going      |
| Partner Liaison      | Keep in contact with CRCA, Loyalist<br>Township   | \$110/year            | On-going      |
|                      |   | Total Over 5<br>Years | \$14,800      |

# 3 BACKGROUND

# 3.1 PURPOSE OF THE MANAGEMENT PLAN

Rideau Waterway Land Trust acquired the 58.96-hectare Nicholson's Point Woods Nature Reserve property in 2008 as a donation from a resident of the adjacent Nicholson Point Road.

Ecological information on Nicholson's Point Woods NR was primarily found in the application for certification of the property as ecologically sensitive under the Ecological Gifts Program, as well as a property monitoring report from 2010 and observations by staff biologists in 2020 and 2021. RWLT has not previously completed any management or stewardship plans for this property.

The scope of this management plan is place-based, focused on Nicholson's Point Woods NR. This management plan will describe how the organization will govern this ecologically significant woodland for the next five years.

# 3.2 RIDEAU WATERWAY LAND TRUST'S CONSERVATION EFFORTS

The rationale and process by which the RWLT decided to accept Nicholson's Point Woods NR in 2008 are outlined in the Land Acquisition Report (Walker, 2008). Although the property does not contain any Areas of Natural and Scientific Interest (ANSIs) or Provincially Significant Wetlands (PSWs), it is considered a Significant Woodland by the municipality. Additionally, it is close (within 1 km) to Parrott's Bay Conservation Area and is likely to provide habitat for species at risk, all criteria that were considered under the Acquisition Guidelines at the time (RWLT Board of Directors, 2008). As a high-profile property in the Kingston area, and with a high likelihood of successful fundraising from the community for stewardship, the property was deemed a worthwhile acquisition.

The property continues to meet a number of the new acquisition criteria as well, including providing habitat for species at risk, identification in a watershed-based Natural Heritage System, containing significant amounts of forested land, having a high risk of being developed, and having a presence as a highly visible property in the Kingston community (Spang & Fiedler, 2021). It also has the potential to be a biodiversity hotspot due to the diversity of microhabitats and may provide nature-based services such as flood control to the community surrounding it.

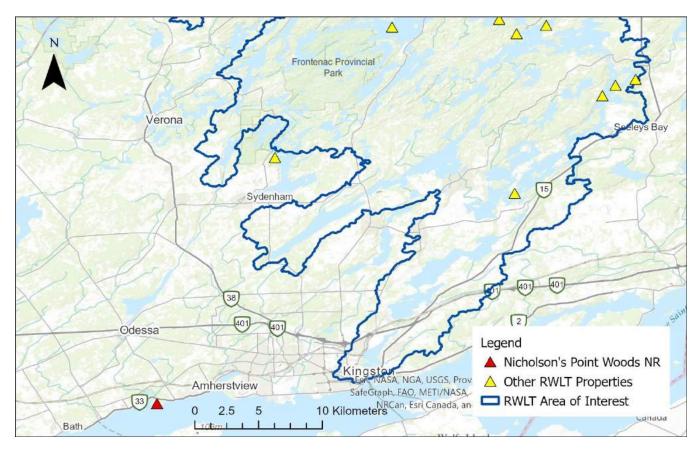


Figure 3: Map of the southern portion of RWLT area of operation w.r.t. Nicholson's Point Woods NR

# 3.3 NICHOLSON'S POINT WOODS NR MANAGEMENT GOALS

It is RWLT's goal to maintain the ecological integrity of the property with the following vision:

A thriving ecosystem of forest and shrubland where the birds sing from the trees, cottontails shelter in the shrubs, and monarch butterflies sip nectar from the plentiful flowers.

The long-term vision for the property is to steward and maintain the health of conservation targets, reduce or eliminate threats, and support species at risk.

# 3.4 Property Description

Table 1: Nicholson's Point Woods NR Property Summary

| Property Owner         | Rideau Waterway Land Trust  |
|------------------------|---|
| Nearest Town           | Amherstview, ON   |
|                        | Proceed west from Kingston on County Rd 33 past Amherstview to                |
| Directions             | Edgewood Dr, turn left to Nicholson Pt Rd. The property is on the right       |
| Directions             | along the entire length of the road. Parking is available at Lighthouse Park, |
|                        | about halfway along Nicholson Pt Rd.  |
| Coordinate Reference   | 44.206795, -76.685790 (Lighthouse Park)                                       |
| Elevation              | 91.8 MASL   |
| Surface Area           | 58.96 hectares (145.7 acres)  |
| Conservation Authority | Cataraqui River Conservation Authority  |
| Watershed              | Lake Ontario  |
| EcoDistrict            | 6E-15 Picton  |
|                        | MNDMNRF's Southern Region, Peterborough District                              |
| MNDMNRF District       | Address: 1st Flr S, 300 Water St, Peterborough, ON K9J 3C7                    |
|                        | Phone: 705-755-2001   |

# 3.4.1 Legal Description

Table 2: Legal Description of Parcels

| Property Identification Number | Assessment Roll<br>Number | Legal Description  | Year Secured |
|--------------------------------|---------------------------|--|--------------|
| 45132-0168<br>(LT)             | 11 04 010 080 19810       | PT LT 30-32 CON BROKEN FRONT<br>ERNESTOWN AS IN LA220624 Except Pt 4,<br>29R8824; LOYALIST | 2008         |

# 3.4.2 Description of Property Perimeter Boundaries

Nicholson's Point Woods is a roughly oval-shaped property covering just under 60 hectares (Figure 4). Starting from the dead-end of Nicholson Point Road, the boundary follows the left (interior) side of the curve of the road

for roughly 2.1 km. About 30 m past where Nicholson Point Road merges into Edgewood Road, the boundary diverges from the road and runs in a straight line northwest for about 300 m until it reaches Loyalist Parkway/County 33/Bath Road. The boundary follows the southern edge of this road for about 275 m, then turns southwest for 100 m. The boundary then runs west for 215 m, south for 18 m, and east for 90 m back to the starting point.



Figure 4: Satellite Imagery of Nicholson's Point Woods Nature Reserve (displayed by red polygon)

#### 3.4.3 Site Designations

There are no Provincially Significant Wetlands (PSWs) or Areas of Natural and Scientific Interest (ANSIs) on the property. However, the majority of the property is designated as Significant Woodland.

# 3.4.4 Agreements (leases, encumbrances, etc.)

When the property was donated in 2008, some provisions were agreed to with the donor. They include:

- The existing trails are to be used for low impact, human-powered recreational uses only and maintained in a safe manner with all efforts made to protect identified conservation values of the property.
- The RWLT will encourage input and leadership from neighbouring landowners in the development and implementation of management plans for the property
- Signage will include RWLT property boundary markers in keeping with the Canadian Land Trust Standards and Practices and RWLT policy. In addition, if necessary, signage will be posted at trail entrances and any other point of entry to notify visitors of uses and/or any restrictions of usage on the property.
- The RWLT will be obligated to abide by any regulations or orders from any regulatory body having authority over the RWLT.

The property was donated through Environment and Climate Change Canada's Ecological Gifts Program. As the recipient of an Ecological Gift, RWLT is required to uphold recipient responsibilities under the federal EGP. This includes maintaining current land use consistent with the original objectives of the Ecological Fits. The penalty for an unauthorized disposition or change in use of an Ecological Gift is a federal tax equal to 50% of the current fair market value of the land.

The property is also registered under the Conservation Land Tax Incentive Program (CLTIP) as a Community Conservation Land (CCL). The CCL category broadens the range of properties owned by Conservation Authorities or like-minded organizations that are eligible for a property tax reduction. No use that would be detrimental to the natural heritage values of the property is permitted on a property registered under CLTIP (Ontario Ministry of Natural Resources, 2021). RWLT is required to reapply annually for properties registered in this program.

#### 3.4.5 Adjacent Land Use and Cultural Elements

The properties directly surrounding Nicholson's Point Woods are mainly waterfront residential properties. Historically, there were a lot of seasonal cottages along Nicholson Point Road on the shore of Lake Ontario, but these have mostly been upgraded or replaced with year-round homes. About halfway down Nicholson Point Road, there is a small neighbourhood park called Lighthouse Park. This 0.34-hectare park provides green space, picnic tables, and access to the waterfront to the neighbourhood and visitors to the area.

# 4 PROPERTY MANAGEMENT

# 4.1 HISTORICAL LAND USE

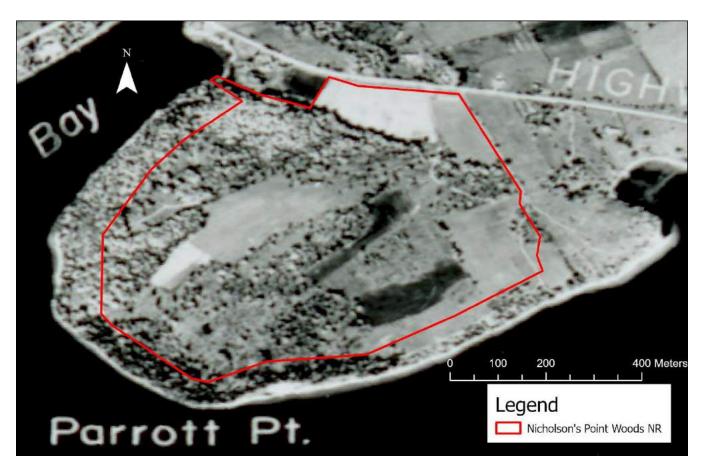


Figure 5: Nicholson's Point in 1954 (University of Toronto)

In 1803, King George III authorized a land claim for the area that is now known as Nicholson's Point. After some time, the land ended up in the possession of Chester Nicholson, the original Nicholson of Nicholson's Point. His descendants have been living at the point ever since. The first cottagers to build on the point were the father and grandfather of current Nicholson's Point resident, Barbara Wood Watson (Chester Nicholson's 3<sup>rd</sup> greatgranddaughter). In the 1950s, the interior land of Nicholson's Point was farmed by a gentleman named Les Head (Figure 5). The fields grew grain and hay, and there were lots of cows around. The road providing access to most of the cottages on the point diverged into two sections just south of Bath Road, with one side providing access to the front shore and the other dividing numerous times into secondary roads each leading to a cottage or group of cottages on the bay shore. At each turn in the road, there were signpost trees, usually very old oaks, that until recently could still be seen. Many of these oaks have now fallen. Around 1976, a new perimeter road joined what had previously been two completely separate shore communities, and the interior roads became little more than walking paths, many of which can still be seen in the trail system today.

Since the 1980s, there have been few changes to the point. There were some mature trees removed the forest was used as a woodlot. Most of the trails currently existing in Nicholson's Point Woods NR were already in place when a local resident moved back to the point in 1984. There is one trail running east-west in the more northern section of the property that was cleared around 25 years ago.

The property that would later become Nicholson's Point Woods NR was purchased in 1997 by Judge William Henderson for \$200,000. He intended to develop the property with one to two-acre estate residential lots. To further this, the zoning of the property was changed from Future Development (D) to Estate Residential (ER). However, primarily due to health issues, Judge Henderson never proceeded with the development before his death in 2006.

At that time, the estate listed the property for sale at \$1.3 million. Several offers close to the list price were received; however, Loyalist Township discouraged the development of the site and was in the process of reviewing a possible land designation change to environmentally sensitive. As the higher offers were conditional on a favourable land designation for future development, and the estate wanted to sell quickly, the property was instead sold in 2007 for under the appraised value to a local resident (S. Rayner & Associates Ltd., 2008).

The new owner was a homeowner on Nicholson Point Road and purchased the property intending to donate it to a conservation organization, to keep the natural greenspace for the use and enjoyment of the inhabitants of the neighbourhood. After approaching both the Cataraqui Region Conservation Authority and the Kingston Field Naturalists in late 2007, the owner reached out to the Rideau Waterway Land Trust in June 2008 (Walker, 2008).

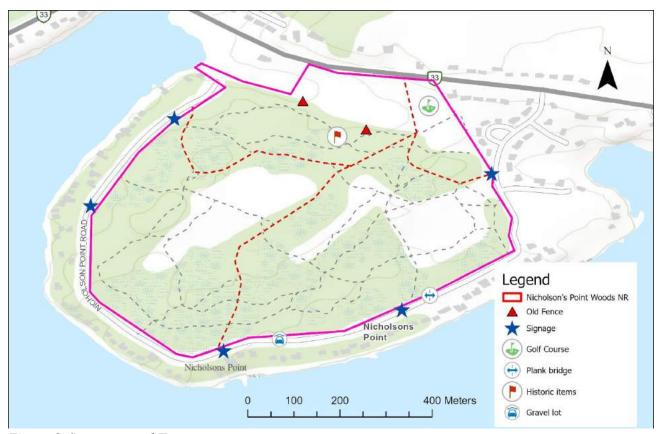


Figure 6: Structures and Features

At some time in its history, an old car, fridge, and other items were disposed of in the forest near the northern portion of the property (Figure 6, "Historic items"). As well, there are remnants of old wire fencing still visible in several places on the property, including a portion running just south of the edge of the most northern shrubland (Figure 8). More recent construction by neighbours includes a gravel parking area and several plank bridges that span the drainage culvert at the southern boundary of the property. There is also a small, one-hole golf course located in the furthest northeast section of the property.

# 4.2 ACQUISITION HISTORY

In June of 2008 the previous owner of Nicholson's Point Woods, reached out to the RWLT to determine if the land trust was interested in receiving a donation of land. He wished to see the property's "natural woodlands protected while allowing low impact recreational walking and cross country skiing to continue" (Walker, 2008). The owner had first approached the Cataraqui Region Conservation Authority but after initial discussions was worried that CRCA would insist upon additional restrictions on the use of Nicholson's Point, such as leash-only dog walking and no cross-country skiing or biking, which would diminish neighbouring residents' accustomed use and enjoyment of the land. His rationale for contacting RWLT was to avoid similar land-use restrictions. An initial site visit by Dave Walker, Doug Lewis and Simon Lunn was undertaken on September 7, 2008.

Based on this initial visit, the property's designation as Significant Woodland, and the high likelihood of significant financial support for stewardship funding from the other property owners in the area, acquisition of the property was recommended by the Land Acquisition Committee of the RWLT. This was approved by the board of directors, and a Letter of Intent to Donate dated September 16, 2008, was drafted by the owner. The transfer of the property to the RWLT occurred on October 10, 2008. As per the donor's wishes, an application was made to certify the donation under the Ecological Gift Program as administered by Environment Canada. The donation was certified as ecologically sensitive on November 26, 2008, and the appraised value was certified on December 11, 2008.

In a letter sent to neighbourhood residents, dated March 9, 2009, then Executive Director, Dave Walker, confirmed the donor's ongoing wish, stating "... Nicholson's Point Woods will be preserved in its natural state for the benefit of the community ... to ensure that the conservation values of this property are protected. This will ensure the community can continue to walk the trails and cross country ski while enjoying nature, activities that many of you have taken for granted over the years."

#### 4.3 CURRENT MANAGEMENT

Since the acquisition of the property in 2008, the RWLT has mainly allowed Nicholson's Point Woods to be managed and used by the residents of the neighbourhood. Several of the neighbours have cooperated to keep the trails through the open areas mown and clear of vegetation. There have also been community members that carried in gravel to make the trails more accessible in wetter weather. Currently, there are discussions underway between staff and board members about creating a "Friends of" group consisting of Nicholson's Point residents that are active in maintaining the property.

In March of 2012, the RWLT sent a letter to neighbours reminding them that dumping lawn clipping and branches in the Nicholson's Point Woods NR was not acceptable and that Loyalist Township provides free brush and yard waste pickup days twice a year. The issue of dumping yard waste and other materials has been a recurring one,

and a letter was sent out in the spring of 2021 on the same topic. According to conversations with Township employees, brush should be piled neatly in front of the property from which it came in order to be picked up.

The township also trims the grass and trees within their right-of-way along the edge of the property, as well as any trees that fall into or overhang the ROW and that are a potential hazard.

# 4.4 FUTURE ACQUISITIONS

No further acquisitions of property in the vicinity of Nicholson's Point Woods are anticipated. The surrounding properties are mainly residential and are not likely to meet acquisition criteria. The area also falls outside the main RWLT area of interest.

#### 4.5 STEWARDSHIP

Nicholson's Point Woods is visited at least once a year for a full property monitoring visit, typically by RWLT biology staff. Each year, the visit is done during a different season to account for the full variation in flora, fauna, and habitat. Monitors complete the monitoring template attached as Appendix B, documenting any changes in the property and/or any disturbances that may have occurred, as well as updating the species database. If there are any unwanted or illegal activities, RWLT staff and board members decide upon the necessary actions needed to resolve the issue. Additional updates on the property may be provided by the neighbours on the adjoining properties. Maintaining a relationship with the current and future owners of the adjacent parcels is an important component of stewardship and long-term conservation of all RWLT properties.

# 5 BASELINE INVENTORY SUMMARY

#### 5.1 Physical Features

#### 5.1.1 Geology

Nicholson's Point Woods NR is underlain primarily by Paleozoic-era bedrock of the Simcoe or Ottawa Group. The bedrock is primarily 470 million-year-old Middle Ordovician sedimentary rock, including Shadow Lake Formation. The Shadow Lake Formation consists of red and green sandy shales, shaly arkosic sandstones and impure silty dolostones (Dodge, 2007). Where the Shadow Lake Formation directly overlies Precambrian basement, its thickness varies from 0 to 15 m. In many places, the Shadow Lake Formation is overlain by and blends into the limestones of the Gull River Formation. In the most northern section of the property, the bedrock is overlain by clay and silt deposits (Figure 7).



Figure 7: Surface geology of area surrounding Nicholson's Point Woods NR (Ontario Geological Survey, 2010)

The property falls within the Great Lakes - St. Lawrence lowlands, on a clay plain (Figure 8). The Nicholson's Point Wood NR is part of a paleozoic bedrock-drift complex. The unconsolidated surface materials along the southern boundary of the county were deposited in fresh-water glacial lakes or the marine waters of the Champlain Sea (J. E. Gillespie, 1963).

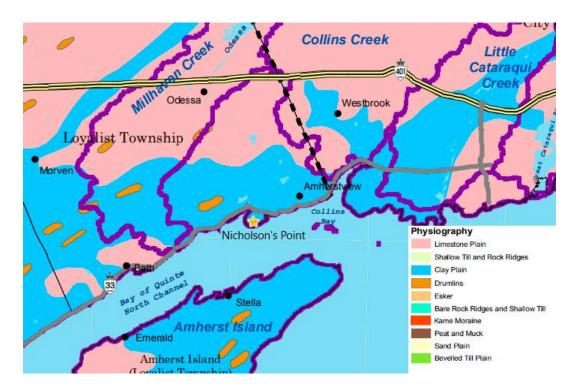


Figure 8: Local Physiography Surrounding Nicholson's Point Woods NR (yellow star)

#### **5.1.2** Soils

The primary soil series on the property is Farmington loam. This is the third most common soil in the county (J. E. Gillespie, 1963). They are found only in the southern half of the county, on blocks of limestone tableland. The soil is very thin, lacking sufficient moisture reserves to ensure crop production. Use of the area as grazing land was more common than any attempt at agriculture.

Farmington soils also tend to have a high content of bases due to their proximity to bedrock. Organic material content is generally high and is present even in the subsoil, so the entire profile is dark brown.

Farmington soils are considered the "problem soils" in this as well as many other counties in the province. They have limited use for agriculture and have a low carrying capacity as grazing land. The capacity for forestry is also limited by the shallow depth (J. E. Gillespie, 1963).

The local soil has been described as very stony, well-drained shallow soil over bedrock. The topography of the area is generally gentle, with slopes of 2-5% (Ontario Ministry of Agriculture, Food, and Rural Affairs, 2015).

#### 5.1.3 Surface Hydrology

The topography of Nicholson's Point Woods tends to be fairly flat. There are no permanent streams or wetlands on the property. However, some sections are seasonally wet due to pooling water, and several springs exist in the northern section of the property. There is a steep ridge that drops into a valley at the northern section of the property, running generally west from the minimum elevation point (Figure 9). At the bottom of this ridge, there is a small

ephemeral creek that is fed by springs and rainfall. Areas around this creek and extending into the northern shrubland are flooded in the spring creating wetland and flooded grassland habitats.

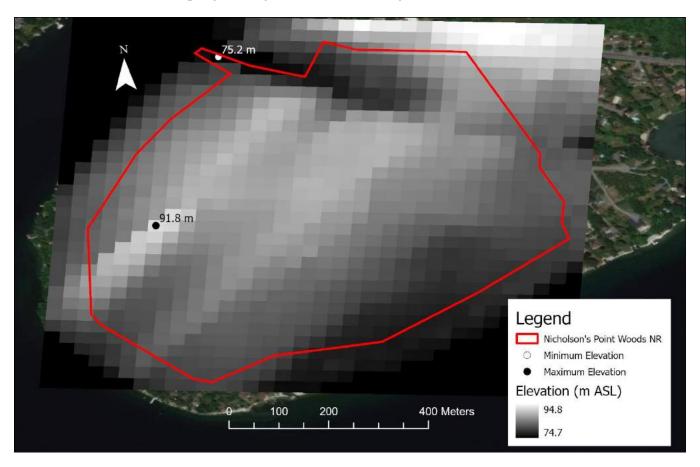


Figure 9: Topography of Nicholson's Point Woods NR

#### 5.1.4 Climate

Nicholson's Point Woods NR occurs in the Lake Simcoe-Rideau Ecoregion (6E). The climate in this region is warmer and drier than that of 5E – Georgian Bay Ecoregion to the north and cooler with a lower evapotranspiration rate than 7E – Lake Erie/Lake Ontario Ecoregion to the south. The area is generally cold and temperate with significant rainfall throughout the year.

# 5.2 BIOLOGICAL FEATURES

#### 5.2.1 Land Cover

Nicholson's Point Woods NR is 58.96 hectares consisting mainly of forest, with some shrubby open areas. About 30% of the property is open areas, with sporadic trees and abundant shrubs and forbs. Of the 70% of the property that is forest, about 50% is mixed forest, 15% is deciduous forest, and 5% is coniferous forest (Figure 10).

#### **5.2.2** Flora

The vegetation communities of this property are typical of those in the area. No official Ecological Land Classification (ELC) assessment has been completed, but the general communities have been delineated based on the Southern Ontario Land Resource Information System (SOLRIS) 3.0, and field observations by staff. SOLRIS is a regional, ecologically-based land use/land cover inventory that follows the standardized ELC for Southern Ontario (Ontario Ministry of Natural Resources and Forestry, 2021). However, it is based solely on aerial imagery and has not been ground-truthed.

Table 3: Vegetation Communities Identified on Nicholson's Point Woods Nature Reserve

| Name                     | Description   |
|--------------------------|---|
| Shrubby Open Area        | Open areas with few trees. Dominated by shrubs (grey dogwood,         |
|                          | honeysuckle, buckthorn) and forbs (wild parsnip, goldenrod,           |
|                          | elecampane, milkweed).  |
| Mixed Forest             | Primarily closed canopy (white pine, sugar maple, ash, shagbark       |
|                          | hickory, ironwood), abundant understorey and floor vegetation         |
|                          | dominated by young sugar maple, fragrant sumac, wild grapevines,      |
|                          | prickly ash, mayapple, false Solomon's seal                           |
| <b>Deciduous Forest</b>  | Closed canopy (sugar maple, northern red oak, white oak, shagbark     |
|                          | hickory, ash, poplar, basswood) with a fairly open understory. Floor  |
|                          | vegetation includes dog-strangling vine, sharp-lobed hepatica, false  |
|                          | Solomon's seal, broad-leaf goldenrod, blue cohosh, early meadow rue,  |
|                          | common blue wood aster, tall rattlesnakeroot                          |
| <b>Coniferous Forest</b> | Partly open canopy dominated by red cedar. Also includes white pine,  |
|                          | maple, buckthorn, prickly ash, fragrant sumac, goldenrod, wild basil, |
|                          | meadow buttercup, oxeye daisy, zigzag clover, Deptford pink, wild     |
|                          | strawberry  |



Figure 10: Vegetation Communities

#### **5.2.3** Fauna

Nicholson's Point Woods NR provides significant forested habitat for a wide range of wildlife. Fifty-one species of birds have been identified on the property, including nine species that typically breed and dwell in large, unfragmented forests with interior habitat. Four of these species, black-and-white warbler, hairy woodpecker, hermit thrush, and pileated woodpecker, breed in forest interiors and are known to have significant population declines when forest habitat is reduced (Rideau Valley Conservation Authority, 2000). Several others, including red-bellied woodpecker, red-eyed vireo, and rose-breasted grosbeak, will not breed in forest fragments (University of Florida).

There have also been eight mammals reported on the property, mainly by the donor. These include coyote, marten, raccoon, red fox, and skunk. Nicholson's Point Woods NR gives these medium-sized mammals a safe place to live and forage while minimizing any conflict with the neighbours that might occur if there were no natural areas for the animals.

A variety of invertebrates also make their home at Nicholson's Point Woods NR, including butterflies, moths, gall-forming insects, and at least one species at risk.

No amphibians or reptiles have been seen by staff of the Rideau Waterway Land Trust. However, a neighbour did say that she has seen snakes on the property and adjacent yards. One was brown with triangular markings – possibly an Eastern Milksnake. She also said she had never noticed any salamanders.

#### **5.2.4** Species of Conservation Concern

Nicholson's Point Woods NR provides suitable habitat for a wide range of flora and fauna, including at least three species at risk (Section 11.1.1)

According to the Natural Heritage Information Centre, there are six species of conservation concern known to be present in the area surrounding Nicholson's Point Woods NR. They include the Eastern Musk Turtle and five species of birds (Table 4Error! Not a valid bookmark self-reference.). There is also a Colonial Waterbird Nesting Colony located nearby (Ontario Ministry of Natural Resources and Forestry, 2019).

Table 4: Species of Conservation Concern – NHIC

| Common Name           | Scientific Name       | SARO Status | COSEWIC Status |
|-----------------------|-----------------------|-------------|----------------|
| Barn Swallow          | Hirundo rustica THR   |             | THR            |
| Eastern Meadowlark    | Sturgnella magna      | THR         | THR            |
| Eastern Musk Turtle   | Sternotherus odoratus | SC          | SC             |
| Henslow's Sparrow     | Ammodramus henslowii  | END         | END            |
| Louisiana Waterthrush | Parkesia motacilla    | THR         | THR            |
| Wood Thrush           | Hylocichla mustelina  | SC          | THR            |

# 5.2.5 Species At Risk Inventories

There have been no targeted species at risk inventories performed at Nicholson's Point Woods NR at the time of the writing of this plan.

#### 5.2.6 Invasive Species

Initial surveys of the property indicate that the nature reserve has a high incidence of invasive species. Invasive species proliferate once introduced and displace native species in the ecosystem. Invasive species were recorded in every vegetation community on the property.

Table 5: Invasive Species Recorded

| Common Name                | Date Observed | Description  |
|----------------------------|---------------|--|
| Canada Thistle             | 2021          | Category 1 – Aggressively Invasive;  |
| Common Lilac               | 2022          | Category 2 – Very Invasive; located in shrublands and along trails           |
| <b>Dog-Strangling Vine</b> | 2022          | Category 1 – Aggressively Invasive; Abundant throughout entire property.     |
| European Buckthorn         | 2022          | Category 1 – Aggressively Invasive; Abundant throughout the entire property. |

| Garlic Mustard        | 2022 | Category 1 – Aggressively Invasive; Abundant along the roadside and in the forest on the western side of the property.            |
|-----------------------|------|---|
| Manitoba Maple        | 2008 | Category 1 – Aggressively Invasive;   |
| Periwinkle            | 2021 | Category 2 – Very Invasive; mainly located near the roadside  |
| Phragmites            | 2021 | Category 1 – Aggressively Invasive; Restricted to one location on the eastern side of the property near hill/pile of dumped fill. |
| Tartarian Honeysuckle | 2022 | Category 1 – Aggressively Invasive; along trails and in open areas  |
| White Sweet-Clover    | 2020 | Category 2 – Very Invasive;   |
| Wild Parsnip          | 2022 | Category 3 – Moderately Invasive; located in all the shrublands   |

#### 5.3 Conservation Context

#### **5.3.1** Protected Areas

The Nicholson's Point Woods NR is the only property that the Rideau Waterway Land Trust owns west of Kingston. The closest RWLT property is Covington Cottage NR, located about 28 km northeast of Nicholson's Point, near the town of Sydenham.

However, Nicholson's Point Woods NR is located close to three properties owned by the Cataraqui Region Conservation Authority (CRCA). Parrott's Bay Conservation Area (CA) is located just over 300 m north, Owl Wood CA is about 3 km south on Amherst Island, and Lemoine Point CA is about 5 km east near the Kingston Airport.

There are also two PSWs (Bayview Bog and Collins Creek Complex) and two ANSIs (Amherstview Swamp and Fen, and Asselstine Alvar) located north of Nicholson's Point Woods NR. The majority of the Bayview Bog is owned and protected by the CRCA.

Nicholson's Point Woods NR is also located between two Important Bird Areas (IBAs), the Napanee Limestone Plain IBA about 3 km north, and the Amherst Island IBA about 2 km south (Figure 11). The Amherst Island IBA is a globally significant staging area for waterfowl such as Brant, Dunlin, Bonaparte's Gull, and Redhead, with thousands congregating at a time. Amherst Island has also gained international recognition for congregations of wintering hawks and owls, with up to 10 species of owls recorded in a single winter (Birds Canada, n.d.).

At one point, Nicholson's Point Woods NR was considered to be inside the Napanee Limestone Plain IBA according to the maps available in the Conservation Plan for the IBA (Bland, 2004). However, the boundaries have been revised over the years, and the southern boundary of the IBA is now approximately 3 km north of Nicholson's Point Woods. The Napanee Limestone Plain IBA is a nationally significant IBA under both the threatened species and congregatory species categories. This IBA supports the critically endangered Eastern Loggerhead Shrike, of which there may be as few as a dozen wild breeding pairs remaining in Ontario. The Napanee Limestone Plain is one of the few places where these predatory songbirds are consistently found to breed, and their existence is threatened by agriculture, development and the natural succession of their grassland

habitat. This IBA also supports a variety of other grassland birds of conservation concern, including the Upland Sandpiper, Common Nighthawk, Eastern Meadowlark, Northern Harrier, American Kestrel, and the endangered Henslow's Sparrow.

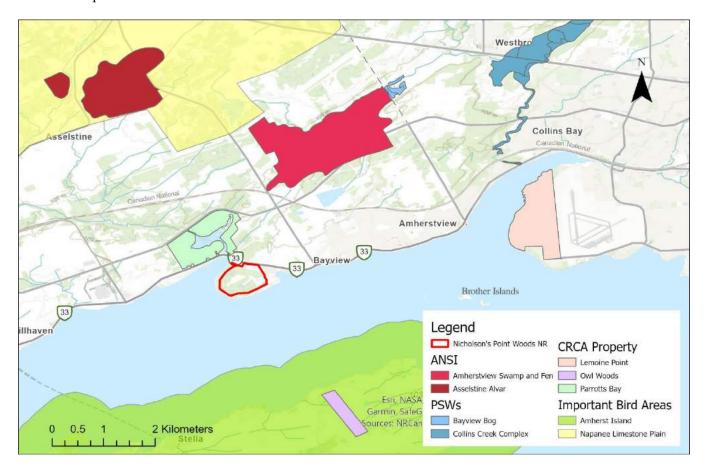


Figure 11: Protected Properties Surrounding Nicholson's Point Woods Nature Reserve

# 5.3.2 Policy Areas

#### 5.3.2.1 Official Plan of Lennox and Addington

The first County Official Plan for Lennox and Addington was adopted by Council on September 30, 2015, and approved by the Ministry of Municipal Affairs and Housing on March 9, 2016. The current version is dated February 13, 2018, and includes Official Plan Amendments #1 and #2.

Nicholson's Point Woods NR is part of the Urban Area around Bath and Amherstview. General land use objectives for urban areas can be found in section C1. A full range of uses is permitted within Urban Areas in accordance with local Official Plan policies and land use designations.

Section D1 contains objectives and policies relevant to Natural Heritage Resources, including significant woodlands. Many of the Natural Heritage Features are to be identified when the County develops a natural heritage system in accordance with section D1.9.

General development policies applicable to the entire county can be found in section E.

# 5.3.2.2 Official Plan of Loyalist Township

Under the current Official Plan of Loyalist Township, Schedule C, the property has an **Environmental Protection** land use designation. The Environmental Protection Area designation applies to "lands that play an important role in the conservation of the natural heritage system of the Township and surrounding region". This designation includes PSWs, ANSIs, the habitat of endangered and threatened species, and any **conservation lands owned by the township, conservation authority or the Rideau Waterway Land Trust.** Policies and permitted uses can be found in section 4.2.2 of the Official Plan.

In Schedule C1, the property is identified as **Environmentally Sensitive**. An Environmentally Sensitive Areas overlay "identifies lands where development and site alteration shall not be permitted unless it has been demonstrated that there will be no negative impacts on the natural features or on their ecological function. These areas should be conserved in the long term". Policies and permitted uses can be found in section 4.2.3.

General Development policies applicable to the entire Township can be found in Section 5 of the Official Plan.

#### 5.3.2.3 Zoning By-law #2001-38

Under the current Zoning By-law of the Loyalist Township, the entire property is zoned **Environmental Protection** (EP). Permitted uses and zone provisions can be found in section 5.2.1. General provisions applicable to all zones can be found in Section 4.0.

#### 5.3.2.4 Environmental Designations

In 2006, the Cataraqui Region Conservation Authority completed the Central Cataraqui Region Natural Heritage Study. This study was funded by the City of Kingston and Loyalist Township to identify a "broad-brush" system of features and areas that support biodiversity in their planning areas. In this study, the majority of Nicholson's Point Woods NR is designated as **Significant Woodland**. Five criteria have been used to identify significant woodlands; meeting any one criterion was sufficient to designate a woodland as significant. Criteria included: Size, Interior Habitat, Hydrological value (adjacency to streams), Connection to other significant features, and Age. The forested area of Nicholson's Point Woods is considered significant mainly due to its large size (over 40 hectares).



Figure 12: Excerpt from Figure 4a: SIGNIFICANT WOODLANDS (Cataraqui Region Conservation Authority, 2006)

#### 5.4 LANDSCAPE CONTEXT

Adjoining land is mainly zoned **Shoreline Residential** (along Nicholson Point Road) or **Residential** (the streets located east of Nicholson's Point Woods NR). Lighthouse Park is zoned as **Open Space**. Much of the land north of Highway 33/Bath Road is currently zoned **Future Development** and is likely to be under increasing developmental pressure in the future as Amherstview continues to expand. Nicholson's Point Woods is already cut off from other natural areas by Highway 33, but this disconnection is likely to increase as more forested areas make way for residential development.

# 6 CONSERVATION TARGET ANALYSIS

RWLT staff have worked collaboratively to identify conservation targets for Nicholson's Point Woods NR. Targets include the **Forests** and **Shrublands** of the property. Each of these conservation targets is described below with a particular focus on their ecological significance. General assessment criteria are identified, and a rating is assigned where possible.

## 6.1 Forests

In this section, forests are all those types that exist within the Nicholson's Point Woods Nature Reserve including:

- Coniferous forest dominated by red cedar
- Mixed forest dominated by white pine, sugar maple, ash, hickory, and other hardwoods
- Deciduous forest dominated by red and white oak, sugar maple, and basswood

#### **6.1.1** Ecosystem Description

Forest is the dominant ecosystem type at Nicholson's Point Woods NR, accounting for over 70% of the property. The forest is made of a mosaic of different types that together make up just over 40 hectares of Significant Woodland. Loyalist Township has significant amounts of forested land, but they are generally fragmented from each other by roads and residential areas. Nicholson's Point Woods NR provides a significant patch of forest in a generally otherwise residential and built-up area of the Township. The location and size of the forest are especially significant due to its proximity to the lake - it provides a linkage between inland and waterfront habitats and could be significant for migration.

## **6.1.2** Biodiversity

The forest has mainly been managed as a natural preserve, with limited passive recreation available to the neighbours of the property. There are large amounts of decaying wood, mosses, cavity trees and snags, all signs of a healthy, mature forest. The mature stands are mostly made up of sugar maple, oaks, basswood and white pine. Younger regeneration is also apparent within the forest. Sugar maple, bitternut hickory, elm, and ash are in early and advanced stages of regeneration.

These forest stands create the habitat required for a wide variety of fern and wildflower species. Species include blue cohosh, barren strawberry, common jewelweed, false Solomon's seal, and mayapple. Herbaceous species are important food sources for wildlife such as white-tailed deer.

Many bird species are recorded in the forest. Forest interior breeding birds require large contiguous tracts of forest. Species including the black-and-white warbler (*Mniotilta varia*), red-eyed vireo (*Vireo olivaceus*), wood thrush (*Hylocichla mustelina*), and rose-breasted grosbeak (*Pheucticus ludovicianus*) have all been recorded in the forest at Nicholson's Point Woods during the breeding season. As well, hairy woodpecker (*Dryobates villosus*), hermit thrush (*Catharus guttatus*), pileated woodpecker (*Dryocopus pileatus*), red-bellied woodpecker (*Melanerpes carolinus*), and barred owl (*Strix varia*), have been observed at other times of the year.

The dense forest and fairly flat terrain in most areas allow for the pooling of water in the spring, providing moist habitats likely conducive to breeding by many amphibian species, although none have been verified as of the writing of this report. Of particular interest is the area in the northern section of the property, where a steep ridge and several springs unite to create an ephemeral stream at the edge of the forest habitat.

#### 6.1.3 Assessment

Table 6: Target Viability Assessment for Forest Target

| Type        | Key Attribute  | Indicator       | Ranking | Notes                                    |
|-------------|----------------|-----------------|---------|--|
| Size/Extent | Size/Extent of | Area of habitat | Fair    | 40.6 hectares of forest total. This      |
|             | Characteristic |                 |         | qualifies the forest as "Significant" in |
|             | Communities    |                 |         | the Cataraqui Natural Heritage System    |

|           | Size/Extent of<br>Characteristic<br>Communities | Interior Forest<br>Area                 | Fair    | report. However, this size of forest patch is not typically sufficient to support many interior bird species  2.14 hectares, just over 5% of the total forest. This is well below the 40 hectares of interior forest that is considered to be good interior habitat. However, it does provide habitat in an otherwise developed area.  |
|-----------|---|---|---------|--|
| Condition | Indicator Species                               | Number of<br>Interior Forest<br>Birds   | Good    | Large, intact forests reduce nest predation and parasitism that many forest-dwelling bird species are subjected to. The presence of forest interior birds, specifically those that are edge-intolerant, is an indicator of quality interior forest habitat. There are nine bird species present at Nicholson's Point Woods NR that are considered to be interior species, which is about 41% of all interior birds observed on RWLT properties. However, over half the species were observed during non-breeding times of the year |
|           | Indicator Species                               | Amphibian diversity                     | Poor    | Amphibians such as wood frogs and salamanders are often found on the forest floor under woody debris and leaf litter. Many species rely on vernal pools for breeding. No amphibian species have yet been located on Nicholson's Point Woods NR.  |
|           | Forest Quality                                  | Percent of trees with disease or damage | Unknown | Forest health to be assessed at future monitoring visit  |
|           | Forest Quality                                  | Vernal Pools                            | Poor    | There do not appear to be any vernal pools on the property. No amphibians have been located to-date  |
|           | Forest Quality                                  | Number of forest layers                 | Unknown | Forest health to be assessed at future monitoring visit  |
|           | Forest Quality                                  | Percent native species                  | Good    | Approximately 90% of forest species recorded were native to Ontario  |

|           | Forest Quality    | Floristic Quality Index | Fair | 24.93 for all species, 26.65 for native species only. An FQI of under 20 means a property has minimal significance from a natural quality perspective, while an FQI of over 35 means a property possesses sufficient conservatism and richness to be floristically important from a Provincial perspective |
|-----------|-------------------|-------------------------|------|--|
| Landscape | Connectivity with | Land use of             | Fair | Surrounding land is a mix of   |
| Context   | Adjacent Natural  | surrounding             |      | residential, agricultural, and protected   |
|           | Areas             | landscape               |      | areas or parks   |
| Overall   |                   |                         | Fair |  |
| Ranking   |                   |                         |      |  |

# 6.2 SHRUBLANDS

## 6.2.1 Ecosystem Description

Approximately 30% of Nicholson's Point Woods NR property consists of shrublands, divided among three large locations, along with smaller clearings in the forest. These more open areas are spread throughout the property, with one located at the far northern edge, and the other two located to the east and west of the center of the property. The shrublands are generally flat, with some areas of exposed bedrock and thin soils.

#### 6.2.2 Biodiversity

The shrublands are mainly dominated by tall herbaceous species and mid-sized shrubs. There are also sporadic trees, including elm, ash, basswood, apple, and eastern white cedar. Shrub species include common lilac, common buckthorn, honeysuckle, and grey dogwood. Herbaceous species include common milkweed, goldenrods, chicory, timothy grass, and raspberries.

The shrublands offer varied habitats for local wildlife, including trees and shrubs for birds to perch in and hunt from, food shrubs that attract wildlife with their berries, and abundant plants for herbivores.

Several bird species have been identified using the shrublands, including eastern towhee (*Pipilo erythrophthalmus*), cedar waxwing (*Bombycilla cedrorum*), great crested flycatcher (*Myiarchus crinitus*), common yellowthroat (*Geothlypis trichas*), and house wren (*Troglodytes aedon*).

The more open portions also provide habitat for varied butterflies and moths. A number of plants on the property are host plants for the caterpillars of specific species, including New England aster (silvery checkerspot and northern pearl crescent butterflies), eastern cottonwood (mourning cloak, viceroy, swallowtail), willows (white admiral, viceroy, swallowtail), Canada thistle (painted lady), common milkweed (monarch), and queen Anne's lace (black swallowtail) (David Suzuki Foundation, 2022). Other plants including deptford pink, goldenrod, and wild strawberry provide nectar for adult butterflies and moths (Boyd, 2018).

# 6.2.3 Assessment

Table 7: Target Viability Assessment for Shrublands Target

| Type                 | Key Attribute                                  | Indicator                                  | Ranking      | Notes  |
|----------------------|--|--|--------------|--|
| Size/Extent          | Size/extent of characteristic communities      | Area of habitat                            | Very<br>Good | 16.3 hectares of habitat, with 3 patches, the largest of which is 5.9 ha. One study showed that the chance of use by all area-sensitive species studied was >90% for patches over >5.5 ha (Shake, Moorman, Riddle, & Burchell, 2012) |
| Condition            | Indicator Species                              | Number of species that rely on shrubland   | Good         | 14 bird species that use or prefer shrub habitats have been identified at Nicholson's Point, as well as some mammals such as the eastern cottontail. This accounts for 48% of the shrubland birds found on all RWLT properties       |
|                      | Species<br>Composition                         | Number of invasive, non-<br>native species | Poor         | Approximately 52% of the species identified in the open areas are non-native. Several invasive species highly detrimental to ecosystem and human health are present in these areas, such as wild parsnip.                            |
|                      | Community<br>Quality                           | Floristic Quality Index                    | Poor         | native species only, FQI = 12.39;<br>all species FQI = 8.49<br>An FQI <20 = Minimal<br>significance from a natural quality<br>perspective  |
| Landscape<br>Context | Connectivity with<br>Adjacent Natural<br>Areas | Land use of surrounding landscape          | Fair         | Surrounding land is a mix of residential, agricultural, and protected areas or parks.  Shrublands are buffered by forest.  |
| Overall<br>Ranking   |  |  | Fair         |  |

# **6.3** OTHER TARGETS

The monarch butterfly has been noted in the shrublands. Further monitoring is needed to determine what level of use this species at risk makes of the property. In the spring, monitoring for caterpillars can determine if a breeding

population is present. As well, there is the potential that the property could act as a staging area for fall migration, due to the matrix of forest and shrubland that allows for resting and feeding in close proximity.

Funding-dependent, rehabilitation of the shrublands by removing invasive dog-strangling vine and supplementing current populations of milkweed and other flowering plants can improve habitat quality for the monarch butterfly as well as other species.

# 7 THREATS

## 7.1 RECREATIONAL ACTIVITIES – LOW

Nicholson's Point Woods NR is crisscrossed by a series of trails, most of which have existed on the property for over 40 years. The newest trail was created about 25 years ago by a pair of residents. Most of the trails are narrow, dirt pathways through the forest, although a few are wider and have a gravel substrate, having once been roads. Where the trails go through the shrublands, the vegetation is trimmed by residents. The trails on the property pose a low threat to both Conservation Targets. The physical compaction of the soil caused by hikers using the trail over many years can lead to decreased vegetation in both the forest and shrubland targets, as well as changing the soil properties and type of vegetation that grows. Trails also facilitate the movement of invasive species further into a natural system, as seeds and plant parts can hitch a ride on hikers or their pets. Trails can also have less obvious impacts on the biodiversity of an area. Although there is a large, forested area, the trails fragment this into many smaller sections and may prevent the use of the property by birds and other species that are intolerant to high levels of disturbance. However, the location of this property inside a thriving residential neighbourhood means that there will always be a minimal level of disturbance that must be coped with, irrespective of the number of trails on the property itself.

The number and location of trails are stable, allowing portions of the property to remain relatively undisturbed and preventing additional damage to the property. Under the restrictions imposed by the EcoGift program under which the property was donated, **no new trails** are allowed to be created. The existing trails provide recreation and nature enjoyment to the inhabitants of the neighbourhood, which should be encouraged by continuing to classify the property as **conservation land**, but with access allowed for neighbours. More widespread usage (by people outside of the immediate vicinity) should be discouraged to prevent issues with overuse and erosion.

# 7.2 INVASIVE NON-NATIVE/PLANTS AND ANIMALS – HIGH

Invasive species are the largest threat that Nicholson's Point Woods NR is currently facing. Of the 64 herbaceous plant species identified on the property, at least 29 are non-native. There are also five non-native tree or shrub species. Not every non-native species is considered invasive, but with a changing climate causing new disturbances and changing environmental conditions, there is a chance that more non-native species will start to prosper at the expense of native species.

Already, there are nine species reported at Nicholson's Point Woods NR that are considered Aggressively Invasive (Category 1) or Very Invasive (Category 2). These classifications come from Urban Forest Associates Inc. and the Invasive Species Centre (Urban Forest Associates Inc., 2002), and seek to rank invasive species based

on their greatest negative effect on local ecosystems. This list is currently undergoing revisions, and the up-to-date list should be used for any future management plans.

The most harmful invasive plants at Nicholson's Point Woods NR include dog-strangling vine and garlic mustard, which are abundant in the forest, and wild parsnip which poses a threat to both ecosystem and human health in the more open shrublands.

# 7.3 GARBAGE AND SOLID WASTE - LOW

Due to Nicholson's Point Woods NR's location in the middle of a longstanding residential neighbourhood, garbage and the dumping of solid waste on the property has been identified as a potential threat to the conservation values of the property. In the northern section, there is an old car from the 1950s, that has been in the forest gradually rusting away since at least the early 1980s, as well as other metal debris such as old sinks, dishwashers, and stoves. This area of discarded items has been on the property for decades, and likely poses no further risk to the ecological values of the property, although care should be taken by users of the property to avoid any broken glass. The historic items may even provide habitat for animals seeking shelter on the property, and there is no plan to remove these items at this time.

Other, more recent garbage and solid waste on the property should be removed if and when possible. One source of garbage on the property noted during property visits in 2021 is the culvert under the road near the 100-level houses of Nicholson Point Road. It appears that some garbage may be washing onto the property by the water flowing through this culvert. Litter is also common along the entire edge of the property, where it has been washed or blown from the road into the forest. Garbage in Nicholson's Point Woods NR causes visual pollution, as well as potential environmental issues if animals become entangled in or consume plastic debris or toxins leach into the soil and should be picked up when and where possible.

In the same area, there are some scattered piles of scrap wood, metal, sandbags, bricks, concrete blocks, food scraps, and other scattered materials. Some of these are located along short spur trails starting at the road. Storage of construction materials or other personal property on Nicholson's Point Woods NR is not permitted, and materials should be relocated.

There is also some dumping of yard waste and brush into the forest by residents of the point. This could be potentially harmful for several reasons, including the introduction of invasive species, increasing the fuel load present in case of a fire, and smothering desirable plants such as trilliums. Dumping plant materials into the roadside culvert can also lead to flooding and road wash-outs. Loyalist Township staff have previously stated that dumping of plant materials into the roadside culvert and forest is often done by lawn-care contractors. **No dumping** signs have been placed around the perimeter of the property, and **education** of neighbours and contractors on the hazards posed by dumping yard waste should be a priority. Contractors should cart away any yard waste to be disposed of properly.

# 7.4 CLIMATE CHANGE - MEDIUM

Upon completion of the Climate Change Vulnerability Assessment, climate change is likely to compound existing threats and put new stresses on the conservation targets.

Threats related to invasive species, pests, and diseases, in particular, may become more pronounced in conjunction with climate change. Extreme weather events, which are expected to increase in frequency in the future, can cause disturbance to the forest and create new opportunities for invasive species to colonize. In particular, the velocity and frequency of severe windstorms coming off Lake Ontario have already begun to increase, knocking over older or more exposed trees on the edge of Nicholson's Point Woods.

Increased temperatures associated with climate could also lead to heat stress in some species, making them more susceptible to disease or pests, and more likely to be outcompeted by non-native species, especially those better adapted to higher temperatures.

Climate change may also create new threats that do not currently impact the conservation targets. It is expected that overall, there will be an increase in temperatures and precipitation, especially in the fall, winter, and spring months. The consequence of an increase in winter temperatures is that more precipitation will fall as rain instead of snow, with unknown consequences for the ecosystem. Temperature increases, especially in the summer, coupled with lower or unchanged amounts of rainfall, may also lead to more frequent droughts due to increased evaporation and transpiration. Vernal pools and streams may dry up sooner in the face of increased temperatures, reducing the likelihood that amphibian species successfully reproduce. Increased temperatures may also lead to temporal mismatches in when peak insect emergence happens in relation to bird migration.

General anticipated changes resulting from climate change also include species migration and changes in species ranges. The changes in temperature and precipitation patterns will affect the species that can thrive on the property under future climate scenarios. It is an important consideration for any restoration work that may take place on the property to ensure that activities are sustainable under current and future climate projections.

# 8 MANAGEMENT GOAL, OBJECTIVES AND ACTIONS

#### 8.1 MANAGEMENT GOAL

RWLT intends to maintain the ecological integrity of Nicholson's Point Woods NR. This nature reserve has extensive significant woodland. It is our goal to ensure its persistence as well as the species it supports into the future.

It is RWLT's goal to maintain the ecological integrity of the property with the following objectives:

- 1. Maintain and improve shrubland habitat for monarch butterflies and other key shrubland species
- 2. Keep invasive species from spreading beyond 2021 limits
- 3. Perform targeted studies to better record the species at risk currently making use of the property

# 8.2 STEWARDSHIP ACTIONS

The following was compiled based on the Conservation Actions Classification (V2.0) created by the Conservation Management Practices (IUCN, 2012).

Table 8: Planned Stewardship Actions – 2022 and beyond

| Action<br>Category       | Description  | Target(s) | Threat(s)        |   | Frequency |
|--------------------------|--|-----------|------------------|---|-----------|
| A. Target Resto          | oration/Stress Reduction Ac  | ctions    | <u> </u>         |   |           |
| Land/Water<br>Management | Monitor property<br>boundaries for<br>evidence of threats,<br>risks, and liabilities | All       | All              | <ul> <li>i) Annual monitoring visits to check property. This includes monitoring the property boundary, changes to the land, threats, SAR, and invasive species.</li> <li>ii) Monitoring form is completed and data is stored in a database. Any issues and threats are addressed.</li> </ul> | Annually  |
|                          | Monitor property for undocumented anthropogenic features                             | All       | All              | <ul> <li>i) Annual monitoring visits to check the property for new anthropogenic structures</li> <li>ii) Monitoring form is completed and data is stored in a database. Features are known and removed/addressed.</li> </ul>  | Annually  |
|                          | Monitor property for invasive species  | All       | Invasive species | <ul> <li>i) Inventory property to document location and extent of invasive species on the property and develop an action plan.</li> <li>ii) Action plan will mitigate impacts of invasive species. Scope and severity of threat are better understood.</li> </ul>                             | Annually  |

| Species              | Maintain current species list for the property    | All       | All | Annual monitoring visits to document incidental SAR, birds, reptiles and amphibians.  Species list is updated. Database is updated with new observations. SAR/tracked species are reported to NHIC.  | Annually               |
|----------------------|---|-----------|-----|--|------------------------|
| Species              | Breeding Bird Surveys                             | Forest    | All | Undertake approved breeding bird survey and/or targeted SAR bird survey.  Sites established for personnel to undertake BBS and Nightjar surveys. Database updated with new records. SAR/tracked species reported to NHIC. Data will help inform management plans, stewardship actions, priorities. | 2022, Every 2<br>years |
| Species              | Monarch Restoration & Research                    | Shrubland | All | Determine feasibility of creating a butterfly garden and/or doing habitat restoration in the shrublands to promote monarch butterfly recovery  Monitor in fall for possibility of monarch staging area   | 2022                   |
| Awareness<br>Raising | Maintain signage on<br>the property<br>boundaries | All       | All | Annual monitoring to check that signs are in good condition and reflect permitted uses on the property.  Signs installed/maintained.   | Annually               |

| Law & Policy                 | Connect with Indigenous communities  | All | All | Meet with local Indigenous communities to discuss the property and community interests.  Relationship established and traditional knowledge incorporated into property stewardship.      | On-going            |
|------------------------------|--|-----|-----|--|---------------------|
| Research & Monitoring        | Identify vegetation communities  | All | All | Identify and map all ELC communities on the property.  ELC data updated to inform stewardship.   | 2021, Every 5 years |
| Education and<br>Training    | Train staff  | All | All | Provide personnel with specific knowledge and skills in species ID and survey protocols.  Personnel are trained and better able to undertake actions.                                    | On-going            |
| Institutional<br>Development | Secure funding for permanent and seasonal staff                                    | All | All | Identify funding sources and positions.  Funding secured, increase capacity.   | On-going            |
| Institutional<br>Development | Establish volunteer community  Create a "Friends of Nicholson's Point Woods" group | All | All | Volunteers are trained to undertake annual monitoring and where relevant additional targeted surveys.  RWLT grows current volunteer pool and increases engagement with those volunteers. | On-going 2022       |
| Institutional<br>Development | Establish alliances/partnerships   | All | All | Partnerships are formed with organizations with shared priorities.   | On-going            |

|                              |  |     |     | Coordinated conservation – data is shared.                    |          |
|------------------------------|--|-----|-----|---|----------|
| Institutional<br>Development | Secure financial support for conservation activities | All | All | Funding sources identified and applied for where appropriate. | On-going |
|                              |  |     |     | Secured funds support stewardship actions.                    |          |

# 8.3 STEWARDSHIP COST SUMMARY

Table 9: Cost breakdown to implement management actions

For full stewardship budget breakdown, see Appendix D: Stewardship Budget. All prices are estimates based on 2021 unit costs and are subject to change.

| Action  | Cost   | Frequency      |
|---|--|----------------|
| <ul> <li>Property taxes and insurance</li> <li>Register property under CLTIP CCL</li> <li>Maintain insurance policy</li> <li>Liaise with MNDMNRF, MPAC, Loyalist Township</li> </ul>  | Insurance Cost: \$1000 Property Taxes: \$225 Staff Time: \$110 Total = \$1,335 | Annually       |
| <ul> <li>Signage Replacement</li> <li>Identification Sign</li> <li>No Dumping Signage</li> <li>*Estimated lifespan of signs = 10 years</li> <li>*Estimated lifespan of posts = 20 years</li> </ul>  | Cost of Signage: \$300<br>Labourer Time: \$90<br>Travel: \$20<br>Total = \$410 | Every 10 years |
| <ul> <li>Conduct annual monitoring visit and complete form</li> <li>Where appropriate, this visit can also include the following:         <ul> <li>Invasive species inventory</li> <li>Record incidental SAR</li> <li>Record all species encountered</li> <li>Trail monitoring</li> </ul> </li> <li>Update database with new information</li> </ul> | Biologist Time: \$270 Assistant Time: \$150 Travel: \$20 Total = \$440         | Annually       |
| Bi-Annual Monitoring (in addition to annual monitoring)  • Breeding Bird Surveys  • Amphibian Surveys   | Biologist Time: \$108 Assistant Time: \$60 Travel: \$20 Total = \$168          | Every 2 years  |

| Planning and Database Update   | Biologist Time: \$760   | Annually            |
|--|-------------------------|---------------------|
| <ul> <li>Plan monitoring visits</li> <li>Write reports</li> <li>Report SAR to NHIC</li> <li>Update species database</li> </ul> | Total = \$760           |                     |
| Yearly maintenance   | Biologist Time: \$110   | Annually, as needed |
| May include the following as needed:   | Labourer Time: \$60     |                     |
| Removal of invasive species  | Travel: \$20            |                     |
| <ul><li>Removal of unauthorized construction</li><li>Any major trail maintenance</li></ul>                                     | Total: \$190            |                     |
| Partner Liaison  | Staff Time: \$110       | Annually            |
| Maintain partnerships with<br>CRCA, Loyalist Township  | Total = \$110           |                     |
| Plan Update  | Biologist Time: \$2,650 | 2027, Every 5 years |
| • 2 site visits in addition to annual  | Assistant Time: \$420   |                     |
| monitoring (2 days each, to see<br>the property in 3 seasons)  | Travel: \$40            |                     |
| Estimated 5 days of revising PMP and getting approved  | Total = \$3,110         |                     |
| Neighbour Relations  | Biologist Time: \$760   | Annually            |
| • Events (invasive species pulls,  | Travel: \$20            |                     |
| guided hikes, education, etc)  • Management of "Friends of" group  | Total: \$780            |                     |
| Monarch Butterfly Research and   | Biologist Time: \$810   | 2022                |
| Restoration  | Assistant Time: \$450   |                     |
| <ul><li>Invasive species removal</li><li>Monitoring for species presence</li></ul>   | Travel: \$40            |                     |
| <ul> <li>and life stages</li> <li>Evaluate milkweed and wildflower community</li> </ul>  | Total: \$1300           |                     |

# 9 MANAGEMENT PLAN REVIEW

Every 5 years – starting June 2027.

# 10 REFERENCES

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# 11 APPENDICES

# 11.1 APPENDIX A: SPECIES LIST (TO DATE)

## 11.1.1 Species at Risk Recorded - Confidential

## 11.1.2 All Species Recorded (including Research-Grade iNaturalist Observations)

|          |                           |                        |           |           | Provincially |        |      |         | Exotic |
|----------|---------------------------|------------------------|-----------|-----------|--------------|--------|------|---------|--------|
| Order    | Species name              | Common Name            | Last Seen | Notes     | Tracked?     | S Rank | SARO | COSEWIC | Rank   |
|          | Agelaius                  | Red-Winged             |           |           |              |        |      |         |        |
| Bird     | phoeniceus                | Blackbird              | 2022      |           | N            | S5     |      |         |        |
| Bird     | Alcedinidae sp.           | Kingfisher             | 2010      |           |              |        |      |         |        |
|          | Bombycilla                | Cedar                  |           |           |              |        |      |         |        |
| Bird     | cedrorum                  | Waxwing                | 2021      | Shrubland | N            | S5     |      |         |        |
| Bird     | Branta canadensis         | Canada Goose           | 2019      |           | N            | S5     |      |         |        |
|          |                           | Red-Tailed             |           |           |              |        |      |         |        |
| Bird     | Buteo jamaicensis         | Hawk                   | Donor     |           | N            | S5     | NAR  | NAR     |        |
|          | Cardinalis                | Northern               |           |           |              |        |      |         |        |
| Bird     | cardinalis                | Cardinal               | 2022      | Shrubland | N            | S5     |      |         |        |
|          |                           |                        |           |           |              | S5B,   |      |         |        |
| Bird     | Cathartes aura            | Turkey Vulture         | 2019      | _         | N            | S3N    |      |         |        |
| <b>.</b> | ~ .                       | **                     | 2010      | Forest    |              | S5B,   |      |         |        |
| Bird     | Catharus guttatus         | Hermit Thrush          | 2019      | Interior* | N            | S4N    |      |         |        |
| n: I     | C 1                       | Common                 | 2000      |           | N            | Q.F    |      |         |        |
| Bird     | Colaptes auratus          | Flicker                | 2008      |           | N            | S5     |      |         |        |
| Bird     | Contonus vinans           | Eastern Wood-<br>Pewee | 2008      |           | Y            | S4B    | SC   | SC      |        |
| Біга     | Contopus virens<br>Corvus | American               | 2008      |           | 1            | 34D    | SC   | SC      |        |
| Bird     | brachyrhynchos            | Crow                   | 2019      |           | N            | S5     |      |         |        |
| Bira     | oracnymynenos             | Common                 | 2017      |           | 14           | 55     |      |         |        |
| Bird     | Corvus corax              | Raven                  | 2019      |           | N            | S5     |      |         |        |

|      | G                               |                        |       |                     |    |             |    |     |
|------|---------------------------------|------------------------|-------|---------------------|----|-------------|----|-----|
| D: 1 | Cyanocitta                      | D1 I                   | 2022  |                     | N  | Q.F.        |    |     |
| Bird | cristata                        | Blue Jay               | 2022  |                     | N  | S5          |    |     |
| n· ı | Dryobates                       | Downy                  | 2010  |                     | N  | C.F.        |    |     |
| Bird | pubescens                       | Woodpecker             | 2019  | Farrat              | N  | S5          |    |     |
| Dind | Denialisatas villasus           | Hairy                  | 2020  | Forest<br>Interior* | N  | S5          |    |     |
| Bird | Dryobates villosus<br>Dryocopus | Woodpecker<br>Pileated | 2020  | Forest              | IN | 33          |    |     |
| Bird | pileatus                        | Woodpecker             | 2021  | Interior*           | N  | S5          |    |     |
| Dira | Dumetella                       | Woodpeeker             | 2021  | Interior            | 11 | S5B,        |    |     |
| Bird | carolinensis                    | Gray Catbird           | 2022  | Shrubland           | N  | S3D,<br>S3N |    |     |
| Bira | caronnensis                     | Common                 | 2022  | Sindoland           | 11 | S5B,        |    |     |
| Bird | Geothlypis trichas              | Yellowthroat           | 2022  | Shrubland           | N  | S3N         |    |     |
|      | Hylocichla                      |                        |       |                     |    |             |    |     |
| Bird | mustelina                       | Wood Thrush            | 2022  |                     | Y  | S4B         | SC | THR |
|      |                                 | Baltimore              |       |                     |    |             |    |     |
| Bird | Icterus galbula                 | Oriole                 | 2022  |                     | N  | S4B         |    |     |
| Bird | Lanius sp.                      | Shrike                 | Donor |                     |    |             |    |     |
|      | •                               |                        |       |                     |    | S4B,        |    |     |
| Bird | Larus argentatus                | Herring Gull           | 2019  |                     | N  | S5N         |    |     |
|      | Leiothlypis                     | Tennessee              |       |                     |    |             |    |     |
| Bird | peregrina                       | Warbler                | 2022  | Shrubland           | N  | S5B         |    |     |
|      | Leiothlypis                     | Nashville              |       |                     |    |             |    |     |
| Bird | ruficapilla                     | Warbler                | 2019  | Shrubland           | N  | S5B         |    |     |
|      | Melanerpes                      | Red-Bellied            |       | Forest              |    | ~ -         |    |     |
| Bird | carolinus                       | Woodpecker             | 2010  | Specialist*         | N  | S5          |    |     |
| Bird | Melospiza melodia               | Song Sparrow           | 2022  | Shrubland           | N  | S5          |    |     |
|      |                                 | Black And              |       | Forest              |    |             |    |     |
| Bird | Mniotilta varia                 | White Warbler          | 2022  | interior*           | N  | S5B         |    |     |
|      |                                 | Brown-Headed           |       |                     |    | ~ -         |    |     |
| Bird | Molothrus ater                  | Cowbird                | 2022  |                     | N  | S5          |    |     |
| n· ı | M . 1                           | Great Crested          | 2022  |                     | NI | CED         |    |     |
| Bird | Myiarchus crinitus              | Flycatcher             | 2022  |                     | N  | S5B         |    |     |
| Bird | Pandion haliaetus               | Osprey                 | 2022  |                     | N  | S5B         |    |     |

| D: 1  | Pheucticus                 | Rose-Breasted      | 2022  | Forest          | N   | O.F.D.      |
|-------|----------------------------|--------------------|-------|-----------------|-----|-------------|
| Bird  | ludovicianus               | Grosbeak           | 2022  | Specialist*     | N   | S5B<br>S4B, |
| Bird  | Pipilo<br>erythrophthalmus | Eastern<br>Towhee  | 2022  | Shrubland       | N   | S4B,<br>S3N |
| Биа   | Poecile Poecile            | Black-Capped       | 2022  | Sinubland       | 11  | 3311        |
| Bird  | atricapillus               | Chickadee          | 2022  |                 | N   | S5          |
| 20.00 | cur reap mus               | Ruby-Crowned       |       |                 | - 1 | S5B,        |
| Bird  | Regulus calendula          | Kinglet            | 2019  |                 | N   | S3N         |
|       |                            | Golden-<br>Crowned |       |                 |     |             |
| Bird  | Regulus satrapa            | Kinglet            | 2019  |                 | N   | S5          |
| Bird  | Sayornis phoebe            | Eastern Phoebe     | 2019  |                 | N   | S5B         |
|       |                            | Yellow-            |       |                 |     |             |
|       | Setophaga                  | Rumped             |       |                 |     | S5B,        |
| Bird  | coronata                   | Warbler            | 2019  |                 | N   | S4N         |
| D: J  | Setophaga                  | Yellow<br>Warbler  | 2022  | Claurala la rad | N   | CSD         |
| Bird  | petechia                   | Red-Breasted       | 2022  | Shrubland       | N   | S5B         |
| Bird  | Sitta canadensis           | Nuthatch           | 2010  |                 | N   | S5          |
| Bira  | Sina canadensis            | White-Breasted     | 2010  |                 | 11  |             |
| Bird  | Sitta carolinensis         | Nuthatch           | 2019  |                 | N   | S5          |
|       |                            | American           |       |                 |     |             |
| Bird  | Spinus tristis             | Goldfinch          | 2022  | Shrubland       | N   | S5          |
|       |                            |                    |       |                 |     | S4B,        |
| Bird  | Spizella pusilla           | Field Sparrow      | 2022  | Shrubland       | N   | S3N         |
| Bird  | Strix varia                | Barred Owl         | Donor | Forest interior | N   | S5          |
|       | Thryothorus                |                    |       |                 |     |             |
| Bird  | ludovicianus               | Carolina Wren      | 2019  | Shrubland       | N   | S4          |
| Bird  | Troglodytes aedon          | House Wren         | 2022  | Shrubland       | N   | S5B         |
|       | Troglodytes                |                    |       |                 |     | S5B,        |
| Bird  | hiemalis                   | Winter Wren        | 2019  |                 | N   | S4N         |
| D: J  | Turdus                     | American           | 2022  |                 | N   | 95          |
| Bird  | migratorius                | Robin              | 2022  |                 | N   | S5          |

| n: 1         | <b>1</b> 7. 1.    | Red-Eyed              | 2022      | FIDS, Forest | N  | Q.C.D.     |    |     |    |
|--------------|-------------------|-----------------------|-----------|--------------|----|------------|----|-----|----|
| Bird         | Vireo olivaceus   | Vireo<br>Blue-Headed  | 2022      | Specialist*  | N  | S5B        |    |     |    |
| Bird         | Vireo solitarius  | Vireo                 | 2019      |              | N  | S5B        |    |     |    |
|              |                   | Mourning              |           |              |    |            |    |     |    |
| Bird         | Zenaida macroura  | Dove                  | 2019      |              | N  | S5         |    |     |    |
|              | Zonotrichia       | White-<br>Throated    |           |              |    |            |    |     |    |
| Bird         | albicollis        | Sparrow               | 2019      | Shrubland    | N  | S5         |    |     |    |
| Bira         | Cerioporus        | Sparrow               | 2017      | Sinuoland    | 14 | 55         |    |     |    |
| Fungus       | squamosus         | Dryad's Saddle        | 2019      |              |    |            |    |     |    |
| o            | Gymnosporangium   | j                     |           |              |    |            |    |     |    |
|              | juniperi-         | Juniper-Apple         |           |              |    |            |    |     |    |
| Fungus       | virginianae       | Rust                  | 4/18/2022 |              |    |            |    |     |    |
| _            | Tremellodendron   | Jellied False         |           |              |    |            |    |     |    |
| Fungus       | pallidum          | Coral Fungus          | 2021      |              |    |            |    |     |    |
| Fungus       |                   | Puffball<br>Mushrooms | 2020      |              |    |            |    |     |    |
| Tungus       |                   | Hickory Sticky        | 2020      |              |    |            |    |     |    |
|              | Caryomyia         | Ginger Jar Gall       |           |              |    |            |    |     |    |
| Invertebrate | viscidolium       | Midge                 | 2021      |              |    |            |    |     |    |
| Invertebrate | Danaus plexippus  | Monarch               | 2021      |              | P  | S2N,S4B    | SC | END |    |
|              |                   | Juvenal's             |           |              |    |            |    |     |    |
| Invertebrate | Erynnis juvenalis | Duskywing             | 2019      |              | N  | S5         |    |     |    |
|              | Glaucopsyche      | a., D.                | 2010      |              |    | ~ <b>~</b> |    |     |    |
| Invertebrate | lygdamus          | Silvery Blue          | 2019      |              | N  | S5         |    |     |    |
| Invertebrate | Harmonia axyridis | Japanese<br>Ladybug   | 2010      |              | N  | SNA        |    |     | SE |
| Invertebrate | Harmonia axyriais | Eastern Tent          | 2010      |              | 14 | SIVA       |    |     | SE |
|              | Malacosoma        | Caterpillar           |           |              |    |            |    |     |    |
| Invertebrate | americana         | Moth                  | 2019      |              | N  | S5         |    |     |    |
| Invertebrate | Philonix nigra    | Fuzzy Gall            | 2021      |              |    |            |    |     |    |
| Invertebrate | Pieris rapae      | Cabbage White         | 2010      |              | N  | SNA        |    |     | SE |
| Invertebrate | -                 | Katydid               | 2010      |              |    |            |    |     |    |
|              |                   | •                     |           |              |    |            |    |     |    |

| Invertebrate | Vanessa atalanta             | Red Admiral           | 2019      |                    | N   | S5B   |     |
|--------------|------------------------------|-----------------------|-----------|--------------------|-----|-------|-----|
| Mammal       | Canis latrans                | Coyote                | Donor     |                    | N   | S5    |     |
| Mammal       | Martes americana             | Marten                | Donor     |                    | N   | S5    |     |
| Mammal       | Mephitis mephitis            | Skunk                 | Donor     |                    | N   | S5    |     |
|              | Odocoileus                   | White-Tailed          |           |                    |     |       |     |
| Mammal       | virginianus                  | Deer                  | 2010      |                    | N   | S5    |     |
| Mammal       | Procyon lotor                | Raccoon               | Donor     |                    | N   | S5    |     |
|              | Sciurus                      | ~ ~                   |           |                    |     | ~ -   |     |
| Mammal       | carolinensis                 | Gray Squirrel         | 2022      |                    | N   | S5    |     |
| Managal      | Sylvilagus                   | Eastern<br>Cottontail | 2021      |                    | N   | S5    |     |
| Mammal       | floridanus                   |                       |           |                    |     |       |     |
| Mammal       | Vulpes vulpes                | Red Fox               | Donor     | Category 1 -       | N   | S5    |     |
|              |                              |                       |           | Aggressively       |     |       |     |
| Plant        | Alliaria petiolata           | Garlic Mustard        | 2021      | Invasive           | N   | SNA   | SE5 |
| 1 tanti      | Time periodene               | Curit iviustaru       |           | spring             | - 1 | 21.12 | 220 |
|              |                              |                       |           | ephemeral -        |     |       |     |
|              |                              |                       |           | indicator of       |     |       |     |
| DI.          | 4.11.                        | ***** 1               | NT 1 1 1  | healthy            | D   | 0.4   |     |
| Plant        | Allium tricoccum<br>Ambrosia | Wild Leek             | Neighbors | undergrowth        | P   | S4    |     |
| Plant        | artemisiifolia               | Common<br>Ragweed     | 2010      |                    | N   | S5    |     |
| 1 tani       | Anemone                      | Tall                  | 2010      |                    | 14  | 55    |     |
| Plant        | virginiana                   | Thimbleweed           | 2021      |                    | N   | S5    |     |
|              |                              | Common                |           |                    |     |       |     |
| Plant        | Asclepias syriaca            | Milkweed              | 2021      |                    | N   | S5    |     |
|              | Borodinia                    | Smooth                |           |                    |     |       |     |
| Plant        | laevigata                    | Rockcress             | 2021      |                    | N   | S4    |     |
|              |                              |                       |           | Wetland            |     |       |     |
|              |                              |                       |           | indicator          |     |       |     |
|              |                              |                       |           | species,<br>Swamp, |     |       |     |
| Plant        | Carex vulpinoidea            | Fox Sedge             | 2021      | Marsh              | N   | S5    |     |
| 1 001111     | ca. an impinomen             | 2 371 55055           | -0-1      | 11141511           | -,  | ~~    |     |

|        |                               |                    |      | spring<br>ephemeral -        |          |      |      |
|--------|-------------------------------|--------------------|------|------------------------------|----------|------|------|
|        |                               |                    |      | indicator of                 |          |      |      |
|        | Caulophyllum                  |                    |      | healthy                      |          |      |      |
| Plant  | thalictroides                 | Blue Cohosh        | 2021 | undergrowth                  | N        | S5   |      |
| Plant  | Cichorium intybus             | Wild Chicory       | 2021 |                              | N        | SNA  | SE5  |
|        |                               |                    |      | Category 1 -<br>Aggressively |          |      |      |
| Plant  | Cirsium arvense               | Canada Thistle     | 2021 | Invasive                     | N        | SNA  | SE5  |
| Plant  | Cirsium vulgare               | Bull Thistle       | 2010 |                              | N        | SNA  | SE5  |
|        | Clinopodium                   |                    |      |                              |          |      |      |
| Plant  | vulgare                       | Wild Basil         | 2021 |                              | N        | S5   |      |
| D14    | Convallaria                   | European Lily      | 2010 | Category 3 -                 | NT       | CNIA | CE5  |
| Plant  | majalis                       | Of The Valley      | 2019 | Mod Invasive                 | N        | SNA  | SE5  |
| Plant  | Crocus sp.                    | Crocuses           | 2022 |                              |          |      |      |
| Plant  | Daucus carota                 | Wild Carrot        | 2021 |                              | N        | SNA  | SE5  |
| Plant  | Dianthus armeria              | Deptford Pink      | 2021 |                              | N        | SNA  | SE5  |
| D.     | T. 1.                         | Viper's            | 2021 |                              | <b>.</b> | an.  | an f |
| Plant  | Echium vulgare                | Bugloss            | 2021 |                              | N        | SNA  | SE5  |
| Plant  | Erigeron annuus               | Daisy Fleabane     | 2021 |                              | N        | S5   |      |
|        | Fragaria<br>· · ·             | XX7:1.1            |      |                              |          |      |      |
| Plant  | virginiana ssp.<br>virginiana | Wild<br>Strawberry | 2021 |                              | N        | S5   |      |
|        | Ü                             | · ·                |      |                              | 11       | 33   |      |
| Plant  | Galanthus sp.                 | Snow Drops         | 2022 |                              |          |      |      |
| Plant  | Gallium sp.                   | Bedstraw           | 2021 |                              |          |      |      |
| Plant  | Geranium<br>maculatum         | Wild Geranium      | 2022 |                              | N        | S5   |      |
| 1 iuni | Geranium                      | Wild Gerallium     | 2022 |                              | 11       | 33   |      |
| Plant  | robertianum                   | Herb Robert        | 2019 |                              | N        | S5   |      |
|        |                               | Barren             |      |                              |          |      |      |
| Plant  | Geum fragarioides             | Strawberry         | 2021 |                              | N        | S5   |      |
|        | Glechoma                      |                    |      | Category 4 -                 |          |      |      |
| Plant  | hederacea                     | Ground-Ivy         | 2020 | Exotic                       | N        | SNA  | SE5  |

|          |                           | Orange Day           |           | Category 4 -                      |    |       |      |
|----------|---------------------------|----------------------|-----------|-----------------------------------|----|-------|------|
| Plant    | Hemerocallis fulva        | Lily                 | 2010      | Exotic                            | N  | SNA   | SE5  |
| Dlant    | Hepatica<br>acutiloba     | Sharp Lobed          | 2021      | forest plant                      | N  | S5    |      |
| Plant    | Hieracium                 | Hepatica<br>Smooth   | 2021      | forest plant                      | IN | 33    |      |
| Plant    | laevigatum                | Hawkweed             | 2021      |                                   | N  | SNA   | SEH  |
| 1 шп     | Hypericum                 | Common St            | 2021      | Category 4 -                      | 14 | SNA   | SLII |
| Plant    | perforatum                | John's Wort          | 2021      | Exotic                            | N  | SNA   | SE5  |
|          | Hyssopus                  |                      |           |                                   |    |       | ~    |
| Plant    | officinalis               | Hyssop               | 2020      |                                   | N  | SNA   | SE2  |
|          |                           | Common               |           | Wetland indicator species, Marsh, |    |       |      |
| Plant    | Impatiens capensis        | Jewelweed            | 2021      | Swamp                             | N  | S5    |      |
|          |                           |                      |           | Category 4 -                      |    |       |      |
| Plant    | Inula helenium            | Elecampane           | 2021      | Exotic                            | N  | SNA   | SE5  |
| DI.      | Lamiastrum                | Yellow               | 0/17/0001 |                                   | N  | CNIA  | CE1  |
| Plant    | galeobdolon               | Archangel            | 3/17/2021 |                                   | N  | SNA   | SE1  |
| Plant    | Leucanthemum vulgare      | Oxeye Daisy          | 2021      |                                   | N  | SNA   | SE5  |
|          |                           |                      |           |                                   | 11 | SINA  | SES  |
| Plant    | Lilium sp.<br>Maianthemum | True Lily<br>False   | 2021      |                                   |    |       |      |
| Plant    | racemosum                 | Solomon's Seal       | 2022      | forest plant                      | N  | S5    |      |
| 1 шп     | racemosum                 | White Sweet-         | 2022      | Category 2 -                      | 14 | 33    |      |
| Plant    | Melilotus albus           | Clover               | 2020      | Very Invasive                     | N  | SNA   | SE5  |
| 2 000.00 | Monotropa                 | 010 ( 01             |           | , 013 111, 481, 0                 | -, | 21.11 | 220  |
| Plant    | uniflora                  | Ghost Pipe           | 2021      |                                   | N  | S5    |      |
|          | v                         | Tall                 |           |                                   |    |       |      |
| Plant    | Nabalus altissimus        | Rattlesnakeroot      | 2021      |                                   | N  | S5    |      |
|          |                           |                      |           | Category 3 -                      |    |       |      |
| Plant    | Pastinaca sativa          | Wild Parsnip         | 2022      | Mod Invasive                      | N  | SNA   | SE5  |
| Plant    | Phleum pratense           | <b>Timothy Grass</b> | 2021      |                                   | N  | SNA   | SE5  |
| Plant    | Phlox divaricata          | Blue Phlox           | 2022      |                                   | N  | S4    |      |
| 1 iuni   | 2                         |                      |           |                                   |    |       |      |

|       | Phragmites<br>australis ssp.    |                           |           | Wetland<br>indicator<br>species,<br>Marsh,<br>Swamp, Fern;<br>Category 1 -<br>Aggressively |   |     |     |
|-------|---------------------------------|---------------------------|-----------|--|---|-----|-----|
| Plant | australis                       | Phragmites                | 2021      | Invasive   | N | SNA | SE5 |
| Plant | Pilosella<br>caespitosa         | Meadow<br>Hawkweed        | 2010      | Category 3 - Mod Invasive  | N | SNA | SE5 |
|       | Podophyllum                     |                           |           |  |   |     |     |
| Plant | peltatum                        | Mayapple                  | 2022      |  | N | S5  |     |
| Plant | Potentilla<br>anserina          | Common<br>Silverweed      | 2020      |  | N | S5  |     |
|       |                                 | Sulfur                    |           |  |   |     |     |
| Plant | Potentilla recta                | Cinquefoil                | 2021      |  | N | SNA | SE5 |
| Plant | Ranunculus acris                | Common<br>Buttercup       | 2021      |  | N | SNA | SE5 |
| Plant | Rubus idaeus                    | European<br>Raspberry     | 2021      |  | N | S5  |     |
|       | Sanguinaria                     |                           |           | spring<br>ephemeral -<br>indicator of<br>healthy   |   |     |     |
| Plant | canadensis                      | Bloodroot                 | 4/28/2022 | undergrowth  | N | S5  |     |
| Plant | Scilla siberica                 | Siberian Squill           | 4/20/2022 |  | N | SNA | SE2 |
| Plant | Solidago<br>flexicaulis         | Broad-Leaf<br>Goldenrod   | 2021      |  | N | S5  |     |
|       |                                 | Marsh                     |           |  |   |     |     |
| Plant | Stachys palustris               | Woundwort                 | 2020      |  | N | SNA | SE5 |
| Plant | Symphyotrichum cordifolium      | Common Blue<br>Wood Aster | 2021      |  | N | S5  |     |
| Plant | Symphyotrichum<br>novae-angliae | New England<br>Aster      | 9/15/2021 |  | N | S5  |     |

| Plant       | Thalictrum<br>dioicum | Early Meadow<br>Rue  | 2021      |                       | N  | S5         |     |
|-------------|-----------------------|----------------------|-----------|-----------------------|----|------------|-----|
| Plant       | Thalictrum pubescens  | Tall<br>Meadowrue    | 2010      |                       | N  | S5         |     |
|             | Toxicodendron         |                      |           |                       |    |            |     |
| Plant       | radicans              | Poison Ivy           | 2020      |                       | N  | S5         |     |
| Plant       | Trifolium medium      | Zigzag Clover        | 2021      |                       | N  | SNA        | SEH |
| Plant       | Trillium sp.          | Trillium             | 2022      |                       |    |            |     |
| ъ.          | Triosteum             | Orange-Fruit         | T/01/0001 |                       |    | 0.405      |     |
| Plant       | aurantiacum           | Horse-Gentian        | 7/21/2021 |                       | N  | S4S5       |     |
| Plant       | Verbascum<br>thapsus  | Common<br>Mullein    | 2021      |                       | N  | SNA        | SE5 |
| Plant       | Vicia sp.             | Vetch                | 2021      |                       | 11 | Sivi.      | DL3 |
| 1 tani      | vicia sp.             | v ctcii              | 2021      | Category 2 -          |    |            |     |
| Plant       | Vinca minor           | Periwinkle           | 2021      | Very Invasive         | N  | SNA        | SE5 |
|             |                       |                      |           | Category 1 -          |    |            |     |
|             | Vincetoxicum          | European             |           | Aggressively          |    |            | ~~~ |
| Plant       | rossicum              | Swallowwort          | 2022      | Invasive              | N  | SNA        | SE5 |
| Tree/Shrub  | Abies balsamea        | Balsam Fir           | 2010      |                       | N  | S5         |     |
|             |                       | Manitoba             |           | Category 1 -          |    |            |     |
| Tree/Shrub  | Acer negundo          | Mantoba<br>Maple     | 2008      | Aggressively Invasive | N  | <b>S</b> 5 |     |
|             | Acer rubrum           | Red Maple            | 2020      | Ilivasive             | N  | S5         |     |
| Tree/Shrub  | Acer saccharum        | Sugar Maple          | 2020      |                       | N  | S5         |     |
| 1 ree/Snrub |                       | White-Fruited        | 2021      |                       | IN | 33         |     |
| Tree/Shrub  | Actaea rubra          | Red Baneberry        | 2021      | forest plant          | N  | S5         |     |
|             | Betula                | ,                    | -         | <b>,</b>              |    |            |     |
| Tree/Shrub  | alleghaniensis        | Yellow Birch         | 2008      |                       | N  | S5         |     |
| Tree/Shrub  | Betula papyrifera     | White Birch          | 2008      |                       | N  | S5         |     |
|             | Carpinus              | American             |           |                       |    |            |     |
| Tree/Shrub  | caroliniana           | Hornbeam             | 3/11/2020 |                       | N  | S5         |     |
| Tree/Shrub  | Carya cordiformis     | Bitternut<br>Hickory | 2021      |                       | N  | S5         |     |

|                |                   | Shagbark             |      |              |    |     |     |
|----------------|-------------------|----------------------|------|--------------|----|-----|-----|
| Tree/Shrub     | Carya ovata       | Hickory              | 2021 |              | N  | S5  |     |
| Tree/Shrub     | Cornus racemosa   | Gray Dogwood         | 2021 |              | N  | S5  |     |
| Tree/Shrub     | Crataegus sp.     | Hawthorn             | 2008 |              |    |     |     |
|                |                   | American             |      |              |    |     |     |
| Tree/Shrub     | Fagus grandifolia | Beech                | 2008 |              | N  | S4  |     |
|                | Fraxinus          |                      |      |              |    |     |     |
| Tree/Shrub     | americana         | White Ash            | 2010 |              | N  | S4  |     |
| T (CI I        | Juniperus         | Common               | 2020 |              | N  | 95  |     |
| Tree/Shrub     | communis          | Juniper              | 2020 |              | N  | S5  |     |
| Tree/Shrub     | Juniperus         | Eastern Red<br>Cedar | 2021 |              | N  | S5  |     |
| 1 ree/Snrub    | virginiana        | Glaucus              | 2021 |              | IN | 33  |     |
| Tree/Shrub     | Lonicera dioica   | Honeysuckle          | 2021 |              | N  | S5  |     |
| 1700/5/1/100   | Lonicera diotea   | Tioneysackie         | 2021 | Category 1 - | 11 |     |     |
|                |                   | Tatarian             |      | Aggressively |    |     |     |
| Tree/Shrub     | Lonicera tatarica | Honeysuckle          | 2022 | Invasive     | N  | SNA | SE5 |
| Tree/Shrub     | Malus sp.         | Wild Apple           | 2021 |              |    |     |     |
|                |                   | Eastern Hop-         |      |              |    |     |     |
| Tree/Shrub     | Ostrya virginiana | Hornbeam             | 2021 |              | N  | S5  |     |
|                | Parthenocissus    | Virginia             |      |              |    |     |     |
| Tree/Shrub     | quinquefolia      | Creeper              | 2020 |              | N  | S4? |     |
| Tree/Shrub     | Picea glauca      | White Spruce         | 2010 |              | N  | S5  |     |
| Tree/Shrub     | Pinus resinosa    | Red Pine             | 2008 |              | N  | S5  |     |
|                |                   | Eastern White        |      |              |    |     |     |
| Tree/Shrub     | Pinus Strobus     | Pine                 | 2021 |              | N  | S5  |     |
|                |                   | Eastern              |      |              |    |     |     |
| Tree/Shrub     | Populus deltoides | Cottonwood           | 2021 |              | P  | S5  |     |
|                | Populus           | Bigtooth             |      |              |    |     |     |
| Tree/Shrub     | grandidentata     | Aspen?               | 2021 |              | N  | S5  |     |
| Tuo o/Clour-l- | Prunus            | Din Chamy            | 2008 |              | N  | 95  |     |
| Tree/Shrub     | pensylvanica      | Pin Cherry           | 2008 |              |    | S5  |     |
| Tree/Shrub     | Prunus serotina   | Black Cherry         | 2008 |              | N  | S5  |     |

| Tree/Shrub    | Pyrus sp.                                | Pear Trees          | 2020      |               |     |       |     |
|---------------|--|---------------------|-----------|---------------|-----|-------|-----|
| Tree/Shrub    | Quercus alba                             | White Oak           | 2021      |               | N   | S5    |     |
| 1100, 2111110 | Quercus                                  | ,, m                |           |               | -,  | ~ 0   |     |
| Tree/Shrub    | macrocarpa                               | Bur Oak             | 2021      |               | N   | S5    |     |
|               | Quercus                                  |                     |           |               |     |       |     |
| Tree/Shrub    | muehlenbergii                            | Chinkapin Oak       | 2020      |               | N   | S4    |     |
| Tree/Shrub    | Quercus rubra                            | Northern Red<br>Oak | 2021      |               | N   | S5    |     |
| Tree/Snrub    | Quercus rubra                            | Oak                 | 2021      | Category 1 -  | 11  | 33    |     |
|               | Rhamnus                                  | European            |           | Aggressively  |     |       |     |
| Tree/Shrub    | cathartica                               | Buckthorn           | 2022      | Invasive      | N   | SNA   | SE5 |
|               |  | Fragrant            |           |               |     |       |     |
| Tree/Shrub    | Rhus aromatica                           | Sumac               | 2021      |               | N   | S4    |     |
| T /Cl 1       | DI (II                                   | Staghorn            | 2020      |               | N   | G.S.  |     |
| Tree/Shrub    | Rhus typhina                             | Sumac<br>Northern   | 2020      |               | IN  | S5    |     |
| Tree/Shrub    | Rhus x borealis                          | Sumac               | 2020      |               | N   | SNA   |     |
| 1100, 2111110 |  | Prickly             | 2020      |               | - 1 | 21.11 |     |
| Tree/Shrub    | Ribes cynosbati                          | Gooseberry          | 2021      |               | N   | S5    |     |
| Tree/Shrub    | Salix sp.                                | Willow              | 2010      |               |     |       |     |
|               |  |                     |           | Category 2 -  |     |       |     |
| Tree/Shrub    | Syringa vulgaris                         | Common Lilac        | 2022      | Very Invasive | N   | SNA   | SE5 |
| Tree/Shrub    | Taxus canadensis                         | Canada Yew          | 2010      |               | N   | S4    |     |
| T /Cl 1       | TI : : : : : : : : : : : : : : : : : : : | Eastern White       | 2020      |               | NT  | G.E   |     |
| Tree/Shrub    | Thuja occidentalis                       | Cedar               | 2020      |               | N   | S5    |     |
| Tree/Shrub    | Tilia americana                          | Basswood            | 2021      |               | N   | S5    |     |
| Tree/Shrub    | Ulmus americana                          | American Elm        | 2021      |               | N   | S5    |     |
| Tree/Shrub    | Ulmus pumila                             | Siberian Elm        | 6/21/2021 |               | N   | SNA   | SE3 |
| Tree/Shrub    | Ulmus rubra                              | Slippery Elm        | 2021      |               | N   | S5    |     |
| Tree/Shrub    | Vitis riparia                            | Riverbank           | 2021      |               | N   | S5    |     |
| ree/snrub     | Zanthoxylum                              | Grape<br>Common     | 2021      |               | 11  | 33    |     |
| Tree/Shrub    | americanum                               | Prickly-Ash         | 2021      |               | N   | S5    |     |

## 11.2 APPENDIX B: MONITORING REPORT TEMPLATE



Property Monitoring Report Form

Please complete this form and include any supporting illustrations, maps or photos in the appropriate section. Please email the completed form to <a href="mailto:lands@rwlt.org">lands@rwlt.org</a> or give directly to RWLT Ecologist.

| 2                              | nservati | on Land |            |                      |      |           |  |  |
|--------------------------------|----------|---------|------------|----------------------|------|-----------|--|--|
| (circle one)                   |          |         |            |                      |      |           |  |  |
| Property:                      |          |         |            | Date of Vi           | sit: |           |  |  |
| Name(s) of Monitor(s):         |          |         |            | Contact Information: |      |           |  |  |
| Report Completed By:           |          |         |            |                      |      |           |  |  |
| Date of Last Monitoring Visit: |          |         |            |                      |      |           |  |  |
| Management Plan Reviewed:      |          |         | Yes        |                      | No   |           |  |  |
| Follow-up Required?            |          |         | Yes        |                      | No   |           |  |  |
| If yes, please describe:       |          |         |            |                      |      |           |  |  |
|                                |          |         |            |                      |      |           |  |  |
| Management Action Taken        |          |         | <b>T</b> 7 |                      | N    |           |  |  |
| Management Action Taken:       |          |         | Yes        |                      | No   |           |  |  |
| If yes, please describe:       |          |         |            |                      |      |           |  |  |
|                                |          |         |            |                      |      |           |  |  |
|                                |          |         |            |                      |      |           |  |  |
| I - Hazards                    |          |         |            |                      |      |           |  |  |
| Bears                          |          | Tree Sn | ags        |                      |      | Old Wells |  |  |
| Poison Ivy                     |          | Other   |            |                      |      |           |  |  |
| Describe:                      |          |         |            |                      |      |           |  |  |
|                                |          |         |            |                      |      |           |  |  |

| II - Existing Structures (buildings, signs, footbridges, fences, etc.)   |          |        |          |                  |            |        |                    |   |   |
|--|----------|--------|----------|------------------|------------|--------|--------------------|---|---|
| Structure  | Locatio  | n      |          | Condition        |            | С      | omments            |   |   |
|  |          |        |          |                  |            |        |                    |   |   |
|  |          |        |          |                  |            |        |                    |   |   |
|  |          |        |          |                  |            |        |                    |   |   |
| <b>III - Recreational Uses</b> (Please check off those activities observed and whether they are either allowed (A) or prohibited (P)). |          |        |          |                  |            |        |                    |   |   |
|  | A        | P      |          |                  | A          | P      |                    | A | P |
| Formal Trails  |          |        | Picnick  | ing              |            |        | Skating            |   |   |
| Informal Trails  |          |        | Swimm    | ning             |            |        | Snowmobiling       |   |   |
| Hiking   |          |        | Campir   | ng               |            |        | Snowshoeing        |   |   |
| Berry Picking  |          |        | Boating  |                  |            |        | Trapping           |   |   |
| Nature Appreciation  |          |        | Cycling  | 7                |            |        | Dog walking        |   |   |
| Bird Watching  |          |        | Rock C   | limbing          |            |        | Equestrian use     |   |   |
| Photography  |          |        | X-coun   | try Skiing       |            |        | Angling            |   |   |
| Hunting  |          |        | Bus tou  | ırs              |            |        | Motorized vehicles |   |   |
| Other  |          |        |          |                  |            |        |                    |   |   |
| Describe:  |          |        |          |                  |            |        |                    |   |   |
|  |          |        |          |                  |            |        |                    |   |   |
| IV - Natural Heritage V  | /alues   |        |          |                  |            |        |                    |   |   |
| a) Wildlife Observation  | ons (mam | ımals, | amphibia | ns, reptiles, fi | sh, birds, | , othe | r):                |   |   |
|  |          |        |          |                  |            |        |                    |   |   |
|  |          |        |          |                  |            |        |                    |   |   |
|  |          |        |          |                  |            |        |                    |   |   |

| b) Vegetation (trees, shrubs, plants):  |  |                     |  |                           |  |  |  |  |  |
|---|--|---------------------|--|---------------------------|--|--|--|--|--|
| c) Habitat Features (examples: snags/cavity trees, fallen trees, confer thickets, brush piles, waterfowl nesting, waterfowl feeding, dens, nests, wildlife trails, etc.): |  |                     |  |                           |  |  |  |  |  |
| V - Disturbances<br>a) Natural  |  |                     |  |                           |  |  |  |  |  |
| Beaver dams   |  | Erosion             |  | Fire                      |  |  |  |  |  |
| Flooding  |  | Heavy deer browsing |  | Siltation                 |  |  |  |  |  |
| Wind falls  |  | Invasive species    |  | Other                     |  |  |  |  |  |
| Describe:   |  |                     |  |                           |  |  |  |  |  |
|   |  |                     |  |                           |  |  |  |  |  |
| b) Human  |  |                     |  |                           |  |  |  |  |  |
| Camping   |  | Pesticides          |  | Road widening             |  |  |  |  |  |
| Channelization of streams   |  | Horseback riding    |  | Shoreline alteration      |  |  |  |  |  |
| Clearing of municipal drains  |  | Motorized vehicles  |  | Stray animals             |  |  |  |  |  |
| Ditching  |  | Mountain bikes      |  | Trampling                 |  |  |  |  |  |
| Dumping   |  | Pets                |  | Trapping                  |  |  |  |  |  |
| Feeding wildlife  |  | Plant harvesting    |  | Trespass                  |  |  |  |  |  |
| Fires   |  | Poaching            |  | Unauthorized construction |  |  |  |  |  |
| Urban runoff  |  | Utility corridors   |  | Vandalism                 |  |  |  |  |  |
| Other   |  |                     |  |                           |  |  |  |  |  |

| Describe:  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
| VI - Contact with Neighbours or Visitors (briefly describe your conversation, provides names if possible): |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| VII - Notes/Comments:  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| VIII – Maps, Illustrations, Photographs  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

# 11.3 APPENDIX C: CONTACT INFORMATION FOR KEY LOCAL PARTNERS - CONFIDENTIAL

# 11.4 APPENDIX D: STEWARDSHIP BUDGET

N.B. All dollar values are based on 2021 costs and are subject to change

|           | Necessary Stewardship Items                              |          | Subtotal | Endowment       | Explanation  |
|-----------|--|----------|----------|-----------------|--|
| Ownership |  |          |          | Funds<br>Needed |  |
|           | Taxes  |          | 225.00   | 5,625           | Actual costs now   |
|           | Liability Insurance – total RWLT                         | 4,000.00 |          |                 |  |
|           | Acres, RWLT  | 1,174    |          |                 |  |
|           | Average cost per acre                                    | 3.41     |          |                 |  |
|           | Factor due to public use                                 | 2        |          |                 |  |
|           | Cost per acre,   | 6.81     |          |                 |  |
|           | Acres, Nicholson   | 146      |          |                 |  |
|           | Annual Insurance Cost,                                   |          | 1000.00  | 25,000          |  |
|           | Follow up with MNDMNRF/MPAC/Municipality regarding CLTIP |          | 110.00   | 2,750           |  |
|           | Administrator Hours                                      | 2        |          |                 |  |
|           | Administrator Wage                                       | 54       |          |                 |  |
|           |  |          |          |                 |  |
| Signage   |  |          | 410.00   | 854             | Replace damaged/missing signs as needed, assuming 10 year lifespan |
|           | Replacement period                                       | 10       |          |                 |  |
|           | Cost of signs  | 300      |          |                 |  |
|           | Labourer hours   | 3        |          |                 |  |

|            | Labourer hourly rate           | 30.00  |        |        |   |
|------------|--------------------------------|--------|--------|--------|---|
|            | Sub-total, labourer            | 90.00  |        |        |   |
|            | Travel – number of trips       | 1      |        |        |   |
|            | Travel – km's per trip         | 40     |        |        |   |
|            | Travel – rate per kilometre    | 0.50   |        |        |   |
|            | Sub-total, travel              | 20.00  |        |        |   |
| Monitoring |                                |        |        |        |   |
|            | Annual Property Monitoring     |        | 440.00 | 11,000 | Trespassing, invasives, incidental species observations |
|            | Biologist hours                | 5      |        |        |   |
|            | Biologist hourly rate          | 54.00  |        |        |   |
|            | Sub-total, biologist           | 270.00 |        |        |   |
|            | Labourer hours                 | 5      |        |        |   |
|            | Labourer hourly rate           | 30.00  |        |        |   |
|            | Sub-total, labourer            | 150.00 |        |        |   |
|            | Travel – number of trips       | 1      |        |        |   |
|            | Travel – km's per trip         | 40     |        |        |   |
|            | Travel – rate per kilometre    | 0.50   |        |        |   |
|            | Sub-total, travel              | 20.00  |        |        |   |
|            |                                |        |        |        |   |
|            | Biannual Ecological Monitoring |        | 168.00 | 2,059  | Breeding birds, amphibians                              |
|            | Frequency, # of years          | 2      |        |        |   |
|            | Biologist hours                | 2      |        |        |   |
|            | Biologist hourly rate          | 54.00  |        |        |   |
|            | Sub-total, biologist           | 108.00 |        |        |   |
|            | Labourer hours                 | 7      |        |        |   |
|            | Labourer hourly rate           | 30.00  |        |        |   |
|            | Sub-total, labourer            | 60.00  |        |        |   |

|             | Travel – number of trips     | With other trip |         |        |  |
|-------------|------------------------------|-----------------|---------|--------|--|
|             | Travel – km's per trip       | 40              |         |        |  |
|             | Travel – rate per kilometre  | 0.50            |         |        |  |
|             | Sub-total, travel            | 0               |         |        |  |
|             | Planning and Database Update |                 | 760.00  | 9,314  | Plan visit, write reports, update database                           |
|             | Biologist hours              | 14              |         |        |  |
|             | Biologist hourly rate        | 54.00           |         |        |  |
|             | Sub-total, biologist         | 756.00          |         |        |  |
| Maintenance |                              |                 |         |        |  |
|             | Yearly Maintenance           |                 | 190.00  | 4,750  | invasive species removal, removal of any unauthorized structures/etc |
|             | Biologist hours              | 2               |         |        | ·  |
|             | Biologist hourly rate        | 54.00           |         |        |  |
|             | Sub-total, biologist         | 108.00          |         |        |  |
|             | Labourer hours               | 2               |         |        |  |
|             | Labourer hourly rate         | 30.00           |         |        |  |
|             | Sub-total, labourer          | 60.00           |         |        |  |
|             | Travel – number of trips     | 1               |         |        |  |
|             | Travel – km's per trip       | 40              |         |        |  |
|             | Travel – rate per kilometre  | 0.50            |         |        |  |
|             | Sub-total, travel            | 20.00           |         |        |  |
|             |                              |                 |         |        |  |
|             | Plan Update                  |                 | 3110.00 | 14,355 | Visit property in all 3 seasons, write updated plan                  |
|             | Frequency, # of years        | 5               |         |        |  |
|             | Biologist hours              | 49              |         |        |  |
|             | Biologist hourly rate        | 54.00           |         |        |  |
|             |                              |                 |         |        |  |

| Sub-total, biologist   | 2,646.00                             |                       |        |   |
|--|--------------------------------------|-----------------------|--------|---|
| Labourer hours   | 14                                   |                       |        |   |
| Labourer hourly rate   | 30.00                                |                       |        |   |
| Sub-total, labourer  | 420.00                               |                       |        |   |
| Travel – number of trips   | 2                                    |                       |        | 2 extra visits in addition to annual monitoring, to visit in all 3 seasons      |
| Travel – km's per trip   | 40                                   |                       |        |   |
| Travel – rate per kilometre  | 0.50                                 |                       |        |   |
| Sub-total, travel  | 40.00                                |                       |        |   |
|  |                                      |                       |        |   |
| Partner Liason   |                                      | 110.00                | 2,750  | Loyalist, CRCA,   |
| Biologist hours  | 2                                    |                       |        |   |
| Biologist hourly rate  | 54.00                                |                       |        |   |
| Sub-total, biologist   | 108.00                               |                       |        |   |
| _  |                                      |                       |        |   |
| _  |                                      |                       |        |   |
|  | <b>Total Endowment</b>               | Fund Needs            | 78,456 |   |
| Optional Stewardship Items   |                                      | Fund Needs            | 78,456 |   |
|  |                                      | Fund Needs<br>1300.00 | 78,456 | Map DSV, remove parsnip/DSV from shrublands, monitoring for adults/caterpillars |
| Optional Stewardship Items   |                                      |                       | 78,456 | from shrublands, monitoring for   |
| Optional Stewardship Items Monarch butterfly   |                                      |                       | 78,456 | from shrublands, monitoring for   |
| Optional Stewardship Items Monarch butterfly Biologist hours   | 15                                   |                       | 78,456 | from shrublands, monitoring for   |
| Optional Stewardship Items Monarch butterfly  Biologist hours Biologist hourly rate  | 15<br>54.00                          |                       | 78,456 | from shrublands, monitoring for   |
| Optional Stewardship Items Monarch butterfly  Biologist hours Biologist hourly rate Sub-total, biologist                                     | 15<br>54.00<br>810.00                |                       | 78,456 | from shrublands, monitoring for   |
| Optional Stewardship Items Monarch butterfly  Biologist hours Biologist hourly rate Sub-total, biologist Labourer hours                      | 15<br>54.00<br>810.00<br>15          |                       | 78,456 | from shrublands, monitoring for   |
| Optional Stewardship Items Monarch butterfly  Biologist hours Biologist hourly rate Sub-total, biologist Labourer hours Labourer hourly rate | 15<br>54.00<br>810.00<br>15<br>30.00 |                       | 78,456 | from shrublands, monitoring for   |

| Travel – rate per kilometre   | 0.50   |        |        |  |
|---|--------|--------|--------|--|
| Sub-total, travel   | 40.00  |        |        |  |
|   |        |        |        |  |
| "Friends of" Group Management/<br>Neighbour Relations Events &<br>Education |        | 780.00 | 19,500 | Neighbourhood events, managing "Friends of" group, working to manage human threats (dumping/storage) |
| Biologist hours   | 14     |        |        |  |
| Biologist hourly rate   | 54.00  |        |        |  |
| Sub-total, biologist  | 760.00 |        |        |  |
| Travel – number of trips  | 1      |        |        |  |
| Travel – km's per trip  | 40     |        |        |  |
| Travel – rate per kilometre   | 0.50   |        |        |  |
| Sub-total, travel   | 20.00  |        |        |  |

# 11.5 APPENDIX E: RESTRICTIONS UPON USE OR DISPOSITION OF NICHOLSON'S POINT WOODS NR

#### 11.5.1 CLTIP

The Conservation Land Tax Incentive Program offers a 100% rebate on property taxes on eligible properties in exchange for a long-term commitment to steward them as conservation lands. Only uses deemed compatible with the natural heritage and biodiversity objectives are allowed on properties enrolled in CLTIP. This includes but is not limited to:

- low-impact recreational activities such as hiking, skiing, hunting, fishing, and wildlife viewing,
- routine land-use activities such as invasive species management, prescribed burns, trail maintenance, tree removal for safety or forest health purposes, and planting of native species.

Other land-use activities may be permitted if approval from MNDMNRF program staff is solicited, including:

- culling non-native tree species
- sustainable fuelwood removal for personal use only
- planned trail development or upgrading.

#### Land uses such as:

- building structures
- landscaping/grooming areas or farming
- use of motorized vehicles (off-trail)
- sale of forest products (timber and non-timber products)
- alteration of ecosystems by draining, dredging, filling, grading or extracting aggregate

are incompatible with objectives under CLTIP and will likely result in the portions of the property affected becoming ineligible for tax exemption.

#### 11.5.2 **EcoGift**

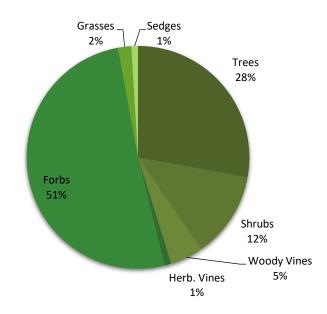
Donation under the EcoGifts program provided the donor with significant tax benefits and ensured that the RWLT would conserve the property's biodiversity and environmental heritage in perpetuity.

Written authorization from Environment and Climate Change Canada is required for any changes in use or dispositions of properties certified as an EcoGift. Failure to receive this authorization before making changes to the property may result in a penalty tax equal to 50% of the current fair market value of the property.

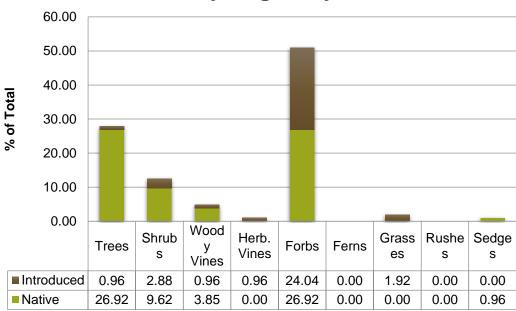
Changes of use that would enhance or restore the conservation value of the property are typically authorized. Any change in use that is not consistent with the original objectives of the ecological gift, such as subdivision, the building of structures or trails, or other changes that may threaten the environmental values, are not likely to be allowed. As well, the sale or transfer of ownership can only be to another conservation organization that is authorized by ECCC as an EcoGift recipient.

# 11.6 SOUTHERN ONTARIO FLORAL INVENTORY ANALYSIS

### 11.6.1 Physiognomy



# **Physiognomy**



**Plant Form** 

# 11.6.2 Floristics

| Floristic Analysis          |       |  |  |  |
|-----------------------------|-------|--|--|--|
| Total Spp.                  | 104   |  |  |  |
| Native                      | 71    |  |  |  |
| % Native                    | 68.27 |  |  |  |
| Introd.                     | 33    |  |  |  |
| % Introd.                   | 31.73 |  |  |  |
| Coefficient of Conservatism |       |  |  |  |
| SUM CC                      | 312   |  |  |  |
| Mean CC (Natives)           | 4.39  |  |  |  |
| Mean CC (All Spp.)          | 3.00  |  |  |  |
| FQI                         |       |  |  |  |
| FQI (Natives)               | 37.03 |  |  |  |
| FQI (All Spp.)              | 30.59 |  |  |  |
| Mean Coefficient of Wet     | ness  |  |  |  |
| Natives                     | 2.11  |  |  |  |
| All Species                 | 2.49  |  |  |  |

### **Mean Coefficient of Conservatism**

| Native Spp. | All Spp. | Scale |  |
|-------------|----------|-------|--|
|             |          | 10.00 |  |
|             |          | 9.50  |  |
|             |          | 9.00  |  |
|             |          | 8.50  |  |
|             |          | 8.00  |  |
|             |          | 7.50  |  |
|             |          | 7.00  |  |
|             |          | 6.50  |  |
|             |          | 6.00  |  |
|             |          | 5.50  | >4.5 remnant has natural area potential    |
|             |          | 5.00  | (relatively intact natural area with high  |
|             |          | 4.50  | floristic quality)                         |
| 4.379       |          | 4.00  | >3.5 Sufficient floristic quality to be of |
|             |          | 3.50  | remnant natural quality                    |
|             | 3.00     | 3.00  |  |
|             |          | 2.50  |  |
|             |          | 2.00  |  |
|             |          | 1.50  |  |
|             |          | 1.00  |  |
|             |          | 0.50  |  |
|             |          | 0.00  |  |

## **Mean Coefficient of Wetness**

| Native Species | All Species | Scale |                                 |
|----------------|-------------|-------|---------------------------------|
|                |             | 5.0   | Strong                          |
|                |             | 4.5   |                                 |
|                |             | 4.0   |                                 |
|                |             | 3.5   |                                 |
|                |             | 3.0   | Dradominance of unland energies |
|                |             | 2.5   | Predominance of upland species  |
| 2.11           | 2.49        | 2.0   |                                 |
|                |             | 1.5   |                                 |
|                |             | 1.0   |                                 |
|                |             | 0.5   | Slight                          |
|                |             | 0.0   |                                 |
|                |             | -0.5  | Slight                          |
|                |             | -1.0  |                                 |
|                |             | -1.5  |                                 |
|                |             | -2.0  |                                 |
|                |             | -2.5  | Predominance of wetland species |
|                |             | -3.0  | redominance of wetland species  |
|                |             | -3.5  |                                 |
|                |             | -4.0  |                                 |
|                |             | -4.5  |                                 |
|                |             | -5.0  | Strong                          |

# Floristic Quality Index (FQI)

| Native Spp. | All Spp. | Scale  |   |
|-------------|----------|--------|---|
|             |          | 100.00 |   |
|             |          | 95.00  |   |
|             |          | 90.00  |   |
|             |          | 85.00  |   |
|             |          | 80.00  |   |
|             |          | 75.00  |   |
|             |          | 70.00  |   |
|             |          | 65.00  |   |
|             |          | 60.00  | >50 Extremely rare and represent a            |
|             |          | 55.00  | significant component of Ontario's native     |
|             |          | 50.00  | biodiversity and natural landscapes           |
|             |          | 45.00  | >35 Possess sufficient conservatism and       |
|             |          | 40.00  | richness to be floristically important from a |
| 37.03       |          | 35.00  | Provincial perspective                        |
|             | 30.59    | 30.00  |   |
|             |          | 25.00  |   |
|             |          | 20.00  | <20 Minimal significance from a natural       |
|             |          | 15.00  | quality perspective                           |
|             |          | 10.00  |   |
|             |          | 5.00   |   |
|             |          | 0.00   |   |