

# INGLIS FALLS CONSERVATION AREA

## Management Plan 2023



**Grey Sauble**  
CONSERVATION

This management plan was reviewed and approved by GSCA Board of Directors on \_\_\_\_\_

For more information, or for a copy of this plan in an alternative format, contact GSCA at 519-376-3076 or [explore@greysauble.on.ca](mailto:explore@greysauble.on.ca)

## Executive Summary

Situated on the Niagara Escarpment, south of Owen Sound in the Township of Georgian Bluffs, Inglis Falls Conservation Area encompasses 209 hectares (516 acres). Inglis Falls Conservation Area hosts significant natural and cultural features, with 67% of the property being an Area of Natural and Scientific Interest (ANSI). The Sydenham River, rare species, a vast trail network, and the rich history and remnants of a booming mill industry, define Inglis Falls Conservation Area as the crown jewel in Grey Sauble Conservation Authority's (GSCA's) conservation areas system.

With over 100,000 visitors per year, balancing visitor use with the protection of natural features is a primary objective of this plan, as well as the responsibility of conserving and celebrating the site's history and cultural heritage. There are many challenges with the site, including aging infrastructure, an undefined visitor experience, environmental degradation, site safety, cultural heritage preservation and overall management capacity.

A management plan was developed in 1980 and updated in 2000. This new plan provides another 20-year vision for the property, with the following Actions to be implemented:

1. Conserve and Protect
2. Improve the Visitor Experience
3. Enhance and Celebrate Cultural Heritage
4. Foster Partnerships and Expand Education
5. Operations/Risk Management

## Acknowledgement

The management planning process is led by staff in GSCA's Lands Policy Department. The creation of the Inglis Falls Management Plan has taken the dedication, brainstorming and perspectives of a diverse team of partners, stakeholders, community members and the public.

Undertaking a management plan is a major endeavour that will now provide Inglis Falls Conservation Area with a new vision for the next 20 years.

Thank you to all the members of the public who participated in the process, including surveys, written comments and attending public meetings. We would also like to acknowledge all the individuals who provided their support, expertise and participation in the development of the management plan.

### **Advisory Committee**

At Last Forest School  
Bruce Trail Conservancy - Sydenham Club  
County of Grey  
City of Owen Sound  
Grey Bruce Health Unit  
Grey Roots Museum and Archives  
Grey Sauble Conservation Authority  
Grey Sauble Conservation Foundation  
Inglis Falls Arboretum Alliance  
Local Neighbourhood Representative  
Metis Nation of Ontario  
Saugeen Ojibway Nation  
Sydenham Sportsman Association  
Township of Georgian Bluffs

### **Project Consultants**

Toronto and Region Conservation Authority

## Land Acknowledgement

We acknowledge with respect, the history, spirituality, and culture of the Anishinabek: The People of the Three Fires known as Ojibway, Odawa, and Pottawatomi Nation, who have inhabited this land from time immemorial. And further give thanks to the Chippewa of Saugeen, and the Chippewa of Nawash, now known as the Saugeen Ojibway Nation, as the traditional keepers of this land. We also recognize, the Metis whose ancestors shared this land and these waters. May we all, as Treaty People, live with respect on this land, and live-in peace and friendship with all its diverse peoples.

DRAFT



## Disclaimers

### Mapping

Grey Sauble Conservation (GSC) makes regular edits to regulation and base data mapping based on the most current information. By using and/or downloading this data the user agrees to inform GSC of any errors in the mapping. All of the included mapping is made available "AS IS", "AS AVAILABLE", and "WITH ALL FAULTS" without representations or warranties of any kind, either express or implied, as to the accuracy, completeness, reliability, currency, merchantability, fitness for purpose, title or otherwise.

The entire risk as to the results and performance of the Map Products, IP, Data and Third Party Data is assumed by the user. The user shall indemnify and save harmless the GSC, its directors and officers, its representatives and employees, and Third Parties (collectively, the Indemnitee") from and against any and all liabilities, damages, costs or expenses awarded against or incurred or suffered by the Indemnitee arising out of any action or proceeding commenced or maintained by any entity in respect of the users use of the Maps, Data, IP or Third Party Data.

Produced by GSC with Data supplied under Licence by Members of the Ontario Geospatial Data Exchange. © King's Printer for Ontario and its licensors. [2023] May Not be Reproduced without Permission. THIS IS NOT A PLAN OF SURVEY. The use of these Data does not constitute an endorsement by the MNR or the Ontario Government of use of such Data. By accepting this data you are agreeing not to edit this data. You also agree to inform GSC of any errors in mapping or missing base features that you are aware of.

### Capacity

GSCA has developed this management plan as a starting point, to allow for future guidance on projects and management decisions. Due to budgetary and staffing constraints, development phases, engineered drawings or finalized designs are not included as part of this plan. Finer details will be determined based on available funds.

### NEPOSS

The development of a management plan is a requirement for Niagara Escarpment Parks and Open Spaces Systems (NEPOSS) properties under Section 3.1.5.1 of the Niagara Escarpment Plan (NEP). The Inglis Falls Management Plan process commenced in 2018 and as such, incorporates elements from both the 2012 and 2021 NEPOSS planning manual. As the property owners and managers, the goals, objectives and financial commitments of Grey Sauble Conservation Authority take precedence over the NEPOSS where they are not in conflict with the Niagara Escarpment Plan or the Niagara Escarpment Planning and Development Act.

## Table of Contents

<b>DISCLAIMERS .....</b>	<b>5</b>
MAPPING .....	5
CAPACITY .....	5
NEPOSS .....	5
<b>TABLE OF CONTENTS .....</b>	<b>6</b>
<b>MAPS .....</b>	<b>7</b>
<b>FIGURES .....</b>	<b>8</b>
<b>TABLES .....</b>	<b>9</b>
<b>LIST OF ACRONYMS .....</b>	<b>9</b>
<b>1.0 INTRODUCTION.....</b>	<b>10</b>
<b>2.0 CONTEXT .....</b>	<b>10</b>
2.1 LOCATION .....	11
2.2 LAND ACQUISITION .....	12
2.3 TAX STATUS/FOREST MANAGEMENT .....	12
<b>3.0 GOALS AND OBJECTIVES.....</b>	<b>12</b>
<b>4.0 PURPOSE OF THE MANAGEMENT PLAN .....</b>	<b>13</b>
<b>5.0 SITE ANALYSIS: THE NATURAL ENVIRONMENT .....</b>	<b>13</b>
5.1 SITE DESIGNATIONS .....	14
5.2 PHYSIOGRAPHY AND SOILS .....	17
5.3 THE SYDENHAM RIVER .....	21
5.4 SITE ECOLOGY .....	22
5.4.1 <i>Ecological Lands Classification (ELC)</i> .....	25
5.4.2 <i>Species at Risk (SAR) and Invasive Species</i> .....	27
<b>6.0 SITE ANALYSIS: HISTORY.....</b>	<b>30</b>
6.1 PRE-CONTACT .....	30
6.2 THE MILL .....	31
6.3 WATER HISTORY .....	34
6.4 THE FILTRATION PLANT.....	34
6.5 THE GROUNDS .....	37
6.6 THE ARBORETUM.....	39
<b>7.0 SITE ANALYSIS: VISITOR NUMBERS, ENGAGEMENT AND FEEDBACK .....</b>	<b>40</b>
7.1 VISITOR NUMBERS.....	40
7.2 PUBLIC OPEN HOUSE AND DRAFT PLAN FEEDBACK.....	40
7.3 SURVEY RESULTS AND STAKEHOLDER FEEDBACK .....	41
<b>8.0 MANAGEMENT CLASSIFICATION AND ZONES .....</b>	<b>41</b>
8.1 CLASSIFICATION .....	41
8.2 ZONING .....	42
<b>9.0 FUTURE DIRECTION.....</b>	<b>48</b>
9.1 ACTION 1: CONSERVE AND PROTECT.....	48
9.2 ACTION 2: IMPROVE THE VISITOR EXPERIENCE.....	54
9.2.1 <i>Trail Network and Permitted Uses</i> .....	54

9.2.2 Signage .....	64
9.2.3 Trail Map Phone Applications .....	66
9.2.4 Parking .....	67
9.2.5 Amenities/Infrastructure to Improve Visitor Experience .....	69
9.3 ACTION 3: ENHANCE AND CELEBRATE CULTURAL HERITAGE.....	74
9.3.1 Inglis Falls Dam.....	74
9.3.2 Filtration Plant .....	75
9.3.3 The Mill Storage Building .....	75
9.3.4 Preserving Artifacts and History.....	77
9.4 ACTION 4: FOSTER PARTNERSHIPS AND EXPAND EDUCATION .....	78
9.4.1 Indigenous Culture .....	79
9.4.2 Education .....	79
9.5 ACTION 5: OPERATIONS/RISK MANAGEMENT .....	84
9.5.1 Operations.....	85
9.5.2 Arboretum Plan .....	86
9.5.3 Ash Management.....	86
9.5.4 What3words .....	87
<b>10.0 EFFECTIVENESS MONITORING .....</b>	<b>88</b>
<b>11.0 ASSET MANAGEMENT .....</b>	<b>90</b>
<b>12.0 EXCLUDED RECOMMENDATIONS.....</b>	<b>98</b>
<b>REFERENCES.....</b>	<b>99</b>
<b>LISTING OF EXTERNAL DATA LAYERS .....</b>	<b>100</b>
<b>APPENDIX A .....</b>	<b>101</b>
<b>APPENDIX B .....</b>	<b>103</b>
<b>APPENDIX C .....</b>	<b>123</b>
<b>APPENDIX D .....</b>	<b>172</b>
<b>APPENDIX E .....</b>	<b>176</b>
<b>APPENDIX F.....</b>	<b>178</b>
<b>APPENDIX G .....</b>	<b>217</b>
<b>APPENDIX H .....</b>	<b>244</b>

## Maps

Map 1 Inglis Falls Conservation Area boundary .....	11
Map 2 Niagara Escarpment Commission (NEC) Designations within Inglis Falls Conservation Area .....	15
Map 3. Area excluded from NEPOSS .....	16
Map 4 Area of Natural and Scientific Interest – Regionally Significant Life ANSI at Inglis Falls Conservation Area .....	17
Map 5 Surficial Geology of Inglis Falls Conservation Area .....	20
Map 6 Soil types at Inglis Falls Conservation Area.....	21
Map 7 Inglis Falls Arboretum.....	24
Map 8 ELC Communities at IFCA .....	27
Map 9 Invasive species at IFCA .....	30
Map 10. Management Zones within IFCA (2023) .....	44
Map 11. Access/Development Zone Zoom on Arboretum Section .....	45

Map 12. Access/Development Zone Zoom on top of Inglis Falls .....	46
Map 13 Management Zones from the 2000 Master Plan .....	47
Map 14. IFCA Trail Plan (Trail Names) .....	55
Map 15 IFCA Trail Plan (Permitted Uses) .....	56
Map 16. Biking Trail at the Arboretum .....	58
Map 17. Biking Trail on the Pines Loop .....	61
Map 18. Parking design around the falls* .....	68
Map 19. Filtration Plant parking design .....	69
Map 20. Viewing platform location.....	72
Map 21 Ash trees along GSCA trails at Inglis Falls Conservation Area .....	87

## Figures

Figure 1 Cabot Head Formation .....	18
Figure 2 Indian Falls, Balmy Beach.....	19
Figure 3 Inglis Falls Grist Mill, ca 1930s.....	32
Figure 4 A Flour Advertisement, 1927 .....	32
Figure 5 Inglis Falls Gristmill and Sawmill, no date. ....	33
Figure 6 Mill workers on the dam, no date.....	34
Figure 7. Inside the Filtration Plant at present .....	35
Figure 8. Article from the Owen Sound Sun Times, July 5, 1910.....	36
Figure 9. The outside of the Filtration Plant at present .....	37
Figure 10. The original Inglis Family house, demolished in 2010 by GSCA due to vandalism ...	38
Figure 11. The two-storey Inglis Family home, which still stands today along Inglis Falls Road. .....	38
Figure 12. Victor and Hazel Inglis family house, which is no longer standing. ....	39
Figure 13. Trail edging example .....	50
Figure 14. Rope trail railing example .....	50
Figure 15. Viewing platform example .....	51
Figure 16. Current view of head pond riparian area .....	52
Figure 17. Future restoration proposal for head pond area .....	52
Figure 18. Existing Arboretum Trails .....	59
Figure 19. Existing Arboretum Trails .....	59
Figure 20. Existing Arboretum Trails .....	60
Figure 21. Existing Pines Loop Trail .....	62
Figure 22. Existing Pines Loop Trail .....	62
Figure 23. Existing Pines Loop Trail .....	63
Figure 24. Existing Pines Loop Trail .....	63
Figure 25. Trailhead sign example from Upper Thames River C.A.....	65
Figure 26. Permitted uses signage example from Conservation Halton .....	66
Figure 27. Existing Inglis Falls pavilion .....	70
Figure 28. Existing boardwalk on Filtration Plant Trail .....	71
Figure 29. Existing boardwalk on Bruce Trail .....	71
Figure 30. Inglis Falls Dam.....	75
Figure 31. Mill storage building .....	76
Figure 32. Inside the mill storage building .....	76
Figure 33. The Heidendor. ....	77
Figure 34. Outdoor classroom example .....	80
Figure 35. Arboretum Design Plan (2001) .....	81
Figure 36. 3D rendering of Admin Centre addition looking west .....	82

Figure 37. Cross section of Admin Centre addition .....	83
Figure 38. Fencing example from Hamilton C.A .....	85

## Tables

Table 1. Forest Cover for the Sydenham River Subwatershed .....	23
Table 2. ELC Communities at IFCA .....	25
Table 3. SAR Categories .....	28
Table 4. SAR at IFCA.....	28
Table 5. Invasive Species at IFCA .....	29
Table 6. Zone Descriptions and Functions in the Inglis Falls Conservation Area .....	42
Table 7. Invasive Species Strategy species priority level from the GSCA Invasive Species Strategy (Appendix H).....	48
Table 8. Future Direction: Conserve and Protect.....	53
Table 9. Pavilion use.....	69
Table 10. Future Direction: Improve the Visitor Experience.....	72
Table 11. Action 3 - Enhance and Celebrate Cultural Heritage .....	77
Table 12. Action 4 – Foster Partnerships and Expand Education .....	84
Table 13. Action 5 – Operational/Risk Management.....	87
Table 14. Effectiveness Monitoring Plan .....	88
Table 15. Inglis Falls Conservation Area Capital Asset Plan .....	92

## List of Acronyms

ANSI – Area of Natural and Scientific Interest  
 BTC – Bruce Trail Conservancy  
 EAB – Emerald Ash Borer  
 ELC – Ecological Land Classification  
 GSCA – Grey Sauble Conservation Authority  
 IFAA – Inglis Falls Arboretum Alliance  
 IFCA – Inglis Falls Conservation Area  
 NEC – Niagara Escarpment Commission  
 NEP – Niagara Escarpment Plan (2017)  
 NEPOSS – Niagara Escarpment Parks and Open Space System  
 PWQMN – Provincial Water Quality Monitoring Network  
 SSA – Sydenham Sportsman Association  
 TRCA – Toronto and Region Conservation Authority

## 1.0 Introduction

Inglis Falls Conservation Area (IFCA) is one of Grey Sauble Conservation Authority's (GSCA) flagship properties and holds high value within GSCA and the surrounding community for its natural beauty and rich history. With over 100,000 visitors each year, IFCA is the most popular property in GSCA's ownership. This management plan combines both "the Falls" portion on the southern part of the property and the Arboretum and Administrative Centre to the north. GSCA's vision is "a healthy watershed environment in balance with the needs of society", which relates well to property management as it is important to maintain a balance between the protection of significant resources and public enjoyment.

A management plan is a document that sets out the management approach and objectives for a property and describes the framework that will be used for ongoing decision-making. The management planning process often involves an extensive review to understand the site followed by visioning exercises to imagine its future state and what the property could and should become.

The IFCA is part of the Niagara Escarpment Parks and Open Space System (NEPOSS). The NEPOSS is a network of more than 160 publicly owned parks and open spaces located along the Niagara Escarpment that together serve to protect significant escarpment resources and provide opportunities for public access and recreation. Under NEPOSS, the IFCA is designated as a nodal park for the Georgian Bay/Grey County portion of the system. As a nodal park, this property is expected to promote the Niagara Escarpment's diverse environments for public benefit and to provide a destination and starting point within the NEPOSS system. Further, the nodal parks within the system are expected to provide information related to relative location of the park within the system, to educate visitors about the Niagara Escarpment and the park system, and to offer information on how to participate in nearby recreational activities.

The original management plan for IFCA was completed in 1980 with an updated master plan in 2000. The management planning process for IFCA commenced in 2018 with the installation of trail and car counters to collect visitor data and obtaining feedback from the public and stakeholders. Survey data shows that visitors generally enjoyed their visit to the conservation area, however signage, parking and washroom facilities could be improved.

This document, the Inglis Falls Management Plan, is the result of public feedback, and input from staff, stakeholders and neighbours. This plan aims to address the variety of threats and challenges identified, while maintaining the properties existing strengths. This plan provides a vision for the property over the next 20 years, with the opportunity to update every ten.

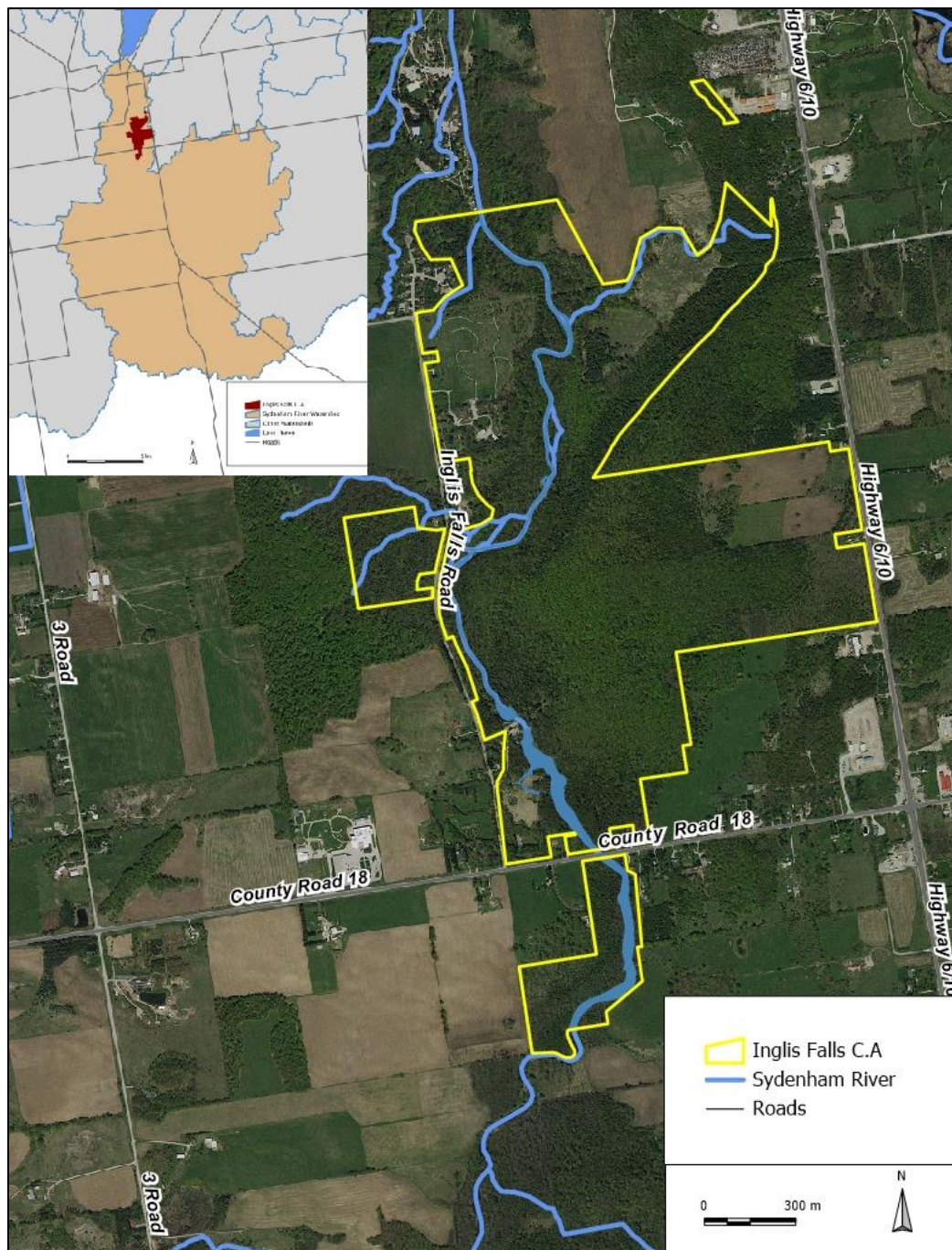
## 2.0 Context

Inglis Falls Conservation Area is located on the Niagara Escarpment, a landform recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a World Biosphere Reserve. Situated south of the City of Owen Sound, in the Township of Georgian Bluffs, this property features an extensive trail network, provides rich local history and hosts many species of rare plants and wildlife.



## 2.1 Location

The Inglis Falls Conservation Area is located south of Owen Sound, within the main Sydenham River watershed along the Sydenham River (Map 1). The property is approximately 209 hectares (ha) in size, located along the Sydenham River valley, on Lots 9, 10, 11, 12, 13 and 14, Concession 1, and Lot 11, Concession 2, and part of park lots 1 to 4, Range II and part of park lot 4, Range I, W.G.R in the Township of Georgian Bluffs (Former Derby Township).



Map 1 Inglis Falls Conservation Area boundary

## 2.2 Land Acquisition

Acquisition began in 1960 and by 1974, sixteen properties had been acquired from private landowners and the City of Owen Sound's Public Utilities Commission (P.U.C.). It was extended again in 1974 when P.U.C. property south of County Road 18 was purchased. In the early 2000's, three more properties were added to the Inglis Falls property, including the former red brick house that Victor Inglis' family lived in. The conservation area now totals 209 hectares (516.45 acres) and covers almost the entire length of the Sydenham River valley from Lot 9, in the Township of Georgian Bluffs to Harrison Park in Owen Sound. In conjunction with the city-owned Harrison Park, it encompasses about 8 km of the Sydenham River. In 1973, the Authority purchased a land locked 0.7 ha rectangular strip of land along the escarpment brow, north of main property to secure the Bruce Trail corridor.

The Authority Arboretum was established early in the history of the Inglis Falls project when property for it was purchased in 1961. The Arboretum was first considered as a site for the new Administration Centre and workshop for the Conservation Authority in 1973. A maintenance building was completed by 1975 and the Administration Centre by 1977. The last piece of the Arboretum at Pt Lot 12, Concession 1 was purchased in 1998. In 2002, the last addition of the property was 2.5 acres donated from the Clark family at Pt Lot 11, Concession 1.

## 2.3 Tax Status/Forest Management

Within the property, 346 acres are enrolled in Conservation Lands Tax Incentive Program (CLTIP) and the 21.5 acres in agricultural leased land is under the Farm Tax program. In 2021, GSCA paid \$1,717.08 in taxes on this property.

GSCA actively manages 120.6 acres for harvest under the Managed Forest Tax Incentive Program and has been actively managed for forest products. The Scots Pine plantation was harvested in 2006, and harvest operations at the property are not scheduled until 2039, if at all. Many of the stands are "Designated No Forest Management" or "Protection Forest". Due to the proximity to Owen Sound and the high use by the public it is not an ideal property for conducting harvest operations.

## 3.0 Goals and Objectives

Goal: To protect, conserve and manage the property within an ecosystem framework and, in consultation with the community, to ensure watershed health, public enjoyment and environmental sustainability.

Objectives:

- *Natural Heritage* - To protect, restore and regenerate the natural ecosystem of IFCA by ensuring the health and diversity of native species, habitats, landscapes and ecological processes. To maximize the linkages and connectivity of the natural heritage features to one another and to adjacent areas and to provide professional resource management on the property as appropriate.
- *Cultural Heritage* - To identify, protect and conserve the cultural heritage features of IFCA for their inherent value and depiction of the long-term human use and occupancy of the area, including any identified traditional uses of Indigenous peoples.



- *Land Use* - To ensure protection of the ecological integrity and cultural values of the property through innovative planning and management, and appropriate conservation, recreation, and other land uses.
- *Recreation* - To provide opportunities for appropriate outdoor recreation at IFCA, that is sustainable in environmental, physical, and economic terms, and which is consistent with all other objectives.
- *Education* - To promote knowledge and understanding of the natural and cultural values of the site, the watershed area, and the Niagara Escarpment, including their protection and management requirements, as well as their significance, sensitivities, and interrelationships.
- *Stewardship* - To promote and facilitate the ongoing public involvement at IFCA that will foster sustainable recreational tourism and will accomplish watershed management objectives.
- *Fiscal Sustainability* – To ensure that GSCA undertakes upgrades, alterations, and management of IFCA in a manner that considers fiscal requirements and responsibilities and strives to ensure financial balance and sustainability over the long-term.
- *Management* - To manage IFCA in a manner that will ensure the achievement of all objectives.

This goal and objectives will also work to achieve the goal “Enhance GSCA Land Management and Natural Heritage Preservation” as set out in GSCA’s 2019-2021 Strategic Plan.

## 4.0 Purpose of the Management Plan

This plan represents the third management plan to be completed for Inglis Falls Conservation Area. The first plan was released in 1980, followed by a master plan in 2000. Since then, the visitor numbers have increased significantly, but the challenges remain the same. A management plan is needed to ensure future sustainability of the site in terms of environmental protection, historical/cultural preservation and visitor amenities and experiences.

The purpose of this plan is to provide an evaluation of the property and direction for future use of the site, as well as a strategy to implement proposed projects. The plan also identifies specific management zones within which a certain type of activity may be undertaken. The plan will be reviewed biennially by GSCA Lands staff to assess the plan progress and track changes in direction for the site. The plan will be updated every 10 years or may exceed this if deemed unnecessary.

## 5.0 Site Analysis: The Natural Environment

Inglis Falls Conservation Area boasts an array of ecological features including the Niagara Escarpment, ancient cedars, glacial potholes, Species at Risk (SAR), Areas of Natural and Scientific Interest (ANSI) and many sensitive flora species. The vast, mature upland forest, pockets of wetland, meadow in the Arboretum and stretch of the Sydenham River all provide unique habitats for a variety of species.

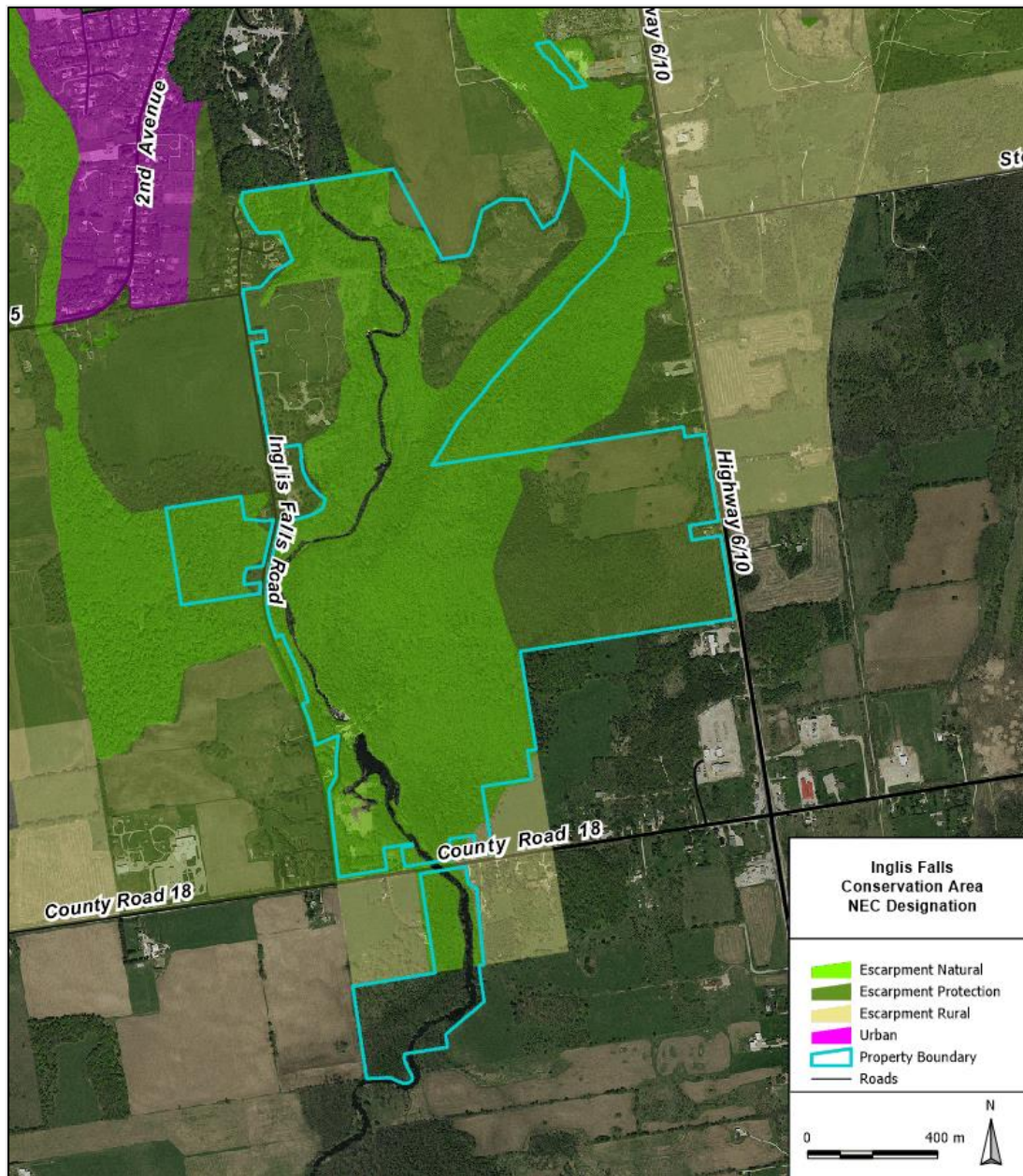
## 5.1 Site Designations

In 1990 the Niagara Escarpment was designated as a United Nations Educational Scientific and Cultural Organization (UNESCO) World Biosphere Reserve. This designation recognizes the Niagara Escarpment and the land in its vicinity as a nationally and internationally significant landform that includes scientifically valuable examples of sustainable relationships between human activities and ecosystems.

The IFCA lies within the jurisdiction of the Niagara Escarpment Planning Area and consists of two land-use designations under the Niagara Escarpment Plan (NEP): Escarpment Natural Area and Escarpment Protection Area, as shown in Map 2.

The Escarpment Natural Areas contains escarpment features that are in a relatively natural state as well as its associated valleys, wetlands and woodlands that are also relatively undisturbed. These areas tend to be the most sensitive and scenic natural resources and the policies aim to protect and enhance these natural areas.

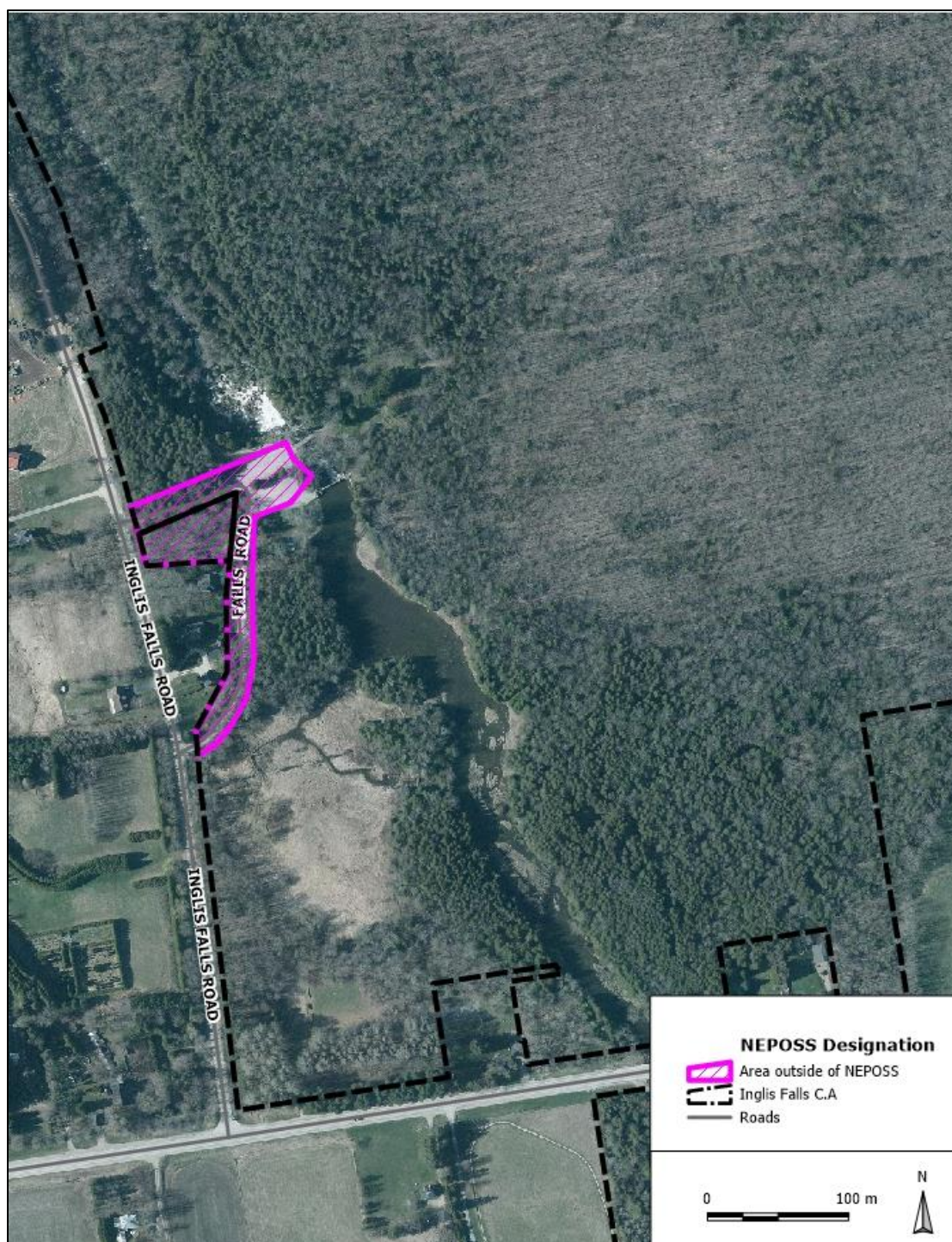
The Escarpment Protection Areas are designated due to their visual prominence and their environmental significance, including increased resilience to climate change through the provision of essential ecosystem services. This also contains escarpment related landforms and natural heritage and hydrologic features that have been significantly modified by land use activities, such as agriculture and residential development, as well as lands needed to buffer the Escarpment Natural Areas.



Map 2 Niagara Escarpment Commission (NEC) Designations within Inglis Falls Conservation Area

As mentioned previously, Inglis Falls Conservation Area is a Nodal Park under the Niagara Escarpment Parks and Open Spaces System (NEPOSS). However, 0.9/209 hectares, comprised of the parking areas and Falls Road, are not included in the NEPOSS (Map 3). The plan will include the entire 209 hectares, but it becomes important in Section 9 to highlight where the NEPOSS boundary is.



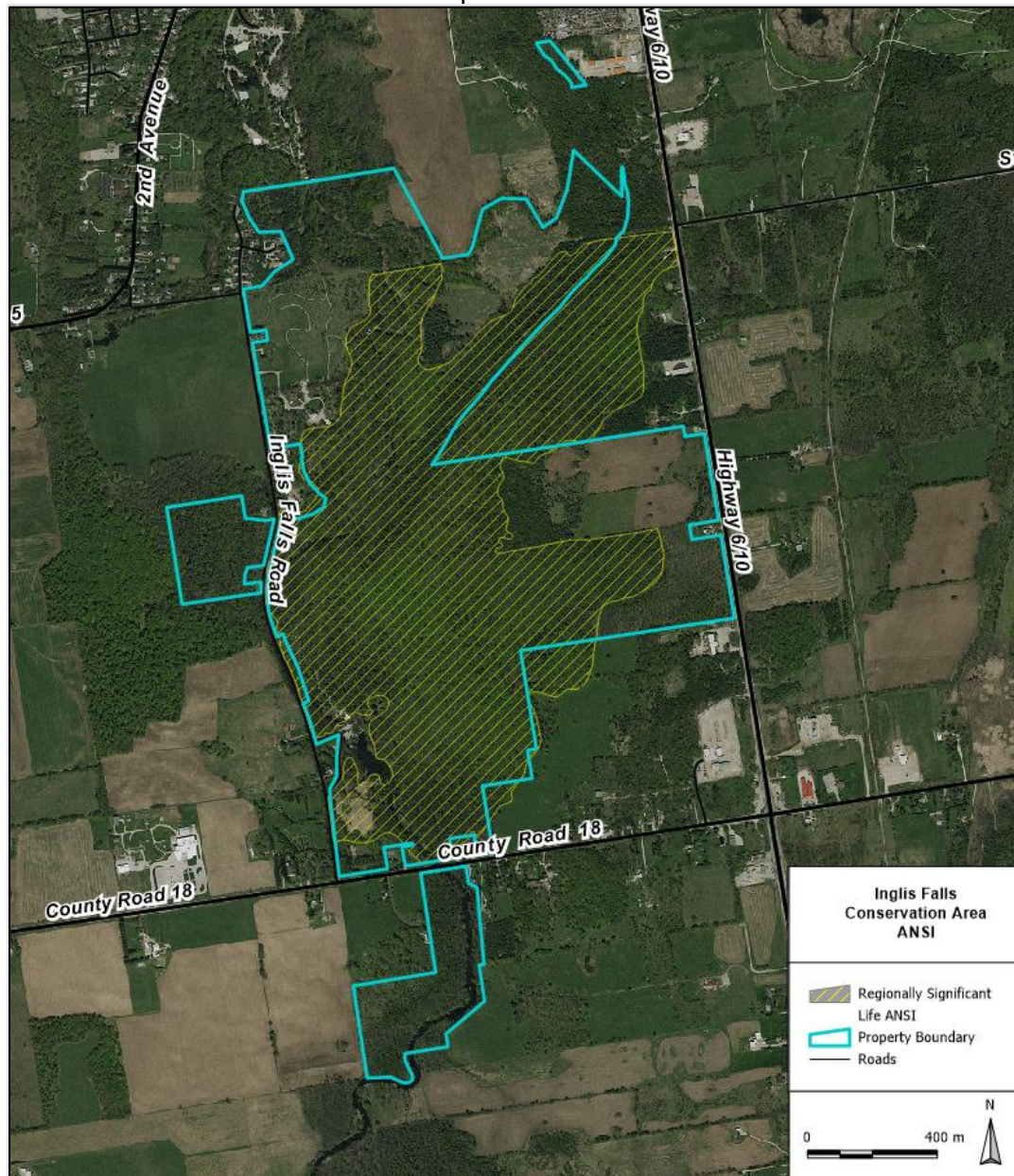


Map 3. Area excluded from NEPOSS

The Inglis Falls Conservation Area is 209 hectares in size, 139 hectares of which are designated as a Regionally Significant Life Science Area of Natural and Scientific Interest (ANSI), as shown in Map 3. ANSI is an official designation by the Province of Ontario which is applied to geographical regions within the province that have geological or ecological features that are deemed locally, regionally or provincially significant for natural heritage, protection, scientific study or educational reasons.



Life Science ANSI's are significant representative segments of Ontario's biodiversity and natural landscapes including specific types of forests, valleys, prairies and wetlands, their native plants and animals and their supportive environments. They contain relatively undisturbed vegetation and landforms and their associated species and communities.



Map 4 Area of Natural and Scientific Interest – Regionally Significant Life ANSI at Inglis Falls Conservation Area

## 5.2 Physiography and Soils

The bedrock exposed along the Niagara Escarpment and underlying this conservation area is of sedimentary origin, having been deposited in epicontinental seas during the Silurian and Ordovician Periods more than 400 million years ago. These formations are well stratified

dolomites, limestones, sandstones and shales some of which contain fossilized saltwater corals, reminders of the ancient marine environment which once covered this area (Tovell, 1992). A map of the site physiography can be found in Map 4.

The various bedrock strata are exposed at different locations on the site. The caprock of the Niagara Escarpment visible at Inglis Falls, consists of harder dolomites of the Amabel formation which overlie softer fossiliferous dolomite of the Fossil Hill formation. Underneath is an even softer blue shale of the Cabot Head formation which is clearly visible at the Inglis Falls Road cut, as shown in Figure 1 (Cowell and Woerns, 1976). The Cabot Head Shale presents an impermeable layer to the infiltration of ground water and thus encourages its flow in a horizontal direction. As a result, a number of springs issue forth from this contact zone in various locations along the escarpment face including the Inglis Falls Road cut (Cowell and Woerns, 1976). The Cabot Head exposure along Inglis Falls Road is a rare occurrence and has been designated as a regionally significant geological feature by the Ministry of Natural Resources and Forestry in their Earth Sciences Report for the Niagara Escarpment Planning Area. The Amabel dolomite exposure just southeast of the property along Highway 6 and 10 is also considered regionally significant because it presents an excellent example of the Colpoy's Bay/Wiarton members of this formation (Cowell and Woerns, 1976).



Figure 1 Cabot Head Formation

Retrieved online from: [https://brucetrail.org/system/downloads/0000/0782/BT\\_Magazine\\_-\\_Spring\\_2015\\_Escarpment\\_Geology.pdf](https://brucetrail.org/system/downloads/0000/0782/BT_Magazine_-_Spring_2015_Escarpment_Geology.pdf)

Manitoulin Dolomite, a slightly harder stratum underlying the Cabot Head shale forms a wide shelf below the primary escarpment. It has been partially eroded back to create a secondary ridge which runs north from the middle of the Inglis Falls Conservation Area through Owen Sound on both sides of the Sydenham River (Cowell and Woerns, 1976). This bedrock is not exposed on the site but is visible at the 10th Street West Road cut in Owen Sound. The bottom bedrock layer visible at the site is the Queenston formation consisting of soft red and green shales which have been exposed by the river along its banks a short distance south of Harrison Park (Cowell and Woerns, 1976). Another GSCA property, Indian Falls in Balmy Beach is a great place to view these various formations (Figure 2).





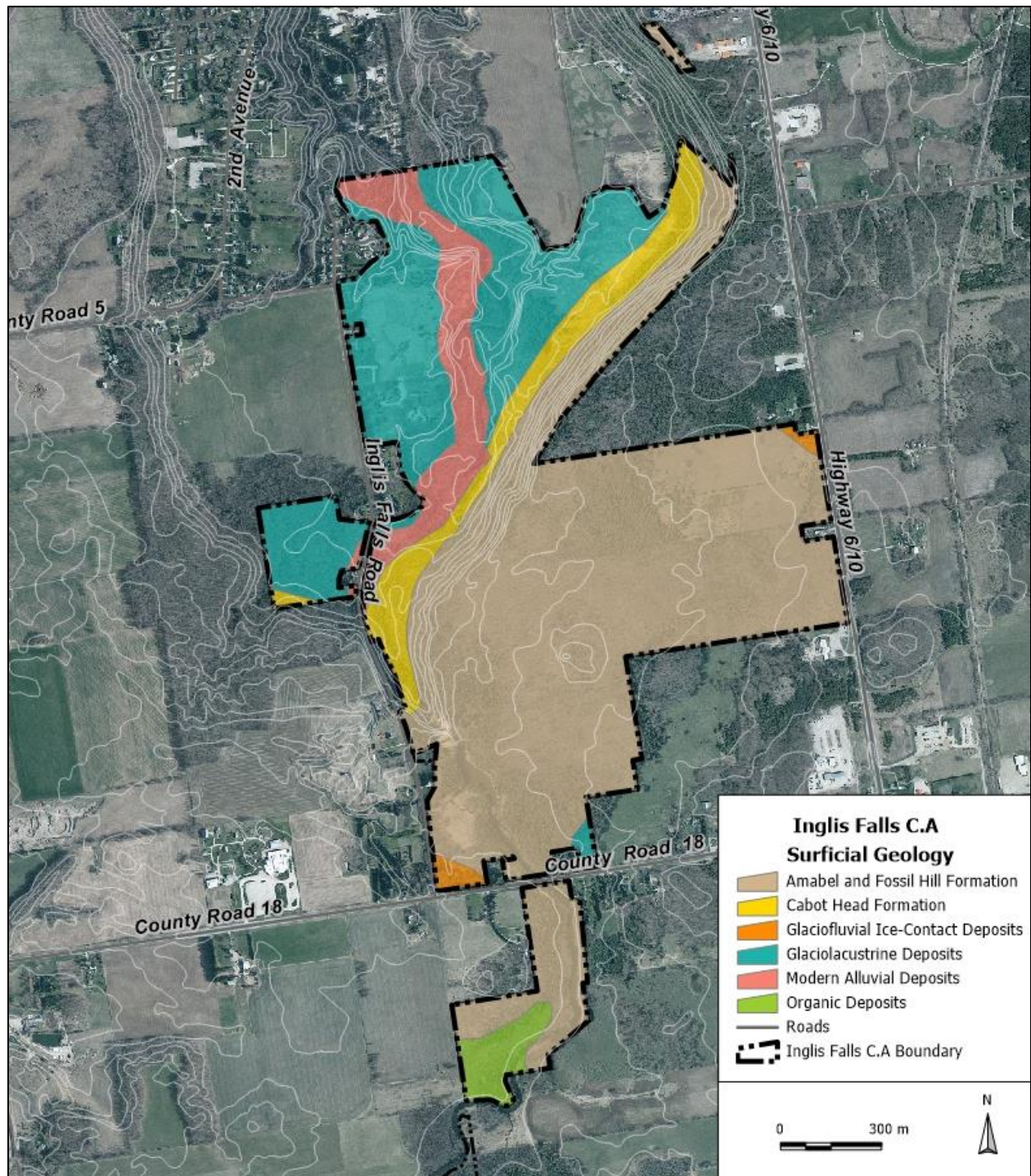
Figure 2 Indian Falls, Balmy Beach.

Retrieved online from: <https://ontarioconservationareas.ca/component/mtree/conservation-authorities/grey-sauble/indian-falls-conservation-area?Itemid=>

Although generally soft and water soluble compared to other rock types, the varying hardness of the different sedimentary bedrock layers have contributed greatly to the diverse topography of this site. This topography is generally broken and undulating with the Niagara Escarpment providing a distinct break in the landscape and dividing the area into northern lowland and southern upland sections (Tovell, 1992). Along the eastern boundary of the property, the escarpment forms a continuous dramatic 25-meter rock wall above a generally flat plain which slopes gently to the north. This plain is deeply cut by numerous ravines and bordered by old river valley ridges which slope sharply down to the present riverbed (Tovell, 1992).

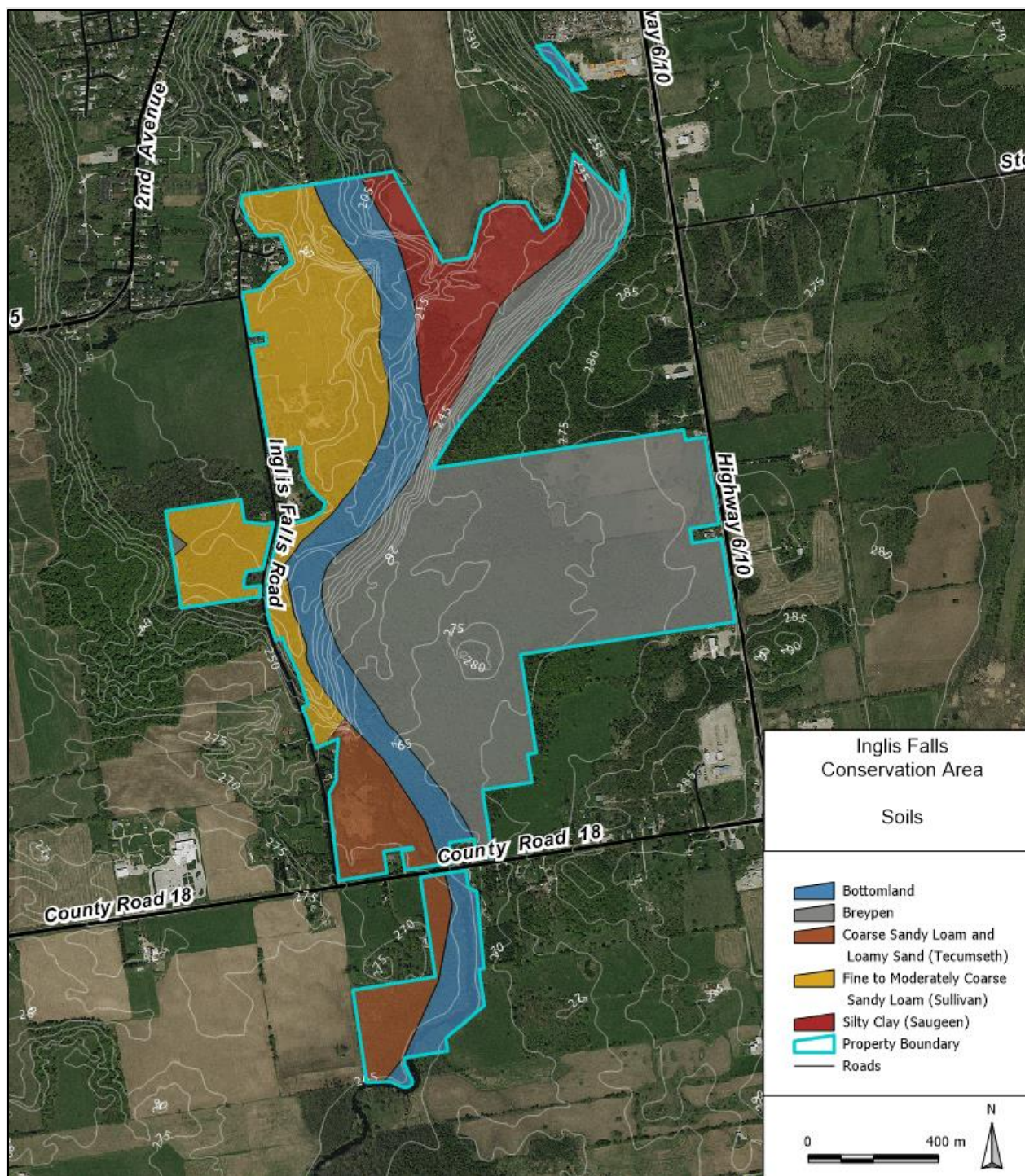
Soils are another complex element of this site. The nature of underlying bedrock, the impact of glacial and post-glacial activities, erosion and the influence of topography are the prime factors in the formation of the soil types found on the site. These soils are derived from three general origins, sandy outwash, lacustrine silt or thin limestone till. As a result, a major part of the area is either erosion prone or has shallow soils (Chapman and Putnam, 1984). A map of the various soil types is shown in Map 5.





Map 5 Surficial Geology of Inglis Falls Conservation Area





Map 6 Soil types at Inglis Falls Conservation Area

### 5.3 The Sydenham River

The Sydenham River system is the major surface drainage system running through the conservation area. The focal point of the property is the 20-meter waterfall where the river cascades over the face of the Niagara Escarpment. This waterfall acts as a natural barrier to

spawning Rainbow Trout and Chinook Salmon. At approximately 32 km in length with a 206 sq km drainage basin, the Sydenham is a major river in this area of Ontario. From Inglis Falls to Harrison Park the river is swift-flowing, dropping an average of 121.9 m/km over that distance. It has several tributaries which flow from springs issuing from the contact zone along the escarpment face or talus slope. The smaller tributaries provide surface drainage of the semi-level plateaus below the escarpment.

Unlike the upper reaches of the river which has meandered widely along its course, the river channel below the falls to Harrison Park is restricted by steep banks. In Harrison Park, the river levels out and meanders through, frequently flooding the nearby banks in spring. From the park to Georgian Bay, the river is again retained in well-defined banks within the City of Owen Sound. The river is seasonally managed for recreation at the Mill Dam in Owen Sound.

In the past, the river played a major role in the welfare of the people who settled its banks. It provided power for mills, drinking water for the City of Owen Sound, an important fish habitat, a recreational resource and unfortunately, several floods.

GSCA has one long term sampling site on the Sydenham River, which is part of the Provincial Water Quality Monitoring Network (PWQMN). The site is located on the south side of the bridge at Grey Road 18. Based on the results for Total Phosphorus, E.Coli and benthic macroinvertebrates, the water quality of the Sydenham River is classified as “Good” as determined using the protocols from the Conservation Ontario Watershed Report Cards. More water quality data is shown in Appendix A. For more information on the watershed report cards, please visit: <https://www.greysauble.on.ca/water-management/watershed-report-cards/>

## 5.4 Site Ecology

The IFCA is located in the Great Lakes St. Lawrence Forest Region of Ontario (Ecoregion 6E) and the Meaford Ecodistrict (6E/4) (Wester et al., 2018), an area containing a mixture of coniferous and deciduous species. The natural forest composition for the IFCA varies considerably because of the influence of the Niagara Escarpment, the presence of the Sydenham River and numerous poorly drained areas, and the wide variety of soil types (Hill, 1961). The forest species which naturally occur on the drier areas of the site are Red and White Pine, Eastern Hemlock, American Beech, White Ash, Sugar Maple, Trembling Aspen, and Butternut. On the wetter sites are found Balsam Fir, White Spruce, American Larch, Eastern Hemlock, Eastern White Cedar and Yellow Birch. Due to the long history of human disturbance such as logging and agriculture on this site, and the large number of previous owners, the forest cover age is variable. Within the mature hardwood stands above the escarpment where selective cutting had occurred in areas of rough terrain, there remains some old large maples and beech that are remnants of the original forest that once covered much of the area.

During a visit in 2007 Doug Larson from the Cliff Ecology Research Group at the University of Guelph, determined that some cedar trees on the escarpment face were estimated to be up to 800 years old. Various coniferous plantations exist within this conservation area, as well as a small stand of Black Walnut in the eastern portion of the property. There are a few old farm fields that have been planted with trees as well as some that are undergoing the natural establishment of native vegetation. These areas are important as they provide habitat and food sources for wildlife near the forest edge.

Forest interior is an important habitat for many species. This term refers to areas of forest that are large enough to accommodate habitat that is deep within a woodland. It is a sheltered



environment a distance of at least 100 m from the forest edge or open habitats (Environment Canada, 2013). IFCA has large significant tracts of forest that contain pockets of interior habitat. Through GSCA's watershed report cards, overall forest cover, interior forest and riparian forest are calculated. The results for the Sydenham River Subwatershed are below in Table 1.

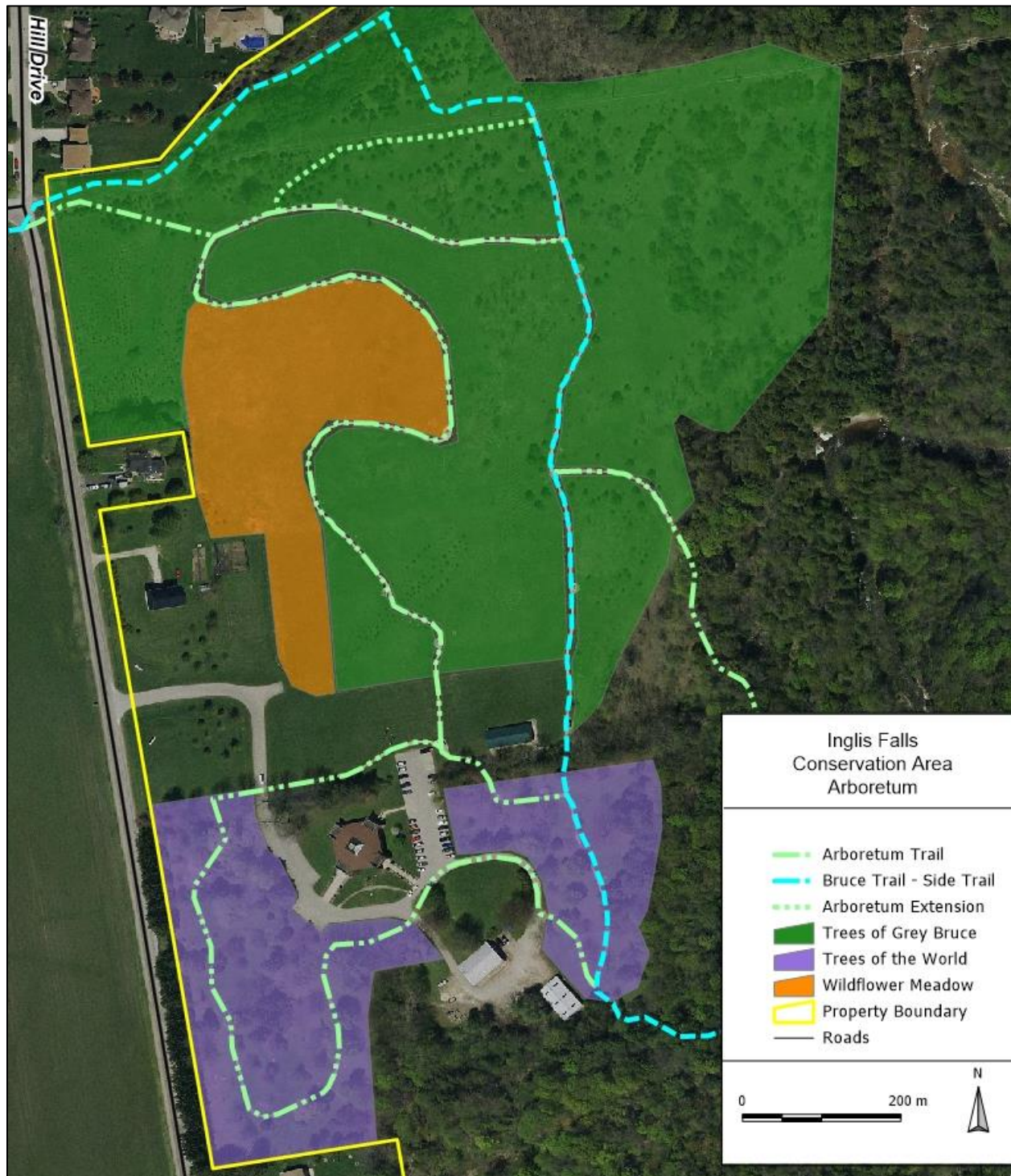
Table 1. Forest Cover for the Sydenham River Subwatershed

Indicators	Sydenham River			EC Guideline*	Indicator Description
	2003-2007	2008-2012	2013-2017		
% Forest Cover	39.96 A	42.52 A	41.2 A	30 B	Forest cover is the percentage of the watershed that is forested. Watersheds should contain at least 30% forest cover to sustain native flora and fauna (ECCC, 2013).
% Forest Interior	13.08 A	12.14 A	11.73 A	10 B	Forest interior is the remaining portion of a woodlot when a 100-metre buffer is removed. Forest interior provides native species with undisturbed habitat.
% Riparian Zone Forested	54.09 B	53.26 B	51.48 B	50 B	Percent riparian zone forested is a measure of the amount of forest cover within a 30 m riparian/buffer zone adjacent to all open watercourses. Riparian zones protect water quality and provide important ecological services, habitat and movement corridors for wildlife.

IFCA in conjunction with Harrison Park provides a continuous strip of green space along about 8 km of the Sydenham River. The vegetation in this zone is influenced by fluctuations in the water levels and the nature of this vegetation will in turn influence the aquatic ecosystem of the river. Understory, shrubs and herbaceous plants also play an important role. Some herbaceous plants include White and Red Trillium, Jack-in-the-Pulpit, Trout Lily and numerous ferns including rarer or unique species such as Hart's Tongue Fern, Walking Fern, Northern Holly Fern, Green Spleenwort which are located on erratics and along the escarpment brow.

The Authority Arboretum, as shown in Map 6, is the most interesting and unique forest cover type on the site. The southern portion was purchased in 1961-1962 and the intention was to set up a complete representation of trees native to Ontario but by 1963, it was decided to plant exotic as well as native species as they would offer more interest for the public. Despite the existence of many interesting species, the original plantings were done in an unorganized fashion and no patterns were followed, thus it is difficult to conduct a sequential tour through the "Trees of the World" portion of the Arboretum. The northern area of the Arboretum ("Trees of Grey Bruce") does allow for a sequential tour with some plantings of trees and shrubs, open grassland meadow areas and a recently created wildflower meadow. This habitat is favourable

to many insects, reptile, small mammal and bird species.



Map 7 Inglis Falls Arboretum

IFCA provides important habitats for several fish and wildlife species. Of note is the Sydenham River and its tributaries which constitute one of the best cold-water habitats for several species

of trout in Southern Ontario, including the native Brook Trout. The Sydenham River contributes a substantial proportion of the total sport fish production of Rainbow Trout and Chinook Salmon in Owen Sound Bay (Dodge, 1972). The main reason for the importance of the Sydenham River for trout production is the existence of cold fast flowing water, gravel stream beds and well-established streambank vegetation needed to maintain cold temperatures.

Waterfowl are attracted to the pond and marsh above the falls. It is an interesting wetland area that has the potential to support a host of reptiles, amphibians, insects and birds and generally at least one family of Canada Geese. Aquatic plants found there include pond weeds, eel grass, duck weed, cattails and water lilies. Within some areas in between the river and the hardwood stands on top of the escarpment there were several vernal pools observed that would likely support amphibian breeding habitat. Some of these pools appear to persist into early summer and provide habitat for woodland frogs such as the Wood Frog and Spring Peeper and possibly Mole Salamanders.

The property also provides important habitats for a variety of birds which are particularly notable and abundant. During the spring of 2019, Breeding Bird Surveys were conducted in the Arboretum and in the lowlands of Inglis Falls on June 2, and in the upland forests on top of the Niagara Escarpment of the Inglis Falls site on June 22. The results of these surveys can be found in Appendix B.

Full scale wildlife inventories have not been conducted at this time. Incidental observations of other species of birds, mammals, reptiles and amphibians, as well as some insects that were encountered during the vegetation confirmation species surveys have been tabulated and are available upon request. All of the surveys conducted up to this point occurred during daylight hours.

#### *5.4.1 Ecological Lands Classification (ELC)*

Ecological Land Classification (ELC) is a system which enables the classification of vegetation systems throughout southern Ontario. ELC is used to identify recurring ecological patterns on the landscape to reduce complex natural variation to a reasonable number of meaningful ecosystem units. It is a useful tool for landscape planning and sustainable management of natural resources. In 2019, ELC polygons were mapped for the IFCA, and confirmation surveys were conducted throughout a large portion of the property. ELC mapping is shown in Map 7 with a description of the codes in Appendix C.

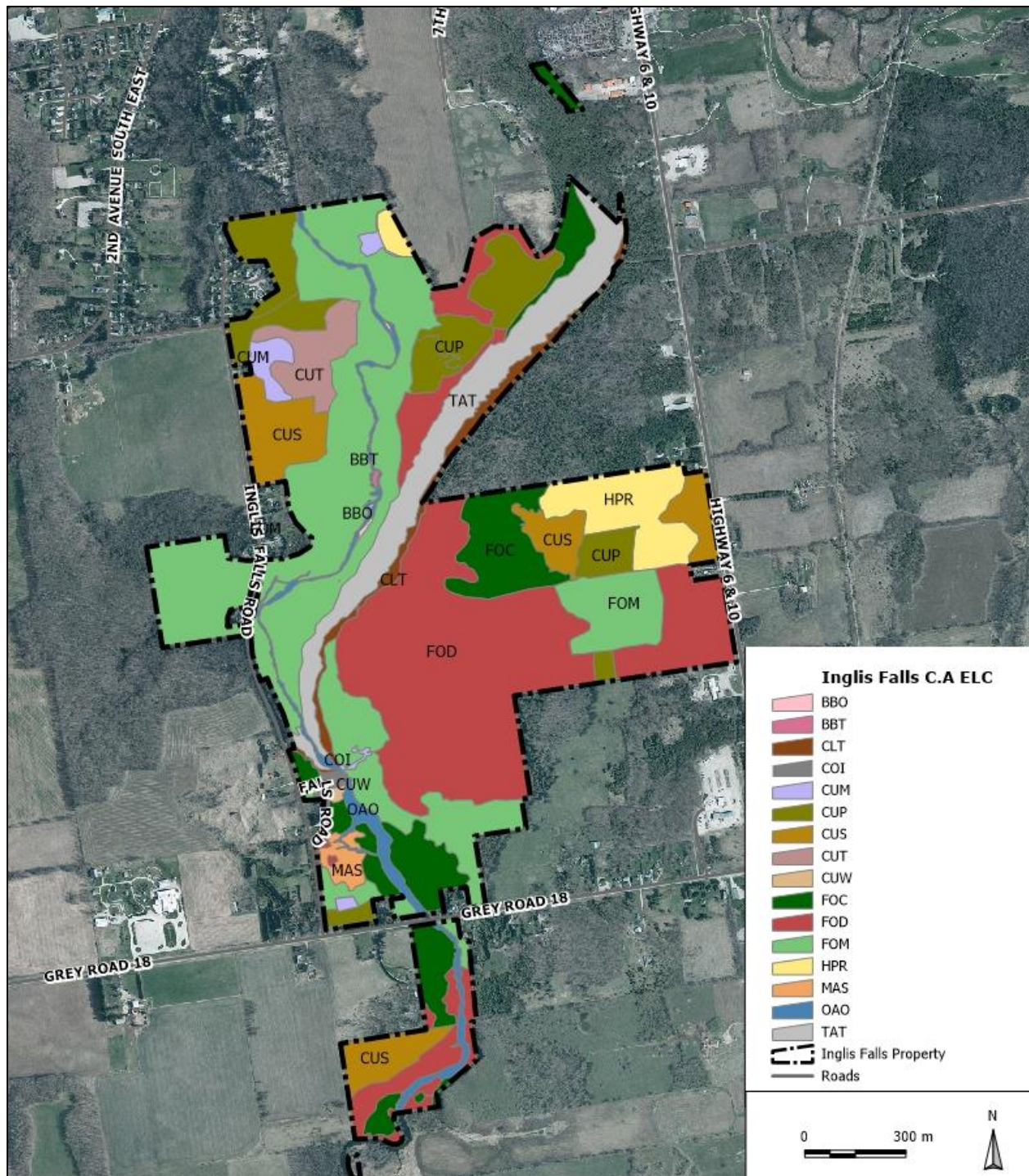
Based on the results from the ELC surveys, there are 16 different ELC communities on this property. The most common vegetation type is Mixed Forest (FOM), totaling 59 hectares, or 28.4% of the property, followed by Deciduous Forest making up 55.8 hectares of the site, or 26.8%. A full list of communities and percent cover is shown in Table 2. A more detailed breakdown of ecosites and vegetation type can be found in Appendix E.

Table 2. ELC Communities at IFCA

ELC Code	Community	Total Hectares	Percentage of Total Area
BBO	Open Beach / Bar	0.10	0.05
BBT	Treed Beach / Bar	0.08	0.04
CLT	Treed Cliff	3.5	1.7

COI	Access Roads and Road Allowances, Parking Lot	0.7	0.3
CUM	Cultural Meadow	2.3	1.1
CUP	Cultural Plantation	17.4	8.4
CUS	Cultural Savannah	13.9	6.7
CUT	Mineral Cultural Thicket	4.8	2.3
CUW	Cultural Woodland	0.2	0.09
FOC	Fresh - Moist White Cedar Coniferous Forest	19.5	9.4
FOD	Deciduous Forest	55.8	26.8
FOM	Mixed Forest	59	28.4
HPR	Agricultural Land	9.0	4.3
MAS	Fresh - Moist Lowland Deciduous Forest	1.3	0.6
OAD	Open Aquatic	5.5	2.6
TAT	Carbonate Treed Talus	14.9	7.2
Grand Total		207.98	100





Map 8 ELC Communities at IFCA

#### 5.4.2 Species at Risk (SAR) and Invasive Species

For the purposes of this report Species at Risk (SAR) are defined as those designated by Federal and Provincial legislation shown in Table 3. Rare species include species designated as provincially rare (S1-S3) by the Natural Heritage Information Centre (NHIC), or locally rare by

local Field Naturalists (i.e., Joe Johnson – MNR - Vascular Flora report 1990).

Table 3. SAR Categories

SARO & SARA Categories	Definitions of Categories
Special Concern (SC)	refers to the species living in the wild in Ontario, that may become threatened due to a combination of biological characteristics and identified threats.
Threatened (THR)	refers to the species living in the wild in Ontario but is likely to become endangered if steps are not taken to address factors threatening it.
Endangered (END)	refers to the species still living in the wild in Ontario, but it is facing imminent extirpation or extinction.
Extirpated	refers to the species having lived in the wild in Ontario at one time, but no longer does. However, it does exist somewhere else in the world.
Extinct	refers to a species that no longer exists anywhere on the earth.
Note: SARA has the same categories and descriptions, but it is a Federal Regulation that pertains to all of Canada.	

The most commonly encountered SAR plant in the IFCA is Hart's Tongue Fern which is listed on SARO and SARA as Special Concern. This fern typically grows only in limestone rich soils, on limestone boulders and in rock crevices, in shaded mixed hardwood forests. It can occur single individuals or exist in large populations, but only exists within a small geographic area, typically restricted to areas associated with the Niagara Escarpment.

The only Endangered plant species encountered was Butternut which are declining due to a disease known as Butternut Canker. Unfortunately, there were no canker free Butternuts observed on this site, and the remaining Butternuts appear to be in poor health. This unique area is also home to a provincially rare S2 lichen called *Punctelia appalachensis* which was discovered by a University of Guelph research group in 2017 (Lewis and Brinker, 2017).

A few SAR birds were observed within the site both within wooded areas and in fields with young plantations. All three of the species are listed as Special Concern on SARO registry, meaning that they are at risk of becoming threatened by a combination of identified threats.

The Species at Risk that were observed during the field surveys are presented below in Table 4.

Table 4. SAR at IFCA

Species at Risk located at Inglis Falls Conservation Area				
Common Name	Scientific Name	SARO Status	SARA Status	Taxa
American Hart's Tongue Fern	Asplenium scolopendrium	Special Concern	Special Concern	Plants
Butternut	Juglans cinerea	Endangered	Endangered	Plants
Eastern Wood Pewee	Contopus virens	Special Concern	Special Concern	Birds

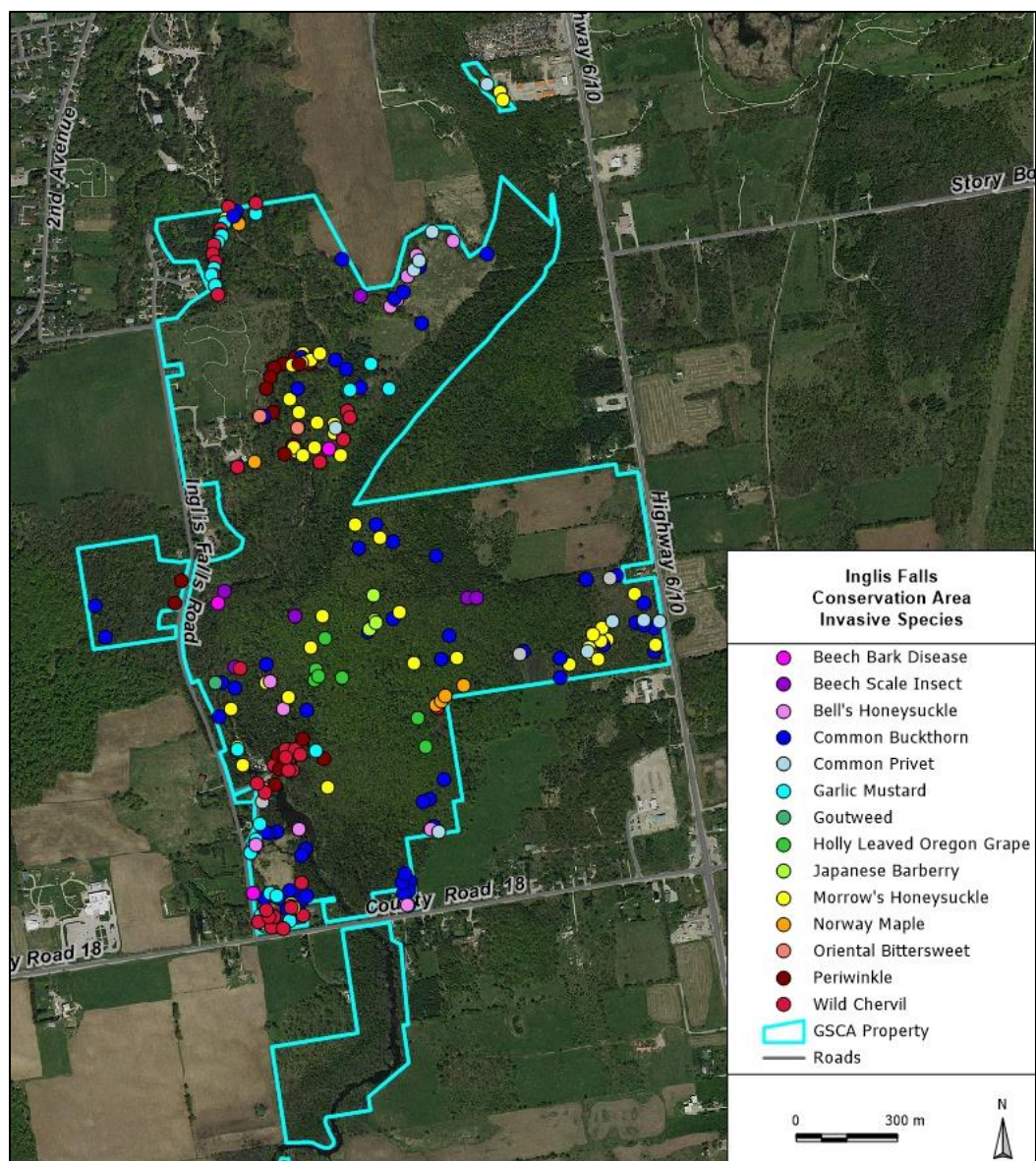


Golden Winged Warbler	Vermivora chrysoptera	Special Concern	Special Concern	Birds
Wood Thrush	Hylocichla mustelina	Special Concern	Threatened	Birds
Monarch	Danaus plexippus	Special Concern	Special Concern	Insect

Vegetation species confirmation surveys have been conducted over a large portion of the Inglis Falls Conservation Area in which numerous invasive species were mapped and tabulated. These are shown in Map 8 and Table 5.

Table 5. Invasive Species at IFCA

Invasive Species located at Inglis Falls Conservation Area			
Common Name	Scientific Name	Taxa	Average Pop Radius (m)
Beech Bark Disease	Nectria coccinea var, faginata	Fungi	1
Beech Scale Insect	Cryptococcus fagisuga	Insect	3
Bell's Honeysuckle	Lonicera x bella	Plants	5
Butternut Canker	Sirococcus clavigignenti-juglandacearum	Fungi	1
Common Buckthorn	Rhamnus cathartica	Plants	10
Common Privet	Ligustrum vulgare	Plants	5
Emerald Ash Borer	Agrilus planipennis	Insect	Ash trees
Garlic Mustard	Alliaria petiolate	Plants	10
Goutweed	Aegopodium podagraria	Plants	10
Holly Leaved Oregon Grape	Mahonia aquifolium	Plants	5
Japanese Barberry	Berberis thunbergii	Plants	5
Morrow's Honeysuckle	Lonicera morrowii	Plants	5
Norway Maple	Acer platanoides	Plants	10
Oriental Bittersweet	Celastrus orbiculatus	Plants	5
Periwinkle	Vinca minor	Plants	20
Wild Chervil	Anthriscus sylvestris	Plants	20
Yellow Archangel	Lamiastrum galeobdolon	Plants	10



Map 9 Invasive species at IFCA

## 6.0 Site Analysis: History

In 2021, GSCA contracted Toronto and Region Conservation Authority (TRCA) to produce a Cultural Heritage Background Report for Inglis Falls Conservation Area using existing resources. The full report provides background on Pre-Contact history from a broad perspective and detailed European settler history at the site. The full report can be found in Appendix F.

### 6.1 Pre-Contact

Although there are few records of culture and peoples in the Paleo and Archaic Periods, life along the Great Lakes region is documented as being nomadic, due to the lifestyle that comes with hunting and gathering (Gagné, 2015). Semi-permanent settlements along rivers and bodies of water began to become more frequent and grew as the climate and environment shifted

towards what the European's would find when they arrived in North America thousands of years later. As technology improved and the climate continued to become more hospitable and led to a slow transition towards the development of the primarily agricultural societies that arose in the Woodland period (Gagné, 2015).

The Woodland Period saw a change in tools, including the bow and arrow and development of pottery. Maize was introduced to Southern Ontario during this period, further promoting the shift from subsistence hunting and gathering to a more stationary agricultural way of living. This shift allowed for a massive population expansion and the development of permanent villages that consisted of large log houses (Gagné, 2015).

Hunting and fishing supplemented the agricultural heavy diet, with proximity to the fishing bounty of Lake Huron and Georgian Bay whitefish, trout and sturgeon were the primary fish harvested (McMillian & Yellowhorn, 2004). Fishing was conducted primarily by netting off the Fishing Islands in Lake Huron. With the arrival of European settlers in the 1600's, local Indigenous populations were met with many challenges, including disease, conflict (from Europeans as well as other First Nations) and a series of land claims made by the Government beginning in the 1800's (McMullen, 1997).

The prominent First Nations cultures of this period can be generally categorized into two broad linguistic/cultural groups the Anishinaabe, Algonquin-speaking, and Iroquois, Iroquoian-speaking, peoples. Both linguistic groups consist of communities and groups that exist within the larger linguistic context and have unique cultural practices, histories, and beliefs. The Great Lakes region north of Lake Simcoe, along Georgian Bay and the Bruce Peninsula and north into the Canadian Shield was populated primarily by the Anishinaabeg peoples. Anishinaabeg refers to the Ojibwe, Chippewa, Odawa, Potawatomi, Mississaugas, Salteaux, Nipissing, and Algonquin peoples. The region that encompasses Georgian Bluffs is the territory of the Ojibwe, who are known today as the Saugeen Ojibway Nation (SON) and are represented by the communities of the Chippewas of Saugeen First Nations and the Chippewas of Nawash Unceded First Nations.

## **6.2 The Mill**

The first European settler to this area was Nathaniel Herriman, who when he first settled on Lot 9, Concession 1 Derby in 1838, erected the first sawmill in the area. Other sawmills followed, namely the Peter Inglis sawmill beyond the bridge at Inglis Falls in 1845 and the Kennedy and Son sawmill built in the 1870's on the Sydenham River at Lot 11, Concession 1, which soon after was taken over by the Inglis family. It became known as Stark's sawmill after the name of the operator who lived nearby.

Inglis Falls Conservation Area takes its name from the pioneer family which settled around the falls and developed the early mill complex on this site which later grew to regional significance. Peter Inglis was a young Scottish millwright who travelled from his home in Cupar Fife, Scotland to the village of Sydenham. In 1845 he married Anne Carroll, a native of Ireland and they had 7 children. As he crossed the flats near Rockford, the sound of the rushing water attracted him west where he found the place of his dreams – Inglis Falls.





Figure 3 Inglis Falls Grist Mill, ca 1930s.

Established 1845—22 Years Before Confederation

# W. A. INGLIS & SONS

Manufacturers of and Dealers In Limited

## Welcome

### Old Boys- Old Girls

We hope that your visit to the old town for Old Home Week will be most delightful and that you will have the time of your life with the old gang.

“Five Lillies” Flour  
 “Lilly White” Flour  
 “King’s Taste” Pastry Flour  
 —also—  
 Bran, Shorts, Mill Feeds and Cereals

Mills at Inglis Falls

Retail Store—181 8th St. East—Owen Sound, Ont.  
 —PHONE 86—

July 1, 1927

Figure 4 A Flour Advertisement, 1927



Figure 5 Inglis Falls Gristmill and Sawmill, no date.

There was a flat rock surface for a mill foundation and a torrent of water for power. When Peter Inglis purchased the property in 1845, it had already been briefly owned by two other men (Mr. Elliot and Mr. Boyd) but Mr. Inglis was the first to register it with the Crown. He immediately built a flour mill at the brink of the falls powered by river water which was controlled and harnessed by a wooden dam, flume and water wheel. The flour mill grew and prospered, and the names “King’s Taste, Five Lily’s and Lily White” became well known. In 1862, the original flour mill was replaced with a new four storey structure that had capacity of 75 bags per 24 hours. Flour from the Inglis mill was sent overseas in WW1.

Peter Inglis also constructed a woollen mill around 1870 on the previous site of the first sawmill east of the falls. In 1881 the woollen mill was operated by Mr. Charles Woodhead and in 1883 Mr. John Benner took over operations. For the next 17 years blankets and wool products were made at the mill. In 1885 the woollen mill was destroyed by fire and rebuilt, with operations being turned over to Peter Inglis’ son, William A. Inglis. In 1901, Peter Inglis lay on his death bed and the woollen mill burned down a second time, which would be its last. He had remained interested in the mills until the time of his death in 1901.

When the dam was washed out by the floods in 1912, a new concrete dam and steel flume were installed. The 1912 flood also washed out the Stark’s sawmill downstream, which had closed in 1901. William ran the flour mill until his death in 1923. His sons Victor and Louis Inglis carried on the business until the mill site was purchased by the City of Owen Sound in 1932 to secure the water rights but the mill continued to be operated by the Inglis family until 1934 when it was sold to Emile and Adolph Henkel. The mill was operated until 1945 when it was completely

destroyed by a fire, which was considered suspicious, and the remainder of the property rights eventually sold to the Owen Sound Public Utilities Commission. When GSCA purchased the property around the falls in 1960, it tore down the remainder of the mill ruins which presented only an eyesore and a hazard. Mill stones mounted on the site are the only reminders of the once active industry.

The mills at Inglis Falls operated for 89 years under the Inglis family name, totalling three generations, which is an amazing record. The mills at Inglis Falls were a very important early industry in the new territory, established prior to the survey of the Township, meeting several staple needs of the residents.



Figure 6 Mill workers on the dam, no date.

### 6.3 Water History

Owen Sound had been generating a small amount of power by steam in the inner harbour when it first received power from the Sydenham River in 1890. Power was originally purchased from the privately owned Parker and Son Power Plant located 0.5 km downstream from the falls at Creamery Hill springs. The company was purchased by the City of Owen Sound in 1903 and the Sydenham River Plant continued to be used until 1915 when the power source was switched to Eugenia Falls plant and the Ontario Hydro system. Nothing visible remains on the Sydenham River.

### 6.4 The Filtration Plant

A river filtration system was built just south of Inglis Falls, which still exists as a decommissioned site on the property today. Originally called the Rockford Water Filters, the construction began in 1910 and was completed by 1912. The filters served the area of Owen Sound from 1912 until they were decommissioned in 1969. The City of Owen Sound took water from the Sydenham River above Inglis Falls and filtered it before sending it to Owen Sound. These filters provided 9,463,500 litres (2,500,000 gallons) of water per day to the homes and factories in Owen Sound. The whole system was based on gravity. The construction consisted of:

- a water works dam built south of Grey Road 18
- a 61-centimetre (24 inch) concrete aqueduct feed to the filter
- the Rockford filters
- 9.6 kilometres (6 miles) of 30-centimetre (12 inch) pipe from the filters down Inglis Falls Road to the chlorination plant at Suburban Road 5 (Grey Road 5) where it was treated along with spring water from Creamery Hill and other springs located along the escarpment on Lot 11 Concession 2 and then pumped to a 18,927,000 litre (5,000,000 gallon) reservoir in Owen Sound.

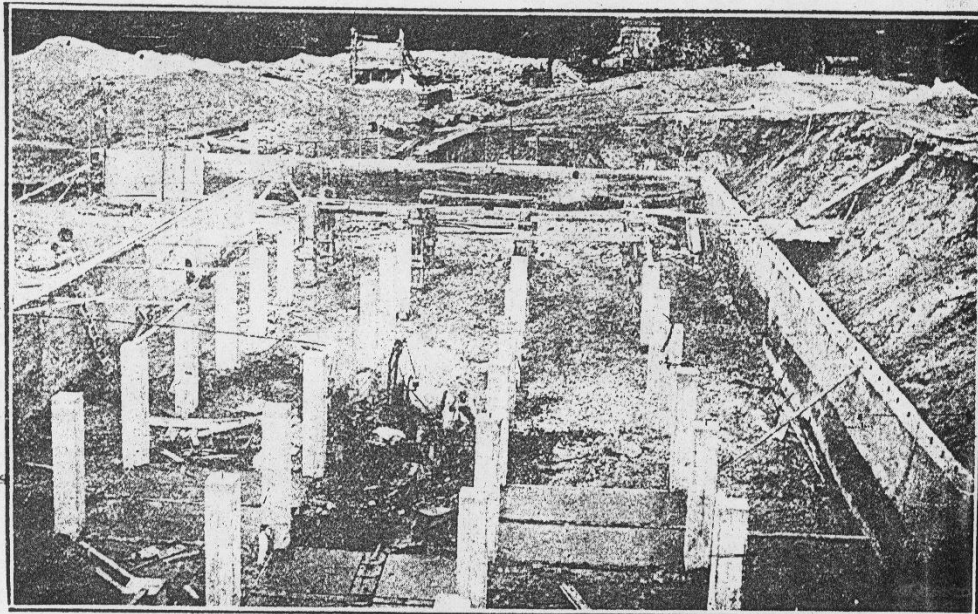


Figure 7. Inside the Filtration Plant at present



OWEN SOUND, ONTARIO, TUESDAY, JULY 5th, 1910.

Filtration Beds at Inglis Falls for Owen Sound's New \$125,000 Water Works System



Photograph showing general construction of filtration plant, taken from the west side. The wall and piers are ready for the roof, which will be started at once.

Figure 8. Article from the Owen Sound Sun Times, July 5, 1910

Owen Sound Sun Times, July 5th, 1910 - the walls of the filter bed are finished except the north side, which has been left open for the sake of more convenient handling of material. All supporting pillars are finished. The valve chamber and concrete floor will be poured next. The reservoir excavation has been completed and concrete work is underway. The concrete roof of the filter beds will be started soon. It is estimated that the filtration beds and reservoir will be completed in fifty days.

Owen Sound Sun Times, Friday, July 15, 1910 - two men died as they were unable to avoid a section of concrete roofing. The concrete was not properly set and as soon as the supports were removed, a mass weighing between 3 and 4 tons crashed down on the men below. Two other workers were injured. Walter Cameron, of Owen Sound, lost a limb and Louis Looby, of Dublin, had his foot and ankle badly crushed.

Over 400 men were involved in mixing concrete for the filters and reservoir, digging and covering the pipes. A man's work for the day was to dig, help lay, and backfill one 3.6-meter (12 foot) length of pipe. The filtration plant was closed in 1969 when the city built a new plant on the bay designed to use lake water.

Today, the filtration plant sits idle. No water is flowing through the filter-beds. The control house sits quietly between the front of the two caverns. The entrance to the caverns is locked and bars have been placed on the structure to prevent vandalism.





Figure 9. The outside of the Filtration Plant at present

## 6.5 The Grounds

In 1951 Peter, Ann and their three children lived in a one storey frame house on the east side of the mill (Figure 10). In 1952 with business thriving, they built and moved into the 2-storey house shown in Figure 11, and the small frame house was used to house mill workers. Beginning in the 1930's, the Victor Inglis family operated a tourist home from the stone home, which accommodated six to eight guests at a time.

In 1923, Victor Inglis married Hazel Craig and they built the red brick house shown below in Figure 12. This house was demolished by GSCA in 2010. The two-storey home built by Peter Inglis still exists today and is a private residence on Inglis Falls Road.





Figure 10. The original Inglis Family house, demolished in 2010 by GSCA due to vandalism



Figure 11. The two-storey Inglis Family home, which still stands today along Inglis Falls Road.



Figure 12. Victor and Hazel Inglis family house, which is no longer standing.

Another historic feature of note on the property is the site of a tree nursery and log cabin replica developed by the Owen Sound Water Department around 1932. The log cabin and nursery were developed as a public resource and for tree stock by that agency, but they have not been maintained. Just east of the nursery is a small black walnut plantation planted by the Water Department in 1937 to celebrate the coronation of King George the 6th.

According to historical maps, there was a tavern located at the northeastern corner of Grey 18 (formerly the Saugeen Road) and Inglis Falls Road.

## 6.6 The Arboretum

In 1961 and 1962, the land where the existing Arboretum is located was purchased by the North Grey Region Conservation Authority to protect part of the scenic Sydenham River Valley. This site, with its flat tableland topography was recognized as an ideal location for an arboretum because of its deep, rich soils and its close proximity to the City of Owen Sound.

When site prep began in 1963, the arboretum was being considered as a possible location for the Grey County Museum. Planting began in 1964 with a shelter bed of Austrian Pine and Norway Spruce surrounding the site, being added in 1965 to protect the more sensitive Carolinian species planned for the site. Planting was conducted piecemeal. Detailed records of the species planted at this time were not kept or do not remain.

In 1973 the site was selected for the new Conservation Authority Administration Centre, which was complete in 1977. The two maintenance buildings were built in 1977 (northwest shed) and



1981 (southeast shed). The property immediately north of the Administration Centre (North Part Lot 12, Concession 1, Derby) was purchased by the Conservation Authority in April 1998. This acquisition added 21.5 acres to the Inglis Falls Conservation Area and created the opportunity to expand the Arboretum.

A design plan for the Arboretum completed in 2001 by Northwood Associates Landscape Architects Ltd. Many of the recommendations in this plan were followed, including the picnic pavilion, new driveway, interpretive signs and plantings. However, there were several projects that did not get completed, possibly due to different directions at the property during that time, budget constraints or staff shortages.

## **7.0 Site Analysis: Visitor Numbers, Engagement and Feedback**

Inglis Falls Conservation Area is a very unique property, drawing several different types of users and visitors. The Arboretum section at the north of the property offers more passive recreation with its even ground and opportunity to view various memorial plaques and educational signage. The extensive trail network with various levels of difficulty as well as its link with Harrison Park to the north, as well as the Bruce Trail make this an appealing option for locals and out-of-towners alike. The main attraction to the site is of course, the falls itself. This is a very accessible waterfall to visit as it is located right off the parking area. The historic and ecological draws offer something for everyone at this property.

A full overview of visitor numbers and feedback can be found in Appendix G.

### **7.1 Visitor Numbers**

Information on the number of visitors has been collected by gatehouse staff from May-October since 2004 (with a gap from 2007-2010). During this timeframe, there were approximately 15,000-35,000 visitors per year. In 2019, trail and car counters were installed throughout the property. This data provides an estimate of 85,158 visitors to Inglis Falls in 2019, however this number is likely underestimated.

Car counter data from 2021 and 2022 indicate 121,618 and 154,955 visitors respectively, so yearly visitation is now what is occurring monthly.

### **7.2 Public Open House and Draft Plan Feedback**

Throughout the management plan process, there have been many opportunities for the general public, partners and neighbouring landowners to be involved, including:

- Initial mailout to neighbours within 2 km
- Several social media posts
- Public survey made available on GSCA's website from 2018-2021 (Section 7.3). In total, 21 people responded to the survey. All of the postal codes provided started with N4K, N0H, N0G, or N4L (local). 11 of the participants were ages 45-64, 8 were ages 65-74 and 1 was 25-34. 11 were female, 6 were male. This information was voluntary.
- Meetings with partners and stakeholders, including walking groups, Bruce Trail Conservancy - Sydenham Club, Sydenham Sportsman Association, At Last Forest School and Inglis Falls Arboretum Alliance

- Meetings with neighbours.
- The ability to subscribe to a mailing list to receive updates. 20 people signed up.
- A postcard mailout to neighbours within 2 km regarding the Inglis Falls Management Plan Open House.
- Inglis Falls Management Plan Open House held virtually on May 3<sup>rd</sup>, 2022, from 6:30-8pm. Seven people participated which was comprised of neighbours and Owen Sound residents.
- Draft plan and supporting documents posted on GSCA's Inglis Falls Management Plan site for comment.
- A more focused survey sent to the subscription list, advisory committee and open house attendees (see Appendix G).

### 7.3 Survey Results and Stakeholder Feedback

Participants were asked about the current state of the Conservation Area on a scale of 1-5 with 1 being "poor" and 5 being "excellent". The overall state and quality of trails were rated as "good". Most people selected "not very good" for the quality of signage throughout the property, which could include interpretive signage and/or wayfinding signs. When asked about parking, the majority of people selected "acceptable/ok" for the availability of parking spaces as well as the cost of parking. It is important to note that many of these responses were from the Thursday morning walking group, who park at the Administration Centre where there is no charge and availability of spaces is higher than if it were a weekend at the top of Inglis Falls.

It appears that survey participants are not interested in a staff presence at Inglis Falls Conservation Area, as they rated access to friendly staff and weekend programming as "very unimportant". The categories of accessibility and access to picnic tables and benches were ones that people had very mixed opinions on. Written materials and self-serve experiences such as clear information about rules and safety, visitor guides/maps and interpretive signage were scored primarily as "very important" to the survey participants. Well-kept roads scored as "somewhat important" and access to clean washrooms received mixed reviews as the top two responses were "not important" (6) and "very important" (8).

This feedback is useful, but there was bias in survey participants and also a lack of participation, with only 21 survey responses. Amenities that are not as important to locals may be extremely important to visitors that travelled a distance to come, for example washrooms, accessibility, and access to staff, whether through programming or general information.

## 8.0 Management Classification and Zones

Property classification and zoning ensure that development and recreational activities are focused at properties and in areas that are most suited for a particular use.

### 8.1 Classification

Parks and open spaces in NEPOSS are assigned a classification based on the predominant characteristics of the property which provides planning and management direction. There are six classification types: Nature Reserve, Natural Environment, Recreation, Cultural Heritage, Escarpment Access and Resource Management Areas.

Inglis Falls Conservation Area is a Nodal Park under NEPOSS, providing a unique escarpment and historical experience to visitors over the years. Inglis Falls is classed as a Natural Environment property as per Appendix 1 of the NEP. Natural Environment lands are characterized by the variety and combination of outstanding natural heritage features, cultural heritage features and outstanding landscape. Activities in these areas are low impact and development is targeted and minimal.

One of the main low impact activities that Inglis Falls Conservation Area offers is hiking through a vast trail network, which plays an important role as a greenspace provider where people can feel close to nature and develop a deep sense of appreciation for our natural spaces.

## 8.2 Zoning

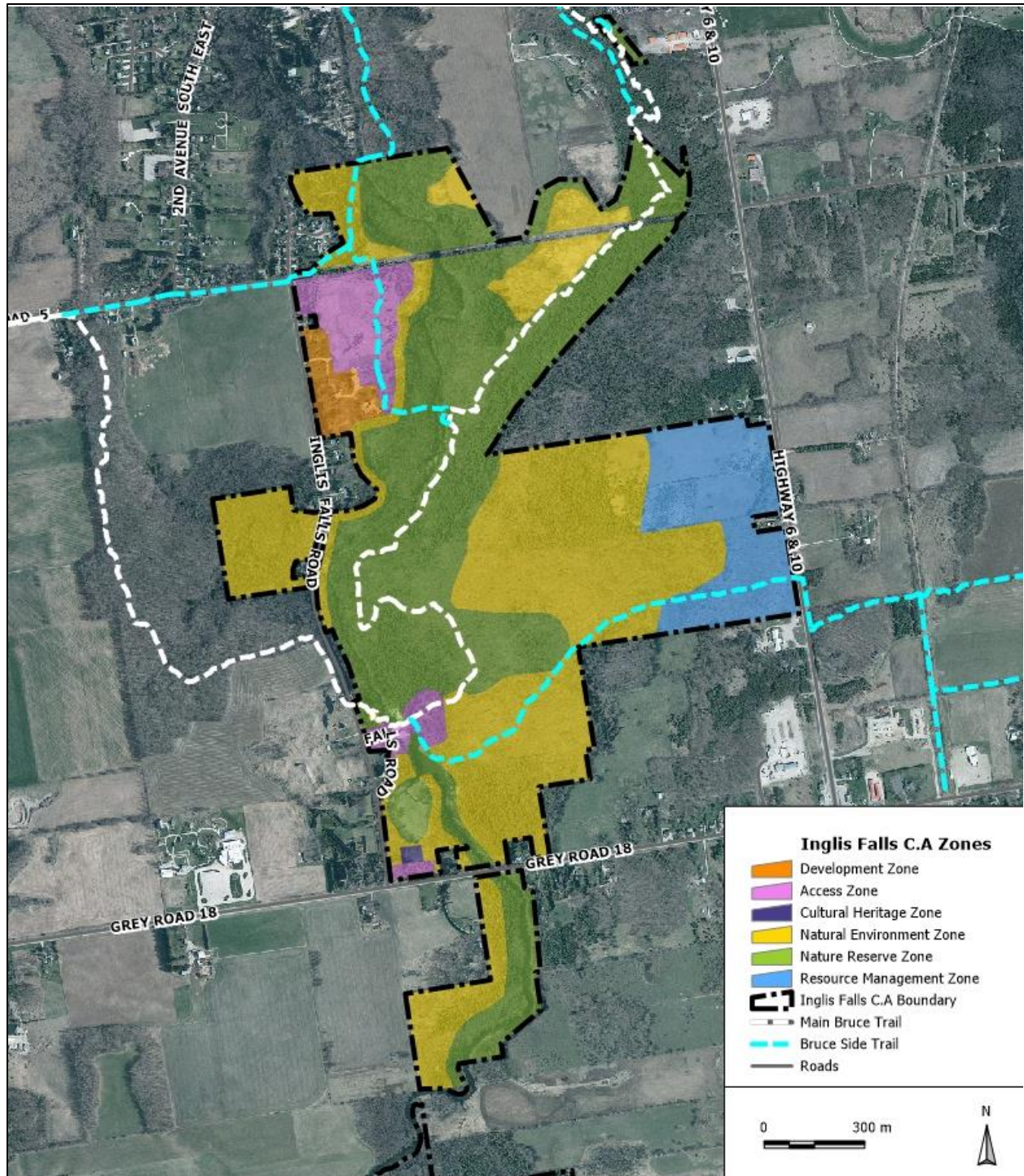
Zoning focuses on development programming and restoration activities in appropriate areas. Each zone represents an area that has distinct management needs based on the existing natural heritage features, existing cultural heritage features, visitor needs and access, suitability for sustainable development and opportunities for recreation. These zones are confirmed by the Ministry of Natural Resources and Forestry and Niagara Escarpment Commission as per the NEP and include Nature Reserve, Natural Environment, Cultural Heritage, Development, Access, and Resource Management. This plan proposes IFCA be broken up into six zones, as shown in Table 6 and Map 10.

Table 6. Zone Descriptions and Functions in the Inglis Falls Conservation Area

Zone Type	Total Size Hectares (%)	Function	Summary of Permitted Uses
<b>Nature Reserve</b>	84.94 (40.26%)	Includes the most sensitive natural heritage features and areas that require careful management to ensure long-term protection.	Management activities may include protection and restoration-based activities. Visitor uses are limited or restricted. Development is generally restricted to trails, necessary signs, interpretive facilities (where warranted), temporary research facilities and conservation practices.
<b>Natural Environment</b>	89.7 (42.51%)	Functions as a buffer between Development/Historical Zones and Nature Reserve Zones. These include aesthetic landscapes.	A minimum level of development is permitted to support low- to moderate-intensity recreational activities. At Inglis Falls Conservation Area this includes trails, necessary signs and minimal interpretive facilities.
<b>Cultural Heritage</b>	0.31 (0.15%)	Cultural Zones include significant archaeological or cultural heritage features or areas that require management that will ensure long-term conservation.	Management activities may include the protection, restoration and interpretation of the Filtration Plant.

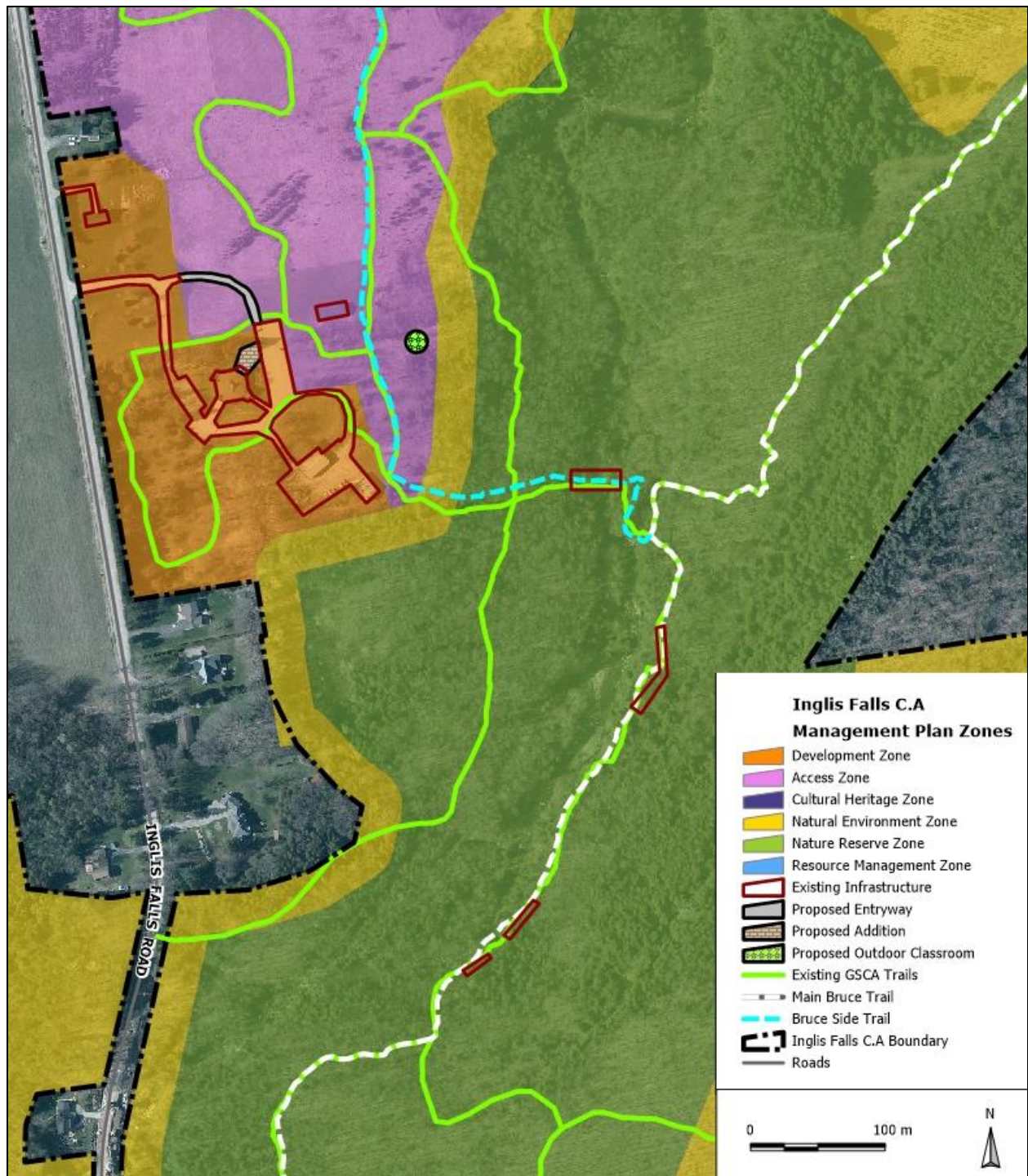


<b>Access</b>	12.19 (5.78%)	Areas designated to provide access, orientation, recreational or operational facilities (e.g., trailheads, visitor washrooms, parking lots. Etc.)	At Inglis Falls Conservation Area, this is limited to driveways and parking areas, as well as buildings that provide administrative services, visitor amenities and operational facilities.
<b>Development</b>	4.10 (2%)	Development Zones provide access, orientation and operational facilities (eg. Visitor centres, maintenance buildings, parking lots Etc.)	Development at Inglis Falls Conservation Area is existing and consist of the administration and maintenance buildings, parking lot and the barn.
<b>Resource Management</b>	19.76 (9.36%)	Resource Management Zones are sustainably managed for many diverse values. This zone should demonstrate exemplary conservation and stewardship.	This type of zone includes land that has been traditionally managed under long-term resource agreements, which includes an agricultural lease and a section of managed forest.



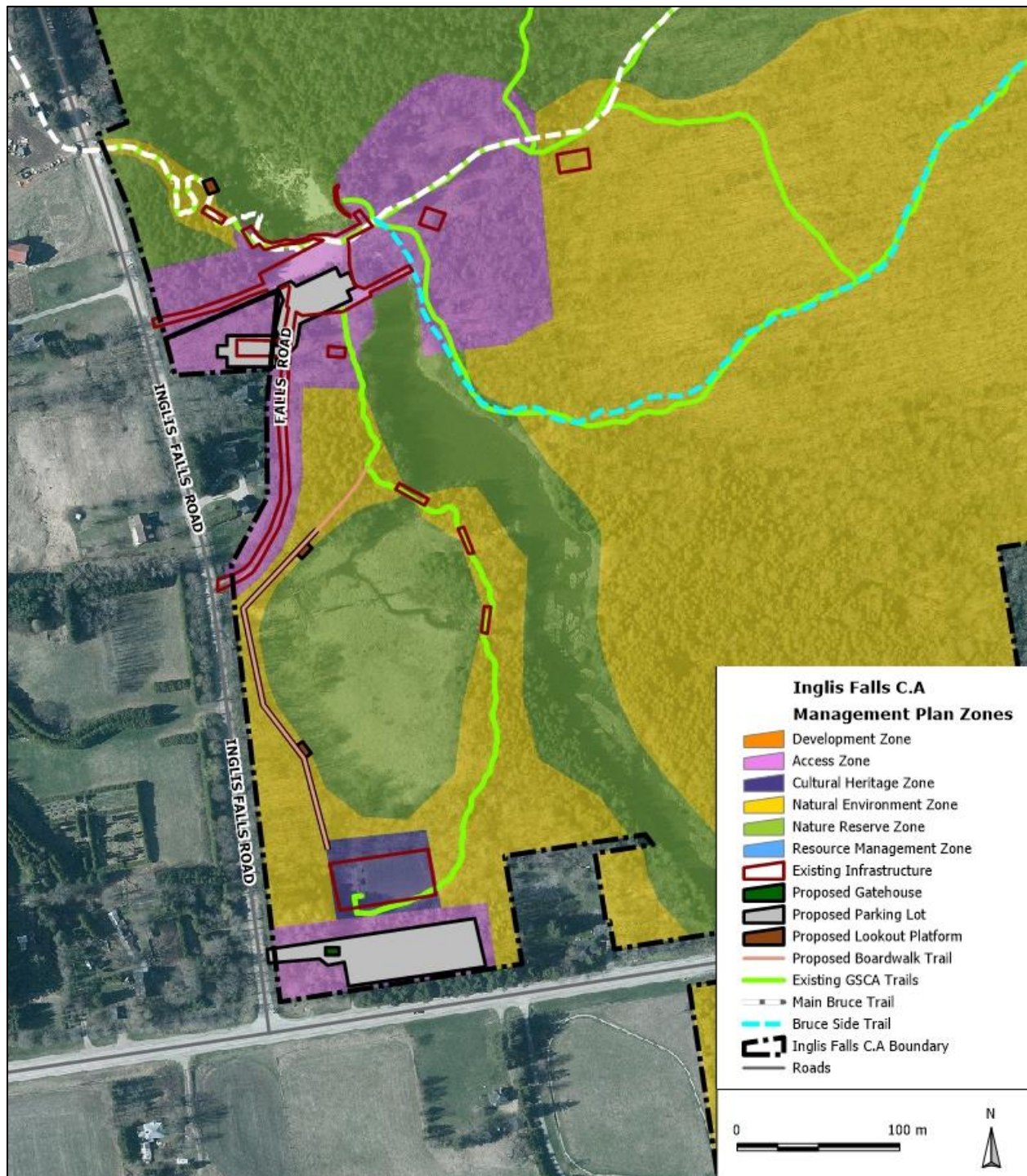
Map 10. Management Zones within IFCA (2023)





Map 11. Access/Development Zone Zoom on Arboretum Section



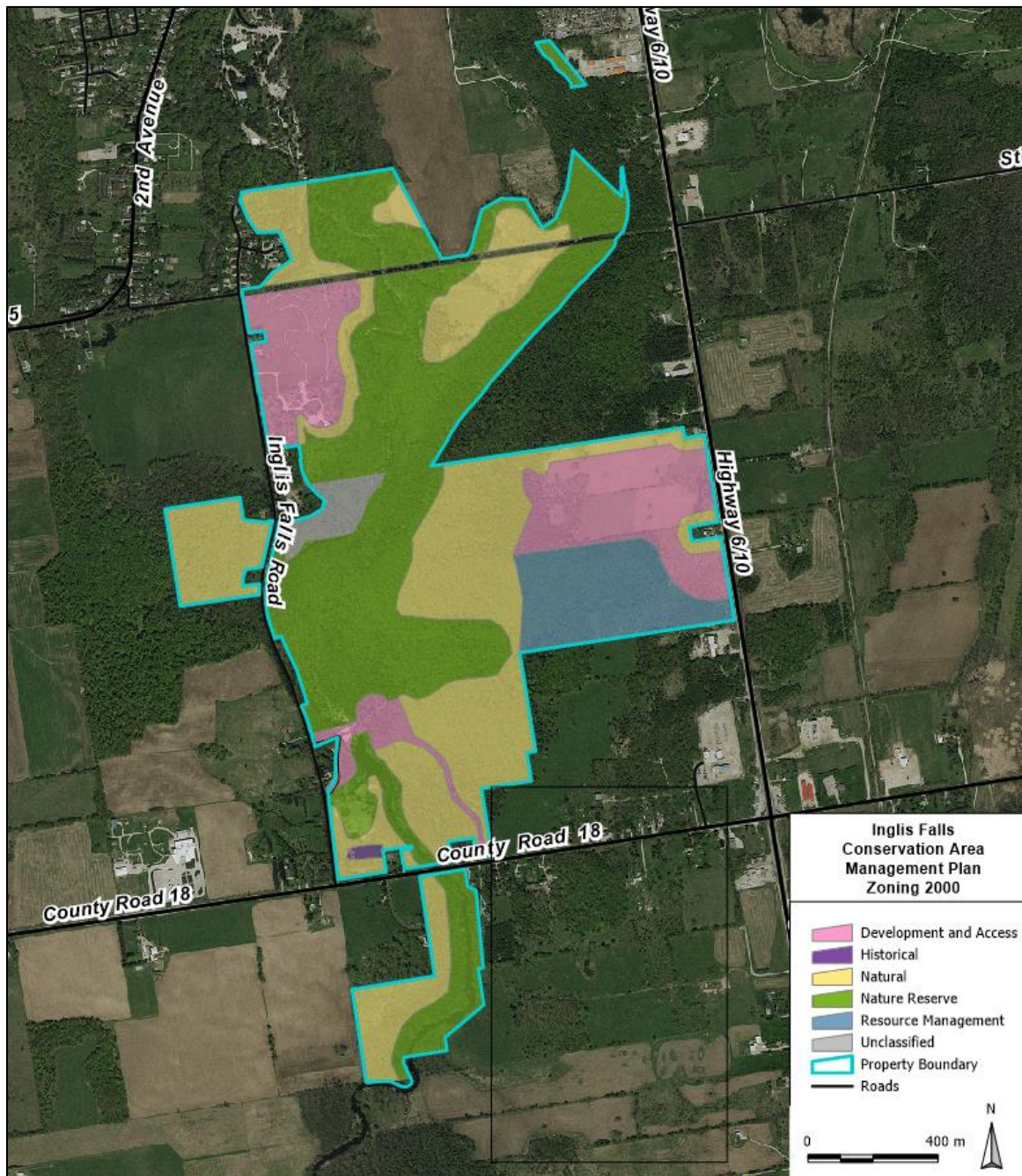


Map 12. Access/Development Zone Zoom on top of Inglis Falls

In the 2000 Master Plan, the zones that were proposed slightly differ from this current plan and can be reviewed in Map 13. The main difference is in the Development and Access Zones (pink) as shown at the east side of the property off Highway 6/10, and the line coming in off Grey Road 18. During this time, there was an exciting project underway called the Ecology Centre Ontario, which was going to be an interpretive centre located off Highway 6/10 focused on interpreting, exhibiting, exploring and celebrating the Niagara Escarpment. Additionally, there was a



proposed parking expansion off Grey Road 18 with a long driveway in. Due to the location of the ANSI, and traffic concerns from the Ministry of Transportation and Grey County Transportation, both projects did not proceed.



Map 13 Management Zones from the 2000 Master Plan

## 9.0 Future Direction

The plan directions describe the specific projects, such as a piece of capital infrastructure, programming or decisions or policy approaches that together will achieve the vision, commitments, and objectives for Inglis Falls Conservation Area. The development of the directions was guided by past management plans, ecological inventories, the zoning framework and the broader objectives of GSCA, the NEPOSS and regional partners, and informed through public, stakeholder, partner and agency consultation.

Based on this input, there are five proposed Action Areas:

1. Conserve and Protect
2. Improve the Visitor Experience
3. Enhance and Celebrate Cultural Heritage
4. Foster Partnerships and Expand Education
5. Operations/Risk Management

### 9.1 Action 1: Conserve and Protect

As mentioned in Section 5.0, there are many sensitive features and species at Inglis Falls Conservation Area that need to be protected. The main threats to these features and surrounding ecology are increasing visitor use and invasive species.

Table 8 indicates the various deliverables and timelines within this Action. Goal A within Action 1 is to address the invasive species issue at the property through inventory, controlling where possible and monitoring future threats. As mentioned in Section 5.4.2, Hart's Tongue Fern is a Species at Risk on the property, so invasive species monitoring, and control is important for protecting the habitat this species needs to survive. In 2022, GSCA developed an internal Invasive Species Strategy to help target efforts with minimal capacity and funding which is attached in Appendix H. Of the invasive species listed in section 5.4.2, Common Buckthorn, Wild Chervil and Garlic Mustard are the most concerning. However, it is important to note that Periwinkle is also dominating cedar forest understory, which was likely introduced by the Inglis family as this was a common plant that made its way over from Europe at the time of settlement.

It is not feasible to manage all invasive species. Species will be prioritized for control following the prioritization outlined in GSCA's Invasive Species Strategy, which is summarized in Table 7 below. Based on the priority level species indicated from Table 7 and the species identified in Section 5.4.2, Map 8, initial control efforts will solely focus on Wild Chervil, given that there is not presently Wild Parsnip, Giant Hogweed or Phragmites on the site. Should staffing and funding change in the future, more species will be added for control.

Table 7. Invasive Species Strategy species priority level from the GSCA Invasive Species Strategy (Appendix H)

Priority Level	Management Trigger	Example	Action
Top priority	- Species known to cause bodily harm - Species listed on	- Giant hogweed - Wild parsnip - Wild chervil - Phragmites	- Begin control measures as soon as possible. Close the area, if necessary,



	Ontario Noxious Weeds List* - Species directly affecting GSCA recreational areas		and place signs informing the public
Medium priority	- Species known to reproduce and spread quickly - Small isolated/satellite population - Newly established/detected population - Rapidly expanding population	- Garlic mustard - Dog-strangling vine - Buckthorn - Non-native honeysuckle sp.	- Develop a management plan. - If budget and staffing resources are available, initiate management plan.
Low priority	- Species known to spread slowly - Species that do not cause physical harm to visitors - Species with no known control tools/techniques	- Periwinkle	- Monitor population. - If population grows, affects species-at-risk, or poses safety risk initiate control measures.

There are a number of sensitive features, including glacial formations, the escarpment cliff, ancient cedars and Species at Risk. Goal B will focus on re-evaluating these locations to determine their current state and potential for future damage. With over 100,000 visitors a year at this property, there are already select areas that are experiencing ecological damage due to trampling of understory vegetation. These hotspots are approximately a 20 m radius around the falls, including the cedar forest on the east side of the falls near the mill building and the cedar forest on the west side of the falls in between Inglis Falls Road and the falls.

Visitor management will be improved in these areas by adding trail edging/guides in the form of wood planks, or railings (Figure 13 and 14) to promote one consistent trail. The viewing area to the east of the falls will be enclosed with railings to formalize this solely as a viewing area (See example from Hamilton Conservation Authority in Figure 15). Any areas outside of the designated trails and viewing areas will have new signage installed stating, "Area Closed for Regeneration". This has proved to be a successful message at other park property and areas of the Bruce Trail.



Figure 13. Trail edging example

Retrieved online from:

<http://www.craterlakeinstitute.com/index-of-images/historic-photos/current-photos-by-park-staff/misc-trail-photos-by-jennifer-gifford-crla-trails-supervisor/>



Figure 14. Rope trail railing example

Retrieved online from: <http://www.wanderingpa.com/2017/08/the-erie-national-wildlife-refuge.html>





Figure 15. Viewing platform example

Retrieved online from: [https://www.hikewnc.info/gallery/andy-cove-nature-trail/2016-12-28\\_pisgah-davidson-river\\_andy-cove-nature-trail-observation-deck](https://www.hikewnc.info/gallery/andy-cove-nature-trail/2016-12-28_pisgah-davidson-river_andy-cove-nature-trail-observation-deck)

The shoreline around the head pond of the dam is also in need of further restoration (Figure 26). In 2010, a failing concrete wall was removed and replaced with rip-rap, as well as additional gabion stone in 2016 to help with erosion. A native pollinator plant buffer will be created, with designated paths leading to the water's edge for viewing (Figure 17). This will assist with erosion and help to filter runoff. This could also serve as an educational opportunity to show landowners the native pollinator plants they can use for their property. Monarch Butterflies were identified on the site, so this project will help provide more habitat for Species at Risk.





Figure 16. Current view of head pond riparian area



Figure 17. Future restoration proposal for head pond area

Retrieved online from: <https://indiana.clearchoicescleanwater.org/pledges/native-plants-and-pollinators/using-native-plants/>

Table 8. Future Direction: Conserve and Protect

Action 1 - Conserve and Protect	Potential Delivery Partners	Timeline	Cost Estimate	Management Zone/NEC Permit
<b>A. Invasive species</b>				
Inventory	GSCA, IFAA	Ongoing	In Kind	All/No
Develop plan for control	GSCA	Short (1-3 years)	In Kind	Nature Reserve, Natural Environment and Access/No
Control	GSCA or contract out to licensed operators. Mechanical control events could involve volunteers.	Medium (3-7 years)	\$1,600 for herbicide	Nature Reserve, Natural Environment and Access/No
Monitor	GSCA, IFAA	Ongoing	In Kind	Nature Reserve, Natural Environment and Access/No
<b>B. Sensitive Ecological Features (Restoration Plan)</b>				
Determine sensitive features that need protection from visitors	GSCA	Short (1-3 years)	In Kind	Nature Reserve/No
Install trail edging/railing guides	GSCA, BTC Outdoor Adventures	Short (1-3 years)	\$3,000	Natural Environment, Nature Reserve, Access/No
Install "Area Closed for Regeneration" signage	GSCA, BTC	Short (1-3 years)	\$400	Natural Environment, Nature Reserve/No
Shoreline restoration around the dam head pond	GSCA with potential to partner with IFAA or Garden Club	Short (1-3 years)	\$1,500	Natural Environment/No
Enclose viewing platform on east side of falls	GSCA, GSCF, Grey County, RTO7	Medium (3-7 years)	\$5,000	Access/No

## 9.2 Action 2: Improve the Visitor Experience

The visitor experience and connecting people to the conservation area is a priority of a Nodal Park under NEPOSS and a fundamental aspect of this plan and several of the directions are focused on improvements and enhancements in this area. Table 10 shows a summary table with the deliverables and associated timelines under this Action.

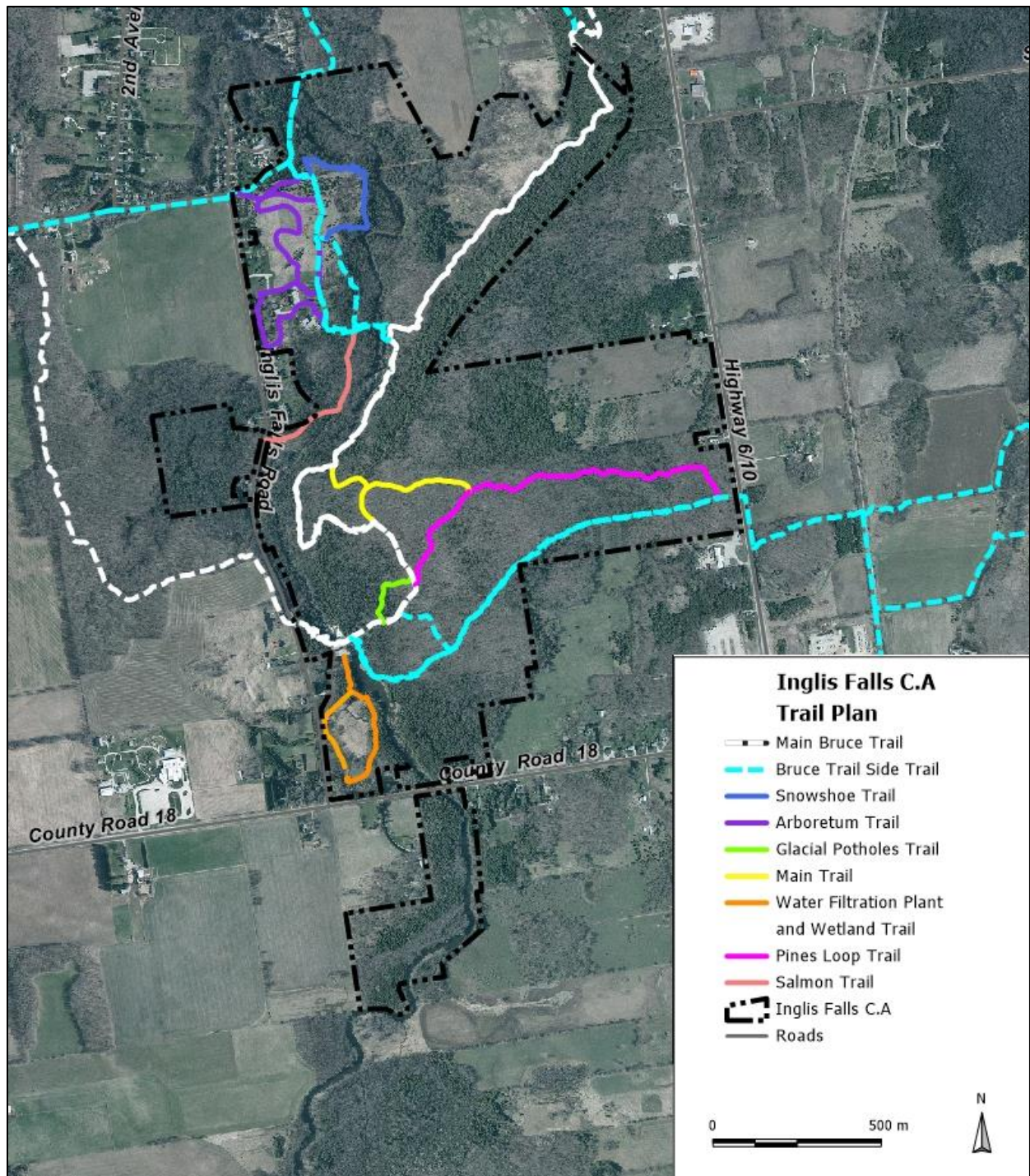
The GSCA Administrative Building is also in need of renovation and possibly an addition. This project will be separate from this management plan as it is more related to corporate planning rather than property management.

### *9.2.1 Trail Network and Permitted Uses*

Inglis Falls Conservation Area currently has 11 km of trails, which includes both GSCA trails and the Bruce Trail. The Bruce Trail Optimum Route is currently being accomplished at the IFCA property, so there are no route updates proposed. This plan primarily focuses on enhancing existing trails but does include two new trails, changing the permitted uses and improving connections with Harrison Park. As shown in Map 14 and 15, there are two new seasonal trails added. One is a snowshoe trail that offers exceptional views of the Sydenham River and showcases the meadow landscape of the Arboretum. Markings would be removed each spring to maintain this solely as a winter snowshoe route. The second one is a wetland boardwalk that runs from the Filtration Plant, north towards the falls exit road.

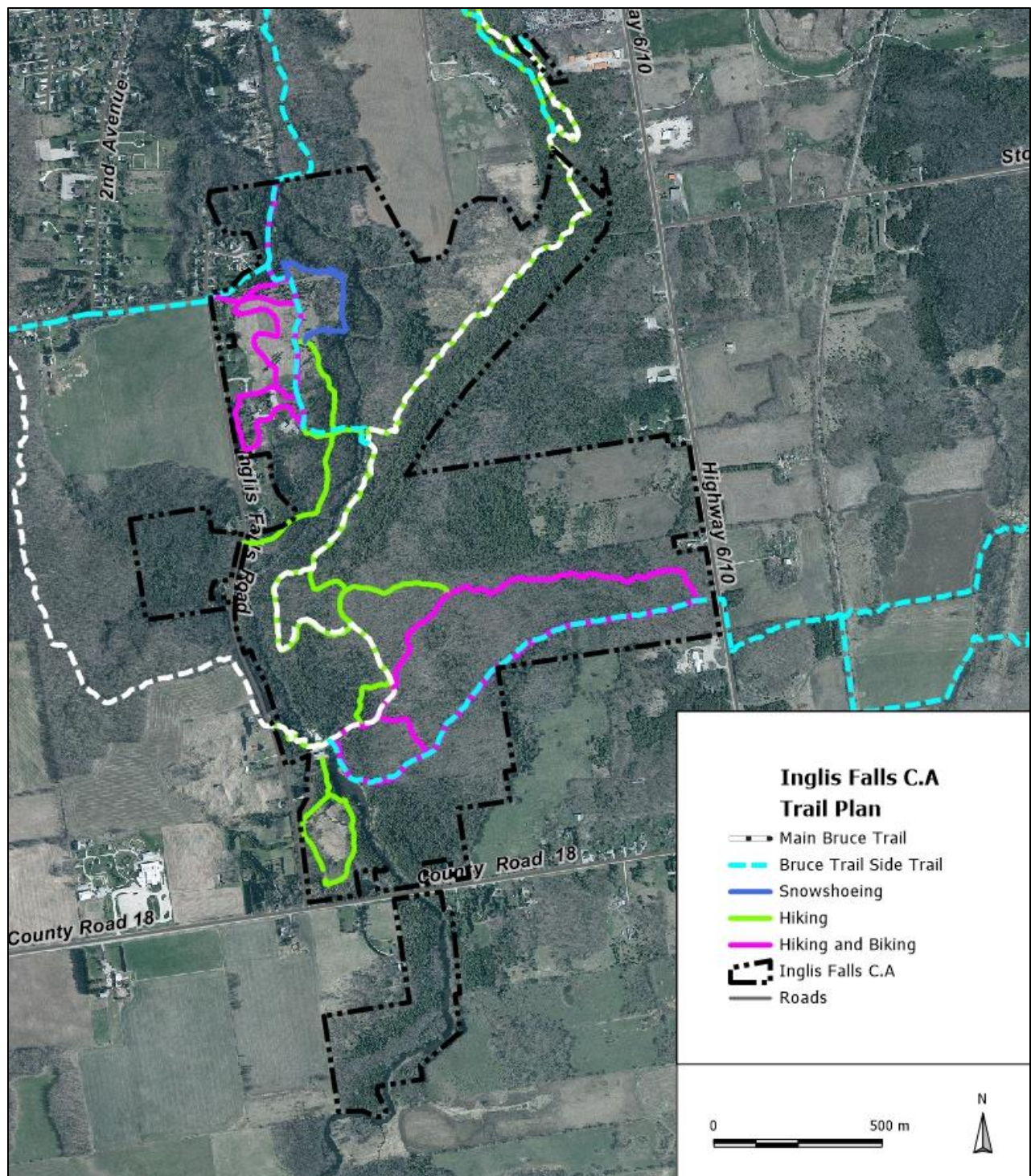
Additionally, through this process permitted uses have been re-evaluated. Under Regulation 107 in the Conservation Authorities Act, biking is only permitted in designated areas. GSCA's partnership agreement with the BTC allows for biking on portions of the Bruce Trail that traverse GSCA properties, subject to GSCA deeming this a permitted use. Although not currently a permitted use, biking does, and historically has, occurred at Inglis Falls CA. The most feasible and responsible approach to addressing this activity at IFCA is to permit biking on certain trails and to install appropriate multi-user signage to lower risk and improve the safety and experience of all visitors to the property. Through this plan, biking will become a permitted use on the Arboretum Loop and the Pines Loop. It would be dangerous to permit biking on all trails at Inglis Falls Conservation Area due to the rugged, steep terrain and multiple user types.





Map 14. IFCA Trail Plan (Trail Names)

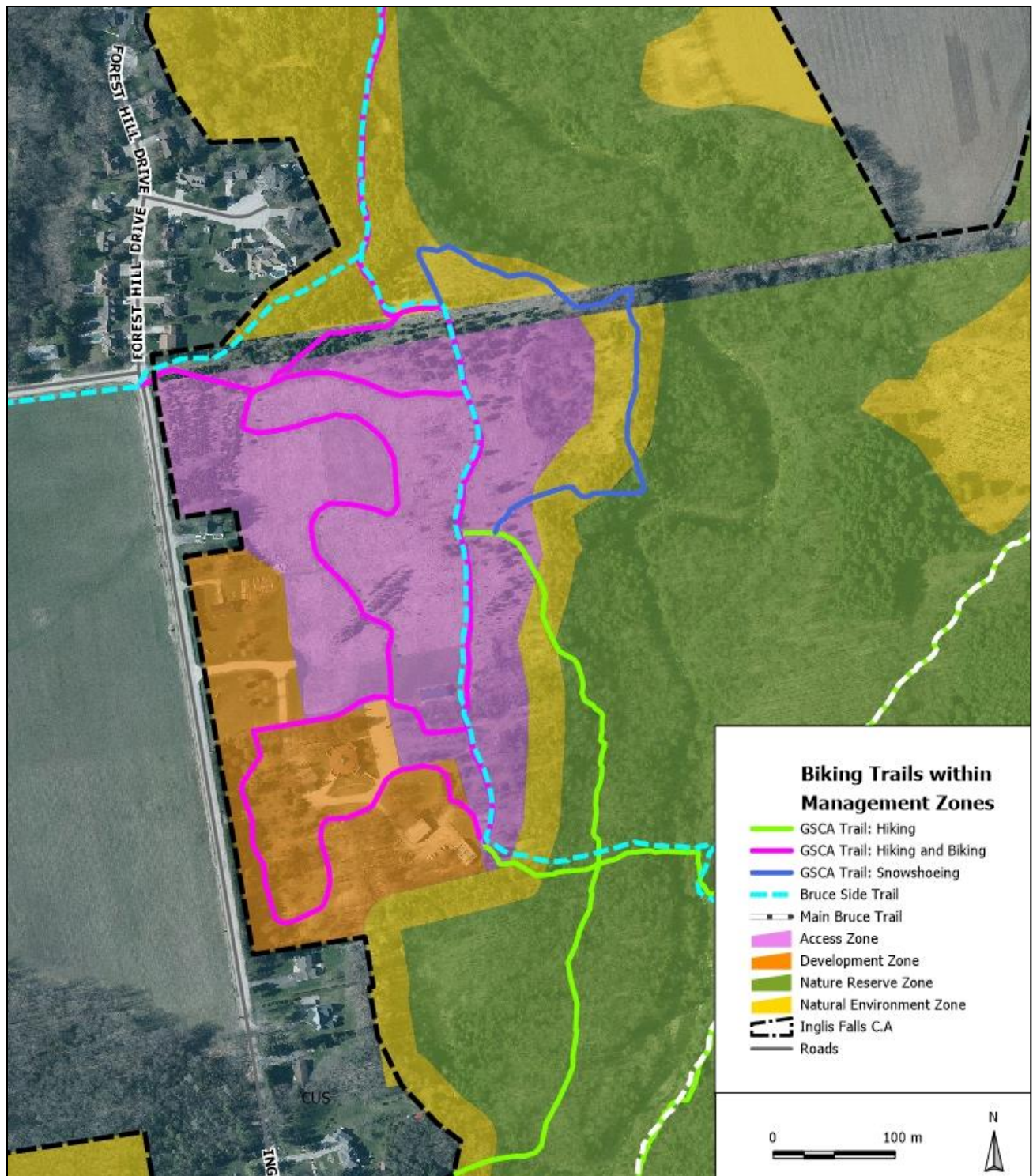




Map 15 IFCA Trail Plan (Permitted Uses)

Biking is already occurring at the Arboretum. As shown in Map 15, biking at the Arboretum would go through Development and Access Zones. As shown in Figures 18-20, the existing Arboretum Trail is primarily stone dust and ranges in width from about 0.5-1m. The terrain through this area is flat and dry, and the openness allows for good sightlines, which eases safety concerns of a multiuse trail. In addition to allowing biking on this section of trail, increased accessibility in general is proposed, which would include further uses such as strollers and wheelchairs. Following endorsement of this plan, biking would become a permitted use immediately while GSCA works towards upgrading approximately 1.7 km for further accessibility standards. As this project develops, GSCA staff will consult with the public and those with disabilities to ensure technical requirements, signage and slope standards are met to the best of ability as per Regulation 413/12, under the Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11. GSCA staff will also consult with Grey County and the Township of Georgian Bluffs Accessibility Advisory Committees. In Section 9.5.2 an updated Arboretum Plan is discussed. An element of this future plan will be to incorporate a maintenance schedule for the Arboretum Trails to ensure that stone dust remains intact and that a consistent width is maintained. Improving the accessibility and permitting biking helps to enhance the connection between Inglis Falls and Harrison Park, as well as the broader City of Owen Sound.





Map 16. Biking Trail at the Arboretum





Figure 18. Existing Arboretum Trails

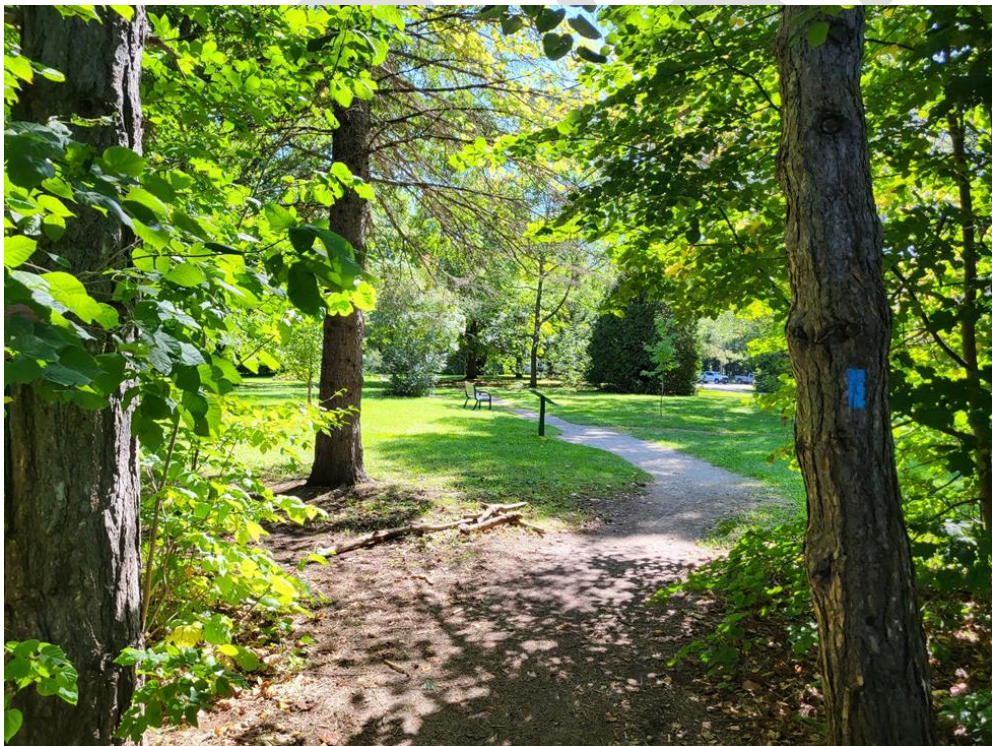


Figure 19. Existing Arboretum Trails

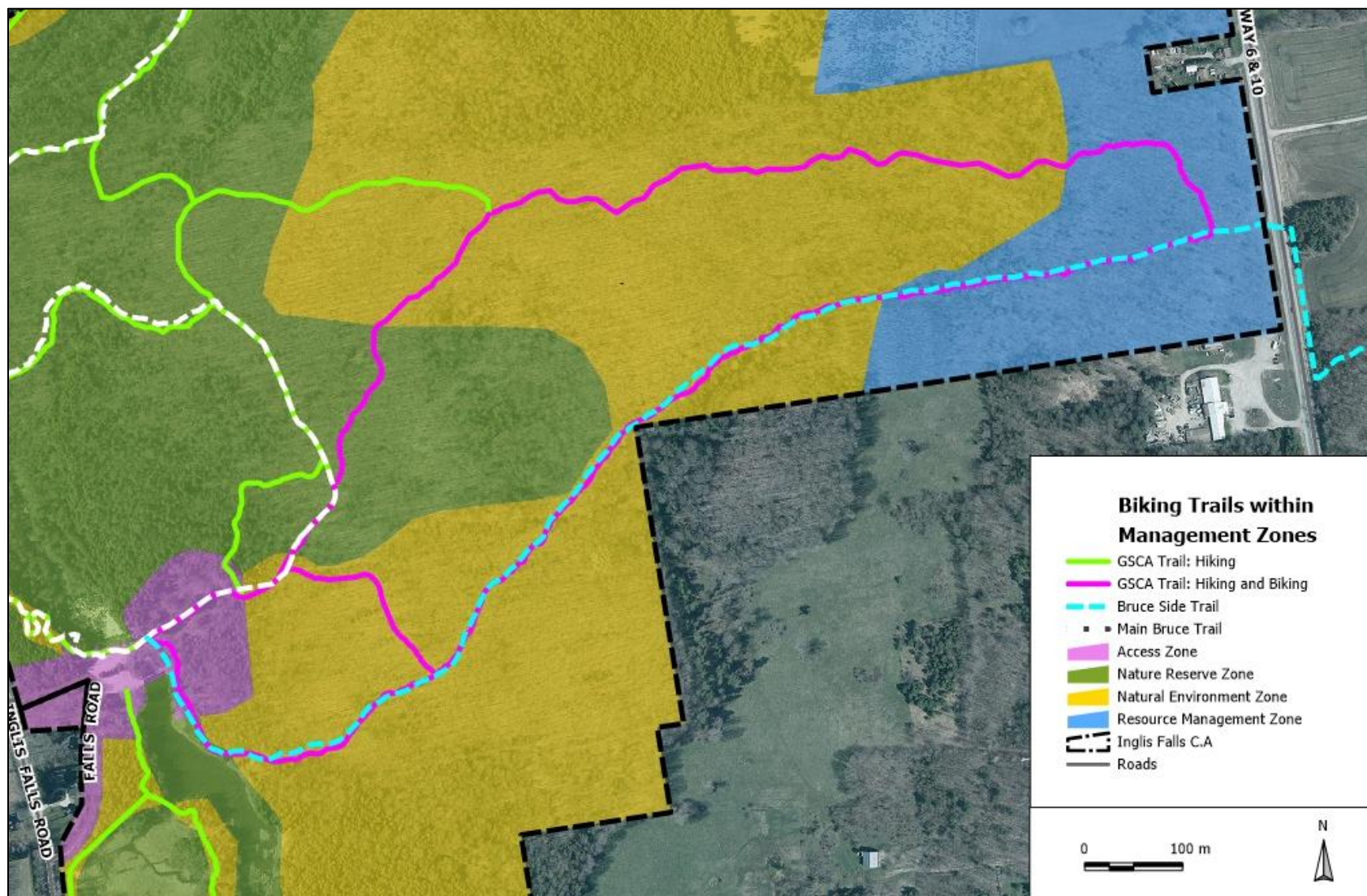




Figure 20. Existing Arboretum Trails

Biking is also proposed on the Pines Loop Trail, which encompasses a portion of the Bruce Trail's Keeling Side Trail. As shown in Map 16, this trail goes through the Resource Management, Natural Environment, Access and Nature Reserve Zones. The forest surrounding the Pines Loop has historically been harvested for timber, with the most recent year being 2006. Figures 21-25 show the existing trail. Due to this use, it is an ideal spot to incorporate biking as the trails are already wide enough to support multiple uses and the tread is established. The upland mixed-age forest type and even terrain provides suitable conditions with no drainage concerns. It is proposed to pilot biking as a permitted use on this trail to ensure that users are sticking to permitted areas and that hiking is not impacted. Trail conditions will be monitored to determine the impact biking may have and depending on site conditions, for example, spring thaw or heavy rains, the trail may be temporarily closed to biking. Clear signage indicating permitted uses and yielding to hikers will be installed.





Map 17. Biking Trail on the Pines Loop





Figure 21. Existing Pines Loop Trail

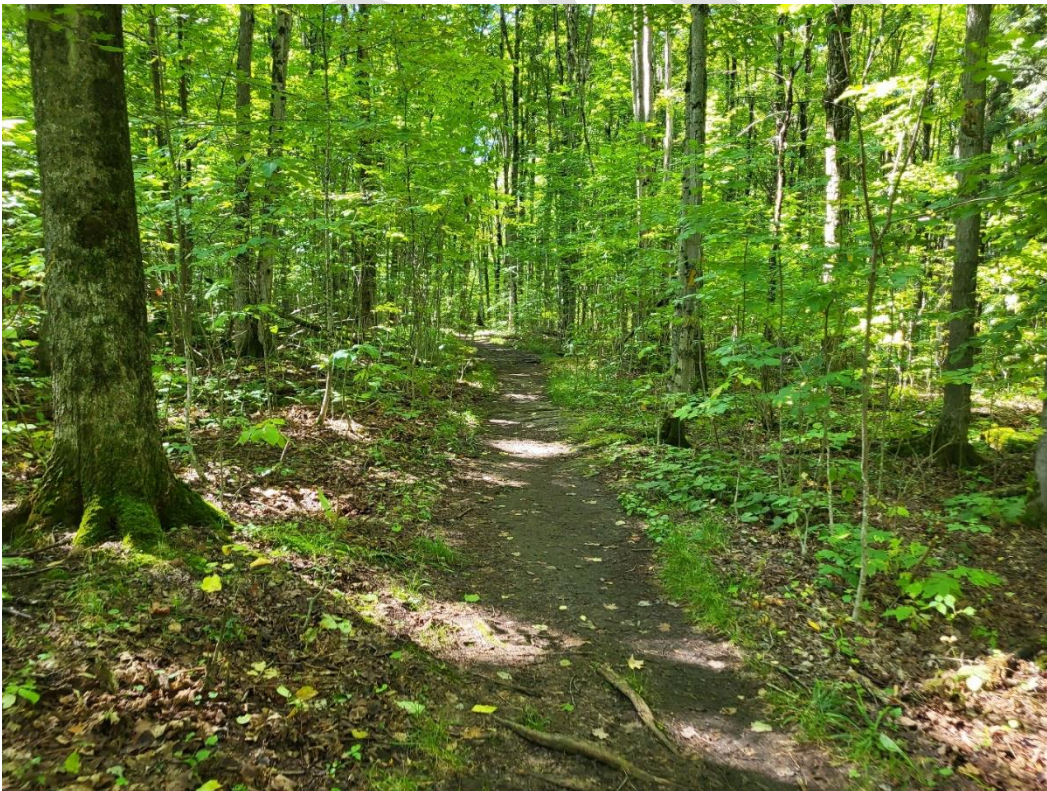


Figure 22. Existing Pines Loop Trail





Figure 23. Existing Pines Loop Trail

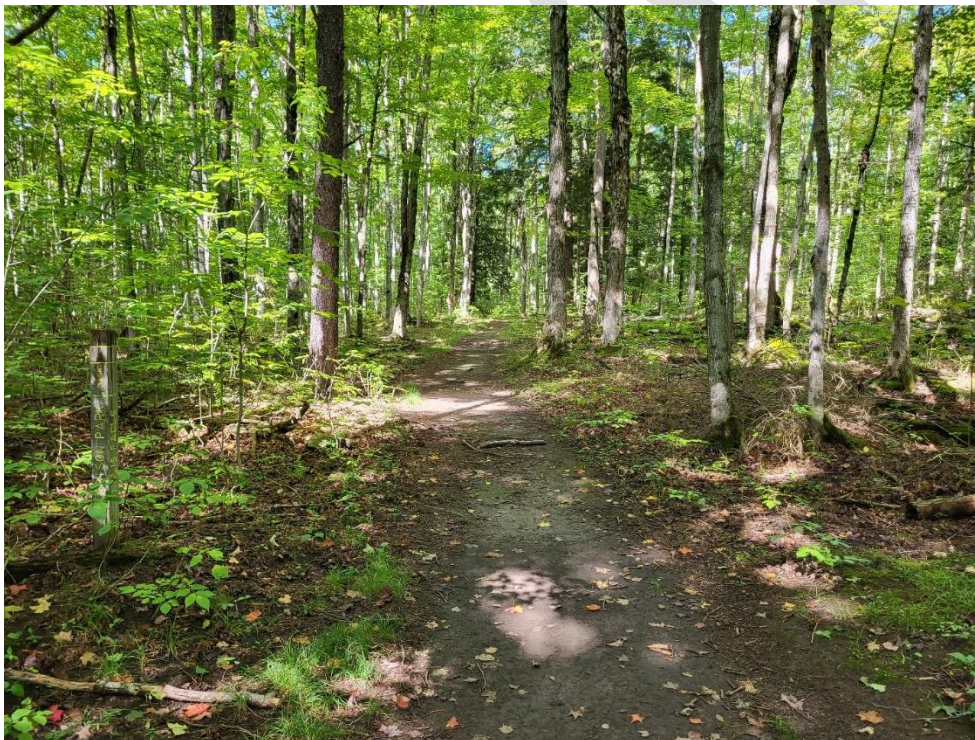


Figure 24. Existing Pines Loop Trail



### 9.2.2 Signage

Signage was mentioned several times in the survey and stakeholder feedback. There are different types of signage to consider:

- Wayfinding
- Interpretive
- Permitted uses
- Hazards
- Paid parking
- Entry signage

The first step to improving signage will be to install new trail wayfinding signage throughout the network and will also include a large trail map display at the top of Inglis Falls, Arboretum and Harrison Park, to show the trails and the varying level of difficulty as well as time and distance (example in Figure 18). As determined from the trail counters, August 2019 indicated 19,888 people visited the falls, but only 2,451 people walked on the main trail heading east into the forest and 776 people walked in the Arboretum. This could be that visitors do not know where the trails lead to and how long it will take to get back to their vehicle. Accessibility will be incorporated into these signs, including more use of symbols instead of text for those visitors that may not have English as their first language.



Figure 25. Trailhead sign example from Upper Thames River C.A

Retrieved online from: <https://chasemarch.com/fanshawe-park-lake-trail/>

Other signage updates include:

- An update to permitted use signage to include a more visually appealing design that incorporates GSCA branding and icons (Figure 19 for example)
- The existing interpretive signage is starting to fade and crack, which will be updated in phases in partnership with other groups such as the Inglis Falls Arboretum Alliance, the Grey Sauble Conservation Foundation and the Bruce Trail Conservancy.
- Currently, interpretive signage on the history of the property is about the mills but does not recognize the pre-Contact history of the site. Tying into Section 9.3 and 9.4, additional interpretive signage will be installed that acknowledges the history of the site/area prior to European settlement, as well as the current importance to Indigenous peoples. This piece would be in collaboration with GSCA's Indigenous Relationships Committee, Grey Roots Museum and Archives as well as First Nations and Metis peoples.
- Interpretive signage that includes a land acknowledgement and some translation into Anishinaabemowin language.
- Improving signage at the Harrison Park-Inglis Falls Conservation Area boundary to show park users the various trails offered and approximate distances.





Figure 26. Permitted uses signage example from Conservation Halton

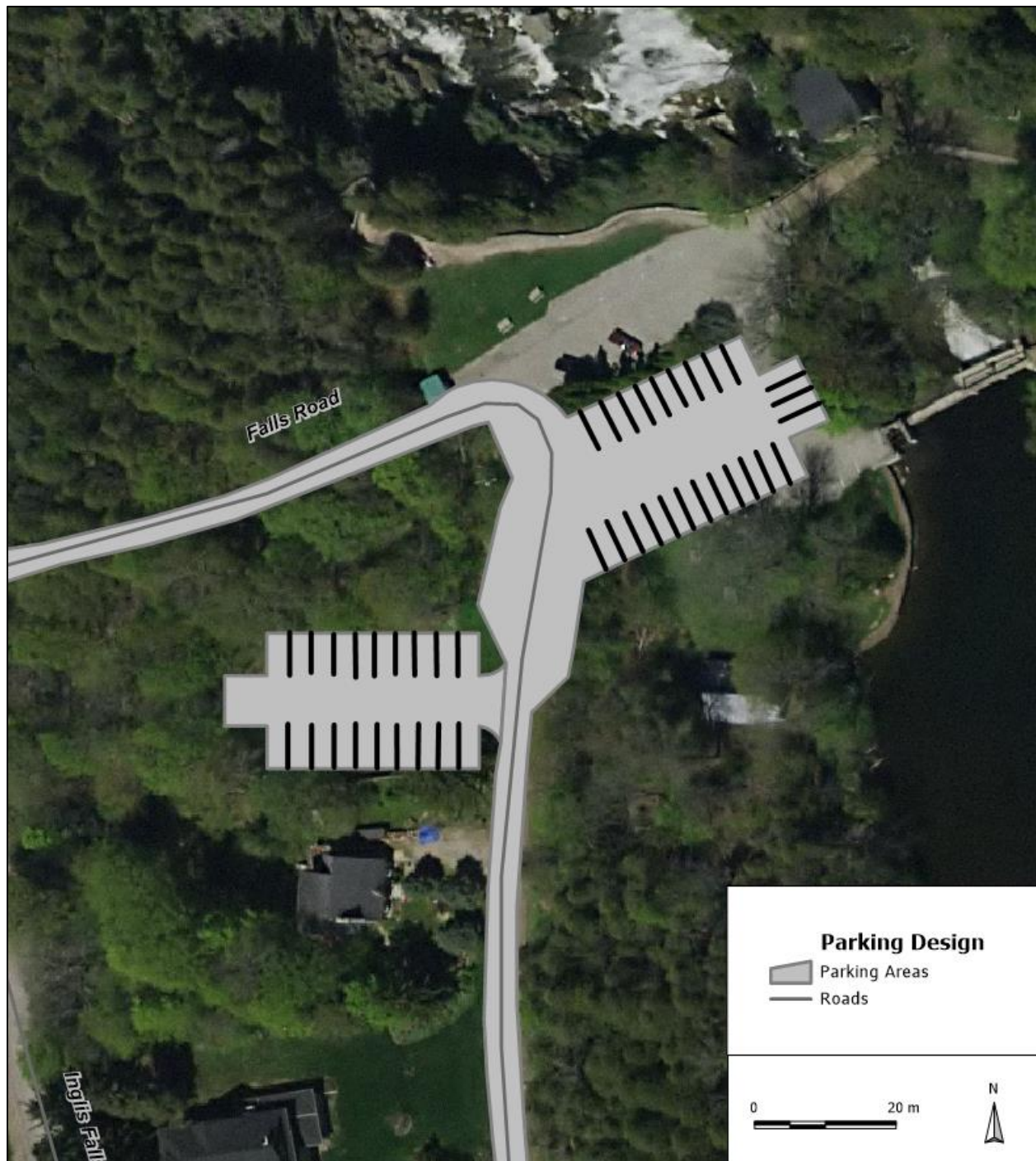
### 9.2.3 Trail Map Phone Applications

In addition to updating wayfinding signage, GSCA has all property trails currently uploaded to a trail application called Trailforks. This allows users to see their location on the trail using satellite tracking. This is also a great tool for GSCA to announce trail or property closures, points of interest and information on distance, direction and level of difficulty. GSCA will continue to monitor phone applications that may assist visitors with wayfinding.

#### 9.2.4 Parking

Parking is a major issue at the Inglis Falls portion of this property, with only approximately 27 parking spaces in the main lot, six in the gravel lot and over 100,000 visitors each year. This has resulted in increasing illegal and dangerous parking on Inglis Falls Road and Grey Road 18. The challenge of parking has also been a nuisance for neighbouring landowners who can experience visitors parking in their driveway or on their lawn. A parking study was completed in 2002 which proposed various options including at Grey Roots, the Filtration Plant and having an entrance off Grey Road 18 to facilitate parking on the east side of the Sydenham River. None of these options were implemented.

Through this management plan, the first parking improvement proposed is to pave the overflow parking lot, which is an existing lot located beside the house on Falls Road. This is not part of the NEPOSS, but important to be included in the management plan for overall visitor management planning. The main parking lot is also outside of the NEPOSS but needs to be reviewed and redesigned, along with resurfacing to maximize space. Map 16 shows a potential redesign of this lot for 45 cars and includes removal of parking spaces that are right beside the falls to allow for naturalization of the space. This would remove congestion around the top of the falls and create an area for picnicking. Additional parking is needed for this site, but options are limited. The pine plantation near the Filtration Plant off Grey Road 18 will be considered for a new lot, which will also promote the Filtration Plant and the hike to the falls (Map 17). This location could fit approximately 42 cars; however Grey County Transportation Services and the Township of Georgian Bluffs will need to be consulted, with special consideration given to the speed limit along Grey County Road 18 and proximity to the turn onto Inglis Falls Road. Additional studies and permits will be required.



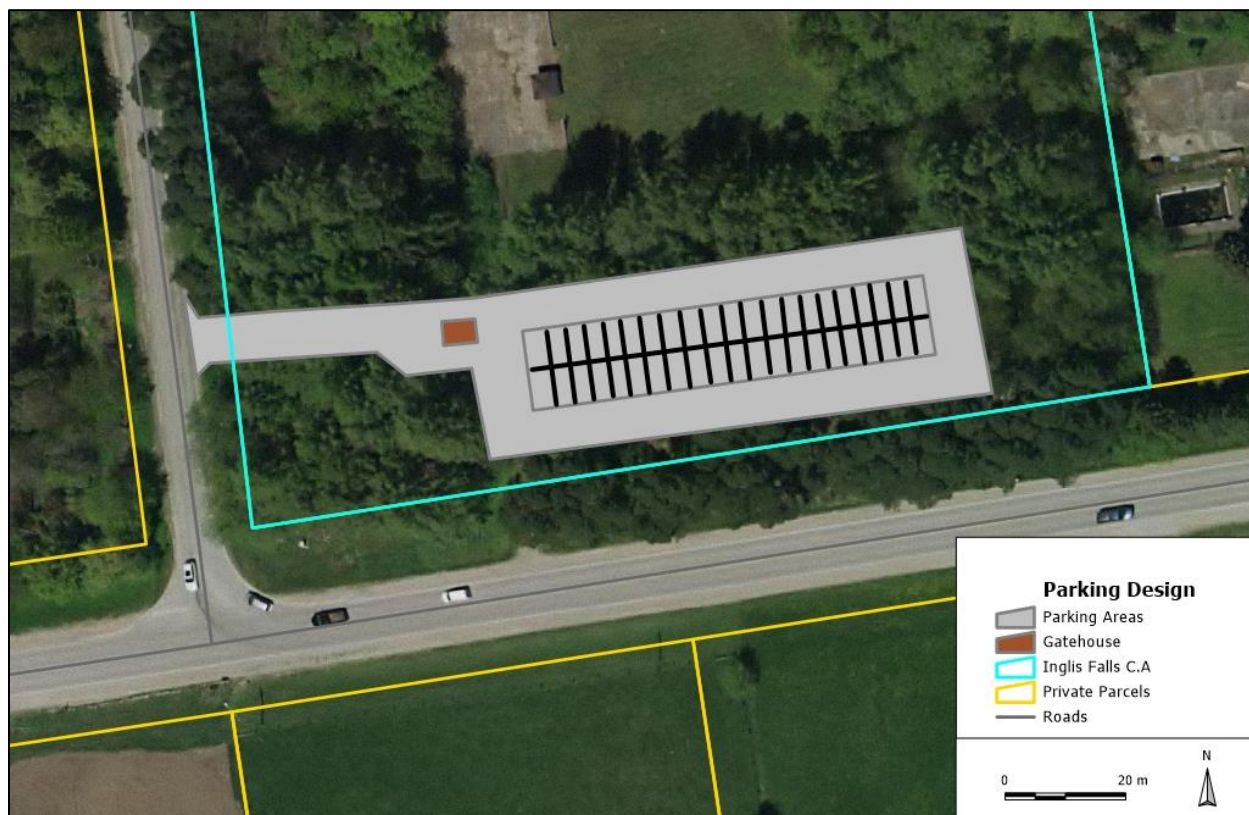
Map 18. Parking design around the falls\*

\*Parking areas are outside of the NEPOSS

GSCA has also outlined other private locations to pursue for future acquisition that would help alleviate this parking challenge. In the future, consideration might be given towards a partnership with Grey Roots that would allow visitors to park at the museum and walk to Inglis Falls, however this would also require acquisition efforts and safety considerations with road crossings. A shuttle service could also be explored, but this would require a fee for entry rather



than a parking fee, which changes the direction of GSCA fees and increases insurance requirements.



Map 19. Filtration Plant parking design

### 9.2.5 Amenities/Infrastructure to Improve Visitor Experience

Clean washroom facilities are extremely important and something that every type of visitor can agree should be a priority. Inglis Falls Conservation Area is now seeing about 25,000 visitors per month in the summer, which used to be the total number of visitors per year. In addition to increased visitation, the current washroom building is 40 years old and in need of renovation or replacement. GSCA will investigate options to improve the washroom facility on the existing footprint, factoring accessibility needs.

There are two pavilions at Inglis Falls Conservation Area, information as follows:

Table 9. Pavilion use

Pavilion	Inglis Falls	Arboretum
Date Built	1980	2010
Replacement Scheduled	2035	2050
Capacity	84	154
Number of Rentals	2/year	30/year on average
Rental Fee	Off Season (no washroom) \$60.00/Day (when open)	Off Season (no washroom) \$60.00/Day (when open)

	Shoulder Season (June, Sept, Oct) - \$100.00/Day	Shoulder Season (June, Sept, Oct) - \$100.00/Day
	High Season (July and August) - \$150.00/Day	High Season (July and August) – \$120.00/Day

The pavilion at the Arboretum is used quite frequently by organizations hosting meetings, family reunions and day camp in the summer. This pavilion was installed in 2010 and is in excellent condition, with replacement scheduled for 2050. However, the pavilion at the top of Inglis Falls is a different story. Through this plan it is proposed to not replace the current Inglis Falls pavilion (Figure 20). This pavilion is in a dark, damp location and is rarely used. The cost to replace this structure is approximately \$40,000 and therefore, not a justified expense.



Figure 27. Existing Inglis Falls pavilion

There are several boardwalks and bridges on the trails that are inspected regularly and will be fixed or replaced when necessary (Figures 21 and 22). Of high importance are the two bridges on the trail to the Filtration Plant. Adding benches along some of the trails will allow hikers to rest and enjoy their surroundings. Picnic tables will be replaced as needed, with the option to include one that accommodates wheelchairs.



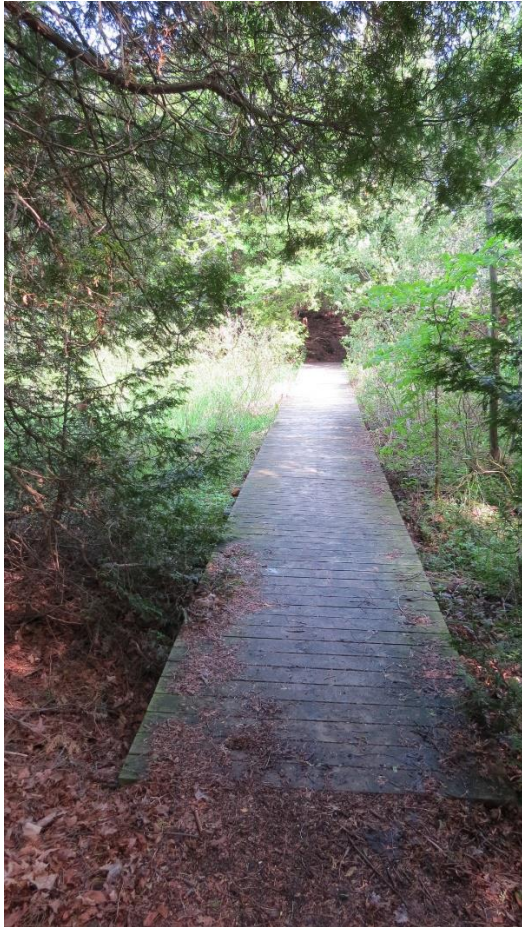


Figure 28. Existing boardwalk on Filtration Plant Trail



Figure 29. Existing boardwalk on Bruce Trail



One suggestion that was raised through the online surveys as a way to improve the visitor experience was to have a better viewing platform to safely see the falls and take photos. There is already a natural viewing area looking directly at the falls that just requires a built base with railings. The location is shown in Map 18.



Map 20. Viewing platform location

Table 10. Future Direction: Improve the Visitor Experience

Action 2 - Improve Visitor Experience	Potential Delivery Partners	Timeline	Cost Estimate	Management Zone/NEC Permit
<b>A. Trail network (Trail Plan)</b>				
Develop snowshoe trail	GSCA	Short (1-3 years)	In Kind	Nature Reserve, Natural Environment/ No
Develop a boardwalk trail from the Filtration Plant to the falls exit road	GSCA, GSCF, Grey County, RTO7	Medium (3-7 years)	\$100,000	Natural Environment/ Yes
Secure funding for accessible trail	GSCA, GSCF	Short (1-3 years)	In Kind	N/A

Develop an accessible trail through the Arboretum	GSCA with support from Arboretum Alliance, other organizations in the accessibility field	Medium (3-7 years)	\$420,000	Access/No
<b>B. Signage</b>				
Create and install trailhead signage	GSCA, GSCF, BTC, Owen Sound, Georgian Bluffs	Short (1-3 years)	\$1,600	Natural Environment, Access/No
Secure funds for interpretive signage	GSCA, Grey Roots, GSCF	Medium (3-7 years)	In Kind	N/A
Update existing interpretive signage and create new signage	GSCA, Grey Roots, GSCF	Medium (3-7 years)	\$1,200	Nature Reserve, Natural Environment, Access, Cultural Heritage/No
Develop and install more wayfinding signage	GSCA, BTC	Short (1-3 years)	\$400	All Zones/No
Create and install signage indicating multi-use trails	GSCA	Short (1-3 years)	\$100	Nature Reserve, Natural Environment/No
<b>C. Visitor Management and Parking</b>				
Improve parking lot where old Inglis house was (on exit road)	GSCA	Short (1-3 years)	\$30,000	Outside of NEPOSS - Access/Yes, separate development permit
Re-design and repave main parking lot	GSCA	Medium (3-7 years)	\$110,000	Outside of NEPOSS - Access/Yes, separate development permit
Construct parking lot by the Filtration Plant	GSCA	Medium (3-7 years)	\$120,000	Access/Yes
Install viewing platform on the west side of the falls	GSCA	Medium (3-7 years)	Simple viewing platform ~\$2,500	Natural Environment/Yes
Secure funding for asset replacement	GSCA, GSCF	Ongoing	In Kind	N/A
Cut back shrubs along the wall to improve view of the falls	GSCA	Short (1-3 years)	In Kind	Nature Reserve/No
Implement Capital Asset Plan	GSCA	Ongoing	Separate funding plan	N/A



D. Conservation Area Infrastructure				
Secure funding for proposed projects	GSCA, GSCF	Ongoing	In Kind	N/A
Construction/renovation of washroom facilities	GSCA	Short (1-3 years)	\$130,000	Access/Yes
Update existing boardwalks on Filtration Plant Trail	GSCA	Short (1-3 years)	\$40,000	Natural Environment /Yes
Remove Inglis Falls pavilion	GSCA	Medium (3-7 years)	\$10,000	Access/No
Benches, picnic tables	GSCA, GSCF	Short (1-3 years)	\$1,800	Natural Environment, Access/No

### 9.3 Action 3: Enhance and Celebrate Cultural Heritage

Not included in the previous section under infrastructure are several historical features which are also considered capital assets. These include: Inglis Falls Dam, Filtration Plant, mill storage building, Bailey bridge and cold cellar. These require separate attention and planning given their historic and cultural nature. Table 11 summarizes the goals within this Action and proposed timelines.

#### 9.3.1 Inglis Falls Dam

GSCA operates several dams throughout the watershed for flood control, habitat or recreation. The Inglis Falls Dam (Figure 23) is operated as a historic structure, and although it does create the Mill Pond upstream, which creates suitable habitat for a variety of amphibian and waterfowl species, the primary function is historical.

The Inglis Falls Dam requires upgrades in order to maintain it as an operable structure. Through the public consultation process and internal discussions, GSCA will move forward with maintaining the dam rather than removing it. This work is coordinated through GSCA's Water Resources Coordinator and Operations Manager. In the short term, the dam will have concrete patching done, however an engineered study is needed to determine the full scope of repairs. In the long term this study will be conducted, and the necessary capital repairs will be implemented in order to preserve this structure.



Figure 30. Inglis Falls Dam

### 9.3.2 Filtration Plant

The Filtration Plant is purely a historical feature and does not currently serve any additional function as it is closed off to the public. If a new parking lot were developed at the Filtration Plant, this would allow for a staff member to be present, and the plant could be open for display. As part of the management plan, the Filtration Plant requires an engineered review to determine if it is structurally sound and a maintenance schedule to preserve this historic feature. In addition to this, ecological monitoring will be conducted to confirm presence/absence of bat species.

### 9.3.3 The Mill Storage Building

Similar to the dam and Filtration Plant, this is a historic structure (Figure 24 and 25) that currently serves very little function. However, this building has tremendous potential to be renovated and transformed. Through the management plan process, some ideas from the public were brought forward, including:

- Interpretive and nature Education Centre. Ice cream cooler in the summer.
- Snack bar/café
- Gift shop
- An ideal location for audio/visual presentations and dioramas depicting the historical aspects of the falls area, the Indigenous stories relating to the area, and the significant features of the larger property.
- Satellite studio for artists co-op

GSCA is proposing to have an engineered study conducted during the lifespan of the plan and issue a Request for Proposal for architectural drawings.





Figure 31. Mill storage building



Figure 32. Inside the mill storage building



#### 9.3.4 Preserving Artifacts and History

There are several artifacts that currently are not being preserved properly. Any artifacts in relation to this property would be best kept at Grey Roots Museum and Archives to be properly preserved, protected from vandals and on display for all to see. GSCA will work with Grey Roots to determine the best path forward with these items.

Additionally, in attempt to visualize what the property would have looked like in the days of the booming mill industry, GSCA staff will contract the design of a plexiglass viewing display with mill buildings etched in, so it overlays with today's view. A similar project was done in Austria to show the architecture of The Heidentor, also known as Heathens' Gate or Pagans' Gate, which is the partially reconstructed ruin of a triumphal arch of the Roman Empire (Figure 26).



Figure 33. The Heidentor.

Retrieved online from: [19265165750\\_a56e227d4f.jpg \(499x333\) \(staticflickr.com\)](https://staticflickr.com/19265165750_a56e227d4f.jpg)

Table 11. Action 3 - Enhance and Celebrate Cultural Heritage

Action 3 - Enhance and Celebrate Cultural Heritage	Potential Delivery Partners	Timeline	Cost Estimate	Management Zone/ NEC Permit
<b>A. Restore the Historic Dam</b>				
Contract engineering firm to review dam structure and propose repair work	GSCA	Long (7-20 years)	\$20,000	Access/No
Move forward with repairs	GSCA	Long (7-20 years)	\$40,000	Access/No
<b>B. Filtration Plant</b>				

Filtration Plant Conditions Report	GSCA, Grey Roots, Historical Society	Medium (3-7 years)	\$10,000	Cultural Heritage/No
<b>C. Renovate Mill Storage Building</b>				
Conduct engineered review	GSCA, Historical Society	Medium (3-7 years)	\$5,000	Access/No
Request community feedback	GSCA	Medium (3-7 years)	\$0	N/A
Identify funding and secure	GSCA, GSCF	Medium (3-7 years)	In Kind	N/A
RFP architect for design	GSCA	Medium (3-7 years)	\$10,000	Access/No
Construction	Contractor	Long (7-20 years)	\$100,000	Access/Yes
Offer contract to have a business located out of this building	Business	Long (7-20 years)	Potential revenue source	Access/No
<b>D. Restore/Preserve Artifacts</b>				
Ensure that artifacts are being stored/displayed appropriately	GSCA, Grey Roots	Short (1-3 years)	In Kind	Access/No
Contract plexiglass display design or interpretive sign	GSCA, Grey Roots	Long (7-20 years)	\$1,000	Natural Environment/No

#### 9.4 Action 4: Foster Partnerships and Expand Education

Volunteers and partnerships are vital for GSCA to be able to offer the programs and services that we have. The Inglis Falls Arboretum Alliance (IFAA) was formed to bring together a group of enthusiastic volunteers to oversee the development of this new section of the Arboretum. A design plan was prepared by a landscape architecture firm in 2001 and included a nursery area for propagation.

The IFAA is entirely self-supported through the generous donations of friends, visitors, and plant purchases. In 2020, the IFAA obtained a grant from TD Bank to replace and improve the labels and signs along the trail in 2021. The IFAA operates out of the barn and greenhouse near the Administration Centre. They are frequently out in the Arboretum mulching, weeding, and caring for the trees and shrubs. Another group that is out weeding and planting, is the Georgian Bay Garden Club who maintains the flowers directly around the building and the flower beds at the Inglis Falls parking lot.

Another partnership that exists on the property is with Sydenham Sportsman Association (SSA). In the mid- 1990's, the SSA constructed two artificial spawning channels in the mid-stretches of the Sydenham River that measure almost a kilometer in length: providing perfect spawning conditions for Rainbow Trout, Brown Trout, Brook Trout and Chinook Salmon. The successful planning, construction and maintenance of the spawning channels are the result of thousands of volunteer hours, tons of washed gravel, strategic placement of logs and boulders and dedicated volunteers. The results have been the recruitment of tens of thousands of Salmonids into the



fishery. GSCA has an ongoing partnership with this group to allow them to maintain these channels.

The Bruce Trail Conservancy (BTC) is a major partner, as the main Bruce Trail and many side trails run through GSCA properties throughout the watershed. At Inglis Falls Conservation Area, there is the main Bruce Trail, Creamery Hill Side Trail and Keeling Side Trail. The Bruce Trail Conservancy - Sydenham Club is responsible for maintaining and inspecting these trails. This is a mutually beneficial relationship with positive collaboration on many initiatives including grants, educational offerings, stewardship and capital projects.

However, there are more partnerships that could provide added benefit to the property and the community, which could include education, history, culture, arts and recreation. A summary table of Action 4 can be found in Table 12.

#### *9.4.1 Indigenous Culture*

Indigenous history is a piece that is missing from this property from a historical perspective, as current interpretive signs only acknowledge settlement of the site in 1838. Incorporating the property history and current Indigenous culture is an item GSCA will work on creating through the Indigenous Relationships Committee. In addition to interpretive signage, GSCA will work with local groups on Owen Sound's M'Wikwedong Indigenous Friendship Centre Giiwe recommendations, including:

- Making four direction teachings available on the property;
- Promoting Indigenous symbols/emblems/art on the premise (art, pictures, Grandfather Teachings, tree of life, flag, treaty poster, etc.);
- Offering GSCA land for Indigenous ceremonies or events, and,
- Including GSCA's land acknowledgement on signage and including Anishinaabemowin language on signage in partnership with Indigenous Elders or Knowledge Holders.

In TRCA's Cultural Heritage Background Report, there were several recommendations to add value and strengthen the protection of cultural heritage, including:

- Engage Indigenous communities to learn about traditional use areas, sacred sites, and Indigenous place names within and surrounding the IFCA project area;
- Engage Indigenous communities through participation and consultation to develop cultural programming including, but not limited to Saugeen First Nation, the Chippewas of Nawash Unceded First Nation and The Metis Nation of Ontario – Owen Sound Office;
- General improvement of partnerships and inclusion in projects and decision making.

GSCA is committed to enhancing relationships with Indigenous peoples and incorporating Indigenous stories, language, history and cultural significance on lands owned by the Authority.

#### *9.4.2 Education*

GSCA hosts a day camp out of the Administration Centre during the summer months. Additionally, private outdoor education operators rent the Arboretum pavilion in the spring and fall, where 20 kids ages 18 months to 12 years old use the pavilion as their home base. On top of the youth focus of the pavilion, there are also numerous organizations and groups that use the pavilion, for example Owen Sound Field Naturalists, Alzheimer Society, Georgian Bay Garden Club etc. This increasing popularity has exposed the need for additional meeting and

teaching spaces. There has been a recent movement towards outdoor education and connecting with nature, so in order to better host these programs GSCA plans to move towards the installation of an outdoor classroom similar to the one shown in Figure 27.



Figure 34. Outdoor classroom example

Retrieved online from: <https://lutheransrestoringcreation.org/augustana-university-outdoor-classroom/>

The vision for an outdoor classroom was included in the 2001 Arboretum Plan, as shown in Figure 28. GSCA will work closely with IFAA and other partners to secure funding, determine a design and begin implementation.

In addition to an outdoor classroom, it has become apparent that GSCA requires an alternative indoor space to host educational programming and meetings. GSCA has engaged an architect for concept design and the GSCA Board of Directors have approved an addition on the current Administrative Centre. This addition will be roughly 1,000 square feet, as shown in Figures 29 and 30. As the greater plan for office renovation and expansion is still in the early phases, more information is not included in the management plan but will be discussed with NEC at a later date.









Feasibility & Concept Design for GSCA's Administrative Centre

Exterior View: Looking Towards the Addition from the Parking Lot

2022.09.29 Page 24

Figure 36. 3D rendering of Admin Centre addition looking west



Feasibility & Concept Design for GSCA's Administrative Centre

Section View

2022.09.29 Page 20

Figure 37. Cross section of Admin Centre addition

The Inglis Falls Conservation Area has the most interpretive signage out of GSCA properties. Interpretive signage and brochures have always been a great way to educate visitors, however with the dominant use of smartphones, there are constantly new and creative ways to engage with visitors. GSCA will focus on expanding education through smartphone application platforms that will allow property users to take a self-guided tour highlighting site ecology and history. Transitioning to this format allows for more options with accessibility as well as logistical limitations in the future.

Table 12. Action 4 – Foster Partnerships and Expand Education

Action 4- Foster Partnerships and Expand Education	Potential Delivery Partners	Timeline	Cost Estimate	Management Zone/NEC Permit
<b>A. Indigenous Communities</b>				
Build and maintain relationship with Indigenous communities	GSCA, Indigenous Relations Committee, Indigenous peoples	Ongoing	In Kind	N/A
Implement projects as a result of Indigenous Relations Committee feedback	GSCA, M'Wikwedong Indigenous Friendship Centre, Saugeen Ojibway Nation, Metis Nation of Ontario, Grey Roots	Ongoing	\$2,500	N/A
<b>B. Education</b>				
Secure funding for outdoor classroom	GSCA, GSCF, IFAA. Forest School, School Board	Short (1-3 years)	In Kind	N/A
Install outdoor classroom	GSCA, IFAA	Medium (3-7 years)	\$15,000	Access/Yes
Administrative Centre addition	GSCA	Medium (3-7 Years)	\$400,000	Development/Yes
Self-guided hike tour	GSCA, Grey Roots, School Board	Medium (3-7 years)	\$5,000	Natural Environment, Nature Reserve/No

## 9.5 Action 5: Operations/Risk Management

Inglis Falls Conservation Area has the most staff presence out of all GSCA properties. This is a result of the Administration Centre being located on the property and the close distance between it and the falls. Additionally, throughout the summer and fall months there is a gate staff on site.

This property is frequently visited in all seasons, requiring a significant amount of maintenance to cut grass, change garbage cans and clear snow. In addition to regular maintenance, this property also has the most infrastructure, which requires ongoing inspections, maintenance and plans for replacement. Given the large trail network at this property, a great amount of effort is also put towards hazard tree removal, board walk replacements, trail blazing etc. Items in this Action are harder to plan for as they are often on a case-by-case basis and can come up



unexpectedly. Table 13 summarizes these deliverables.

### *9.5.1 Operations*

There is one agricultural land lease on the Inglis Falls property, which will be reviewed annually and re-tendered every five years. Revenue from this lease goes towards GSCA land taxes and supporting the Lands Policy department. Agricultural Best Management Practices with a focus on resource protection is included in all GSCA agricultural land leases. Further, through GSCA's risk management guidelines there is a requirement for land use agreements and liability insurance whenever an organization or individual is using the property for an event or research. A long-term agreement is in place for the Sydenham Sportsman Association to maintain the spawning channels.

Since the last Master Plan, the rise in social media has greatly shaped the way individuals share their experience at properties. As pictures from out of bounds areas get posted, more people see these and try to copy the same photo. There have been several falls that have resulted in severe injury and emergency rescues. GSCA staff is working with media outlets and tourism-focused organizations to promote trail/property etiquette and manage visitor expectations. Ambassador and gate staff frequently communicate with the public to stay in bounds and signage and safety fencing is replaced when needed.

Through this management plan and as part of our capital asset plan, the stone fencing around the falls needs repairs and gaps along the Escarpment edge require new fencing. Based on recommendations from other Conservation Authorities, GSCA plans to transition away from the stone wall feature and install steel fencing, similar to that of Hamilton Conservation Authority shown in Figure 31. There are several reasons to transition: Visually appealing to see through the spaces of the fence, people are less likely to climb over this style of fence compared to the current stone wall and this style is easier and more affordable to repair if there is graffiti or damage. This will be done in phases, to see if there can be a combination of the unique stone, with the modern steel style in areas of higher risk.



Figure 38. Fencing example from Hamilton C.A

### 9.5.2 Arboretum Plan

In 2001, Northwood Associates Landscape Architects Ltd. was hired to produce the first Arboretum Design Plan. Many deliverables of this plan were completed, such as the parking area, pavilion, plantings and labelling. However, as the plan is now over 20 years old it is time to update it with new perspectives and priorities of Conservation Authorities. The plan will be updated by both GSCA staff and IFAA members. A component of this plan will focus on invasive species management and ensuring that in the future no new exotic invasive species are planted and to review existing species to determine if there are currently any species that should be considered for removal to prevent invasive species spread.

### 9.5.3 Ash Management

The Emerald Ash Borer (EAB) is a non-native invasive insect that was first identified near Detroit Michigan in 2002 and shortly afterwards in Essex County Ontario. EAB is known to attack all native ash species (*Fraxinus* sp.) by boring into the conductive tissues (xylem and phloem) and stopping the supply of water and nutrients. Within its native range, there are several predators that sufficiently control the population size of EAB. In North America, the known predators are not able to sufficiently control its population or spread. EAB has been found throughout the GSCA watershed and is expected to be more widespread than in areas that have been identified.

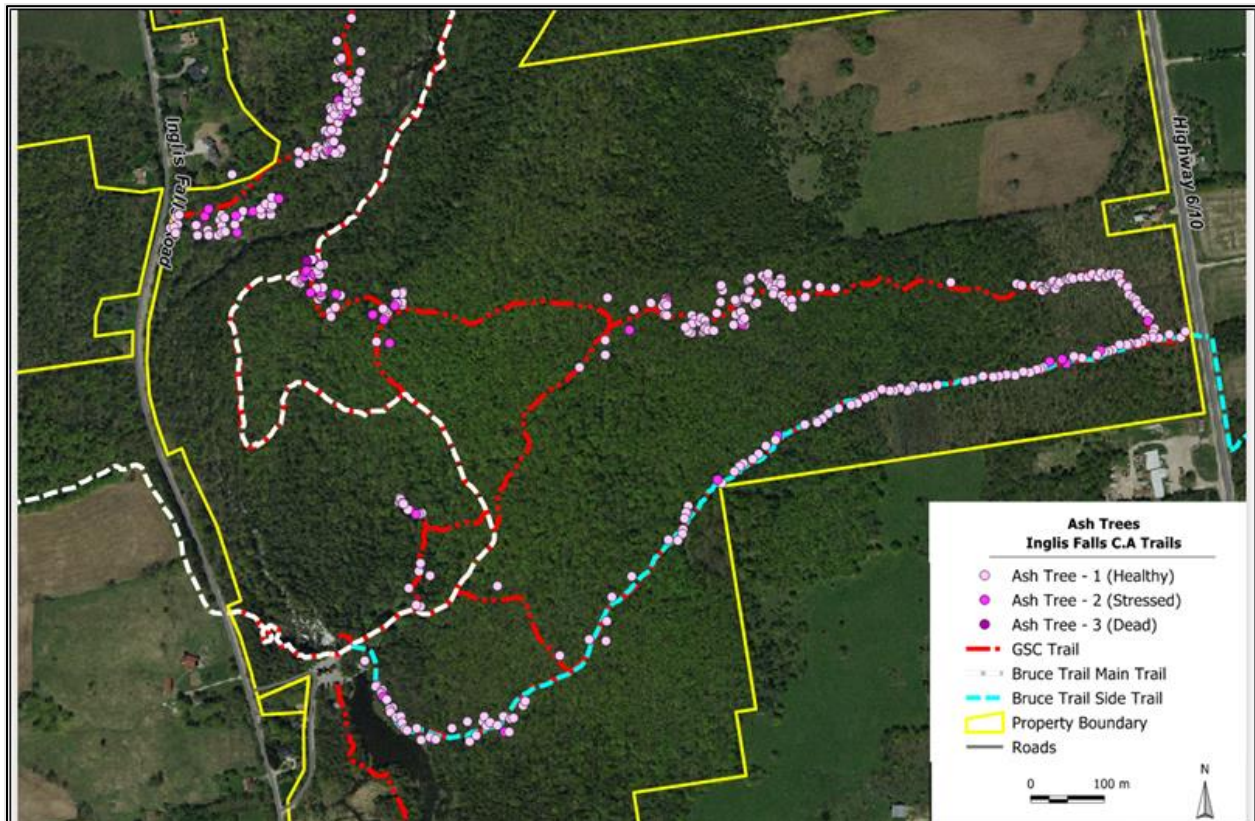
It is challenging to assess the health of an EAB-infected ash tree as the decay occurs on the inside. Trees that may appear to be healthy can decline rapidly by the next season. This poses a risk to GSCA property users, especially given the number of ash trees found along trail networks. In order to come up with a plan to begin managing ash, it is important to know how many ash trees would need to be considered for removal. In the summer of 2021, GSCA operations staff mapped and marked ash trees within striking distance (approximately 20 m) of trails, as well as infrastructure. The trees were rated based on their appeared health, 1 – Healthy, 2 – Stressed and 3 – Dead. This map is shown in Map 19.

The desired outcomes of GSCA's Risk Management Guideline (2018), are to recognize, prioritize, and mitigate risk and liability exposure; and to incorporate a risk management culture into our processes, policies and decisions. There are a significant number of ash trees within striking distance of IFCA trails and the presence of EAB creates an increasing risk for GSCA property users.

Other agencies have addressed this issue on their properties several years ago and have recommended to remove all ash trees within striking distance, regardless of their health. Moving forward GSCA staff will:

- Continue to map and mark ash at GSCA properties with trails and infrastructure which will allow us to determine the total risk and scope of removal;
- Develop a tree removal plan, focusing first on Category 1 lands and then Category 2 as per the Risk Management Guideline;
- Connect with the Bruce Trail Conservancy on ash management along the Bruce Trail sections on GSCA lands;
- Allocate funding under property operations to hire a tree removal professional to begin removing ash on a select number of properties per year, as budget allows;

- Create a tree planting plan where tree removal occurs, in order to avoid ash regeneration.



Map 21 Ash trees along GSCA trails at Inglis Falls Conservation Area

#### 9.5.4 What3words

What3words is a phone application used to help find an individual that may be lost or injured on a property. They have divided the world into 3-metre squares and gave each square a unique combination of three words, making it the easiest way to find and share exact locations. Visitor safety is of high importance, and in order to assist emergency services, GSCA will promote use of what3words on GSCA properties via signage and online communications.

Table 13. Action 5 – Operational/Risk Management

Action 5 - Operational/Risk Management	Delivery	Timeline	Cost Estimate	Management Zone/NEC Permit
Regular inspections to monitor the property for trespassers, vandals and damage to the property	GSCA	Ongoing	In Kind	All
Update Arboretum Plan	IFAA, GSCA	Short (1-3 years)	In Kind	N/A



Proactively manage risks and hazards on the property (hazard trees, trail conditions etc.)	GSCA, BTC	Ongoing	In Kind	All
Annual review of leases and agreements	GSCA	Ongoing	In Kind	Resource Management/No
Replace stone fencing with black steel fence	GSCA	Long (7-20 years)	\$80,000	Access/Yes
Structural review of Bailey Bridge	GSCA	Medium (3-7 years)	\$10,000	Access/No
Ash Management Strategy	GSCA, Arborist	Ongoing	\$5,000/year	All
Promote what3words	GSCA	Short (1-3 years)	In Kind	All

## 10.0 Effectiveness Monitoring

The IFMP is a 20-year plan. Consistent with the timing requirements laid out for implementation, many works identified will occur within 15 years after Plan approval. Table 14 outlines the proposed deliverables from Section 9.0 with a metric indicating how we will measure if this was completed, as well as how this links back to Section 3.0, the objectives of the plan. A progress report will be completed every five years to determine which deliverables have been met. This report will also include a new public survey to gain an analysis of visitor data.

Table 14. Effectiveness Monitoring Plan

Action Area	Deliverable	Metric	Objective
1- Conserve and Protect	Invasive Species Plan developed	Y/N	Natural Heritage
	Invasive species inventory and monitoring	Updated mapping	Natural Heritage
	Invasive species controlled	Annual control of wild chervil at Filtration Plant, the top of Inglis Falls, and the Creamery Hill Side Trail	Natural Heritage
	Determine sensitive features	Map of sensitive features	Natural Heritage, Land Use
	Trail edging installed	100 meters of edging installed on the Glacial Potholes Trail and Bruce Trail on the west side of the falls	Natural Heritage, Land Use, Recreation
	Shoreline restoration of mill pond	10 native species planted, 135 square meters restored	Natural Heritage, Education, Stewardship, Management
	Install "Area Closed for Regeneration" signage	Survey every three years to determine amount of regeneration	Natural Heritage, Land Use, Recreation

	Enclose viewing area on east side of the falls	15 meters of fencing installed	Natural Heritage, Land Use, Management
2- Improve the Visitor Experience	Develop snowshoe trail	650 meters of trail marked	Recreation
	Develop boardwalk trail at Filtration Plant	275-meter boardwalk trail installed	Recreation, Education
	Develop accessible trail through the Arboretum	1.7 km accessible trail developed in partnership with two additional organizations	Recreation
	Create and install all signage	Y/N	Education, Fiscal Sustainability
	Redesign parking lot at Inglis Falls (outside of NEPOSS)	Y/N	Fiscal Sustainability, Management
	Install parking lot at the Filtration Plant	Y/N	Management
	Cut back shrubs along the wall to improve the view	30% of shrubs cut	Recreation
	Implement Capital Asset Plan	Y/N	Fiscal Sustainability
	Construct/renovate Inglis Falls washroom	AODA compliance met	Management
	Pavilion removed at Inglis Falls	Y/N	Management
	Update existing boardwalks on Filtration Plant Trail	Y/N (meters of boardwalk replaced)	Recreation
3 - Enhance and Celebrate Cultural Heritage	Repair Inglis Falls Dam	Y/N	Cultural Heritage, Management
	Filtration Plant Conditions Report	Y/N	Cultural Heritage
	Engineered review of Mill storage building	Y/N	Cultural Heritage
	Community feedback on Mill storage building	20 survey responses, one public information session hosted with at least 10 in attendance	Cultural Heritage, Stewardship, Education
	RFP architect for design of Mill storage building renovation	Y/N	Management
	Construction of Mill storage building	Y/N	Management

	Artifacts display	One display created at GSCA or Grey Roots	Cultural Heritage, Education
	Plexiglass interpretive sign	Y/N	Cultural Heritage, Education
4 - Foster Partnerships and Expand Education	Build and maintain relationship with Indigenous communities	One new relationship formed, meet with M'Wikwedong annually	Cultural Heritage, Education, Stewardship
	Implement joint project with Indigenous communities	Collaborate on at least one project on the Inglis Falls C.A property	Cultural Heritage, Education, Stewardship
	Install outdoor classroom	Y/N, two groups book the facility	Education
	Administrative Centre addition	Y/N	Management, Education, Fiscal Sustainability
	Self-guided hike tour	Development of one phone application	Education, Recreation
5 - Operational/Risk Management	Inspections	Property is inspected six times annually	Management
	Update Arboretum Plan	Y/N	Management, Stewardship
	Manage risks and hazards	Y/N	Management
	Annual review of leases and agreements	Check in with agricultural tenants annually	Management
	Replace sections of stone fence	Y/N	Management
	Structural review of Bailey Bridge	Y/N	Management
	Develop Ash Management Strategy	Y/N	Management, Recreation
	Promote what3 words	Logo incorporated on all signage	Management

## 11.0 Asset Management

The Ontario Ministries of Infrastructure and Transportation define asset management as “the process of making the best possible decisions regarding the building, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective is to maximize benefits, manage risk, and provide satisfactory levels of service to the public in a sustainable manner”.

The Inglis Falls Conservation Area is GSCA's most complex property when it comes to capital asset planning given the mix of historic features that were inherited at the time of acquisition, the Administrative Office needs as well as the other built assets such as pavilions, parking lots



and trails. To better prepare for annual projects and budget allotments, Table 15 below outlines the various assets, replacement costs and approximate replacement years as per GSCA's Capital Asset Plan.

DRAFT

Table 15. Inglis Falls Conservation Area Capital Asset Plan

Asset	Notes	Acquisition Date	Acquisition Cost	Replacement Cost	End Year	Current Age	Scheduled Replacement Year
Bridge	A bailey bridge – for pedestrians mainly, but occasional vehicle traffic for maintenance.	1960, built in 1950	\$5,000	\$120,000.00	2040	71	2050 (but dependent on structural review)
Gates for Bailey Bridge	Gates to block vehicles	2010	\$2,000.00	\$3,000.00	2040	12	2030
Stone Building	Difficult to assess, due to age and condition of building. roof repairs required	1960, built in 1870	\$0.00	\$200,000.00	2040	152	2040
Mural	Allen C. Hilgendorf	1998	\$2,472.5	\$5,000.00	2030	23	2030
Stone Wall	Found a quote from 1989 that the stone was 70\$/ft and it was 72 ft long, 4.5 ft tall	1960's	\$5,040.00	\$80,000.00	2060	62	2032
Cold Cellar Ruins		1960	\$0.00	Will not be replacing	N/A	N/A	N/A

Asset	Notes	Acquisition Date	Acquisition Cost	Replacement Cost	End Year	Current Age	Scheduled Replacement Year
Blue Gates - south and east entrances	Quote from MSD	1980	Unknown	\$2,520.00	2025	42	2025
Filtration Plant	Difficult to assess value	1960. built in 1912	\$11,617.99	Would be repairs, rather than full replacement	1960	101	N/A
Inglis Main Parking Lot	Parking lots outside of NEPOSS	01-Jan-09	\$6,233.00	\$140,000.00	2039	12	2024
Inglis Pavilion		01-Jan-80	\$5,000.00	\$40,000.00	2020	41	No Replacement
Wooden bridge 1 on Filtration Plant Path	Needs to be replaced in the near future	2000	\$0.00	\$20,000.00	2022	22	2023
Wooden bridge 2 on Filtration path	Estimate on year	2000	\$0.00	\$20,000.00	2022	22	2023
Washrooms	minor renovations in 2014 new sewage pump in 2017  2021:Septic bed inspected, new pump installed, tanks pumped	1983	\$69,300.00	\$130,000.00	2017	39	2026



Asset	Notes	Acquisition Date	Acquisition Cost	Replacement Cost	End Year	Current Age	Scheduled Replacement Year
Boardwalks on main trail	Estimate on year	2007	\$0.00	\$20,000.00	2030	15	2030
Wooden stairs to lower lookout	Estimate on year	2000	\$0.00	\$5,000.00	2030	22	2030
Viewing platform	Dwight Burley Construction	2000	\$13,995.00	\$45,000.00	2039	22	2039
Safety Fence	Pressure treated wood - concrete footings	19-Aug-21	\$1,875.00	\$2,000.00	2041	1	2041
Gatehouse		01-Jan-04	\$2,800.00	\$5,000.00	2044	17	2044
Bridge Railing		14-Jul-14	\$3,061.03	\$3,500.00	2044	7	2030
Stone Stairs		1960	\$0.00	\$6,000.00	2050	62	2050
Barn	Unsure we would replace	1998	\$0.00	\$200,000.00	2048	24	2048

Asset	Notes	Acquisition Date	Acquisition Cost	Replacement Cost	End Year	Current Age	Scheduled Replacement Year
Office building	Upgrades have been done to building and will continue to be needed to extend the life of the building	01-Jan-79	\$375,000	\$4,300,000.00	2079	42	2079
6' Picnic Tables	Tables vary in age and have been repaired and replaced over the years as needed	01-Jan-03	\$16,500.00	\$19,000.00	2013	18	2030
9' Picnic Tables	Tables vary in age and have been repaired and replaced over the years as needed	01-Jan-03	\$3,230.00	\$4,100.00	2013	18	2030
Lighting	Should consider energy efficient and "dark sky" led lighting when replacing	01-Jan-93	\$23,000.00	\$40,000.00	2033	28	2024

Asset	Notes	Acquisition Date	Acquisition Cost	Replacement Cost	End Year	Current Age	Scheduled Replacement Year
Arboretum Parking Lot		01-Jan-03	\$70,000.00	\$125,000.00	2033	18	2035
Stone dust pathway	Will be replaced with accessible surfacing	01-Jan-04	\$8,988.00	\$12,000.00	2034	17	2024
Field office compound fence		30-Nov-15	\$16,772.60	\$20,000.00	2025	6	2030
Footbridge	Eagle Bridge	01-Jan-09	\$68,401.97	\$120,000.00	2039	12	2039
Roof		01-Jan-00	\$26,339.00	\$68,500.00	2040	21	2023
Skylights		01-Jan-06	\$50,000.00	\$70,000.00	2047	15	2024
Windows	Should have a tint or blinds to reduce glare to employees	01-Jan-07	\$32,211.00	\$48,000.00	2046	14	2046



Asset	Notes	Acquisition Date	Acquisition Cost	Replacement Cost	End Year	Current Age	Scheduled Replacement Year
Office Building Entrance Signs	Stone signs	01-Jan-07	\$20,228.80	\$28,000.00	2047	14	2040
Pavilion	Domm	31-Aug-10	\$93,675.00	\$100,000.00	2050	11	2050
Water source heat pump	Riddell Contracting	23-May-14	\$35,285.97	\$40,000.00	2054	7	2054

## 12.0 Excluded Recommendations

GSCA appreciates all of those who submitted comments towards development of the plan, however when undergoing a public process such as this, there will ultimately be some recommendations that do not get accepted. Below is a list of some of the recommendations and an explanation as to why they were not included.

1. **Gate arm** – It was recommended that rather than having a gate staff collecting parking fees, an entrance gate could be installed. The reason that this was not recommended to move forward was because there is one residential lot on Falls Road. Therefore, this would create an emergency service issue for accessing the property and complicate winter maintenance.
2. **Smoke free** – While GSCA appreciates the recommendation and is aligned with outdoor recreation and health, it is not apparent at this time that smoking on GSCA lands is an issue, as there are not excess of cigarette butts laying around.

Additionally, GSCA has concerns around enforcement. There are already many non-permitted activities that need to be enforced and this adds more pressure to staff.

3. **Trail connecting with Grey Roots Museum and Archives** – Currently there is private property in between IFCA and Grey Roots, which would require agreements or land donation. Even with a joining property, there are safety concerns with having large numbers of people crossing Inglis Falls Road. This option may also cause parking revenue to decline, which is very important in order to fund conservation area management and offset levy costs.
4. **Trail to the bottom of the falls** – After much consideration, GSCA has decided to continue to restrict access to the bottom of Inglis Falls due to concerns over public safety and ecological integrity.
5. **TRCA recommendations on archeology and heritage designations** – GSCA values the work completed by TRCA and the recommendations to further the understanding of cultural heritage at the site and local area. Unlike TRCA, GSCA does not have an archeology department with trained staff so this would be a major undertaking and expense.

## References

- Chapman, L.J. and D.F. Putnam (1984). The Physiography of Southern Ontario. Ontario Geological Survey, Special Volume 2, 3rd Edition, Government of Ontario.
- Cowell, D.W., and Woerns, N. (1976). Earth Science Candidate Nature Reserves in the Niagara Escarpment Planning Area. Ontario Ministry of Natural Resources, Division of Parks
- Dodge, D. (1972). Comparative Bio-ecology of Rainbow Trout (*Salmo gairdneri* Richardson) of Three Tributaries of the Owen Sound, Lake Huron, published Phd Thesos, Guelph.
- Environment Canada. (2013). How Much Habitat is Enough? Third Edition. Environment Canada. Toronto, Ontario
- Gagné, M., 2015. Archaic. *The Canadian Encyclopedia*. Retrieved from: <https://www.thecanadianencyclopedia.ca/en/article/archaic>
- Gagné, M., 2015. Palaeoindian. *The Canadian Encyclopedia*. Retrieved from: <https://www.thecanadianencyclopedia.ca/en/article/palaeoindian>
- Gagné, M. 2015. Woodland Culture. *The Canadian Encyclopedia*. Retrieved from: <https://www.thecanadianencyclopedia.ca/en/article/woodland-culture>
- Hill, A. (1961). The Ecological Basis for Land-Use Planning. Ontario Department of Lands and Forests. Research Report Number 46.
- Lewis, C. and Brinker, S. (2017). Opuscula Philolichenum, 16: 153-187. Retrieved online from: [http://sweetgum.nybg.org/images3/2233/271/op16p4\\_17March2017.pdf](http://sweetgum.nybg.org/images3/2233/271/op16p4_17March2017.pdf)
- McMillian A. D., Yellowhorn, E. (2004) *First Peoples in Canada*. D&M Publishers. Vancouver, Canada.
- McMullen, Stephanie., 1997. *Disunity and dispossession: Nawash Ojibwa and Potawatomi in the Saugeen Territory, 1836 – 1865*. University of Calgary, Calgary, AB.
- Ministry of Natural Resources and Forestry. (2017). *Niagara Escarpment Plan*.
- Ministry of Natural Resources and Forestry. (2021). *Niagara Escarpment Parks and Open Spaces Systems Planning Manual*.
- Tovell, W.M., (1992). A Guide to the Geology of the Niagara Escarpment, The Niagara Escarpment Commission and the Ontario Heritage Foundation, Ontario.
- Wester, M., Henson, B., Crins, W., Uhlig, P and Gray, P. (2018). Science and Research Branch Ministry of Natural Resources and Forestry



## Listing of External Data Layers

Map 1. Sydenham River:

Map 2. NEC Designation. (2021). Retrieved from NEC, here, <https://geohub.lio.gov.on.ca/datasets/lio::niagara-escarpment-policy-area/about>

Map 3. ANSI. (2021). Retrieved from MNR Resources Planning and Development Policy Branch, here, <https://geohub.lio.gov.on.ca/datasets/lio::areas-of-natural-and-scientific-interest-ansi/about>

Map 4. Surficial Geology. (2021). Retrieved from Ontario Ministry of Agriculture, Food, and Rural Affairs and Agriculture and Agri-Food Canada, here, <https://geohub.lio.gov.on.ca/datasets/ontarioca11::soil-survey-complex/about>

Map 5. Soils. (2021). Retrieved from Ontario Ministry of Agriculture, Food, and Rural Affairs and Agriculture and Agri-Food Canada, here, <https://geohub.lio.gov.on.ca/datasets/ontarioca11::soil-survey-complex/about>

DRAFT

## APPENDIX A

Table 1. Water quality results and grading for the Sydenham River from the subwatershed report card

Indicators	2003-2008	2008-2013	2013-2018	Grade Ranges	Guideline *	Indicator Description
Total Phosphorus (mg/L)*	0.026 B (n=40)	0.021 B (n=35)	0.023 B (n=40)	A= <0.020 B=0.020-0.030 C=0.031-0.060 D=0.061-0.180 F=>0.180	0.030 B Aquatic Life	Phosphorus is found in products such as fertilizer and detergents, and contributes to excess algal growth which creates low oxygen in streams and lakes.
Bacteria (# per 100 mL)**	N/A	65.68 B (n=15)	59.68 B (n=40)	A=0-30 B=31-100 C=101-300 D=301-1000 F=>1000	100 B Recreation	E.coli is a fecal coliform bacteria found in human and animal waste. It is a strong indicator of the potential to have organisms present that could harm human health.
Benthic Score* FBI Index	N/A	5.48 C (n=3)	4.85 B (n=1)	A=0.00-4.25 B=4.26-5.00 C=5.01-5.75 D=5.76-6.50 F=6.51-10.00	<5.00 B Target Only	Benthic macroinvertebrates are small aquatic animals that live at the bottom of streams. These organisms are good indicators of water quality and are commonly used to diagnose watershed health.

Table 2. Benthic invertebrate scoring for the Sydenham River

	2003-2008	2008-2013	2013-2018	Grade Ranges	Guideline
Benthic Score*** BioMAP (Qualitative)	3.15 A (n=3)	3.06 A (n=3)	3.20 A (n=1)	A=>3.0 B=2.4-2.99 C=2.0-2.39 D=1.5-1.99 F=<1.5	>3.2 B Target Only

Table 3. Sydenham River water chemistry results

Chemical Parameters	2003-2008	2008-2013	2013-2018
Nitrate (mg/L):	0.69 (n=40)	0.66 (n=36)	0.63 (n=40)
Chloride (mg/L):	18.23 (n=40)	15.9 (n=36)	14.6 (n=40)
Particulate residue (mg/L):	3.83 (n=40)	3.2 (n=35)	2.93 (n=40)



## APPENDIX B

### **Bird Survey Report - Point Count Method**

### **GSCA Inglis Falls / Arboretum Property**

**June 2019**

By Elaine Van Den Kieboom, Ecological Lands Technician



## PROJECT OVERVIEW

The main goal of this project is to establish baseline inventory data of the species of birds that are occupying and breeding in the various habitats within the Grey Sauble Conservation Authority's Inglis Falls / Arboretum Conservation Area.

This property consists of a variety of different habitats, including coniferous forest, hardwood forest, wetlands, open water and river complexes, all occurring on the karst topography of the Niagara Escarpment, as well as open meadow / field habitat, and mixed forests occurring near the base of the escarpment.

The Point Count methodology for this survey is outlined in this report and is based on the protocol for conducting the Ontario Breeding Bird Atlas Surveys. Point counts of all birds observed will be recorded at regular intervals along predetermined routes and in predetermined locations. Any evidence of breeding or nesting activity observed will also be recorded. The data forms developed for the Ontario Breeding Bird Atlas will be used to record all observations for each point count location, and can be found in Appendix A. For the purposes of this project, each point count location will be georeferenced with a GPS and mapped. These points will be assigned a reference number that corresponds to the data form that the observations were recorded on for each point location. Circle chart location mapping of the bird's position will not be required.

## POINT COUNT BIRD SURVEY PROTOCOL

### Point Count Survey Schedule

As mentioned above, Point Counts of all birds observed will be recorded at regular intervals along predetermined routes and in predetermined locations in order to intercept a variety of habitats. Due to limitations with available resources, each point will be surveyed once between June 1<sup>st</sup> and June 30<sup>th</sup> which in Southern Ontario, is the peak time when many birds are breeding and nesting.

### Weather and Timing

Counts should be done within five hours after dawn, when most diurnal birds are typically active. The weather on the day of the count must be favourable and the counts should be postponed if it is persistently raining, or in the event of thick fog, or if the winds are greater than 19 km/hr (>3 of the Beaufort Scale. See below).

**Beaufort Wind Scale Table**

Beaufort Scale	Wind Speed (km/h)	Description	Visual Cues
0	<1	Calm	Smoke rises vertically
1	1-5	Light	Direction of wind shown by smoke drift
2	6-11	Light breeze	Leaves rustle, can feel wind on face.
3	12-19	Gentle breeze	Leaves and small twigs in constant motion. sway
4	20-28	Moderate breeze	Dust rises, small branches move

5	29-38	Fresh breeze	Small trees with leaves begin to sway
6	39-49	Strong breeze	Large branches in motion.

Ideally all points on the route scheduled for one day, should be surveyed in one day but if it is not possible due to worsening weather throughout the morning, then the time and at the point in which the count was terminated, should be recorded.

### Conducting Point Count Surveys

Surveyors should familiarize themselves with the data forms before starting the survey. Before leaving a Point Count Station, be sure that all relevant information has been recorded. All survey points should be at least 250-metres apart, and the GPS location should be recorded for each point.

Upon arriving at a designated point allow for a short 10-30 second “rest” to allow for your breathing to slow and your ears to “tune in” before starting the count.

The Point Count involves one surveyor standing at a specific point and counting all birds seen and heard in all directions, during a 5-minute period. When recording the species on the Point Count Form indicate whether it was observed less than 100-metres away or greater than 100-metres away. If the same individual bird is viewed at more than one station, then it should only be recorded at the first station it was observed at within 100-metres. Care should be taken to avoid “tuning out” to any constant repetitive bird calls, ie Red Eyed Vireo which is a specie that is typically constantly singing.

### Recording Habitat Information

The Ontario Breeding Bird Atlas protocol divides the province into different zones, and then further divides the zones into regions. For our location (Inglis Falls – Owen Sound), we are within Region 9, of the South Central Ontario Zone and will be recording our data on the forms for this region. On the Point Count Form for South Central Ontario, habitat information for the two dominant habitats within a 100-metres circle of the sample point should be filled in for each point location. The main habitats can be recorded on your form using a two-character code, which are listed below. The first character is the “Class” and consists of a single capital letter (A-H), corresponding to the major habitat classes. The second character is the subclass (“Sub.” on the data form), consisting of a single number (1-7).

Habitat Codes	
A – Woodland	E – Wetlands
1 – Deciduous	1 - Sedge/grass
2 – Coniferous	2 - Reeds/cattail
3 - Mixed (>10% of each A1 and A2)	3 - Shrubs/bog/fen
B - Grassland, Agriculture and Shrubland	F - Wetlands with mainly open water
1 – Grassland	1 - Sheet water (shallow/impermanent)
2 – Shrubland	2 - Pond/dugout (<0.25 ha)
3 - Planted grass	3 - Small lake (0.25-5 ha)



4 - Tilled crop	4 - Lake (>5 ha)
5 - Overgrown/old field	5 - Stream (< 3 m wide)
6 - Orchard	6 - River (> 3 m wide)
7 - Vineyard	7 - Ditch/canal with water
C – Tundra	G - Saltwater coastal sites
1 - Dry vegetated tundra/meadow	1 - Marine shore
2 - Wet vegetated tundra/meadow	2 - Estuarine shore
3 - Mix of wet and dry tundra	3 - Brackish lagoon shore
4 - Rock/gravel	
5 - Polygonal tundra	H – Rock
	1 - Cliff
D - Human Sites	2 - Scree/boulder slope
1 – Urban	3 - Rock outcrop
2 – Rural	4 - Quarry
	5 - Mine spoil/slag heap

If the habitat does not fit within one of the category codes shown above, or if you would like to record additional detail (such as whether the forest has been recently burned or logged) you may do so in the “Structure” and “Modification” boxes on the data form. These boxes will allow you to fill in up to four additional codes. Please see the ONRS Coding Card for additional habitat codes and instructions in Appendix B.

### Breeding Evidence Data Forms

During the Point Count Survey all birds should be counted, including fledged young, and any observations of breeding or nesting activity should be recorded on the Ontario Breeding Bird Form. If an active nest is discovered within a Point Count Station, its presence and specie should be recorded on the form, but do not disturb or interfere with the nest.

There are four levels of evidence:

1. Species observed in breeding season (no indication of breeding).
2. Possible breeding.
3. Probable breeding.
4. Confirmed breeding.

Included on this form is a key to the codes for the information to fill in on the Ontario Breeding Bird Form:

CODE	BREEDING EVIDENCE
	<b>OBSERVED</b>
X	Species observed in its breeding season (no evidence of breeding). Presumed migrants should not be recorded.
	<b>POSSIBLE BREEDING</b>
H	Species observed in its breeding season in suitable nesting habitat.
S	Singing male present, or breeding calls heard, in its breeding season in suitable nesting habitat.

	<b>PROBABLE BREEDING</b>
P	Pair observed in their breeding season in suitable nesting habitat
T	Permanent territory presumed through registration of territorial song on at least 2 days, a week or more apart, at the same place.
D	Courtship or display between a male and a female or 2 males, including courtship feeding or copulation.
V	Visiting probable nest site.
A	Agitated behaviour or anxiety calls of an adult.
B	Brood patch on adult female or cloacal protuberance on adult male.
N	Nest-building or excavation of nest hole.
	<b>CONFIRMED BREEDING</b>
DD	Distraction display or injury feigning.
NU	Used nest or egg shell found (occupied or laid within the period of the study).
FY	Recently fledged young or downy young, including young incapable of sustained flight.
AE	Adults leaving or entering nest site in circumstances indicating occupied nest.
FS	Adult carrying faecal sac.
CF	Adult carrying food for young.
NE	Nest containing eggs.
NY	Nest with young seen or heard.

### Rare / Colonial Species

On the Breeding Bird Form the provincially rare species are marked with a “t” symbol and colonial species of birds are marked with a double “S” symbol. If breeding evidence of a rare species or a nesting colony of a colonial species is encountered the information should be filled out on the Rare / Colonial Species Reporting Form – Appendix A. One form should be filled out for each species. Up to six sightings of the same species can be filled out on the same form.

Colonial species can be sensitive to disturbances at the colony site so the number of nests should be estimated from a distance.

### STATION SELECTION

The area to be surveyed was split into two sections, a north section which included the Arboretum and the some of the forested areas north of the Inglis Falls, and a south section which included Inglis Falls and surrounding forested areas south of the GSCA administration building.

GSCA staff, along with advice from Peter Middleton (Owen Sound Field Naturalists) selected the locations of 10 - Point Count Survey Stations in the northern portion of the Inglis Falls / Arboretum property, and 10 - Point Count Survey Stations in the southern portion of the Inglis Falls property.

Maps showing the locations of the Survey Stations can be found in Appendix A

The stations were selected to represent as many different habitats as possible while keeping the stations at least 250 m apart. Details of the Point Count Station descriptions are tabulated can be reviewed in Appendix B.

## **RESULTS**

Survey observations were carried out on June 2, 2019 for the north section of the property, and on June 22 for the south section of the property. Locally active birders Erik Van Den Kieboom and Kiah Jasper were the main observers for these surveys and were assisted by Peter Middleton (OSFN) and GSCA staff Elaine Van Den Kieboom to conduct these surveys.

The weather on both days was mild and sunny, with a wind speed on the Beaufort scale of 0-1, with no precipitation.

On June 2, 2019 a total of 38 species were seen or heard. Of those 38 two of the species were Species At Risk: Eastern Wood Pewee and Golden Winged Warbler both listed on the Species At Risk registry for Ontario as Special Concern.

Other birds associated with open meadow terrain and forest interior birds were recorded in suitable associated habitat.

On June 22, 2019 a total of 32 species were seen or heard. Of those 32 only one of the species were Species At Risk: Eastern Wood Pewee listed on the Species At Risk registry for Ontario as Special Concern.

There were two raptors observed within this survey, a Cooper's Hawk and a Merlin, and it is believed that the Cooper's Hawk was nesting in the area near where it was recorded but the nest was not located. The majority of all the birds observed were species that would be expected to be associated with a forest habitat.

These initial surveys provide a preliminary baseline for future monitoring. Tabulated results of the data can be found in Appendix C. The raw field data sheets can be found in Appendix D.

## **SAFETY CONSIDERATIONS**

The safety of any staff, volunteers, and visitors to any of Grey Sauble Conservation Authority's property is of utmost importance. Surveyors should be working in teams of at least two people, and should have a cell phone, map, compass and GPS.

Hazards including rough terrain, fast moving water, wildlife issues (i.e. black bear encounters, noxious plants, biting and stinging insects) are to be expected to exist in the environment where the surveys will occur.



Precautions should be taken to avoid any hazards that one may encounter while conducting the bird surveys.

Further information can be obtained from the MNRF pamphlet, "Living with Black Bears in Ontario: a guide to co-existing" available at: <http://www.mnr.gov.on.ca/MNR/pubs/pubm enu.html>

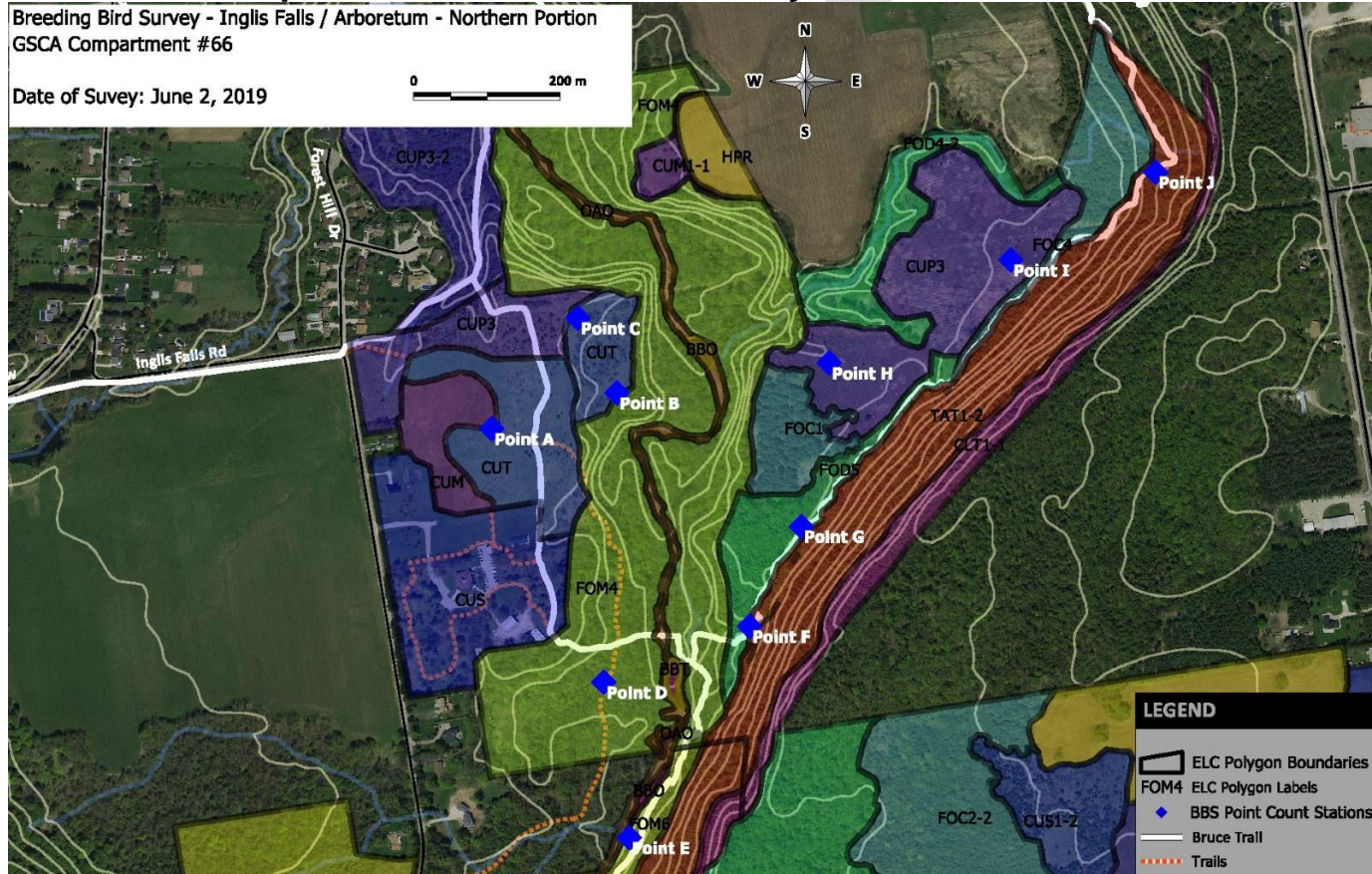
## **REFERENCES**

Ontario Breeding Bird Atlas. 2001. Guide for Participants. Atlas Management Board, Federation of Ontario Naturalists, Don Mills.

DRAFT

## Appendix A

### Maps of Point Count Bird Survey Station Locations



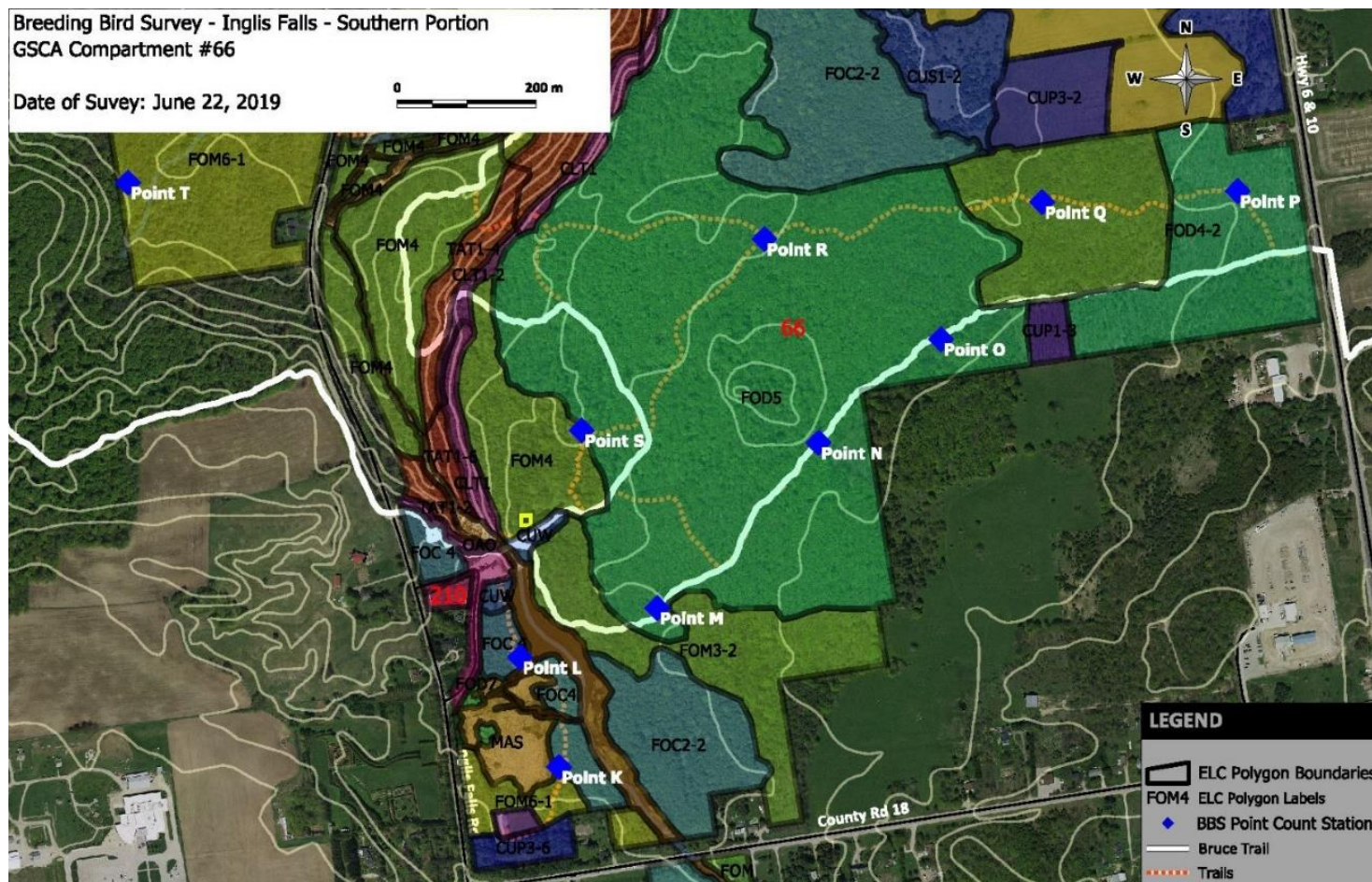
Grey Sauble Conservation (GSC) makes regular edits to the associated regulation and base data mapping based on the most current information. By using and/or downloading this data the user agrees to inform GSC of any errors in the mapping. All of the included mapping is made available "AS IS", "AS AVAILABLE", and "WITH ALL FAULTS" without representations or warranties of any kind, either express or implied, as to the accuracy, completeness, reliability, currency, merchantability, fitness for purpose, title or otherwise. The entire risk as to the results and performance of the Map Products, IP, Data and Third Party Data is assumed by the user. The user shall indemnify and save harmless the GSC, its directors and officers, its representatives and employees, and Third Parties (collectively, the "Indemnitee") from and against any and all liabilities, damages, costs or expenses awarded against or incurred or suffered by the Indemnitee arising out of any action or proceeding commenced or maintained by any entity in respect of the users use of the Maps, Data, IP or Third Party Data. Produced by GSC with Data supplied under Licence by Members of the Ontario Geospatial Data Exchange. © Queen's Printer for Ontario and its licensors. [2018] May Not be Reproduced without Permission. THIS IS NOT A PLAN OF SURVEY. The use of these Data does not constitute an endorsement by the MNR or the Ontario Government of use of such Data. This mapping contains products of the South Western Ontario Orthophotography Project (SWOOP). These images were taken in 2015 at 20 cm resolution. They are the property of GSC. By accepting this data you are agreeing not to edit this data. You also agree to inform GSC of any errors in mapping or missing base features that you are aware of. Base mapping produced under license with the Ontario Ministry of Natural Resources through the Ontario Geospatial Data Exchange. Copyright© Queen's Printer 2018.



Breeding Bird Survey - Inglis Falls - Southern Portion  
GSCA Compartment #66

Date of Survey: June 22, 2019

0 200 m



LEGEND

- ELC Polygon Boundaries
- FOM4 ELC Polygon Labels
- BBS Point Count Stations
- Bruce Trail
- Trails

Grey Sauble Conservation (GSC) makes regular edits to the associated regulation and base data mapping based on the most current information. By using and/or downloading this data the user agrees to inform GSC of any errors in the mapping. All of the included mapping is made available "AS IS", "AS AVAILABLE", and "WITH ALL FAULTS" without representations or warranties of any kind, either express or implied, as to the accuracy, completeness, reliability, currency, merchantability, fitness for purpose, title or otherwise. The entire risk as to the results and performance of the Map Products, IP, Data and Third Party Data is assumed by the user. The user shall indemnify and save harmless the GSC, its directors and officers, its representatives and employees, and Third Parties (collectively, the "Indemnitee") from and against any and all liabilities, damages, costs or expenses awarded against or incurred or suffered by the Indemnitee arising out of any action or proceeding commenced or maintained by any entity in respect of the user's use of the Maps, Data, IP or Third Party Data. Produced by GSC with Data supplied under Licence by Members of the Ontario Geospatial Data Exchange. © Queen's Printer for Ontario and its licensors. [2018] May Not Be Reproduced without Permission. THIS IS NOT A PLAN OF SURVEY. The use of these Data does not constitute an endorsement by the MNR or the Ontario Government of use of such Data. This mapping contains products of the South Western Ontario Orthophotography Project (SWOOP). These images were taken in 2015 at 20 cm resolution. They are the property of GSC. By accepting this data you are agreeing not to edit this data. You also agree to Inform GSC of any errors in mapping or missing base features that you are aware of. Base mapping produced under license with the Ontario Ministry of Natural Resources through the Ontario Geospatial Data Exchange. Copyright © Queen's Printer 2018.



## Appendix B

### Inglis Falls Breeding Bird Survey June 2019 - Point Count Station Details

Inglis Falls Breeding Bird Survey June 2019 - Point Count Station Info

Mainfold ID	Map Label	Date and Time	Waypoint Name	ELC Code of BBS Point Count Station Location	Description
37136480	Point A	2/6/2019 6:36	Sta A wpt 02 06 2019 06:36:48	CUM/CUT	Point Count Station A - dinedge between cultural field / meadow and cultural thicket.
37136481	Point B	2/6/2019 6:56	Sta B wpt 02 06 2019 06:56:29	CUT	Point Count Station B - old field open shrubby
37136477	Point C	2/6/2019 7:12	Sta C wpt 02 06 2019 07:12:26	CUP/CUT	Point Count Station C - edge of pine plantation, fairly open grassy.
37136478	Point D	2/6/2019 7:39	Sta D wpt 02 06 2019 07:39:05	FOM4	Point Count Station D - cedar / hardwood mixed forest, near river.
37136479	Point E	2/6/2019 7:58	Sta E wpt 02 06 2019 07:58:14	FOM6	Point Count Station E - in mixed forest talus slope adjacent to the river. River was very loud making it difficult to hear birds.
37136485	Point F	2/6/2019 8:12	Sta F wpt 02 06 2019 08:12:11	FOD5	Point Count Station F - in deciduous forest at base of talus slope
37136486	Point G	2/6/2019 9:45	Sta G wpt 02 06 2019 09:45:06	FOD5	Point Count Station G - in deciduous forest at base of talus slope
37136482	Point H	2/6/2019 8:35	Sta H wpt 02 06 2019 08:35:01	CUP3	Point Count Station H - old field open shrubby - young pine plantation
37136483	Point I	2/6/2019 9:15	Sta I wpt 02 06 2019 09:15:21	CUP3	Point Count Station I - old field open shrubby, wet areas - young spruce plantation
37136484	Point J	2/6/2019 9:29	Sta J wpt 02 06 2019 09:29:33	TAT1 2	Point Count Station J - cedar mixed forest, talus slope near river.
42629070	Point K	22/6/2019 5:48	Sta K wpt 22 06 2019 05:48:44	FOC4	Point Count Station K - cedar forest at edge of wetland
42629071	Point L	22/6/2019 5:57	Sta L wpt 22 06 2019 05:57:15	FOC4	Point Count Station L - cedar forest near bridge between wetland and river
42629072	Point M	22/6/2019 6:15	Sta M wpt 22 06 2019 06:15:04	FOD5	Point Count Station M - deciduous forest some hemlock
42629073	Point N	22/6/2019 6:29	Sta N wpt 22 06 2019 06:29:24	FOD5	Point Count Station N - deciduous forest
42629074	Point O	22/6/2019 6:40	Sta O wpt 22 06 2019 06:40:32	FOD5	Point Count Station O - deciduous forest some hemlock
42629075	Point P	22/6/2019 6:59	Sta P wpt 22 06 2019 06:59:01	FOD4 2	Point Count Station P - open deciduous forest close to hwy 6 (noise issues)
42629076	Point Q	22/6/2019 7:12	Sta Q wpt 22 06 2019 07:12:35	FOM3 2	Point Count Station Q - mixed forest maple hemlock close to edge of field
42629077	Point R	22/6/2019 7:28	Sta R wpt 22 06 2019 07:28:33	FOD5	Point Count Station R - deciduous forest.
42629078	Point S	22/6/2019 7:48	Sta S wpt 22 06 2019 07:48:56	FOM4	Point Count Station S - mixed forest near potholes
42629079	Point T	22/6/2019 8:36	Sta T wpt 22 06 2019 08:36:49	FOM6 1	Point Count Station T - mixed forest, area of heavy bicycle use on trails

## Appendix C

### Inglis Falls Breeding Bird Survey Results - June 2019

Inglis Falls / Arboretum Compartment # 66 - Point Count Breeding Bird Surveys - June 2, 2019

List of Bird Species					Date of Survey - June 2, 2019, (North section)									
					ELC Code									
ENGLISH COMMON NAME	SCIENTIFIC NAME	S RANK	SARO STATUS	SARA STATUS	CUM/CUT	CUT	CUP / CUT	FOM4	FOM6	FOD5	FOD5	CUP3	CUP3	TAT1.2
					Point Count A	Point Count B	Point Count C	Point Count D	Point Count E	Point Count F	Point Count G	Point Count H	Point Count I	Point Count J
American Crow	Corvus brachyrhynchos	S5B										1		
American Goldfinch	Spinus tristis	S5B			3	3						1		
American Redstart	Setophaga ruticilla	S5B			1									
American Robin	Turdus migratorius	S5B								2				
Baltimore Oriole	Icterus galbula	S4B			1								1	
Bay breasted Warbler	Setophaga castanea	S5B				2								
Black and white Warbler	Mniotilta varia	S5B				1	2				1			
Black capped Chickadee	Parus atricapillus	S5				1		1				1		
Black throated Blue Warbler	Setophaga caerulescens	S5B								1				
Black throated Green Warbler	Setophaga virens	S5B						1			1			
Blue Jay	Cyanocitta cristata	S5			1		1			1	1	1		1
Brown headed Cowbird	Molothrus ater	S4B				1								
Cedar Waxwing	Bombycilla cedrorum	S5B			5	15								
Common Yellowthroat	Geothlypis trichas	S5B										4		
Eastern Blue bird	Sialia sialis	S5B			1									
Eastern Kingbird	Tyrannus tyrannus	S4B											1	
Eastern Phoebe	Sayornis phoebe	S5B												1
Eastern Wood pewee	Contopus virens	S4B	SC	SC							1		1	
Golden winged Warbler	Vermivora chrysoptera	S4B	SC	THR							1	1		
Great Crested Flycatcher	Myiarchus cinerascens	S4B										1		
House Wren	Troglodytes aedon	S5B			1		2							
Indigo Bunting	Passerina cyanea	S4B				2	1					3		
Least Flycatcher	Empidonax minimus	S4B											1	1
Mourning Warbler	Geothlypis philadelphia	S4B									1	1		
Nashville Warbler	Oreothlypis ruficapilla	S5B			1		1			1	1			1
Northern Cardinal	Cardinalis cardinalis	S5			1									
Ovenbird	Seiurus aurocapilla	S4B								2	1			
Red bellied Woodpecker	Melanerpes formicivorus	S4								1				
Red eyed Vireo	Vireo olivaceus	S5B					6	1	1	1	1	2		
Red winged Blackbird	Agelaius phoeniceus	S4			5									
Rose breasted Grosbeak	Phainopepla nitens	S4B			1		1				1	1	3	1
Ruby throated Hummingbird	Archilochus colubris	S5B										1		
Song Sparrow	Melospiza melodia	S5B			1	1			1		1	2	1	
Swamp Sparrow	Melospiza georgiana	S5B											1	
Warbling Vireo	Vireo gilvus	S5B											2	
White breasted Nuthatch	Sitta carolinensis	S5					1							
Winter Wren	Troglodytes hiemalis	S5B								2	1	1		
Yellow bellied Sapsucker	Sphyrapicus varius	S5B												1

Total of 38 Species Observed during Breeding Bird Survey - June 2 2019  
Data status referenced from NHIC

Inglis Falls / Arboretum Compartment # 66 - Point Count Breeding Bird Surveys - June 22, 2019

List of Bird Species					Date of Survey - June 22, 2019 ( South Section )									
					ELC Code									
ENGLISH COMMON NAME	SCIENTIFIC NAME	S RANK	SARO STATUS	SARA STATUS	FOC4 Point Count K	FOC4 Point Count L	FOD5 Point Count M	FOD5 Point Count N	FOD5 Point Count O	FOD4 2 Point Count P	FOD5 2 Point Count Q	FOD5 Point Count R	FOD4 Point Count S	FOD6 1 Point Count T
American Crow	<i>Corvus brachyrhynchos</i>	S5B					1			2				
American Goldfinch	<i>Spinus tristis</i>	S5B								3				
American Redstart	<i>Setophaga ruticilla</i>	S5B				1			1					
American Robin	<i>Turdus migratorius</i>	S5B			2	1				1				1
Black and white Warbler	<i>Mniotilta varia</i>	S5B				2		1						
Blackburnian Warbler	<i>Setophaga fusca</i>	S5B						1				1		
Black-capped Chickadee	<i>Parus atricapillus</i>	S5			2		1			1	2			
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	S5B						1				1	1	
Black-throated Green Warbler	<i>Setophaga virens</i>	S5B						1						1
Blue Jay	<i>Cyanocitta cristata</i>	S5						1	2	1				
Brown Creeper	<i>Certhia americana</i>	S5B					1		1					
Cedar Waxwing	<i>Bombus cedrorum</i>	S5B			1	2	1							
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	S5B								1				
Chipping Sparrow	<i>Spizella passerina</i>	S5B			1									
Common Grackle	<i>Quiscalus quiscula</i>	S5B			5	6			1					
Cooper's Hawk	<i>Accipiter cooperii</i>	S4						1						
Eastern Phoebe	<i>Sayornis phoebe</i>	S5B			1									
Eastern Wood-pewee	<i>Contopus virens</i>	S4B	SC	SC	1		1	2	1				1	1
Field Sparrow	<i>Spizella pusilla</i>	S4B									1			
Great Crested Flycatcher	<i>Myiarchus cinerascens</i>	S4B						1					1	
House Wren	<i>Troglodytes aedon</i>	S5B								1				
Indigo Bunting	<i>Passerina cyanea</i>	S4B								1				
Merlin	<i>Falco columbarius</i>	S5B								1				
Mourning Warbler	<i>Geothlypis philadelphia</i>	S4B								1				
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	S5B									1			
Ovenbird	<i>Seiurus aurocapillus</i>	S4B					1	2	2		1	2	1	1
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	S4						1				1		
Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B			2	2	3	2	2	2	2	3	1	1
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S4			1									1
Scarlet Tanager	<i>Piranga olivacea</i>	S4B											1	
Song Sparrow	<i>Melospiza melodia</i>	S5B			2	3			1	1	2			
Winter Wren	<i>Troglodytes hiemalis</i>	S5B					2						2	1

Total of 32 Species Observed during Breeding Bird Survey - June 22 2019  
Data status referenced from NHC



# **Appendix D** **Inglis Falls Breeding Bird Survey Field Data Sheets - June 2019**

*Inglis Falls Arboretum - June 2, 2019*

**Ontario Breeding Bird Atlas - Point Count Form - South Central**

Zone: ☐ Block: ☐ Square: ☐ Atlaser Name: Erk Van Den Kieboom / Elaine VDK Year: 2019

**Point A**

Designated Number: 6102

UTM (if not designated point):  
☐ On Road ☒ GPS ☐ NAD83  
☐ Off Road ☐ Map ☐ NAD27

Mon: 6 Day: 10 UTM Easting: 2

Start Time (24-hr): 6:30

UTM Northing: 6:56

Habitat: Class Sub: B 3 Structure (Optional): Modification (Optional):

1st: B 3 2nd:

**Point B**

Designated Number: 6102

UTM (if not designated point):  
☐ On Road ☒ GPS ☐ NAD83  
☐ Off Road ☐ Map ☐ NAD27

Mon: 6 Day: 10 UTM Easting: 2

Start Time (24-hr): 6:56

UTM Northing: 6:56

Habitat: Class Sub: B 5 Structure (Optional): EFG Modification (Optional):

1st: B 5 2nd: EFG

**Point C**

Designated Number: 6102

UTM (if not designated point):  
☐ On Road ☒ GPS ☐ NAD83  
☐ Off Road ☐ Map ☐ NAD27

Mon: 6 Day: 10 UTM Easting: 2

Start Time (24-hr): 7:12

UTM Northing: 6:56

Habitat: Class Sub: B 5 Structure (Optional): EFG Modification (Optional): 13 (on rocky)

1st: B 5 2nd: EFG

Species Name	Point A <100m >100m	Point B <100m >100m	Point C <100m >100m
Killdeer			
Ring-billed Gull			
Rock Dove			
Mourning Dove			
Downy Woodpecker			
Northern Flicker			
Eastern Wood-Pewee			
Least Flycatcher			
Eastern Phoebe			
Great Crested Flycatcher			
Eastern Kingbird			
Warbling Vireo			
Red-eyed Vireo			<u>6</u>
Blue Jay	<u>1</u>		<u>1</u>
American Crow			
Tree Swallow			
Barn Swallow			
Black-capped Chickadee		<u>1</u>	
White-breasted Nuthatch			<u>1</u>
House Wren	<u>1</u>		<u>2</u>
Veery			
Wood Thrush			
American Robin			
Gray Catbird			
Brown Thrasher			
European Starling			
Cedar Waxwing	<u>5</u>	<u>15</u>	
Yellow Warbler			
Black-and-white Warbler		<u>1</u>	<u>2</u>
American Redstart		<u>1</u>	
Ovenbird			
Northern Waterthrush			

Species Name	Point A <100m >100m	Point B <100m >100m	Point C <100m >100m
Common Yellowthroat			
Scarlet Tanager			
Chipping Sparrow			
Savannah Sparrow			
Song Sparrow	<u>1</u>	<u>1</u>	
Swamp Sparrow			
White-throated Sparrow			
Northern Cardinal		<u>1</u>	
Rose-breasted Grosbeak	<u>1</u>		<u>1</u>
Indigo Bunting		<u>2</u>	<u>1</u>
Bobolink			
Red-winged Blackbird	<u>5</u>		
Eastern Meadowlark			
Common Grackle			
Brown-headed Cowbird		<u>1</u>	
Baltimore Oriole		<u>1</u>	
American Goldfinch	<u>3</u>	<u>3</u>	
House Sparrow			

Additional species or species with > 100 individuals

Species Name	Species Code	Point A <100m >100m	Point B <100m >100m	Point C <100m >100m
Eastern Bluebird	E A B L	<u>1</u>		
Nashville Warbler	N A W A		<u>1</u>	<u>1</u>
Bay Breasted Warbler	B B W A		<u>2</u>	

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 4573522884

# Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone		Block		Square		Atlas Number		Atlas Name		Year	
								Erik & Elaine VanDenKieboom		2009	

Point	Designated Number	UTM (if not designated point)	Mon	Day	Start Time (24-hr)	Habitat: Class Sub	Structure (Optional)	Modification (Optional)
D		<input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27	6	10	2	A 3	CD	I
E		<input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27	6	10	2	A 3	CD	K
F		<input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27	6	10	2	A 1	CD	AL

Species Name	Point D <100m >100m	Point E <100m >100m	Point F <100m >100m	Species Name	Point D <100m >100m	Point E <100m >100m	Point F <100m >100m
Killdeer				Common Yellowthroat			
Ring-billed Gull				Scarlet Tanager			
Rock Dove				Chipping Sparrow			
Mourning Dove				Savannah Sparrow			
Downy Woodpecker				Song Sparrow		1	
Northern Flicker				Swamp Sparrow			
Eastern Wood-Pewee				White-throated Sparrow			
Least Flycatcher				Northern Cardinal			
Eastern Phoebe				Rose-breasted Grosbeak			
Great Crested Flycatcher				Indigo Bunting			
Eastern Kingbird				Bobolink			
Warbling Vireo				Red-winged Blackbird			
Red-eyed Vireo	1	1	1	Eastern Meadowlark			
Blue Jay			1	Common Grackle			
American Crow				Brown-headed Cowbird			
Tree Swallow				Baltimore Oriole			
Barn Swallow				American Goldfinch			
Black-capped Chickadee	1			House Sparrow			
White-breasted Nuthatch				Additional species or species with > 100 individuals			
House Wren				Species Name	Species Code	Point D <100m >100m	Point E <100m >100m
Veery				Black-throated Green Warbler	BTNW	1	
Wood Thrush				Black-throated Blue Warbler	BTBW		1
American Robin			2	Winter Wren	WWR		2
Gray Catbird				Nashville Warbler	NWA		1
Brown Thrasher				Red-bellied Woodpecker	RBW		1
European Starling							
Cedar Waxwing							
Yellow Warbler							
Black-and-white Warbler							
American Redstart							
Ovenbird			1				
Northern Waterthrush							

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 1700522883

# Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone		Block	Square	Atlas Number	Observer Name	Year
					Erik & Elaine Van Der Kolk	2019

Point	Designated Number	UTM (if not designated point)	Mon	Day	Start Time (24-hr)	Habitat: Class Sub.	Structure (Optional)	Modification (Optional)
G		On Road <input type="checkbox"/> GPS <input type="checkbox"/> NAD83 <input type="checkbox"/> Off Road <input type="checkbox"/> Map <input type="checkbox"/> NAD27 <input type="checkbox"/>	6	10	9:45	A1	COKL	
H		On Road <input type="checkbox"/> GPS <input type="checkbox"/> NAD83 <input type="checkbox"/> Off Road <input type="checkbox"/> Map <input type="checkbox"/> NAD27 <input type="checkbox"/>	6	10	8:35	A2	AKLG	4
I		On Road <input type="checkbox"/> GPS <input type="checkbox"/> NAD83 <input type="checkbox"/> Off Road <input type="checkbox"/> Map <input type="checkbox"/> NAD27 <input type="checkbox"/>	6	10		A2	AKLG	4

Species Name	Point G <100m >100m	Point H <100m >100m	Point I <100m >100m
Killdeer			
Ring-billed Gull			
Rock Dove			
Mourning Dove			
Downy Woodpecker			
Northern Flicker			
Eastern Wood-Pewee	1		1
Least Flycatcher			1
Eastern Phoebe			
Great Crested Flycatcher		1	1
Eastern Kingbird			1
Warbling Vireo			2
Red-eyed Vireo	1	2	
Blue Jay	1	1	
American Crow		1	
Tree Swallow			
Barn Swallow			
Black-capped Chickadee		1	
White-breasted Nuthatch			
House Wren			
Veery			
Wood Thrush			
American Robin			
Gray Catbird			
Brown Thrasher			
European Starling			
Cedar Waxwing			
Yellow Warbler			
Black-and-white Warbler		1	
American Redstart			
Ovenbird		1	
Northern Waterthrush			

Species Name	Point G <100m >100m	Point H <100m >100m	Point I <100m >100m
Common Yellowthroat		4	
Scarlet Tanager			
Chipping Sparrow			
Savannah Sparrow			
Song Sparrow		1	2
Swamp Sparrow			1
White-throated Sparrow			
Northern Cardinal			
Rose-breasted Grosbeak	1	1	2
Indigo Bunting		3	
Bobolink			
Red-winged Blackbird			
Eastern Meadowlark			
Common Grackle			
Brown-headed Cowbird			
Baltimore Oriole			1
American Goldfinch		1	
House Sparrow			

Species Name	Species Code	Point G <100m >100m	Point H <100m >100m	Point I <100m >100m
Mourning Warbler	MOWA	1		
Winter Wren	W1WR	1		
Nashville Warbler	N1WA	1		
Black-throated Green Warbler	BTNW	1		
Golden-winged Warbler	GWWA	1	1	
Ruby-throated Hummingbird	RTHU		1	

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 1700522883



# Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone		Block		Square		Atlas Number		Observer Name		Year	
								Erik / Elaine Van Der Kieken		2019	

Point	Designated Number	UTM (if not designated point)	Point	Designated Number	UTM (if not designated point)	Point	Designated Number	UTM (if not designated point)
	<input type="radio"/> On Road <input checked="" type="radio"/> GPS <input type="radio"/> NAD83	<input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27		<input type="radio"/> On Road <input checked="" type="radio"/> GPS <input type="radio"/> NAD83	<input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27		<input type="radio"/> On Road <input checked="" type="radio"/> GPS <input type="radio"/> NAD83	<input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27
Mon	Day	UTM Easting	Mon	Day	UTM Easting	Mon	Day	UTM Easting
6	102							
Start Time (24-hr)		UTM Northing	Start Time (24-hr)		UTM Northing	Start Time (24-hr)		UTM Northing
9:29								
Habitat: Class Sub.		Structure (Optional)	Habitat: Class Sub.		Structure (Optional)	Habitat: Class Sub.		Structure (Optional)
1st A 2 B DGL		Modification (Optional)	1st		Modification (Optional)	1st		Modification (Optional)
2nd			2nd			2nd		

Species Name	Point 1 <100m >100m	Point 2 <100m >100m	Point 3 <100m >100m	Species Name	Point 4 <100m >100m	Point 5 <100m >100m	Point 6 <100m >100m
Killdeer				Common Yellowthroat			
Ring-billed Gull				Scarlet Tanager			
Rock Dove				Chipping Sparrow			
Mourning Dove				Savannah Sparrow			
Downy Woodpecker				Song Sparrow			
Northern Flicker				Swamp Sparrow			
Eastern Wood-Pewee				White-throated Sparrow			
Least Flycatcher	1			Northern Cardinal			
Eastern Phoebe	1			Rose-breasted Grosbeak	1		
Great Crested Flycatcher				Indigo Bunting			
Eastern Kingbird				Bobolink			
Warbling Vireo				Red-winged Blackbird			
Red-eyed Vireo				Eastern Meadowlark			
Blue Jay	1			Common Grackle			
American Crow				Brown-headed Cowbird			
Tree Swallow				Baltimore Oriole			
Barn Swallow				American Goldfinch			
Black-capped Chickadee				House Sparrow			
White-breasted Nuthatch							
House Wren							
Veery							
Wood Thrush							
American Robin							
Gray Catbird							
Brown Thrasher							
European Starling							
Cedar Waxwing							
Yellow Warbler							
Black-and-white Warbler							
American Redstart							
Ovenbird							
Northern Waterthrush							

Species Name	Species Code	Point 1 <100m >100m	Point 2 <100m >100m	Point 3 <100m >100m	Point 4 <100m >100m	Point 5 <100m >100m	Point 6 <100m >100m
Nashville warbler	NAWA	1					
Yellow bellied sapsucker	YBSA		1				

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 4573522884

# Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone    Block    Square    Atlaser Number    Atlaser Name Erik Van der Kolk / Kiah Jasper Year 2019

Point K Designated Number    UTM (if not designated point)    On Road ☐ GPS ☐ NAD83 ☐ Off Road ☐ Map ☐ NAD27 ☐ Mon 6 Day 122 UTM Easting    UTM Northing    Start Time (24-hr) 05:48 Habitat: Class A Sub 2 Structure (Optional) COG Modification (Optional) 2

Point L Designated Number    UTM (if not designated point)    On Road ☐ GPS ☐ NAD83 ☐ Off Road ☐ Map ☐ NAD27 ☐ Mon 6 Day 122 UTM Easting    UTM Northing    Start Time (24-hr) 05:57 Habitat: Class A Sub 2 Structure (Optional) AH1 Modification (Optional) 268

Point M Designated Number    UTM (if not designated point)    On Road ☐ GPS ☐ NAD83 ☐ Off Road ☐ Map ☐ NAD27 ☐ Mon 6 Day 122 UTM Easting    UTM Northing    Start Time (24-hr) 06:15 Habitat: Class A Sub 3 Structure (Optional) CIKL Modification (Optional) 2

Species Name	Point <u>K</u> <100m >100m	Point <u>L</u> <100m >100m	Point <u>M</u> <100m >100m	Species Name	Point <u>K</u> <100m >100m	Point <u>L</u> <100m >100m	Point <u>M</u> <100m >100m
Killdeer				Common Yellowthroat			
Ring-billed Gull				Scarlet Tanager			
Rock Dove				Chipping Sparrow	<u>1</u>		
Mourning Dove				Savannah Sparrow			
Downy Woodpecker				Song Sparrow	<u>2</u>	<u>3</u>	
Northern Flicker				Swamp Sparrow			
Eastern Wood-Pewee	<u>1</u>		<u>1</u>	White-throated Sparrow			
Least Flycatcher				Northern Cardinal			
Eastern Phoebe		<u>1</u>		Rose-breasted Grosbeak			
Great Crested Flycatcher				Indigo Bunting			
Eastern Kingbird				Bobolink			
Warbling Vireo				Red-winged Blackbird	<u>1</u>		
Red-eyed Vireo	<u>2</u>	<u>2</u>	<u>3</u>	Eastern Meadowlark			
Blue Jay				Common Grackle	<u>5</u>	<u>6</u>	
American Crow			<u>1</u>	Brown-headed Cowbird			
Tree Swallow				Baltimore Oriole			
Barn Swallow				American Goldfinch			
Black-capped Chickadee	<u>2</u>		<u>1</u>	House Sparrow			
White-breasted Nuthatch				Additional species or species with > 100 individuals			
House Wren				Species Name	Species Code	Point <u>K</u> <100m >100m	Point <u>L</u> <100m >100m
Veery				Brown Creeper	BR CR	<u>2</u>	<u>1</u>
Wood Thrush				Winter Wren	WI WR	<u>2</u>	<u>2</u>
American Robin	<u>2</u>	<u>1</u>					
Gray Catbird							
Brown Thrasher							
European Starling							
Cedar Waxwing	<u>1</u>	<u>2</u>	<u>1</u>				
Yellow Warbler							
Black-and-white Warbler	<u>2</u>	<u>2</u>					
American Redstart	<u>1</u>	<u>1</u>					
Ovenbird			<u>1</u>				
Northern Waterthrush							

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 1700522883

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 4573522884



# Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone		Block		Square		Atlas Number		Atlas Name		Year	
								Erik Van Der Kerkhof - Kiah Jasper		2000	

Point	Designated Number	UTM (if not designated point)	Mon	Day	Start Time (24-hr)	Habitat	Structure	Modification
Q	6122	On Road	6	122	07:12			
R	6122	On Road	6	122	7:28			
S	6122	On Road	6	122	7:48			

Species Name	Point Q	Point R	Point S
Killdeer			
Ring-billed Gull			
Rock Dove			
Mourning Dove			
Downy Woodpecker			
Northern Flicker			
Eastern Wood-Pewee			1
Least Flycatcher			
Eastern Phoebe			
Great Crested Flycatcher			1
Eastern Kingbird			
Warbling Vireo			
Red-eyed Vireo	2	3	1
Blue Jay			
American Crow			
Tree Swallow			
Barn Swallow			
Black-capped Chickadee	2		
White-breasted Nuthatch			
House Wren			
Veery			
Wood Thrush			
American Robin			
Gray Catbird			
Brown Thrasher			
European Starling			
Cedar Waxwing			
Yellow Warbler			
Black-and-white Warbler			
American Redstart			
Ovenbird	1	2	1
Northern Waterthrush			

Species Name	Point Q	Point R	Point S
Common Yellowthroat			
Scarlet Tanager			1
Chipping Sparrow			
Savannah Sparrow			
Song Sparrow	2		
Swamp Sparrow			
White-throated Sparrow			
Northern Cardinal			
Rose-breasted Grosbeak			
Indigo Bunting			
Bobolink			
Red-winged Blackbird			
Eastern Meadowlark			
Common Grackle			
Brown-headed Cowbird			
Baltimore Oriole			
American Goldfinch			
House Sparrow			

Species Name	Species Code	Point Q	Point R	Point S
Nashville Warbler	N A W A	1		
Field Sparrow	F I S P			
Red Bellied Woodpecker	R B W O		1	
Black Throated Blue Warbler	B T B W		1	1
Black-throated Green Warbler	B L B W		1	
Winter Wren	W I W R			2

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 4573522884

# Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone		Block	Square	Atlas Number	Atlas Name		Year	
					Erik VanBerkelaar / Kiah Jagger		2 0 0	

Point Designated Number T Mon Day 6/22 Start Time (24-hr) 08:36 UTM (if not designated point) <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 UTM Easting UTM Northing Habitat: Class Sub 1st A 3 C O G M 2 2nd	Point Designated Number  Mon Day  Start Time (24-hr)  UTM (if not designated point) <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 UTM Easting UTM Northing Habitat: Class Sub 1st 2nd	Point Designated Number  Mon Day  Start Time (24-hr)  UTM (if not designated point) <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 UTM Easting UTM Northing Habitat: Class Sub 1st 2nd
---	---	---

Species Name	Point <100m >100m	Point <100m >100m	Point <100m >100m
Killdeer			
Ring-billed Gull			
Rock Dove			
Mourning Dove			
Downy Woodpecker			
Northern Flicker			
Eastern Wood-Pewee	1		
Least Flycatcher			
Eastern Phoebe			
Great Crested Flycatcher			
Eastern Kingbird			
Warbling Vireo			
Red-eyed Vireo	1		
Blue Jay			
American Crow			
Tree Swallow			
Barn Swallow			
Black-capped Chickadee			
White-breasted Nuthatch			
House Wren			
Veery			
Wood Thrush			
American Robin	1		
Gray Catbird			
Brown Thrasher			
European Starling			
Cedar Waxwing			
Yellow Warbler			
Black-and-white Warbler			
American Redstart			
Ovenbird	1		
Northern Waterthrush			

Species Name	Species Code	Point <100m >100m	Point <100m >100m	Point <100m >100m
Common Yellowthroat				
Scarlet Tanager				
Chipping Sparrow				
Savannah Sparrow				
Song Sparrow				
Swamp Sparrow				
White-throated Sparrow				
Northern Cardinal				
Rose-breasted Grosbeak				
Indigo Bunting				
Bobolink				
Red-winged Blackbird	1			
Eastern Meadowlark				
Common Grackle				
Brown-headed Cowbird				
Baltimore Oriole				
American Goldfinch				
House Sparrow				
Additional species or species with > 100 individuals				
Winter Wren	W1 NR	1		
Black Throated Green Wren	BT NW	1		

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

2 1700522883

## APPENDIX C

List of Amphibian Species				B.I.R. 1992 rpt	ELC Polygon Number and Code			
ENGLISH COMMON NAME	SCIENTIFIC NAME	S RAN K	SARO STATU S		12	20	41	42
					FOM 4	FOD 5	CU W	FOM3 -2
American Bullfrog	Lithobates catesbeianus	S4			X			
American Toad	Anaxyrus americanus	S5		X		X		
Eastern Red-backed Salamander	Plethodon cinereus	S5		X	X	X		
Gray Treefrog	Hyla versicolor	S5				X		
Green Frog	Lithobates clamitans	S5		X	X	X	X	X
Northern Leopard Frog	Lithobates pipiens	S5	NAR	X	X	X		
Spring Peeper	Pseudacris crucifer	S5		X		X		
Wood Frog	Lithobates sylvaticus	S5				X		











East ern Blue bird	Sialia sialis	S5 B	NA R													X																						
East ern King bird	Tyran nus tyrann us	S4 B			X					X																												
East ern Mead owlar k	Sturme lla magn a	S4 B	TH R		X																					X												
East ern Phoe be	Sayor nis phoebe	S5 B			X				X			X														X	X	X	X				X					
East ern Whip - poor -will	Antros tomus vocifer us	S4 B	TH R		X																																	
East ern Woo d- pewe e	Conto pus virens	S4 B	SC	X	X					X			X			X			X					X							X					X		
Field Sparr ow	Spizell a pusilla	S4 B			X															X																		
Gold en- wing ed Warb ler	Vermi vora chryso ptera	S4 B	SC							X			X																									
Gras shop per Sparr ow	Ammo dramu s savan narum	S4 B	SC																							X												
Gray Catbi rd	Dumet ella carolin ensis	S4 B			X							X															X	X				X						
Great Blue Hero n	Ardea herodi as	S4			X		X						X																			X						
Great Crest ed Flyca tcher	Myiarc hus crinitu s	S4 B		X	X		X		X				X			X							X								X							





























































Trillium - White	Trillium grandiflorum	S 5		X			X				X				X	X	X	X					X	X			X		X		X	X				X	X
Trout-lily - Yellow	Erythronium americanum	S 5		X			X				X	X	X			X	X		X				X			X	X		X								
Turtlehead - White	Chelone glabra	S 5		X																																	
Vervain - Hoary	Verbena stricta	S 4			X																																
Vervain - Blue	Verbena hastata	S 5		X			X																														
Vetch - Common Crown	Securigera varia (Coronilla varia)	S N A		X																																	
Vetch - Tufted (cow)	Vicia cracca	S N A		X		X																															
Vetchling - Marsh	Lathyrus palustris	S 5		X																																	
Violet - Canada	Viola canadensis	S 5		X			X																X				X										
Violet - Downy Yellow	Viola pubescens var. pubescens	S 5															X																				
Violet - Dog	Viola muhlenbergii (Viola conspersa)						X			X	X		X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X		X	X	X	X	
Violet - Kidney Leaved White	Viola renifolia	S 5											X																							X	
Violet - Long-spurred	Viola rostrata	S 5		X																																	
Violet - Marsh Blue	Viola cucullata	S 5		X																			X				X					X	X				
Violet - Woolly Blue	Viola sororia	S 5					X			X	X		X	X	X	X	X	X	X				X	X		X	X								X	X	
Violet - Yellow (Smooth)	Viola pubescens	S 5		X		X	X			X	X	X	X	X	X	X	X	X	X				X			X	X	X			X	X	X		X	X	
Virginia Virgin's-bower	Clematis virginiana	S 5		X			X			X		X	X	X	X	X	X			X			X			X									X	X	
Waterleaf - Canada / Broad Leaved Waterleaf	Hydrophyllum canadense	S 4		X																																	
Waterleaf - Virginia	Hydrophyllum virginianum	S 5		X							X				X								X				X					X					





				rp t																																										
ENG LISH CO MM ON NAM E	SCIE NTIFI C NAM E	S R A N K	SA R O ST AT US			1	2	4	5	6	8	9	11	12	20	21	26	27	28	29	31	32	33	34	35	36	37	38	39	41	42	43	44	45	46	47	49	51	52	54	68	69	70			
						C U P 3- 2	F O M 4	C U M 1- 1	F O C 4	F O D 4- 2	T A T 1- 2	C L T 1- 1	F O D 5	F O M 4	F O D 5	F O C 2- 2	F O D 4- 2	F O M 3- 2	C U P 1- 3	F O M 6	F O M 4	F O M 4	T A T 1- 4	C L T 1- 2	C L T 1- 1	T A T 1- 6	F O M 4	T A T 1- 2	F O C 4	C U W	F O M 3- 2	C U W	F O C 4	F O D 7	F O C 4	F O C 2- 2	F O C 4	F O M 6- 1	C U P 3- 6	O A O	C L T 1- 1	F O M 6- 1	F O C 4			
Appl e - Com mon	Malu s pumila	S N A				X			X	X							X									X																				
Ash - Balk an	Fraxi nus holotricha	S N A			X																																									
Ash - Black	Fraxi nus nigra	S 4		X , A r			X							X						X																										
Ash - Euro pean	Fraxi nus excelsior	S N A			X																																									
Ash - Green (Red )	Fraxi nus pennsylvanica	S 4		A r	X																																									
Ash - White	Fraxi nus americana	S 4		X , A r	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X			X	X	X		
Aspen - Trembling	Populus tremuloides	S 5		X		X		X						X																																
Barberry - European	Berberis vulgaris	S N A		X			X			X		X		X	X	X	X	X		X		X	X				X	X			X		X		X	X						X			X	
Barberry -	Berberis thunbergii	S N A													X																															











































House Mouse	Mus musculus	SNA		X																										
Meadow Vole	Microtus pennsylvanicus	S5		X																										
Muskrat	Ondatra zibethicus	S5		X																										
Northern Raccoon	Procyon lotor	S5		X		X			X	X			X	X	X	X	X	X												
Northern Short-tailed Shrew	Blarina brevicauda	S5		X																										
Porcupine	Erethizon dorsatum	S5		X																										
Red Fox	Vulpes vulpes	S5												X														X	X	
Red Squirrel	Tamiasciurus hudsonicus	S5		X		X				X	X		X	X	X	X	X		X	X		X						X	X	
Snowshoe Hare	Lepus americanus	S5												X																
Striped Skunk	Mephitis mephitis	S5		X																X										
White-tailed Deer	Odocoileus virginianus	S5		X		X		X	X	X		X	X		X	X			X	X					X			X		
Woodchuck / Groundhog	Marmota monax	S5		X																										

List of Reptile Species				B.I.R. 1992 rpt	ELC Polygon Number and Code
ENGLISH COMMON NAME	SCIENTIFIC NAME	S RANK	SARO STATUS		37
					FOM4
Eastern Gartersnake	Thamnophis sirtalis sirtalis	S5		X	X
Eastern Milksnake	Lampropeltis triangulum	S4	NAR	X	
Midland Painted Turtle	Chrysemys picta marginata	S4		X	
Northern Watersnake	Nerodia sipedon sipedon	S5	NAR	X	
Red-bellied Snake	Storeria occipitomaculata	S5		X	

## APPENDIX D

Table 1. ELC Codes and description at IFCA

Nested ELC Community Units	ELC Code	Vegetation Characteristics	Environmental Characteristics
Open Beach/Bar	BBO	Tree cover <25%, shrub cover <25%	Openness maintained by active shoreline processes
Treed Beach/Bar	BBT	25% < tree cover < 60%	Active processes least severe, woody species invasion includes tree species
Carbonate Treed Cliff Ecosite	CLT1	Cover varies from patchy and barren to more closed in nature (i.e., savannah or woodland)	Carbonate bedrock
White Cedar Treed Carbonate Cliff Type	CLT1-1	25% < tree cover < 60%	- Typically restricted to the narrow cliff rim - Dependent on how broken and fractured the cliff rim and face are
Sugar Maple - Ironwood - White Ash Treed Carbonate Cliff	CLT1-2	25% < tree cover < 60%	
Cultural Meadow	CUM	Tree cover < 25%, shrub cover < 25%	
Black Walnut Deciduous Plantation Type	CUP1-3	Deciduous tree species > 75% of canopy cover	- Site conditions and substrate types variable - Community resulting from, or maintained by, cultural or anthropogenic-based disturbances
Coniferous Plantation	CUP3	Coniferous tree species > 75% of canopy cover	- Site conditions and substrate types variable - Community resulting from, or maintained by, cultural or anthropogenic-based disturbances
White Pine Coniferous Plantation Type	CUP3-2	Coniferous tree species > 75% of canopy cover	- Site conditions and substrate types variable - Community resulting from, or maintained by, cultural or anthropogenic-based disturbances
European Larch coniferous plantation type CUP 3-6	CUP3-6	Coniferous tree species > 75% of canopy cover	- Site conditions and substrate types variable - Community resulting from, or maintained by, cultural or anthropogenic-based disturbances
Cultural Savannah	CUS	25% < tree cover < 35%	Parent mineral material or mineral soil

White Cedar - Green Ash Cultural Savannah Type	CUS1-2	25% < tree cover < 35%	
Cultural Thicket	CUT	Tree cover <25%, shrub cover <25%	
Dry - Fresh White Cedar coniferous forest type	FOC2-2	White Cedar dominant or shares dominance with White Spruce or Balsam Fir	
Fresh - Moist White Cedar Coniferous Forest Ecosite	FOC4	<ul style="list-style-type: none"> <li>- White Cedar dominant</li> <li>- Balsam Fir, Hemlock, and to a lesser extent, White Pine, Yellow Birch, Sugar Maple, Green Ash and White Birch associates</li> <li>- Shrub and herb cover and species richness low, fern rich</li> <li>- Sensitive Fern, Marsh Fern, Spotted Touch-me-not and Cinnamon Fern</li> </ul>	<ul style="list-style-type: none"> <li>- Moist (4,5,6) to fresh (2,3) soil moisture</li> <li>- Moderately well (4) to poor (6) soil drainage</li> <li>- Typically on basic or carbonate substrate and bedrock; moist yet well drained</li> <li>- Middle to lower slopes (3,4,5), seepage areas and bottomlands (5,6)</li> </ul>
Dry-Fresh White Ash Deciduous Forest Type	FOD4-2	<ul style="list-style-type: none"> <li>- White Ash dominant</li> <li>- Ironwood, Trembling Aspen, Largetooth Aspen and White Birch associates</li> <li>- Likely disturbance or management related</li> </ul>	
Dry-Fresh Sugar Maple Deciduous Forest Type	FOD5	<ul style="list-style-type: none"> <li>- Sugar Maple with Beech, Red Oak, White Oak, Ironwood, Basswood, Black Cherry, Bitternut Hickory, Shagbark Hickory, White Ash, Red Maple, White Birch, Trembling Aspen; dominant species may vary</li> <li>- Heavily managed, grazed or disturbed sites tend to be relatively lacking in shrub and understorey vegetation</li> <li>- Alternate-leaved Dogwood, Raspberry and Red Elderberry</li> <li>- Trillium spp., Wild Sarsparilla, Blue Cohosh, Jack-in-the-pulpit and Wild Leek</li> </ul>	<ul style="list-style-type: none"> <li>- Moderately dry (0) to fresh (1,2,3) soil moisture regimes</li> <li>- Shallow soils over bedrock, rock, sands and loams</li> <li>- Rapid (2) to well (3) drained sites</li> <li>- Typically on upper to middle slopes (1,2,3) or tablelands (7) with suitable drainage</li> </ul>

Fresh - Moist Lowland Deciduous Forest Ecosite	FOD7	<ul style="list-style-type: none"> <li>- White Elm, Willows, Black Walnut, Black Maple, Basswood, Green Ash and Black Ash dominant separately or in variable mixtures</li> <li>- Red Maple, White Birch, Hackberry, Sycamore and Sugar Maple associates</li> <li>- Typically more open canopies - may be &lt; 60% tree cover</li> <li>- Blue Beech, Alternate-leaved Dogwood and Prickly Gooseberry</li> <li>- Greater presence of vines; Virginia Creeper, Poison Ivy and Wild Grape</li> <li>- Mixture of herbaceous species common to wet sites, such as Sensitive Fern, Foam Flower and Spotted Touch-me-not along with common upland species such as Wild Leek, Blue Cohosh and Jack-in-the-Pulpit</li> </ul>	<ul style="list-style-type: none"> <li>- Moist (4,5,6) to fresh (2,3) soil moisture</li> <li>- Coarse and fine loams and occasionally sands and clays; all soils have finer silt and clay components</li> <li>- Well (3) to poor (6) soil drainage</li> <li>- Lower slopes (4,5) with seepage and bottomlands (5,6), especially floodplains</li> <li>- Typically in rich areas where deposition due to flooding occurs yet drying occurs by mid- to late summer</li> </ul>
Fresh - Moist Ash Lowland Deciduous Forest Type	FOD7-2	Green Ash, Black Ash	
Mixed Forest	FOM	Conifer tree species >25% and deciduous tree species >25% of canopy cover	
Dry-Fresh Hardwood-Hemlock Mixed Forest Ecosite	FOM3	<ul style="list-style-type: none"> <li>-Hemlock with Sugar Maple, Red Maple or Red Oak; dominant species varies</li> <li>-Shrub and herb species cover and species richness low</li> </ul>	<ul style="list-style-type: none"> <li>-On moderately dry (0) to fresh (1,2) soil moisture regimes</li> <li>-Sands and coarse loams and, to a lesser extent, shallow substrates over bedrock and rock; soils have finer silt and clay components</li> <li>-Typically found on slopes with adequate moisture yet good drainage</li> </ul>
Dry-Fresh Sugar Maple-Hemlock Mixed Forest Type	FOM3-2	<ul style="list-style-type: none"> <li>-Hemlock with Sugar Maple. Sugar Maple &gt; 25% canopy cover</li> <li>-White Ash, Basswood and Red Maple associates</li> </ul>	<ul style="list-style-type: none"> <li>-Typically on deeper sands and loams with finer silt and clay components</li> </ul>



Dry-Fresh White Cedar Mixed Forest Ecosite	FOM4	<ul style="list-style-type: none"> <li>-White Cedar with White Birch, Largetooth Aspen, Trembling Aspen, Sugar Maple and White Ash; dominant species varies</li> <li>-Often represents second growth arising on heavily managed, grazed or disturbed areas</li> <li>-Low shrub and herb cover</li> </ul>	<ul style="list-style-type: none"> <li>-Moderately dry (0) to fresh (1,2) soil moisture regimes</li> <li>-Sands, loams and shallow substrates over bedrock; common on mesic and carbonate substrates and bedrock</li> </ul>
Fresh-Moist Sugar Maple-Hemlock Mixed Forest Type	FOM6-1	<ul style="list-style-type: none"> <li>-Hemlock with Sugar Maple. Sugar Maple &gt; 25% canopy cover</li> <li>-White Birch, Ash species, Beech and Yellow Birch associates</li> <li>-Jack in the Pulpit, intermediate Wood Fern, Lady Fern and Wild Ginger</li> </ul>	<ul style="list-style-type: none"> <li>-Typically on the fresher end of the moisture regime gradient</li> <li>-Middle to lower slopes (3,4,5) and tablelands or bottomlands with complex microtopography (8)</li> </ul>
Agricultural Land - Hay, Pasture, Row Crop	HPR		
Open Aquatic	OA0		
Dry-Fresh White Cedar Carbonate Treed Talus Type	TAT1-2		Dry (0.0) to fresh (1,2,3) moisture regimes

## APPENDIX E

ELC Code	Description	Total Hectares	Percentage of Total Area
BBO	Open Beach / Bar	0.0	0.02
BBT	Treed Beach / Bar	0.1	0.04
CLT1	White Cedar Treed Carbonate Cliff	1.0	0.49
CLT1-1	White Cedar Treed Carbonate Cliff	2.5	1.19
CLT1-2	Carbonate Treed Cliff- Niagara Escarpment	0.3	0.12
COI	Access Roads and Road Allowances, Parking Lot	0.7	0.32
CUM	Cultural Meadow	1.7	0.78
CUM1	Mineral Cultural Meadow	0.2	0.10
CUM1-1	Cultural Meadow	0.4	0.20
CUP1-3	Black Walnut Deciduous Plantation	0.5	0.25
CUP3	White Pine coniferous plantation	8.6	4.06
CUP3-2	White Pine coniferous plantation	7.6	3.57
CUP3-6	European Larch Coniferous Plantation	0.7	0.33
CUS	Cultural Savannah	5.6	2.63
CUS1	Mineral Cultural Savannah	2.4	1.15
CUS1-1	Hawthorn Cultural Savannah	3.4	1.59
CUS1-2	Cultural Savannah	2.6	1.21
CUT	Mineral Cultural Thicket	4.8	2.25
CUW	Cultural Woodland	0.2	0.09
FOC 4	Fresh - Moist White Cedar Coniferous Forest	1.1	0.53
FOC2-2	Dry - Fresh White Cedar Coniferous Forest	10.9	5.16
FOC4	Fresh - Moist White Cedar Coniferous Forest	6.7	3.16
FOC4-1	Fresh- Moist White Cedar Coniferous Forest	1.1	0.50
FOD	Deciduous Forest	2.0	0.94
FOD4-2	Dry - Fresh White Ash Deciduous Forest	9.6	4.51
FOD5	Dry - Fresh Sugar Maple Deciduous Forest	41.3	19.48
FOD7	Fresh - Moist Lowland Deciduous Forest	0.2	0.10
FOD7-2	Fresh - Moist Ash Lowland Deciduous Forest	3.0	1.40
FOM	Mixed Forest	0.5	0.22
FOM3	Dry to Fresh Sugar Maple - Hemlock Mixed Forest	6.1	2.86
FOM3-2	Dry - Fresh Sugar Maple - Hemlock Mixed Forest	12.2	5.75
FOM4	Dry - Fresh White Cedar Mixed Forest	33	15.56
FOM6	Fresh-Moist Hemlock Mixed Forest	1.0	0.47
FOM6-1	Fresh - Moist Sugar Maple - Hemlock Mixed Forest	9.3	4.37
HPR	Agricultural Land	9.0	4.25
MAS	Fresh - Moist Lowland Deciduous Forest	1.5	0.71
OAO	Open Aquatic	5.5	2.58

TAT1	Carbonate Treed Talus	2.4	1.13
TAT1-2	Dry - Fresh White Cedar Treed Talus	10.3	4.86
TAT1-4	Fresh - Moist Sugar Maple Carbonate Treed Talus	1.7	0.80
TAT1-6	Fresh - Moist Hemlock - Sugar Maple Carbonate Treed Talus	0.6	0.27
Grand Total		212.1	100

## APPENDIX F



# CULTURAL HERITAGE BACKGROUND

## Inglis Falls Conservation Area Management Plan

### Grey Sauble Conservation Authority

**1.0**

ORIGINAL REPORT  
February 18, 2022  
GS21-01

Lots 9 to 13, Concession 1 and Lot 11, Concession 2  
Geographic Township of Derby,  
Historic Grey County in the Township of Georgian Bluffs,  
Regional Municipality of Grey County



## Table of Contents

<a href="#"><u>1.0 Introduction</u></a> .....	182
<a href="#"><u>2.0 Traditional Territories and Treaties</u></a> .....	182
<a href="#"><u>3.0 Local Historic Environmental Context</u></a> .....	183
<a href="#"><u>4.0 Historic Context</u></a> .....	185
<a href="#"><u>5.0 Built Heritage Context</u></a> .....	192
<a href="#"><u>6.0 Archaeological Context</u></a> .....	194
<a href="#"><u>7.0 Summary and Retrofit Opportunities</u></a> .....	196
<a href="#"><u>Bibliography and Sources</u></a> .....	198
<a href="#"><u>Appendix A: Maps</u></a> .....	201
<a href="#"><u>Appendix B: Images</u></a> .....	212

## Tables

<a href="#"><u>Table 1. Summary of Patent Dates</u></a> .....	190
<a href="#"><u>Table 2. Heritage Features at IFCA</u></a> .....	192

## Maps

<a href="#"><u>Map 1. General Project Area</u></a> .....	201
<a href="#"><u>Map 2. Orthographic Map</u></a> .....	202
<a href="#"><u>Map 3. Modern Topography</u></a> .....	203
<a href="#"><u>Map 4. 1845 Patent Map of Derby Township – Grey County</u></a> .....	204
<a href="#"><u>Map 5. 1877 McNab Map of Derby Township</u></a> .....	205
<a href="#"><u>Map 6. 1879 Map of the County of Grey</u></a> .....	206
<a href="#"><u>Map 7. 1880 Derby Township, Belden &amp; Co. Illustrated Atlas of Grey County</u></a> .....	207
<a href="#"><u>Map 8. 1929 Grey County Map</u></a> .....	208
<a href="#"><u>Map 9. Built Heritage Resources within IFCA</u></a> .....	209
<a href="#"><u>Map 10. NEC Designations at Inglis Falls</u></a> .....	210
<a href="#"><u>Map 11. NEC Landscape Evaluation of Inglis Falls</u></a> .....	211

## Images

<a href="#"><u>Image 1. 1954 Aerial Photograph</u></a> .....	212
<a href="#"><u>Image 2. Mill workers on dam, no date (GSCA)</u></a> .....	213
<a href="#"><u>Image 3. Inglis Falls, 1880 (Belden &amp; Co.)</u></a> .....	213
<a href="#"><u>Image 4. Frozen Inglis Falls, ca1930s (GRMA)</u></a> .....	213
<a href="#"><u>Image 5. Inglis Falls, no date (GSCA)</u></a> .....	213
<a href="#"><u>Image 6. Inglis Falls, no date (GRMA)</u></a> .....	214
<a href="#"><u>Image 7. Inglis Falls, no date (GSCA)</u></a> .....	214
<a href="#"><u>Image 8. Inglis Family Home, no date (GSCA)</u></a> .....	215
<a href="#"><u>Image 9. Inglis Advertisement, 1927 (GSCA)</u></a> .....	215
<a href="#"><u>Image 10. Filtration Plant Under Construction, 1910 (GSCA)</u></a> .....	215

## Project Personnel

### Report Preparation:

Loren Scott

Alvina Tam

### Graphics:

Kathryn Brown

### Edited By:

Alvina Tam

## 1.0 Introduction

The following cultural heritage background report previews the known cultural histories of Indigenous Peoples and Euro-Canadian settlers within the environmental context of the Sydenham River, and the cultural heritage resources in the Inglis Falls Conservation Area (IFCA), which will herein be referred to as the “project area” (**Maps 1 to 3**). These remnants of the past are often found in the form of archaeological sites and built heritage which help characterize past human activity. This report demonstrates how past peoples over thousands of years were drawn to the location, establishing opportunities to interpret and celebrate cultural heritage within the future Management Plan of IFCA.

This report was completed with available data provided by Grey Sauble Conservation Authority (GSCA) and Grey Roots Museum and Archives (GRMA). Minimal research was conducted to fill timeline gaps. Future research and reports should include updating datasets, consultation with the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) database of archaeological sites and municipal heritage divisions at the Township of Georgian Bluffs and the City of Owen Sound, as well as comprehensive research at GRMA and the Archives of Ontario.

## 2.0 Traditional Territories and Treaties

The GSCA’s jurisdiction encompasses the Traditional territory and Treaty areas relating to the Saugeen Ojibway Nation (SON). SON is composed of two First Nations – the Chippewas of Saugeen First Nation and the Chippewas of Nawash Unceded First Nation – with a shared history and ancestry. The Traditional Lands or Territory of SON includes over 2 million acres in Southwestern Ontario, as well as the surrounding lakebed.

During the late seventeenth century, Britain and France were locked in a struggle to establish trade dominance in the Great Lakes Region. The French had allied with the Huron-Wendat and Anishinaabe, while the British were aided by the Haudenosaunee or Five Nations Iroquois (Mohawk, Oneida, Onondaga, Cayuga and Seneca Nations). Both the Huron and Iroquois claimed the lands north of Lake Ontario as part of their traditional hunting territory.

The treaty making process began during the 1700s in Ontario and continued through to the twentieth century. Following the Seven Years’ War, Britain became the dominant colonial power in North America. By the late eighteenth century, it was the Anishinaabeg Mississauga who resided along the north shore of Lake Ontario and in the Trent River valley, and the Chippewas resided around Lake Simcoe, the Bruce Peninsula, and the Thames River valley. The Five Nations Iroquois at the time were not residing within the region. A number of land surrenders (the Upper Canada Land Surrenders of 1763-1830) occurred between the Crown and the Chippewas, the Mississauga, and the now Six Nations of the Iroquois Confederacy, that potentially affect lands within the study area.

Differing interpretations of these historic treaties have been the subject of several land claims brought to federal and provincial courts over Aboriginal rights, rights to land, and traditional uses of that land.

Descendants of Indigenous peoples who occupied Ontario prior to European settlement are actively involved in consultations with the provincial and federal governments relating to ancestral sites (particularly burial grounds and other sacred spaces) and proposed projects that have the potential to impact ancestral territories and

Indigenous rights under the Canadian constitution. These descendant communities reside on reserve lands and in urban areas throughout Ontario, in the Province of Quebec, and in the States of Kansas and New York.

The treaty most relevant to the Inglis Falls area is the Saugeen Purchase Tract or Saugeen Treaty (Treaty No. 45 ½) of 1836. The SON agreed to open up 1.5 million acres for settlement in exchange for economic assistance and protection from settler encroachment. At the time, the British promised the SON that they would protect the Indigenous peoples residing on the Saugeen Peninsula and that it would be protected for their use. However, 18 years later the Crown claimed that they could not protect these lands unless another treaty was negotiated. Consequently, this resulted in the Saugeen Peninsula Treaty or Treaty 72 in 1854, which ceded 500,000 acres of the Saugeen Peninsula to the Crown.

Other treaties that followed include: the Half-Mile Strip Treaty (Treaty 67) of 1851 for a road allowance to Owen Sound; The Owen Sound or Nawash Treaty (Treaty 82) of 1857; The Colpoy's Bay Treaty (Treaty 93) of 1861; and the 1885-1899 Islands Treaties (including the surrender of the Fishing Islands, Cape Hurd Islands, Griffith Island, Hay Island and White Cloud Island). In 1968, approximately 90 fishing islands in Lake Huron were returned to the SON. What remains today of the Saugeen territory are the villages of Saugeen, Neyashingaming at Cape Croker, and the hunting grounds north on the peninsula near Tobermory. Both the lakebed and the Saugeen (Bruce) Peninsula are subject to a land claim that is in the courts as of Spring 2019 (SON 2021).

We want to acknowledge the Territory of the Anishinabek Nation: The People of the Three Fires known as Ojibway, Odawa, and Pottawatomie Nations. And further give thanks to the Chippewas of Saugeen, and the Chippewas of Nawash, known collectively as the Saugeen Ojibway Nation, as the traditional keepers of this land.

## ● 3.0 Local Historic Environmental Context

### 3.1 Prehistoric Environment

The IFCA is 209 hectares in size and located within the Bruce Peninsula and Cape Rich Steps physiographic region of southern Ontario, as well as the Niagara Escarpment (Chapman and Putnam 1984:190). The Bruce Peninsula consists largely of gently rolling and irregular exposed dolostone plains, with a thin veneer of Quaternary deposits. Soils are shallow, and are classified as Breypen series in the Ontario Soil Survey. The irregular topography of the bedrock surface results in many wet swampy basins and small lakes throughout the Peninsula. Shale plains, known as the Cape Rich Steps, are located between Owen Sound and Nottawasaga Bay. This area consists of Paleozoic bedrock overlain by shallow overburden, with the plain being incised by the Beaver Valley (in the Thornbury area) and the Bighead Valley (in the Meaford area). The Niagara Escarpment extends from the Niagara River to the northern tip of the Bruce Peninsula and through the Manitoulin Islands. The Escarpment is composed primarily of dolostone of the Lockport and Amabel Formations, underneath which lies red shale. Within Ontario, the Escarpment stretches 725 kilometres in length and varies in elevation between 106 metres and 545 metres (Chapman and Putnam 1984:114).

The Niagara Escarpment was formed over a million years of erosion and visible following the last glacial retreat of the North American Laurentide ice sheet about 15,000 years ago. Massive amounts of glacial meltwater expanded against the retreating ice boundary in the north, flooding modern day Lake Huron and Georgian Bay and occupying much of the Simcoe lowlands (Stewart 2013:25). This mass of water was known as Lake Algonquin and spanned all of Lake Huron, Lake Superior and the Erie basins, including Lake Simcoe and Lake Couchiching (Frim 2002:XI; Karrow and Warner 1990:15). The shoreline of glacial Lake Algonquin extended



around the Lake Simcoe basin, the base of Bruce Peninsula and southwest to Kincardine (Karrow and Warner 1990:15). The lessening ice load created isostatic rebound and caused abandoned shorelines to tilt northward towards the ice centre. Water began to accumulate along the southern shorelines, forming the main glacial strandline of Lake Algonquin which extended around the southern shore of Lake Simcoe (Karrow and Warner 1990:15). This strandline is marked by a number of erosional and depositional features including high bluffs, offshore bars, and limestone scarps where wave erosion cut into the bedrock (Storck 1982:9).

After 10,000 BP, a gradual increase in atmospheric humidity in conjunction with warm summers led to the replacement of spruce forests by jack pine which were dominant between 9,800 and 8,500 BP and then replaced by white pine by 8,000 BP. These forests would have been similar to (although not directly analogous with) a modern boreal forest, insofar as a variety of hardwood and mast trees such as oak were present. In this relatively open boreal forest, subsistence resources were probably woodland caribou and/or elk, moose, beaver, hare and fish (Dibb 2004:126; Lennox 2002:8). With the exception of a mid-Holocene warm/dry period between 6000 and 3000 years ago (Yu and McAndrews 1994:151), after *ca.* 7,500 years ago the southern Ontario climate shifted from deglacial to postglacial (Yu 2003:387), and experienced an essentially modern but slightly drier climate. Mixed coniferous-deciduous forests dominated the region. Subsistence resources at this time likely included a wide variety of aquatic animals, as well as waterfowl attracted to the riverine and marsh environment. Deer, fish, beaver, hare, duck and turtle as well as seasonal plants such as berries, sedges and nut trees were all possible food items established at this time (Ellis *et al.* 1990:111-114; Jamieson 2002:31; Ritchie 1994:34).

### 3.2 Historic Environment

The project area is situated within the Sydenham River Watershed which tumbles 20 m. (65.6 ft.) down the face of the Niagara Escarpment, becoming the focal point of the IFCA. IFCA is in the Great Lakes St. Lawrence Forest Region of Ontario, an area containing a mixture of coniferous and deciduous tree species. This region lies between the boreal forests to the north of Lake Superior and the deciduous forests along the southern Great Lakes shoreline.

Water resources are a major component in the IFCA because of the dominating presence of the Sydenham River and numerous tributaries which stretch the length of the property. Although it measures only about 23 km in length with a 206 sq. km drainage basin (half of the Bighead River basin), the Sydenham is a major river in this part of Ontario. From its source in Williams Lake, it ambles through the countryside at a gradient of only 6.7 m/km, forming extensive wetlands on level sections of the riverbed through Sullivan and Derby Townships. From Inglis Falls to Harrison Park, the river is swift flowing, dropping an average of 121.9 m/km over this distance. The river channel below the falls to Harrison Park is restricted by steep banks, and levels out and meanders towards Georgian Bay.

Early nineteenth century settler families in this area would have encountered thriving forests filled with plenty of hardwood trees important for building homes and fuelling fires. Families were fortunate if the land they acquired had a substantial water source, such as a stream, creek or spring that would attract game animals, provide fish and be a source of drinking water. Clearing the land would have been a tedious, painstaking task but of high importance for planting, growing, and harvesting crops.

In 1990, UNESCO recognized Ontario's Niagara Escarpment as a World Biosphere Reserve. This international designation distinguishes the Niagara Escarpment Plan and management system, which is complemented by continual research, monitoring activity and education. Ontario's Niagara Escarpment is one of 12 Canadian biosphere reserves and part of a worldwide network of 440 biosphere reserves in 97 countries.

One aerial photograph was available of the project area, however, its resolution is not detailed enough to provide further interpretation (**Image 1**).

## ● 4.0 Historic Context

The following historic background was compiled to document the land use history within the project area. The Pre-Contact chronology is constructed from research contained within *The Archaeology of Southern Ontario to A.D. 1650*, edited by C.J. Ellis and N. Ferris (1990) and research conducted in a nearby Stage 2 archaeological assessment completed by Archeoworks in 2016 under licence P1016-0066-2015. The Euro-Canadian period is presented from its broadest scale and refined down to individual properties. That is, the discussion reviews the history of Grey County, Derby Township, Owen Sound and any available lot and concession histories on file.

### 4.1 Pre-Contact History

#### Paleo Period – 12,000 to 10,000 BP

Twelve thousand years ago, as the glaciers retreated from Southern Ontario, nomadic peoples gradually moved into areas recently vacated by the massive icesheets. These people lived in small family groups, and it is presumed that they hunted caribou and other fauna associated with the cooler environment of this time. As the glaciers melted at the end of the last ice age, the landscape of Southern Ontario was very much like the tundra of the present day eastern sub-arctic. Traditionally, the occupation of southern Ontario during the Paleo Period has been associated with glacial lake shorelines, however recent investigations in the Toronto vicinity indicate that these peoples also exploited interior locations situated inland from the glacial lakes.

Artifact assemblages from this period are characterized by fluted and lanceolate stone points, scrapers, and small projectile points produced from specific chert types (Ellis and Deller 1990). Paleoindians favoured Collingwood chert from Beaver Valley, which has been found throughout Ontario and as far as Michigan (Flynn 1999:9). Distinctive dart heads were used to kill game, and knives for butchering and other tasks (Wright 1994:24). These items were created and transported over great distances while following migratory animals within a massive territory.

#### Archaic Period – 10,000 to 2,800 BP

As the climate in Southern Ontario warmed, Indigenous populations adapted to these new environments and associated fauna. Thus, many new technologies and subsistence strategies were introduced and developed by the Indigenous peoples of this period. Woodworking implements such as groundstone axes, adzes, and gouges began to appear, as did net-sinkers (for fishing), numerous types of spear points and items made from native copper, which was mined from the Lake Superior region. The presence of native copper on archaeological sites in Southern Ontario and adjacent areas suggests that people were involved in long range exchange and interaction. The trade networks established at this time were to persist between Indigenous groups until European contact. To harvest the new riches of the warming climate, the bands residing in southern Ontario followed an annual cycle, which exploited seasonably available resources in differing geographic locales within watersheds. As the seasons changed, these bands split into smaller groups and moved inland to exploit other resources that were available during the fall and winter such as deer, rabbit, squirrel, and bear, which thrived in the forested margins of these areas.

### Initial Woodland Period – 2,800 BP to A.D. 700

Early in the Initial Woodland period, band size and subsistence activities were generally consistent with the groups of the preceding Archaic Period. Associated with the earliest components of this cultural period is the introduction of clay pots. Additionally, around two thousand years ago a revolutionary new technology, the bow and arrow, was brought into Southern Ontario and radically changed approaches to hunting and warfare. These two technological innovations allowed for major changes in subsistence and settlement patterns. As populations became larger, camps and villages with more permanent structures were occupied longer and more consistently. Generally, these larger sites are associated with the gathering of macrobands. Often these larger groups would reside in favourable locations to cooperatively take advantage of readily exploitable resources. It was also during this period that elaborate burial rituals and the interment of numerous exotic grave goods with the deceased began to take place. Increased trade and interaction between southern Ontario populations and groups as far away as the Atlantic coast and the Ohio Valley was also taking place.

Between 200 BC and AD 900, three primary cultural complexes developed in Southern Ontario. The Couture complex was located in the southwestern-most part of Ontario (Spence et al. 1990:143). The Point Peninsula complex was “distributed throughout south-central and eastern Southern Ontario, the southern margins of the Canadian Shield, the St. Lawrence River down river to Quebec City, most of southeastern Quebec, along the Richelieu River into Lake Champlain” (Spence et al. 1990:157; Wright 1999:633). The Saugeen complex occupied “southwestern Southern Ontario from the Bruce Peninsula on Georgian Bay to the north shore of Lake Erie to the west of Toronto” (Wright 1999:629; Wright 1994:30). The Saugeen complex was also present along the Nottawasaga, Thames and Grand Rivers, however “sites along the Grand River have been variously assigned to Saugeen, Point Peninsula and independent complexes” (Spence et al. 1990:148).

The Saugeen and Point Peninsula cultures appear to have shared southern Ontario but the borders between these three cultural complexes are not well defined, and many academics believe that the Niagara Escarpment formed a frontier between the Saugeen complex and the Point Peninsula complex (Spence et al. 1990:143; Wright 1999:629; Ferris and Spence 1995:98). Consequently, the dynamics of hunter-gatherer societies shifted territorial boundaries resulting in regional clusters throughout southwestern Southern Ontario that have been variously assigned to Saugeen, Point Peninsula, or independent complexes (Spence et al. 1990:148; Wright 1999:649). Saugeen material culture is best known from the east shore of Lake Huron (Spence et al. 1990:148).

### Late Woodland Period – AD 700 to 1650

Around AD 700, maize was introduced into Southern Ontario from the south. With the development of horticulture as the predominant subsistence base, the Late Woodland Period gave rise to a tremendous population increase and the establishment of permanent villages. These villages consisted of longhouses measuring 6 metres wide and high and extending anywhere from 3 to 15 metres in length. Quite often these villages, some of which are 1 to 4 hectares in size, were surrounded by multiple rows of palisades suggesting that defence was a community concern. Aside from villages, Late Woodland peoples also inhabited hamlets and special purpose cabins and campsites associated with larger settlements. Social changes were also taking place, reflected in the florescence of smoking pipes; certain burial rituals; increased settlement size; and distinct clustering of both longhouses within villages (clan development) and villages within a region (tribal development). One interesting socio-cultural phenomenon that occurred during this period was a movement away from the traditional patrilineal and patrilocal societies of the preceding band-oriented groups to a matrilineal orientation, due to a changing emphasis from hunting to horticulture subsistence practices. Warfare was also on the rise.

The movement of villages northward from Lake Ontario within individual watersheds and beyond is clearly documented over time. This movement is generally attributed to the decline of resource availability over the lifetime of the village. After which, communities continued a northward trend, eventually settling in Huronia (in the Penetanguishene Peninsula) and it was these communities that eventually interacted with and were described by French missionaries and explorers during the early seventeenth century.

During this time period, two distinct linguistic groups are believed to have coexisted in southern Ontario, including Iroquoian-speaking peoples north and west of Lake Ontario and Algonkian-speaking peoples north of Lake Simcoe, along the Georgian Bay shore, on the Bruce Peninsula and in the vicinity of Lake St. Clair.

During the Late Ontario Iroquoian stage, the Iroquoian-speaking linguistic groups developed. Prior to European Contact, neighbouring Iroquois-speaking communities united to form several confederacies known as the Huron (Huron-Wendat), Neutral (called Attiewandaron by the Wendat), Petun (Tionnontaté or Khionontateronon) in Ontario, and the Five Nations of the Iroquois (Haudenosaunee) of upper New York State (Birch 2010:31; Warrick 2013:71). Each group was distinct but shared a similar pattern of life already established by the 16<sup>th</sup> century (Trigger 1994:42). The *Wendat*, who are recognized as the cultural group that inhabited the Toronto area during the Late Woodland Period, eventually moved their villages northward toward Georgian Bay and have now established communities in Wendake, Quebec and in the American States of Kansas and New York.

According to oral traditions, Algonquin-speaking *Anishinaabe* peoples migrated from the Eastern coast into the Great Lakes region. The Anishinaabe include people identified as Ojibway, Chippewa, or Mississauga and until the seventeenth century lived primarily a nomadic lifestyle north of Lake Ontario on the Canadian Shield.

## 4.2 Post Contact History

### Post Contact Period – AD 1650 to 1778

Also called the Early Historic Period, these years are characterized by the arrival of a small number of Europeans interested in exploration, trade, and establishing missions, coupled with a gradual adoption of European materials by First Nations peoples.

Exploration and fur trade activities between Lake Ontario and the upper Great Lakes were carried out along well-established trails linking Lake Ontario to the Holland River, Lake Simcoe and Lake Huron. French explorer, Samuel de Champlain, utilized these trails to connect with the Tionnontaté and the Odawa. The Tionnontaté or Khionontateronon were called the ‘Petun,’ a term of Brazilian origin meaning tobacco, by Champlain who observed the Tionnontaté cultivating and trading tobacco. In 1615-1616, Champlain, along with Father Joseph Le Caron, a Recollet priest, had arrived in Tionnontaté territory and found eight occupied villages and two villages under construction. The Odawa (also referred to as the ‘Ottawa’), an Algonquin-speaking cultural group known to Champlain as the *Cheveux relevés* or “standing hairs,” were located along the western limits of the Niagara Escarpment within the Bruce Peninsula on Manitoulin Island, (Fox 1990:457; Feest and Feest 1978:772). The Odawa were located immediately west of the Tionnontaté and shared the resources of the Niagara Escarpment.

In 1701, following years of warfare, representatives of several bands within the Anishinaabeg Nation and the Haudenosaunee assembled in Montreal to participate in Great Peace negotiations, sponsored by the French (Johnston 2004:10). The Great Peace Treaty of Montreal brought peace between the Iroquoian Confederacy with the French, allowing the Odawa and the Ojibwa to travel safely to Albany to trade their furs (McArthur et al. 2013:23). The Townships of Collingwood and Nottawasaga continued to function primarily as hunting grounds until after the Seven Years War (Flynn 1999:11)

Following the signing of the Treaty of Paris in 1763, which passed New France into British hands, King George III issued the Royal Proclamation, a document attributed to the first formal recognition of Indigenous rights. The Royal Proclamation asserted the British Crown's sovereignty of the region, while also declaring the land to be in possession of the Indigenous peoples who lived there. It forbade non-Indigenous people from entering the land and denied individual land purchasing rights. Only the Crown could purchase land from the Indigenous peoples living there, and this land could then subsequently be bought from the Crown.

## Euro-Canadian Period – A.D. 1778 to Present

### Grey County

The first settlers to arrive in the Grey County area settled in the vicinity of Collingwood and Meaford in 1825. They travelled from York from Holland Landing and down the Holland River into Lake Simcoe and Shanty Bay. From here, they travelled by land to the Nottawasaga River into Georgian Bay. In 1837, the town of Sydenham (Owen Sound) was founded and surveyed by Charles Rankin.

In 1840, the area became part of the new District of Wellington and formed part of the County of Waterloo for electoral purposes. By 1849, Wellington District was abolished and the area, along with the Bruce Peninsula became part of Waterloo County. The Bruce Peninsula was removed from this county in 1851 and transferred to Bruce County. The following year, Waterloo County became the United Counties of Wellington, Waterloo and Grey. Grey County received its name to honour the British Colonial Secretary's father, Charles Grey, 2<sup>nd</sup> Earl Grey, who was Prime Minister of the United Kingdom from 1830 to 1834. By 1854, the United Counties separated.

### Derby Township

The land which forms Derby Township was originally surveyed by Crown land surveyor Charles Rankin in 1846, however, settlers were known to have staked their claim on tracks of land in 1842. The Township was named after Lord Derby, father of the then present Earl. Early settlement was predominantly those of Irish, Scottish and British descent.

In 2001, Derby Township was amalgamated with the townships of Keppel, Sarawak and the village of Shallow Lake, forming the Township Of Georgian Bluffs.

### Owen Sound

Originally known as village of Sydenham after Lord Sydenham, Owen Sound was first surveyed in 1837 and was quickly settled by 1839 when Garafraxa Road (present day Highway 6 and 10) was completed from Guelph. Owen Sound became a harbour town in Georgian Bay, renamed in 1857 to honour William Fitzwilliam Owen, a member of the Royal Navy, who charted the local waters in the early nineteenth century. The port became a vital location for receiving supplies for the Toronto, Grey, and Bruce Railway in 1873. The town's popularity grew as a shipping port and became known as a drinking spot. By the 1900's, there were thirteen saloons, and the town was nicknamed "Corkscrew City". Following prohibition laws in 1906, the town's nickname became "Dry Gulch". In 1920, Owen Sound was incorporated as a city and continued to prosper with the new industries of ship building, printing, and manufacturing of auto parts and industrial equipment.

### Inglis Falls

The first known settler of the Inglis Falls area was Nathaniel Herriman in 1838. He built a home and a sawmill, the first mill in the area, on Lot 9, Concession I, acquiring the property title from the Crown in 1845. In 1845, Peter Inglis constructed a sawmill beyond the bridge at Inglis Falls on Lot 11, Concession I.



Inglis was a Scottish millwright who travelled from Cupar Fife, Scotland and arrived in Sydenham, married Anne Carrol in 1845 with whom he had seven children. Inglis would go on to construct a wooden dam (**Image 2**), flume and water wheel to harness the power from the Sydenham River to operate a flour mill on Lot 10, Concession I.

The 1851 Census return for this area listed Inglis, a miller, residing with his wife, Ann (Anne), their three children, Ellen, John and George in a one-storey frame house. Also listed as residing with the Inglis family were Ann Reed and Archibald Irvin who assisted at the mill. The enumerator of this census notes, the following regarding the mills in this area:

There is a grist mill on the Sydenham River on Lot No. 10 1<sup>st</sup> Con with 2 run of stones. Water power. Cost of erecting the same seven hundred pounds. Employs 2.

Also a saw mill on the same river adjacent to the grist mill with on saw. Water power. The above mills managed by Mr. Peter Inglis. Employs 1.

There is a Saw Mill on 1<sup>st</sup> Con Lot N ½ 11 managed by James and George Crop. Cost 300 pounds. Employs 2.

There is a on the 2<sup>nd</sup> Con S ½ 12 an oat meal mill owned by Mr. James McNab. Cost 150 pounds. Water power. Employs 2.

By 1862, the flour mill was replaced by a picturesque four-storey building at the falls, which converted the rollers and powered by turbines which had the capacity to produce 75 bags every 24 hours (**Images 3 to 7**). The mills continued to grow and prosper under many names including *King's Taste*, *Five Lily's* and *Lily White* (**Image 9**).

In 1870, Kennedy & Son built a sawmill on the same lot as Inglis, which was quickly purchased by the Inglis family. It was locally known as Stark's Mill, named after the miller who operated the equipment. This same year, Inglis constructed a woollen mill). In 1881, the woollen mill was operated by Charles Woodhead and John Benner in 1883. In 1885, the woollen mill was lost to a fire but quickly rebuilt. The mill was also turned back over to the Inglis family, and operated by Peter's son, William. In 1901, the woollen mill was lost to fire a second time and never rebuilt. 1901 also marks the passing of Peter Inglis.

The old wooden dam was fully washed out by a flood in 1912 and rebuilt with concrete, as well as an upgraded steel flume. This same flood washed out remnants of Stark's sawmill, located downstream from the Inglis mills, that stopped operating in 1901. Soon the Inglis family installed another turbine at the mill which provided electricity to nearby homes.

William Inglis ran the flour mill until his death in 1923. The flour he milled was sent overseas during World War I. His sons, Victor and Louis continued the family business until the City of Owen Sound purchased the mill site to secure water rights in 1932. The Inglis' continued operations until 1934 when they sold to Emile and Adolph Henkel, who operated the mills until 1945 when the mill was devastated by a suspicious fire. At this time, the remainder of the property was purchased by Owen Sound P.U.C. and then purchased by GSCA in 1960. Remaining features of the mill site were removed by GSCA due to hazard and risk concerns. The mill stones are all that remain of a once thriving milling industry operated by the Inglis family for 89 years.

## Original Crown Grants

**Table 1** is a summary of original Crown land grants identified on the land abstracts from the Ontario Land Registry Access website. While this summary documents the earliest legal transaction of land in the project area, it is possible individuals occupied the land prior to this documentation.

**Table 16. Summary of Patent Dates**

Lot - Concession	Grantee	Acres	Date
Lot 9 Concession 1	Johnson Reilly	50 a S ½ of S ½	1852
Lot 9 Concession 1	Deborah Reilly	50 a N ½ of S ½	1848
Lot 9 Concession 1	Nathaniel Herriman	100 a N ½	1845
Lot 10 Concession 1	Hugh McDermid	50 a S ½ of S ½	1847
Lot 10 Concession 1	Hugh McDermid	50 a N ½ of S ½	1851
Lot 10 Concession 1	John McDermid	50 a E ½ of N ½	1855
Lot 10 Concession 1	Peter Inglis	50 a NW ¼	1855
Lot 11 Concession 1	James Beatty	50 a E ½ of S ½	1844
Lot 11 Concession 1	Peter Inglis	50 a SW ¼	1847
Lot 11 Concession 1	Charles Rankin	50 a E ½ of N ½	1849
Lot 11 Concession 1	Archibald McNab	50 a W ½ of N ½	1849
Lot 12 Concession 1	Henry Rosseter	50 a S ½ of S ½	1849
Lot 12 Concession 1	James McNab	50 a N ½ of S ½	1853
Lot 12 Concession 1	William Sharp	50 a S ½ of N ½	1853
Lot 12 Concession 1	James Sharp	50 a N ½ of N ½	1853
Lot 13 Concession 1	Edward Sparling	50 a S ½ of S ½	1848
Lot 13 Concession 1	A.K.R. Mulholland	50 a N ½ of S ½	1852
Lot 13 Concession 1	James Oliver	50 a S ½ of N ½	1856
Lot 13 Concession 1	James Oliver	50 a N ½ of N ½	1847
Lot 11 Concession 2	James Beatty	50 a SW ¼	1848
Lot 11 Concession 2	Peter Inglis	50 a SE ¼	1847
Lot 11 Concession 2	James Connell	100 a N ½	1845

## Nineteenth-Century Mapping

Five historical maps were identified and have been included in this report: the 1845 Patent Map of Derby Township (**Map 4**), the 1877 Map of Derby Township by Alexander McNab (**Map 5**), the 1879 Map of the

County of Grey (**Map 6**) and the 1880 Map of Derby Township from the Illustrated Historical Atlas of Grey County by Belden & Co. (**Map 7**).

### 4.3 Twentieth Century History

#### Water Filtration Plant

Originally called the Rockford Water Filters, construction began on the filtration plant in 1910 (**Image 10**) and completed in 1912, serving the community of Owen Sound until the plant was decommissioned in 1969. The City of Owen Sound took water from the Sydenham River above Inglis Falls and filtered it before sending it to Owen Sound. These filters provided over nine million litres of water per day to the homes and factories of Owen Sound and relied on gravity to deliver. Construction included a water works dam, a 61 cm concrete aqueduct feed to the filter, the Rockford filters, nearly 10 km of pipe from the plant to Owen Sound and a 20 million litre reservoir in Owen Sound. Over 400 men worked on constructing the plant including mixing concrete for the filters and reservoir, digging, and covering the pipes.

The structure is in excellent condition and is a good example of a poured concrete vaulted ceiling structure. During construction they utilized lime that was produced locally. The building is representative of a time when the only treatment of water from the Sydenham River was through a sand bed to remove sediments.

#### Inglis Falls Conservation Area and Grey Sauble Conservation Authority

Originally founded under North Grey Conservation Authority, IFCA was established in 1959 to protect significant natural resources within this region. This included the Niagara Escarpment with its associated upland hardwood forest, the Sydenham River and the scenic Inglis Falls. The property was the first to open for the local conservation authority and long-term planning took precedence due to the property's central location, scenic waterfall, natural setting, and its significant educational and recreational value.

Between 1960 and 1974 properties were acquired from local landowners and the City of Owen Sound to form the Inglis Falls property. In 1961, the North Grey Conservation Authority established an arboretum.

Established in 1985 following the amalgamation of North Grey and Sauble Valley Conservation Authorities, GSCA was established to undertake programs designed to further jurisdictional efforts in conservation, development and management of renewable resources.

#### Twentieth-Century Maps and Aerial Photographs

One twentieth-century map from 1929 (**Map 8**) and one aerial photograph from 1954 (**Image 1**) was provided by GRMA, however, neither provide high enough resolution to review and identify areas of cultural heritage interest. No additional aerial photographs or twentieth century topographic maps were reviewed as part of this background study.

## 5.0 Built Heritage Context

The project area was reviewed for the identification of built heritage resources based on information provided by GSCA, GRMA, the Township of Georgian Bluffs and the Niagara Escarpment Commission.

### 5.1 Existing Cultural Heritage Resources

#### Heritage Register

The *Ontario Heritage Act (OHA)* gives municipal heritage advisory committees the responsibility of researching and recommending to municipal council properties of cultural value or interest. The properties are recorded and monitored through a heritage register as *designated* (under the OHA) or *listed* (non-designated properties with cultural heritage interest or value that may become candidates for designation).

The Township of Georgian Bluffs presently does not have a heritage advisory committee or a heritage register, however, students from Ryerson University are working on a plan which will be brought to council in December 2021. It is unknown when this plan will be made publicly available.

#### Commemorative Plaques

GSCA has indicated there are two plaques detailing cultural heritage information on the property. They are titled: *The History of Inglis Falls* and *Inglis Falls Filtration Plant*.

#### Built Heritage Features

Located throughout the property are historical or heritage features which are illustrated on **Map 9. Table 2** lists the historical features as they were presented in the 1980 Master Plan for Inglis Falls.

**Table 17. Heritage Features at IFCA**

#	Feature	Date
1	Filtration Beds	ca. 1910
2	Herriman's Sawmill	ca. 1838
3	Inglis Mills	1845
4	Kennedy's/Inglis'/Stark's Sawmill	1870
5	McMickins' 3 Mile Inn	1850s
6	Parker & Son Power Plant	1890
7	Remnants of bridge	No date
8	Tree Nursery & Log Cabin	1932
9	Waterworks Dam	1910

### 5.2 Cultural Heritage Landscapes

While no cultural heritage landscapes were identified within the IFCA, an assessment in 2000 by GSCA in conjunction with a management plan from IFCA included an inventory of trees, with over a dozen trees between the ages of 125 years and 825 years deemed as having cultural heritage value. A “heritage tree” can be defined as “a notable specimen because of its size, form, shape, beauty, age, colour, rarity, genetic constitution, or other distinctive features” (Aird 2005) including:

- A living relic that displays evidence of cultural modification by Aboriginal or non-Aboriginal people, including strips of bark or knot-free wood removed, test hole cut to determine soundness, furrows cut to collect pitch or sap, or blazes to mark a trail;
- A prominent community landmark;
- A specimen associated with a historic person, place, event or period;
- A representative of a crop grown by ancestors and their successors that is at risk of disappearing from cultivation;
- A tree associated with local folklore, myths, legends, or traditions.

This definition is used by Forests Ontario and is generally accepted among heritage tree protection advocates. However, trees can also be given heritage status when they are part of an individual property or Heritage Conservation District via Heritage Preservation Services that meets criteria for designation under the OHA.

### Niagara Escarpment Parks and Open Space System (NEPOSS)

IFCA is designated within the Niagara Escarpment Commission's (NEC) *Niagara Escarpment Parks and Open Space System* (NEPOSS) as a Natural Environment (**Map 10**) which is defined as:

Natural Environment Zones: include scenic landscapes in which minimum development is permitted to support recreational activities that have minimal impacts on the Escarpment environment.

An objective of the Niagara Escarpment Plan (NEP) is to protect the scenic resources of the Escarpment. To assist regional planners with their evaluations, each area is assigned a ranking through a Landscape Evaluation Study (LES). The LES has six rankings: Outstanding, Very Attractive, Attractive, Average, Low and Very Low. These rankings were used to assess IFCA for its visual attractiveness and the results are illustrated on **Map 11**. Most of IFCA is ranked predominantly "Low" with a portion identified as "Attractive". The "Attractive" areas offer significant views of the Niagara Escarpment.

Additionally, the NEP has policies related to cultural heritage located in Section 2.10. The objective is to conserve the Escarpment's cultural heritage resources, including significant built heritage resources, cultural heritage landscapes, and archaeological resources.

1. Development shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources are conserved.
2. Where proposed development is likely to impact cultural heritage resources or areas of archaeological potential, the proponent shall undertake a heritage impact assessment and/or archaeological assessment. The proponent must demonstrate that heritage attributes will be conserved through implementation of proposed mitigative measures and/or alternative development approaches.
3. Reconstruction, alterations and consideration of a second dwelling under Part 2.2.7 should be compatible with the area's community character.
4. Where the implementing authority has approved the construction of a second single dwelling on an existing lot where the existing dwelling has heritage attributes and is subject to a heritage conservation easement agreement, the property and details regarding its size and location shall be recorded and listed in Appendix 3.



5. Removal of the property from the list on Appendix 3 shall require an amendment to the Niagara Escarpment Plan.

Additionally, an argument could be made that the area around Inglis Falls is a cultural heritage landscape candidate based on the presence of ruins, heritage trees, historic industries, and local historical knowledge of property.

A Cultural Heritage Evaluation Report would provide a detailed assessment of the property's broader cultural heritage context on the Niagara Escarpment.

## ● 6.0 Archaeological Context

Archaeological context is considered through the review of previous archaeological sites registered in the vicinity, site predictive models and previous archaeological assessments within the current project area.

### 6.1 Known Archaeological Sites within the Project Area

The Ontario Archaeological Sites Database (OASD) maintained by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) was consulted to determine if there were any archaeological sites within two kilometres and five kilometres of the IFCA. MHSTCI reported no archaeological sites within two kilometres of IFCA.

### 6.2 Reports Documenting Archaeological Assessments

MHSTCI provided several archaeological reports near the IFCA, one of which abuts the eastern project limits along Highway 6/10. Project P007-414-2012 was a Stage 1 and 2 archaeological assessment ahead of road rehabilitation along Highway 6/10 from Chatsworth to Owen Sound. No artifacts or cultural heritage resources were encountered during this assessment. To the best of TRCA's knowledge, no archaeological assessments have occurred on the IFCA property.

### 6.3 Archaeological Potential Modelling

TRCA recognizes that GSCA does not have an Archaeological Site Predictive Model (ASPM). However, as these tools assist in determining the probability of encountering archaeological sites, a brief summary of the utility of an ASPM has been included for future consideration by GSCA.

Probability models are created under careful consideration of several variables including: distance to water, stream order, soil type, drainage, physiographic region, degree of slope, proximity to registered archaeological sites, and degree of disturbance.

In 1990, TRCA's Archaeological Master Plan was designed to assess the potential for cultural resources within a particular property. The model employs High, Medium and Low probability categories based on the several variables noted above. The three most significant factors that determine settlement location of past peoples are close proximity to water, well drained soils, and flat to gently sloping terrain. While the model does not forecast exact site locations, it does present a generalized prediction based on the known settlement patterns of Indigenous populations. The accuracy of such models has not been thoroughly studied and compared with archaeological finds in the last two decades; however, it is quite clear that most sites are located in high probability areas. A scenario where archaeological potential is nil occurs when there is reliable, convincing data to determine that a location has been thoroughly disturbed and that no potential remains for intact archaeological resources to survive. Nevertheless, even in areas of disturbance, there is still the possibility to encounter deeply buried deposits containing cultural resources. Low potential is often found in low lying

wetlands and scenarios like this greatly reduce the potential for encountering archaeological sites, except in small pockets of undisturbed land at higher elevated locations within the study area.

It should be stressed that accessible water is one of the most fundamental influences on human settlement and is therefore a major indicator of archaeological potential. In the 2011 Standards and Guidelines, the MHSTCI notes that archaeological sites are likely to be discovered in project and study areas that are within 300 metres of primary water source (lakes, rivers, streams and creeks), secondary water sources (intermittent streams and creeks, springs, marshes and swamps) and features that indicate past or ancient water sources (glacial lake shorelines). Thus, areas with high probability to contain Pre-Contact cultural resources are approximately within 300 metres of a water source with good soil drainage and level to gently undulating topography.

Euro-Canadian settlers faced the same environmental constraints as Indigenous peoples including good access to water and arable soil. Primary and permanent water resources were crucial for establishing mills and well drained soils were important for gardens, crops, and livestock. Roads established at this time were vital for access to settlements and transportation of goods. As a result, areas with high probability to contain Euro-Canadian sites are typically located within 100 metres of historic roads. In many cases modern roads follow these original alignments.

Based on the variables presented above, IFCA would demonstrate high potential to locate intact archaeological resources.

## ● 7.0 Summary and Growth Opportunities

This report was completed with available data provided by GSCA and GRMA. Inquiries were made to MHSTCI for site and report data, the Township of Georgian Bluffs and the Niagara Escarpment Commission on behalf of GSCA.

The following are the results of this research and evaluation:

- The IFCA has a rich history in the early development of the township, as well as milling and water industries which supported the surrounding communities. This is exemplified by the property's location on the Niagara Escarpment.
- The Township of Georgian Bluffs does not presently recognize any heritage assets in the jurisdiction.
- The Niagara Escarpment Commission has designated IFCA as a Natural Environment under NEPOSS.
- No archaeological sites have been registered within 2 km of the property. However, settler activities have been well documented in the area and there are visible remnants of the past.
- The IFCA demonstrates high potential to encounter cultural heritage resources from all past cultural periods in the form of archaeological sites.

The following recommendations will add value and strengthen the protection of cultural heritage features and resources at IFCA. These efforts to be led by GSCA, GRMA, Township of Georgian Bluffs, Ontario Heritage Trust and/or hired archaeological/cultural heritage consultants:

- Engage Indigenous communities to learn about traditional use areas, sacred sites, and Indigenous place names within and surrounding the IFCA project area;
- Engage Indigenous communities through participation and consultation to develop cultural programming including, but not limited to Saugeen First Nation, the Chippewas of Nawash Unceded First Nation and The Metis Nation of Ontario – Owen Sound Office;
- Conduct in-depth archival research to establish a comprehensive timeline of people, places and industries to learn more about the communities within and adjacent to IFCA beyond the milling industry, incorporate the families and individuals who lived and worked there; build greater awareness for cultural heritage resources at IFCA and beyond;
- Hire a consultant to complete a Conditions Report on the Inglis Falls Water Treatment Plant. This report will provide a comprehensive construction history of a potential heritage asset and to set a baseline to determine areas at risk of deterioration;
- Hire a consultant to complete a Cultural Heritage Evaluation Report to comprehensively evaluate the potential of IFCA as a cultural heritage landscape, including but not limited to the ruins of settler occupations and heritage trees;
- Implement recommendations for cultural heritage preservation in the Niagara Escarpment Plan (2017), Section 3.1., The Niagara Escarpment Parks and Open Space Systems (NEPOSS). This includes inventorying all cultural heritage assets to establish procedures surrounding their protection and celebration. Assets include but are not limited to archaeological sites, built heritage resources, cultural heritage landscapes, heritage trees and viewshed or viewsapes;
- Follow up with the Township of Georgian Bluffs regarding the heritage study conducted by students of Ryerson University;

- Create an Archaeological Master Plan for GSCA and/or Sydenham Watershed that will include open-ended cultural heritage inventory and cultural heritage landscape identification in order to preserve the cultural integrity within the watershed, integrating those into future development initiatives;
- Conduct archaeological assessments prior to ground disturbance or change of land use and protect any archaeological sites that are discovered on IFCA;
- Advocate for more systematic archaeological assessments with some community assistance throughout the township. Extensive and systematic Stage 2 pedestrian surveys conducted on ploughed farm fields and test pit surveys in forests, grasslands and meadows in high probability areas will provide a more robust indicator of archaeological potential and enhance local and regional knowledge of past peoples. These projects must be led by a licenced archaeologist;
- Develop a process to identify areas of known cultural heritage features to project managers and ensure future property development does not impact these potential sites. Should construction or ground-breaking activities be necessary, conduct an archaeological assessment to preserve the history of IFCA;
- Create educational opportunities through interpretation with local institutions. With increased knowledge of cultural heritage resources in the Township, greater opportunities become available to celebrate cultural heritage in the form of archaeological sites, built heritage resources and cultural heritage landscapes;
- Develop stewardship opportunities to engage regular visitors to the property to document and help preserve areas containing cultural heritage features, known and unknown;
- Develop opportunities to engage the community at large online such as a geospatial Story Map which provides a virtual opportunity for the public to explore the rich natural and cultural heritage features of IFCA;
- Programming opportunities: guided hikes showcasing cultural heritage points throughout the property;
- Partnership opportunities: Saugeen First Nation, Metis Nation of Ontario – Owen Sound, Grey Roots Museum and Archives, Grey County Historical Society, Community Waterfront Heritage Centre, Billy Bishop Home and Museum, Grey Bruce Chinese Heritage and Culture Association;

## ● Bibliography and Sources

Aird, P.

2005 *Heritage, natural heritage, cultural heritage and heritage tree defined*. The Forestry Chronicle. July/August 2005, Vol. 81, No. 4.

Archeoworks Inc.

2016 *Stage 1 Archaeological Assessment: Detailed Design for Proposed Improvements to the Intersection of Grey Road 19/Grey Road 21 and Grey Road 19/Mountain Road Within Par of Lots 45 and 46, Concession 12 and Lots 15 and 16 Concession 1*. P1016-066-2015.

Birch, J.

2010 Coalescence and Conflict in Iroquoian Ontario. [Online]. Available at: [http://uga.academia.edu/JenniferBirch/Papers/183903/Coalescence\\_and\\_Conflict\\_in\\_Iroquoian\\_Ontario](http://uga.academia.edu/JenniferBirch/Papers/183903/Coalescence_and_Conflict_in_Iroquoian_Ontario) [Accessed 03 March 2015].

Chapman, L.J. and D.F. Putnam

1984 *The Physiography of Southern Ontario*. Ontario Geological Survey, Special Volume 2, 3<sup>rd</sup> Edition, Government of Ontario.

Dibb, G.

2004 The Madina Phase: Late Pleistocene-Early Holocene Occupation Along the Margins of the Simcoe Lowlands in South-Central Ontario. In *The Late Paleo-Indian Great Lakes: Geological and Archaeological Investigations of Late Pleistocene and Early Holocene Environments*, L. J. Jackson and A. Hinshelwood eds., pp. 117-126. Mercury Series, Archaeological Survey of Canada Paper 159, Canadian Museum of Civilization, Hull.

Dodd, C.F., D.R. Poulton, P.A. Lennox, D.G. Smith, and G.A. Warrick

1990 The Middle Ontario Iroquoian Stage. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 321-359.

Ellis, C.J. and D.B Deller

1990 Paleo-Indians. In C.J. Ellis, and N. Ferris, (Eds.). *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 37-64.

Ellis, C.J. and N. Ferris

1990 *The Archaeology of Southern Ontario To A.D. 1650*. Occasional Publications of the London Chapter, Ontario Archaeological Society Inc., Publication Number 5, London Ontario.

Ferris, N. and M.W. Spence, M.W.

1995 *The Woodland Traditions in Southern Ontario*. Revista de Arqueologia Americana (9), 83-138.

Feest, J.E. and C.F. Feest

1978 Ottawa. In B.G. Trigger (Ed.). *Volume 15: Northeast*. Washington: Smithsonian Institution, pp.772-786.

Flynn, J.

1999 The End of An Era: Collingwood Township 1977-1997). Thornbury, Ontario: The Town of Blue Mountain.



- Fox, W. A.  
1990 The Odawa. In C.J. Ellis, and N. Ferris, (Eds.). *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 457-474.
- Frim, M.  
2002 *Secrets of the Lakes*. Toronto, Ontario: Lynx Images Inc.
- Francis, Daniel  
2015 [Owen Sound](#). *The Canadian Encyclopedia*. Historica Canada. Accessed on September 29, 2021.
- Jamieson, S. M.  
2002 Limited Activity and Low Visibility Remains in the Middle Trent Valley: Wishin' and Hopin' at the West Burleigh Bay Site. *Ontario Archaeology* 73:29-37.
- Johnston, D.  
2004 *Connecting People to Place: Great Lakes Aboriginal History in Cultural Context*. [Online]. Available at: [http://www.attorneygeneral.jus.gov.on.ca/inquiries/ipperwash/transcripts/pdf/P1\\_Tab\\_1.pdf](http://www.attorneygeneral.jus.gov.on.ca/inquiries/ipperwash/transcripts/pdf/P1_Tab_1.pdf) [Accessed 03 March 2015].
- Karrow, P. F. and B. G. Warner  
1990 The Geological and Biological Environment for Occupation in Southern Ontario. In *The Archaeology of Southern Ontario to A.D. 1650*, C. J. Ellis and N. Ferris, eds., pp. 5-36. London Chapter of the Ontario Archaeological Society Occasional Publication No.5, London, Ontario.
- Lennox, P. A.  
2002 The McKean Site: A Late Paleo-Indian/Early Archaic Site in Simcoe County, Ontario. Available at <[Adamsheritage.com/articles/lennox/mckean site](http://Adamsheritage.com/articles/lennox/mckean%20site)>
- McArthur, P., Dr. D. McNab, and P.E. McNab  
2013 *Historic Saugeen Metis: A Heritage Atlas*. Southampton, Ontario: Saugeen Metis Council, Government of Ontario.
- Owen Sound  
2019 [Damnation Corners](#). Historical Owen Sound. Owen Sound. Accessed September 29, 2021.
- Ritchie, W. A.  
1994 *The Archaeology of New York State*. Reprinted. Purple Mountain Press, Fleischmanns, New York. Originally published 1965, Doubleday & Company, New York.
- Saugeen Ojibway Nation  
2021 Environmental Office. <https://www.saugeenojibwaynation.ca/> . Accessed September 2021.
- Spence, M.W., R.H. Pihl, and C.R. Murphy  
1990 Cultural Complexes of the Early and Middle Woodland Periods. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 125-169.
- Stewart, A.M.  
2013 Water and Land. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Archaeology: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press

Storck, P.L.

- 1982 Palaeo-Indian Settlement Patterns Associated with the Strandlines of Glacial Lake Algonquin in South-Central Ontario. *Canadian Journal of Archaeology*, Vol. 6:1-32.

Trigger, B.G.

- 1994 The Original Iroquoians: Huron, Petun and Neutral. In Edward S. Rogers (Eds.). *Aboriginal Ontario: Historical Perspectives on the First Nations*. Toronto, Ontario: Dundurn Press Limited, pp 41-63.

Toronto and Region Conservation Authority

- 2003 *Archaeological Site Predictive Model*. On file with Toronto and Region Conservation Authority.

Warrick, G.

- 2013 The Aboriginal Population of Ontario in Late Prehistory. In Munson, M.K. and Jamieson, S.M (Eds.) *Before Archaeology: The Archaeology of a Province*. Montreal & Kingston, Ontario: McGill Queen's University Press.

Williamson, R. F.

- 1990 The Early Iroquoian Period of Southern Ontario. In Ellis, C.J. and N. Ferris (Eds.) *The Archaeology of Southern Ontario to A.D. 1650*. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 291-320.

Wright, J.V.

- 1994 Before European Contact. In Edward S. Rogers (Eds.). *Aboriginal Ontario: Historical Perspectives on the First Nations*. Toronto, Ontario: Dundurn Press Limited, pp 21-40

Wright, J.V.

- 1999 *A History of the Native People of Canada: Volume II (1,000B.C. – A.D. 500)*. Hull, Quebec: Museum of Civilization.

Yu, Z.

- 2003 Late Quaternary Dynamics of Tundra and Forest Vegetation in the Southern Niagara Escarpment, Canada. *New Phytologist* 157:365-390.

Yu, Z. and J. H. McAndrews

- 1994 Holocene Water Levels at Rice Lake, Ontario, Canada: sediment, pollen and plant macrofossil evidence. *The Holocene* 4(2): 141-152.

## Archival Material

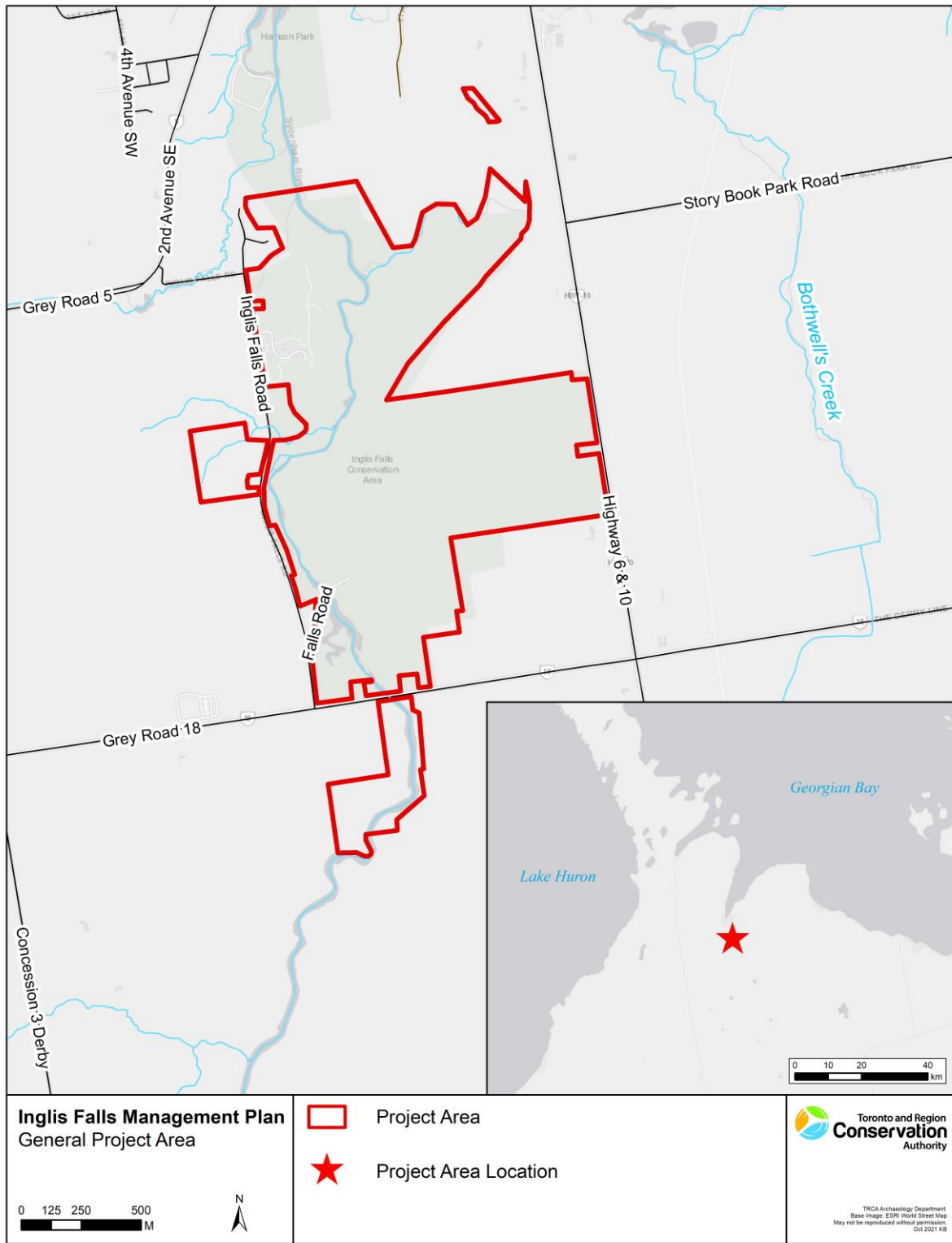
### Land Abstracts

Lots 9 to 13 Concession 1 and Lot 11 Concession 2 Geographic Township of Derby, Historic Grey County in the Township of Georgian Bluffs. Accessed online at OnLand.ca.

### Maps and Aerial Photographs

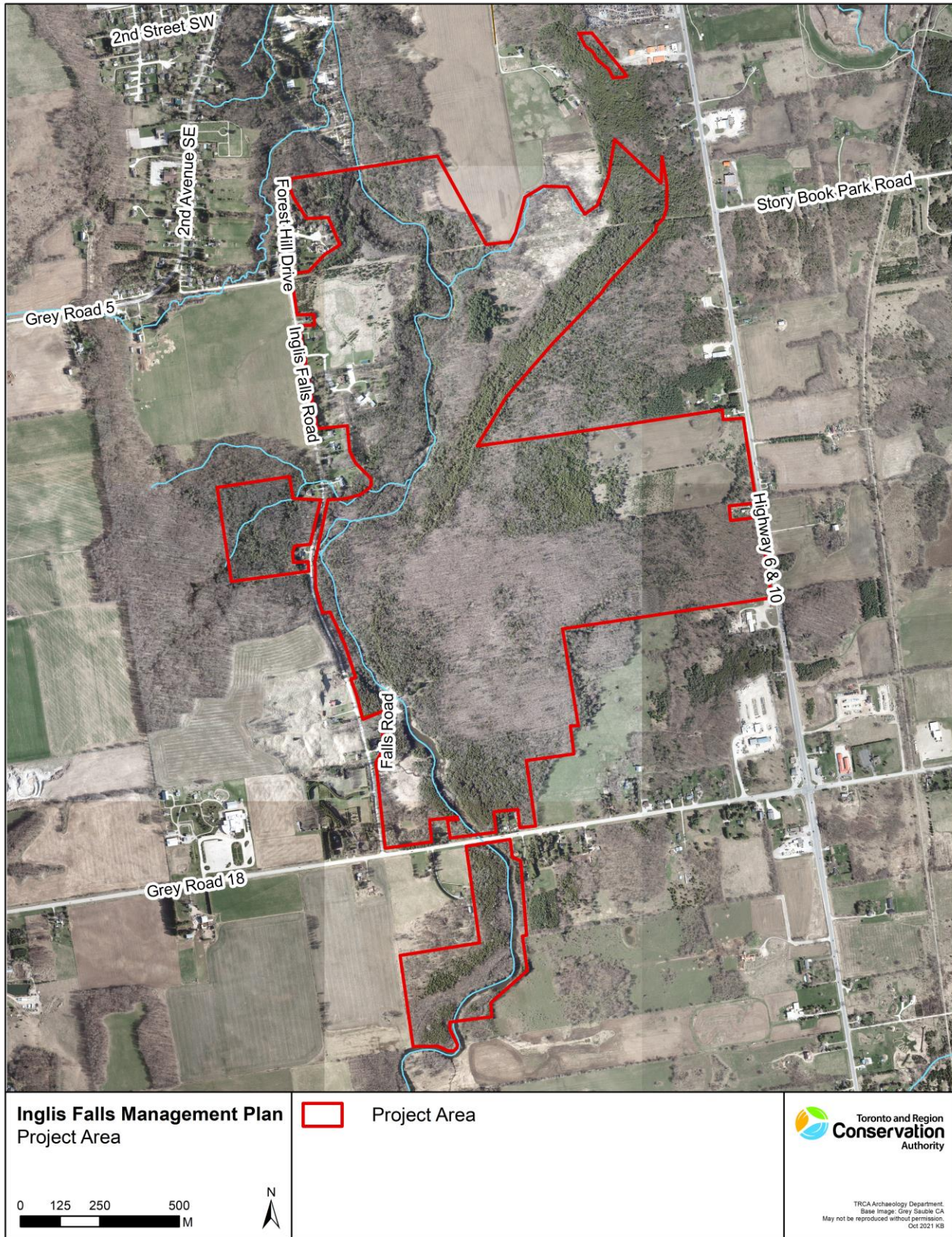
- 1845 Patent Map of Derby Township, Grey County. Thomas Parke. On file at Grey Roots Museum & Archives.  
1877 Map of the Township of Derby by Alexander McNab. On file at Grey Roots Museum and Archives.  
1879 Map of the County of Grey  
1880 Map of Derby Township, Illustrated Historical Atlas of Grey County. H. Belden & Co.  
1929 Map of Grey County. On file at Grey Roots Museum and Archives.  
1954 Aerial Photograph. On file at Grey Roots Museum and Archives.

## Appendix A: Maps



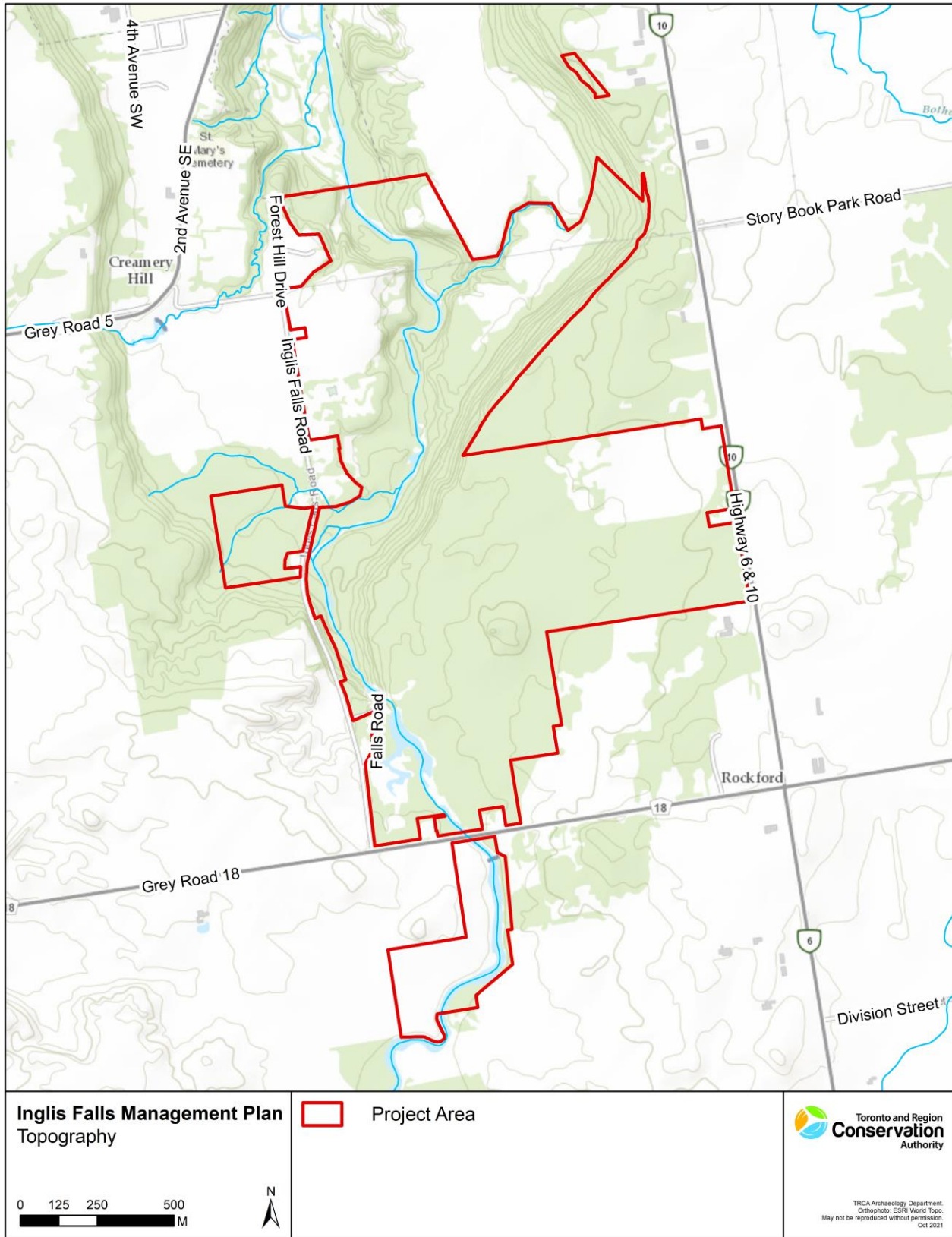
Map 22. General Project Area





Map 23. Orthographic Map





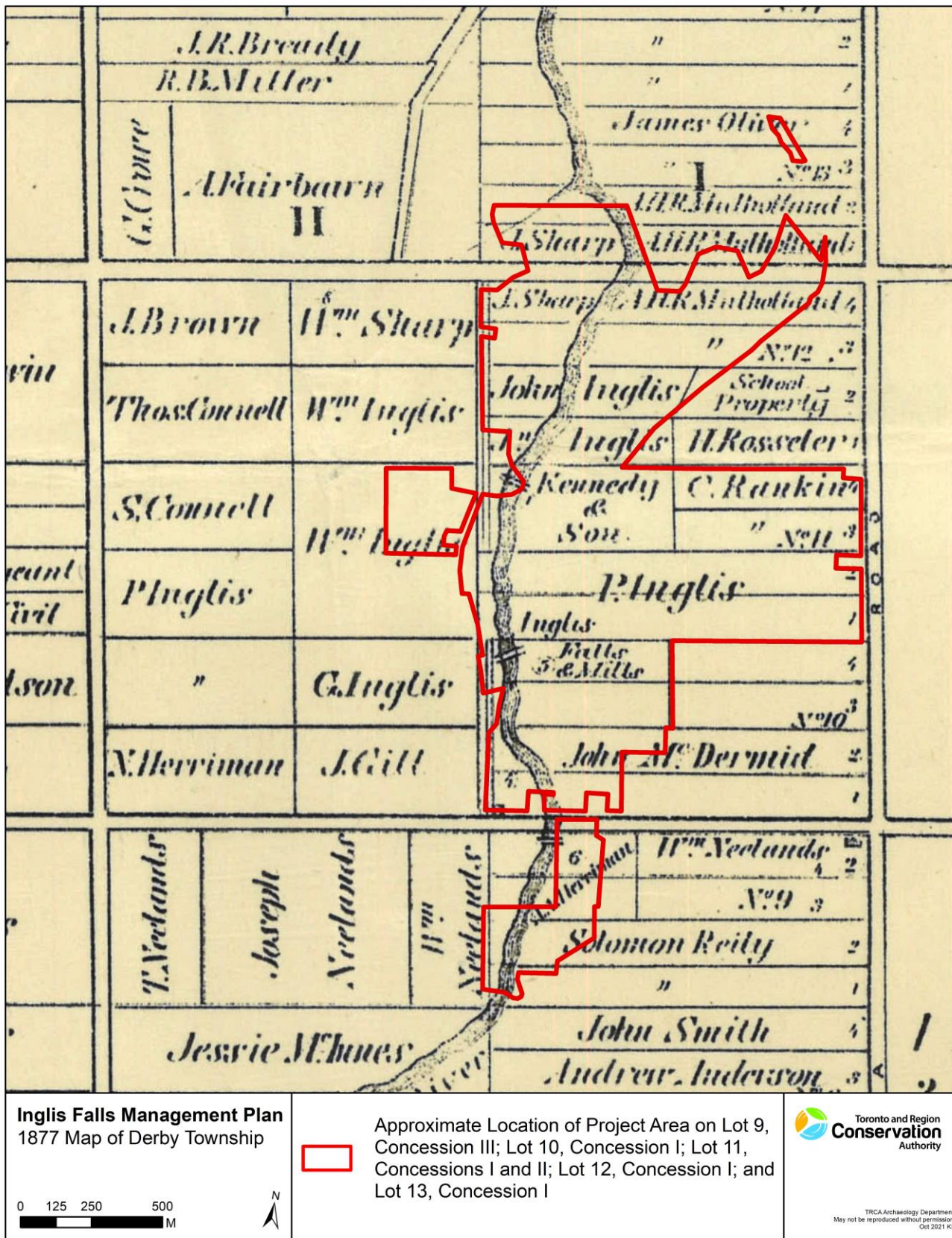
Map 24. Modern Topography





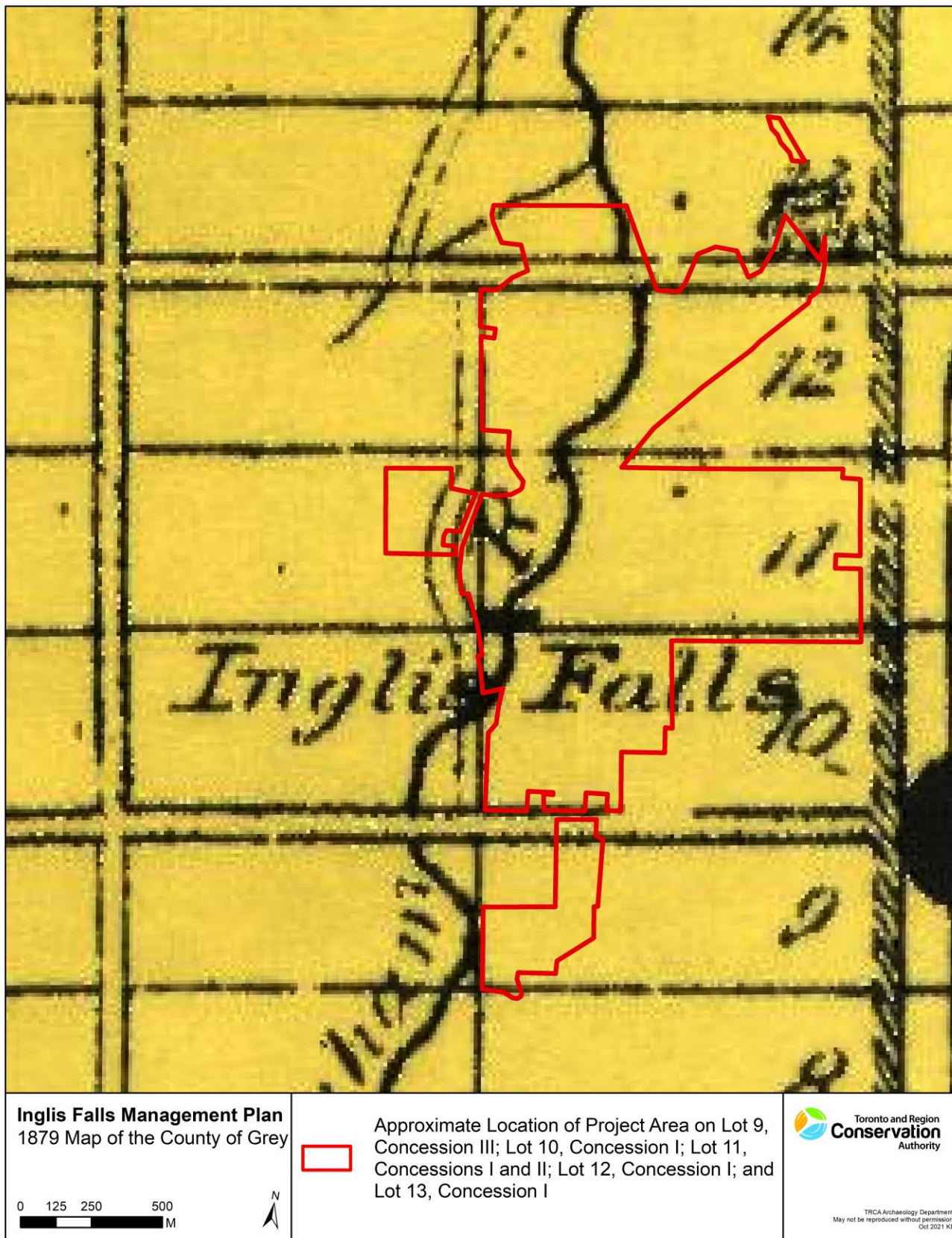
Map 25. 1845 Patent Map of Derby Township – Grey County





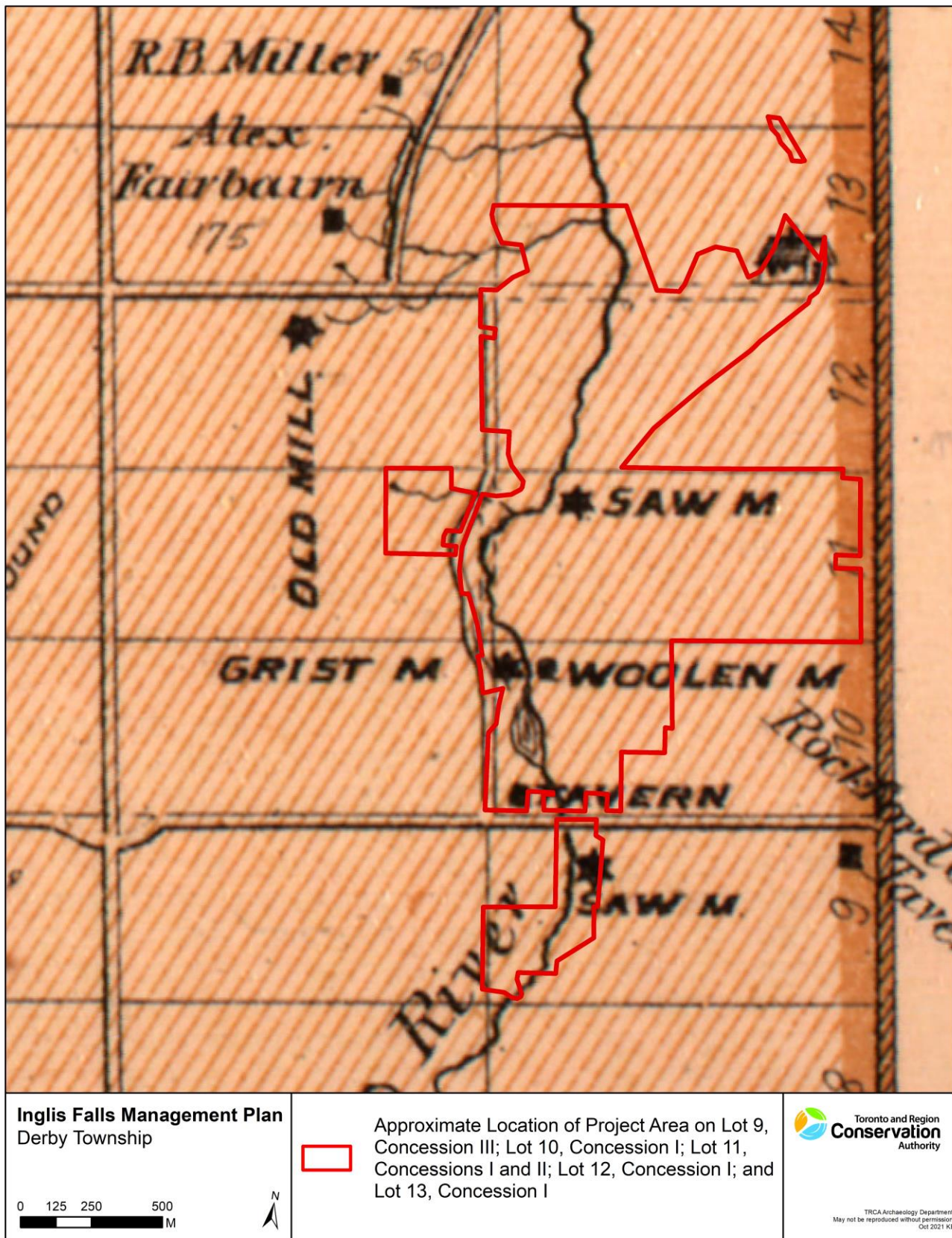
Map 26. 1877 McNab Map of Derby Township





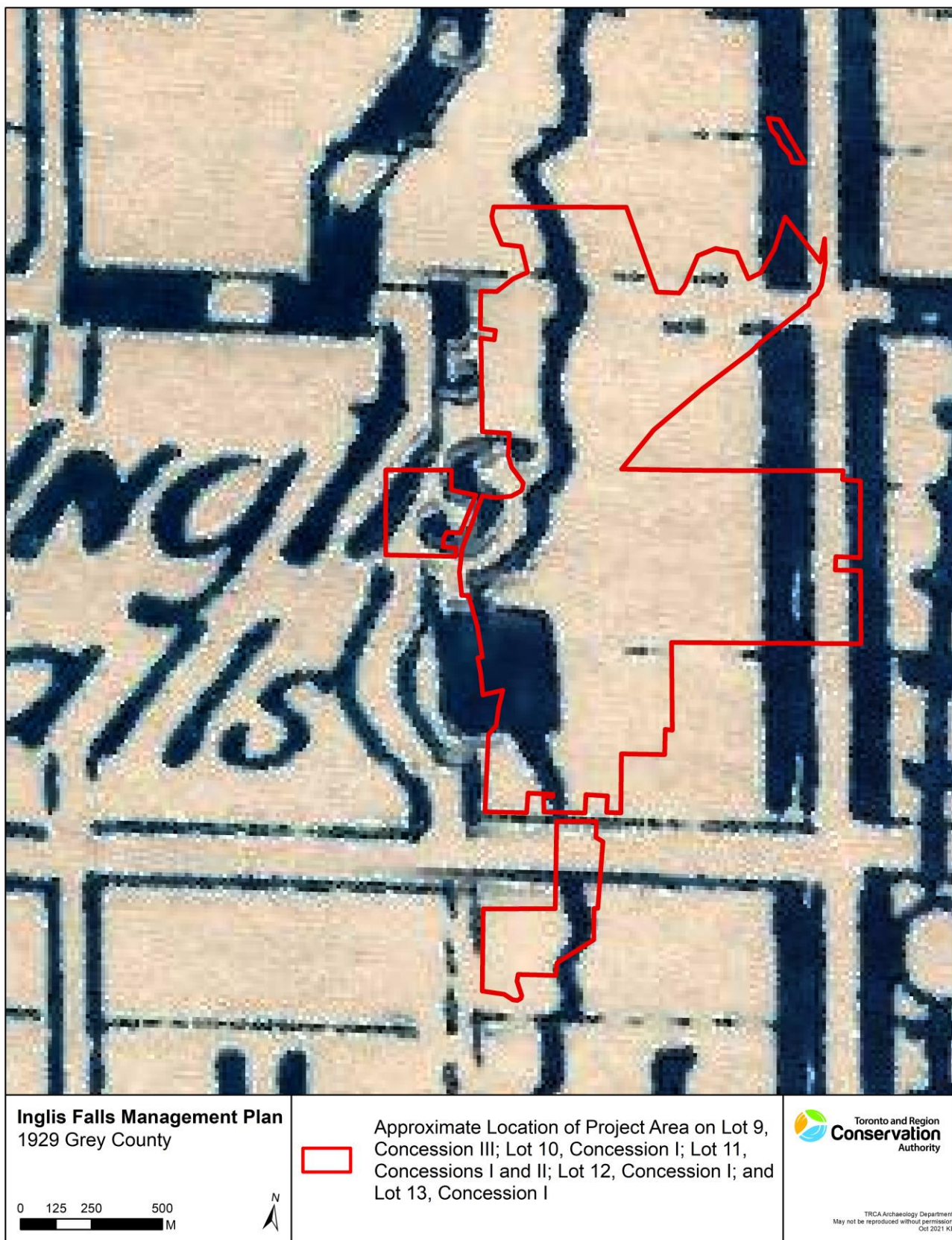
Map 27. 1879 Map of the County of Grey





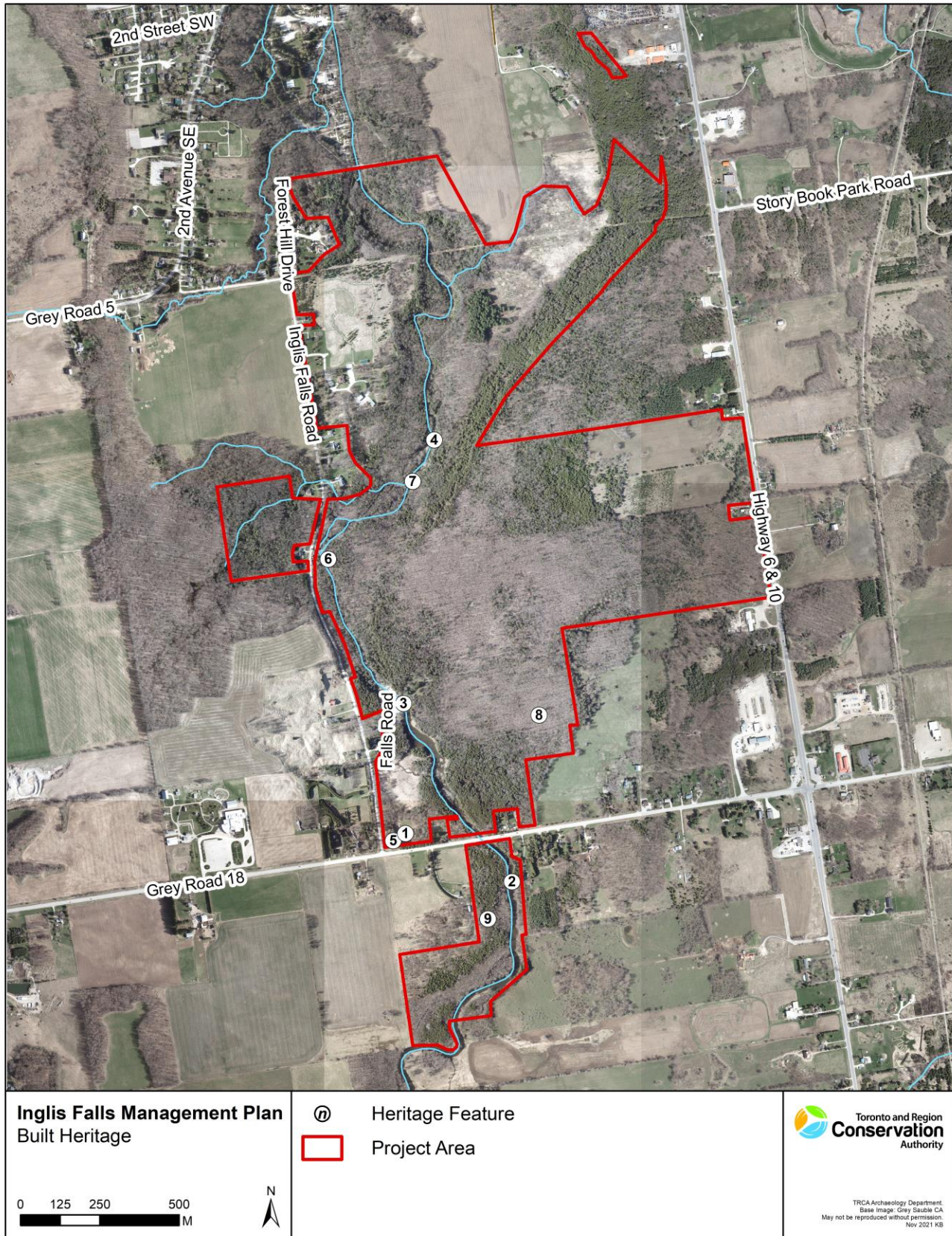
Map 28. 1880 Derby Township, Belden & Co. Illustrated Atlas of Grey County





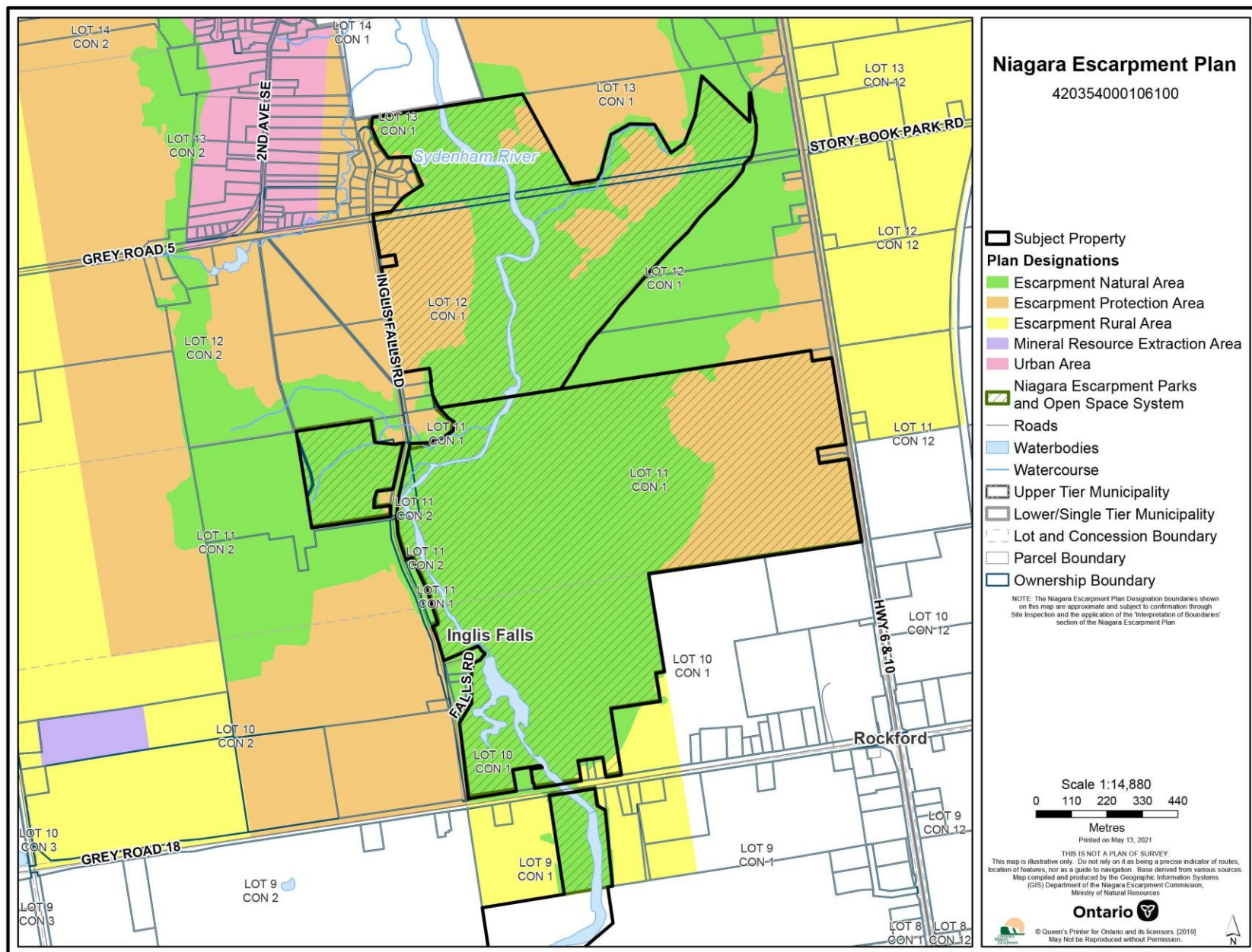
Map 29. 1929 Grey County Map

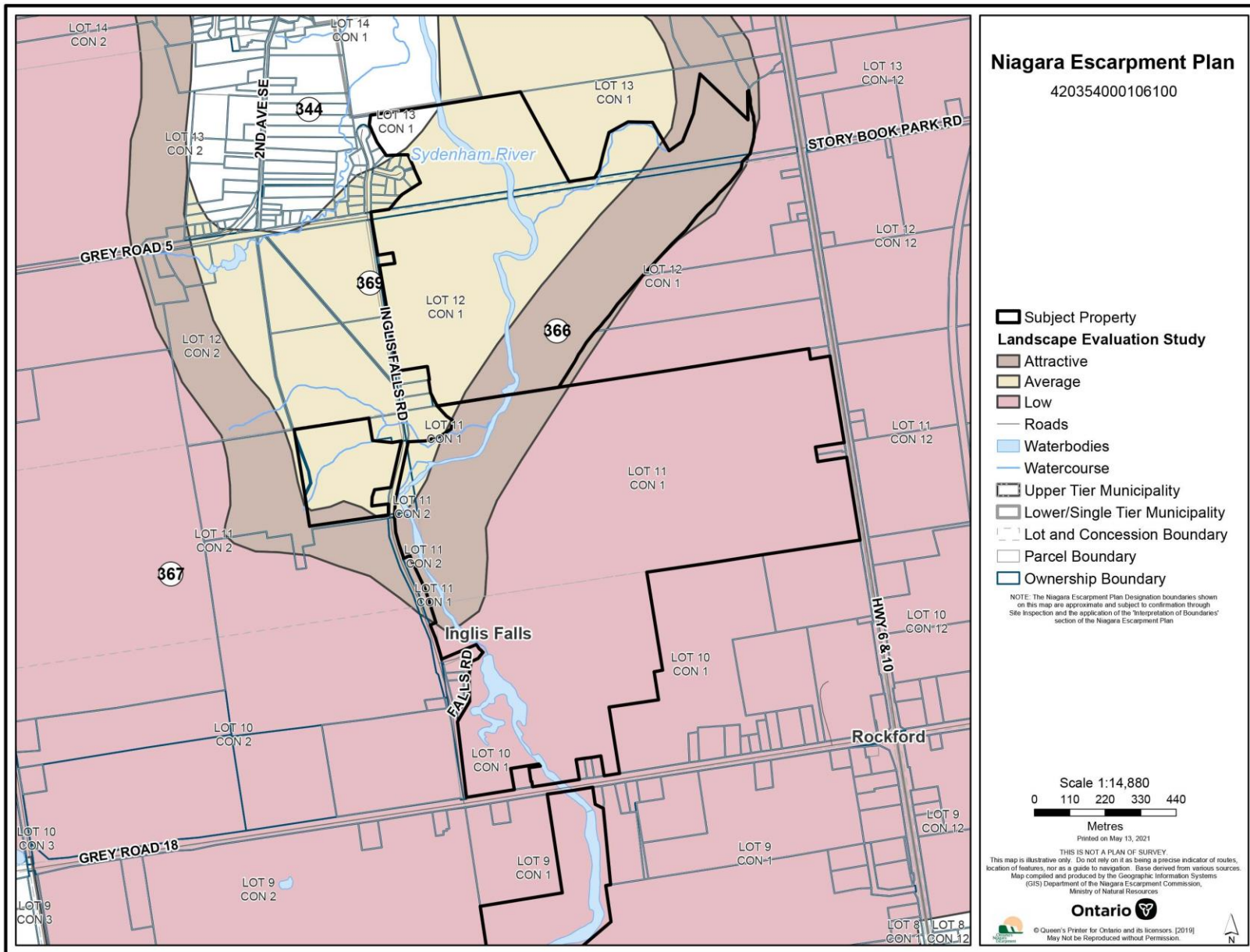




Map 30. Built Heritage Resources within IFCA







Map 32. NEC Landscape Evaluation of Inglis Falls



## Appendix B: Images

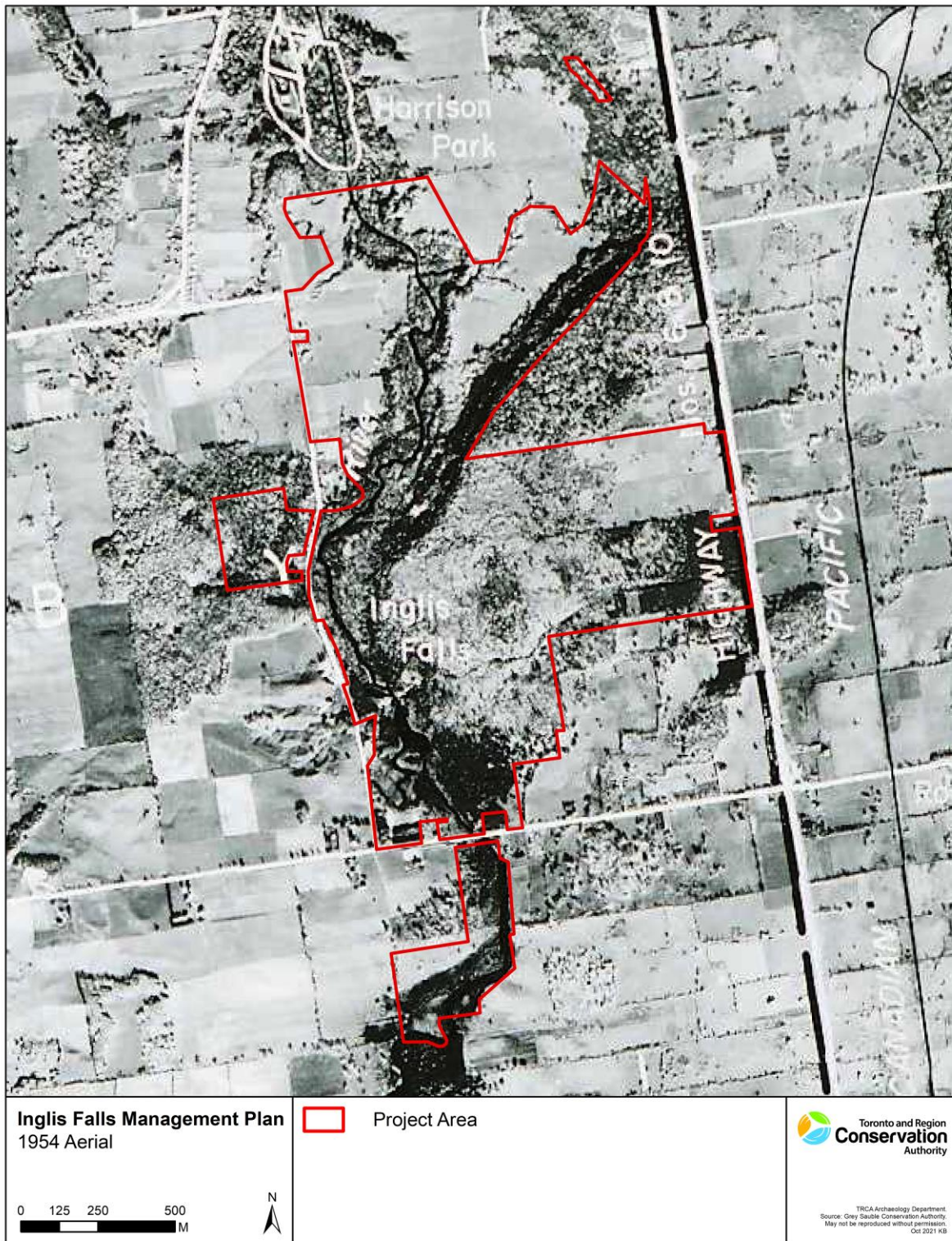
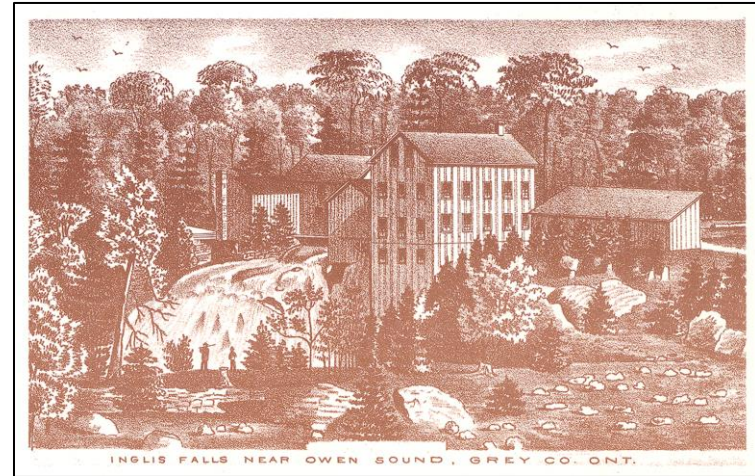


Image 1. 1954 Aerial Photograph





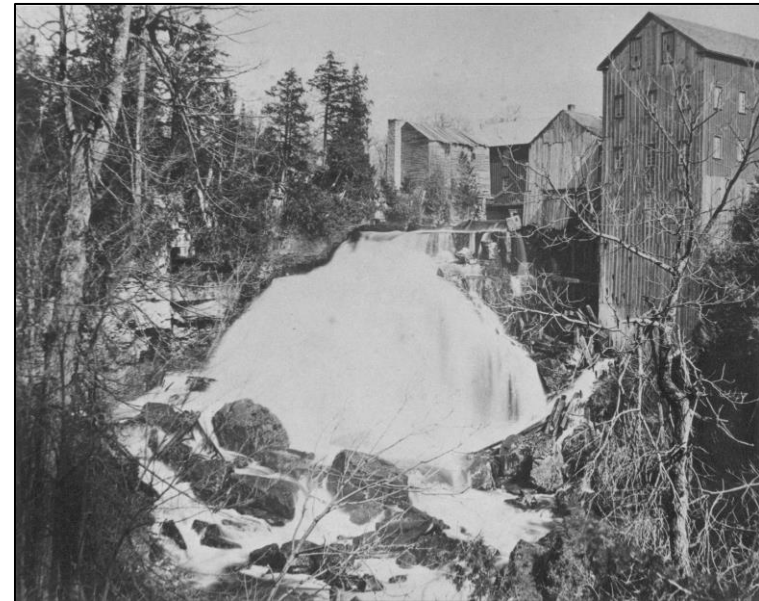
*Image 2. Mill workers on dam, no date (GSCA)*



*Image 3. Inglis Falls, 1880 (Belden & Co.)*



*Image 4. Frozen Inglis Falls, ca1930s (GRMA)*



*Image 5. Inglis Falls, no date (GSCA)*



*Image 6. Inglis Falls, no date (GRMA)*



*Image 7. Inglis Falls, no date (GSCA)*



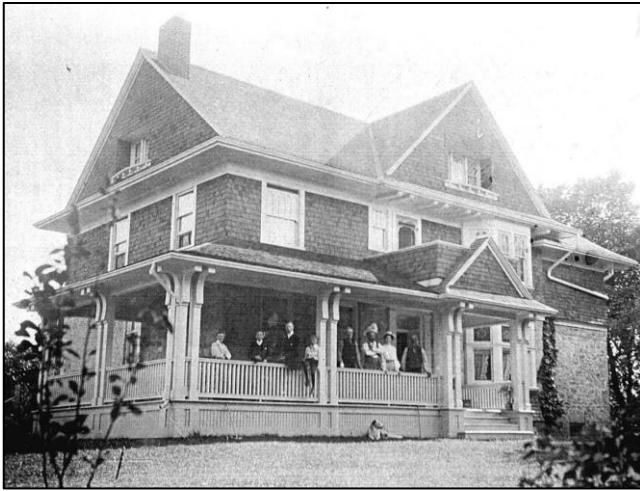


Image 8. Inglis Family Home, no date (GSCA)

Established 1845—22 Years Before Confederation

# W. A. INGLIS & SONS

Limited  
Manufacturers of and Dealers In

## Welcome

Old Boys - Old Girls

We hope that your visit to the old town for Old Home Week will be most delightful and that you will have the time of your life with the old gang.

"Five Lillies" Flour  
"Lilly White" Flour  
"King's Taste" Pastry Flour

—also—

Bran, Shorts, Mill Feeds and Cereals

Mills at Inglis Falls

Retail Store—181 8th St. East—Owen Sound, Ont.

—PHONE 86—

July 16, 1927

Image 9. Inglis Advertisement, 1927 (GSCA)

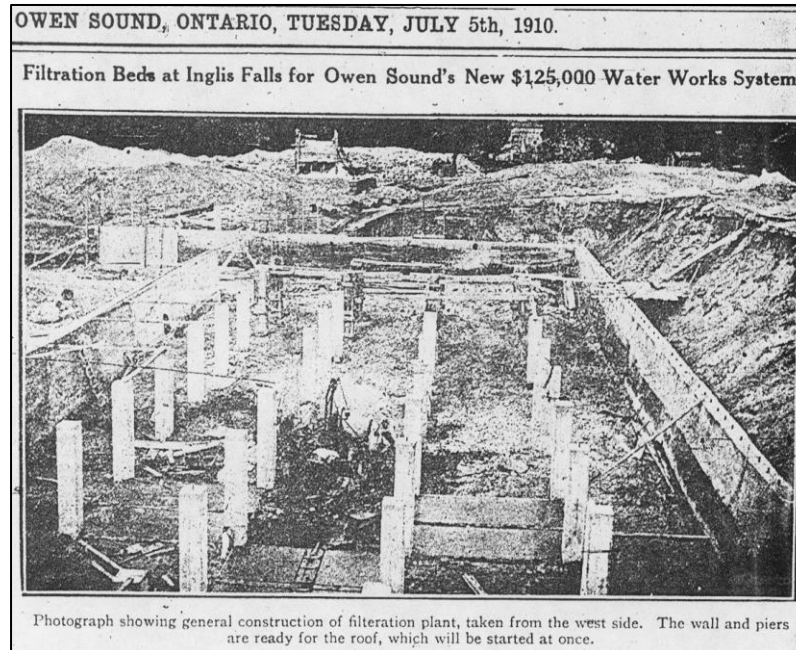
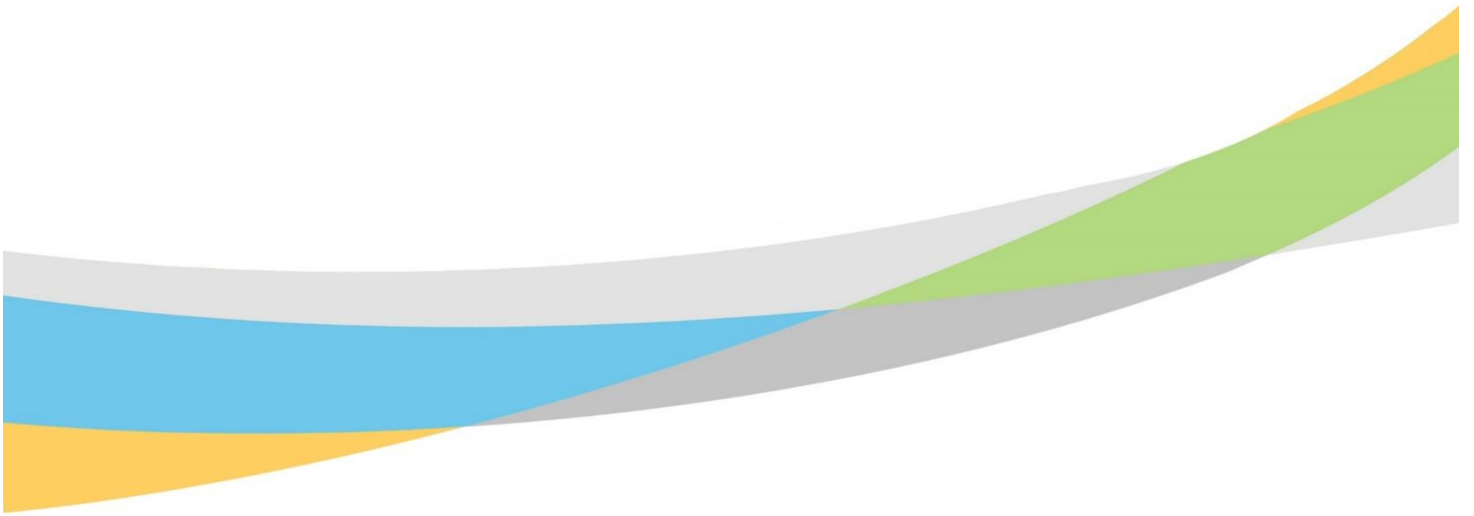


Image 10. Filtration Plant Under Construction, 1910 (GSCA)



[www.trca.ca](http://www.trca.ca)







# INGLIS FALLS CONSERVATION AREA VISITOR SUMMARY

April 2021

**PROTECT. RESPECT. CONNECT.**



237897 Inglis Falls Road, Owen Sound ON, N4K 5N6  
519-376-3076  
[www.greysauble.on.ca](http://www.greysauble.on.ca)



## Map Disclaimer

Grey Sauble Conservation (GSC) makes regular edits to regulation and base data mapping based on the most current information. By using and/or downloading this data the user agrees to inform GSC of any errors in the mapping. All of the included mapping is made available "AS IS", "AS AVAILABLE", and "WITH ALL FAULTS" without representations or warranties of any kind, either express or implied, as to the accuracy, completeness, reliability, currency, merchantability, fitness for purpose, title or otherwise.

The entire risk as to the results and performance of the Map Products, IP, Data and Third Party Data is assumed by the user. The user shall indemnify and save harmless the GSC, its directors and officers, its representatives and employees, and Third Parties (collectively, the "Indemnatee") from and against any and all liabilities, damages, costs or expenses awarded against or incurred or suffered by the Indemnatee arising out of any action or proceeding commenced or maintained by any entity in respect of the users use of the Maps, Data, IP or Third Party Data.

Produced by GSC with Data supplied under Licence by Members of the Ontario Geospatial Data Exchange. © Queen's Printer for Ontario and its licensors. [2021] May Not be Reproduced without Permission. THIS IS NOT A PLAN OF SURVEY. The use of these Data does not constitute an endorsement by the MNR or the Ontario Government of use of such Data. By accepting this data you are agreeing not to edit this data. You also agree to inform GSC of any errors in mapping or missing base features that you are aware of.

Table of Contents

[MAP DISCLAIMER](#) ..... 218

[1.0 INTRODUCTION](#)..... 220

[2.0 VISITOR NUMBERS](#)..... 220

[3.0 SURVEY RESULTS](#) ..... 223

[3.1 The Visitor and their Visit](#) ..... 223

[3.2 Feedback on the State of Inglis Falls Conservation Area](#) ..... 226

[3.3 Future Recommendations](#) ..... 228

[4.0 STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS \(SWOT\)](#) ..... 233

[5.0 FOCUSED SURVEY RESULTS](#) ..... 234

[CONCLUSION](#) ..... 242

## 1.0 Introduction

This document provides a summary of number of people visiting Inglis Falls Conservation Area and their thoughts on the current state of the property and ideas for the future. Data on property visitation is a combination of gatehouse tally records and data collection by TRAFx counters. A public survey was available on GSCA's website and promoted through social media between April and August 2018 to gain feedback from the public on their visit and what they value at Inglis Falls Conservation Area. In total, 21 people responded to the survey. All of the postal codes provided started with N4K, N0H, N0G, or N4L (local). 11 of the participants were ages 45-64, 8 were ages 65-74 and 1 was 25-34. 11 were female, 6 were male. This information was voluntary. Additionally, letters were sent to neighbours within a 120 km radius of Inglis Falls Conservation Area as well as partners and stakeholders. The letter requested input on the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the property. This information will be used to guide the initial draft of the Inglis Falls Management Plan, with additional public consultations taking place throughout the planning process.

## 2.0 Visitor Numbers

Information on the number of visitors has been collected by gatehouse staff from May-October since 2004 (with a gap from 2007-2010). This information in Figure 1 indicates that 2004 was the busiest over the 11 years where there is gatehouse data available.

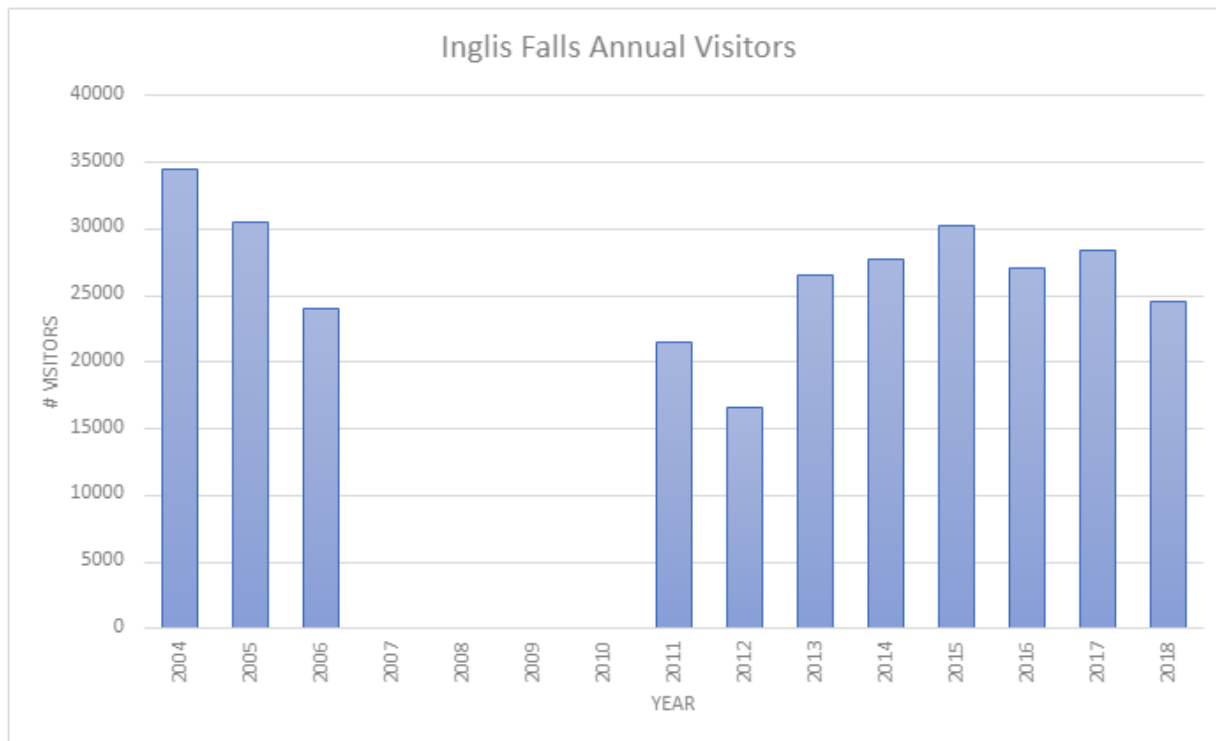


Figure 1. Inglis Falls Annual Visitors 2004-2018, Gatehouse Records

In 2019, trail and car counters were installed throughout the property (Figure 2). This data is shown in Figure 3. In the Arboretum section of the property, there is a car counter and two trail counters and at the top of Inglis Falls, there is one car counter and one trail counter (Figure 3). This information is very helpful for us to understand the number of visitors and the difference between the Arboretum section versus the Falls section of the property. This



also showcases that many visitors are just staying to see Inglis Falls and not necessarily hiking the property. This data provides an estimate of 85,158 visitors to Inglis Falls in 2019, however this number is likely underestimated. It is important to note that the car counter at the Administration Centre is skewed due to staff.

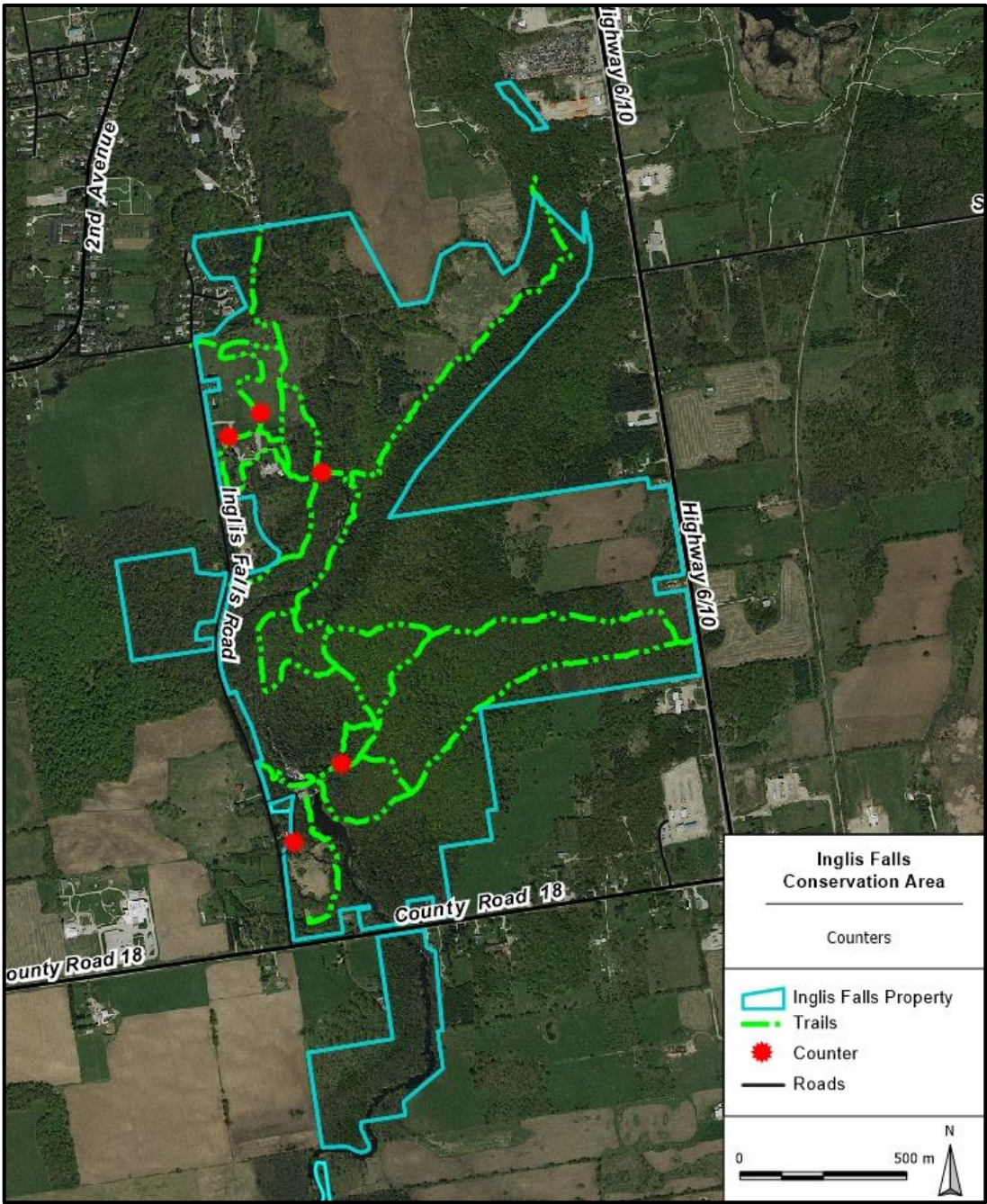


Figure 2. Counter Locations at Inglis Falls Conservation Area

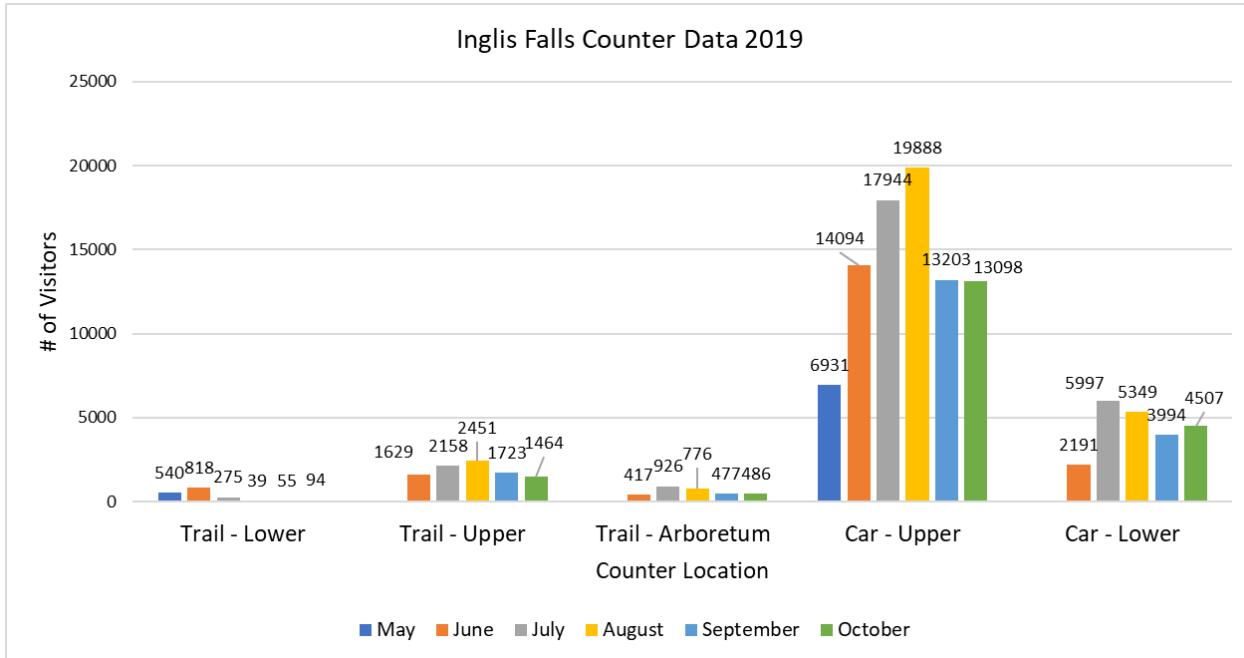


Figure 3. Inglis Falls Counter Data, 2019

Unfortunately, the counters were not collecting data in 2020, which was the busiest year for property use. As a result of the pandemic, gate staff were not collecting payments or information, so the only information available as a rough estimate is MacKay Pay parking transactions and revenue. Figure 4 shows the number of transactions by month, which totals 18,903. If we assume there is on average 2.7 people per car, this would be a visitation of 51,038 people. If we assume parking compliance was 30% that would mean that there were 169,956 visitors in 2020, which is probably a more accurate estimate.

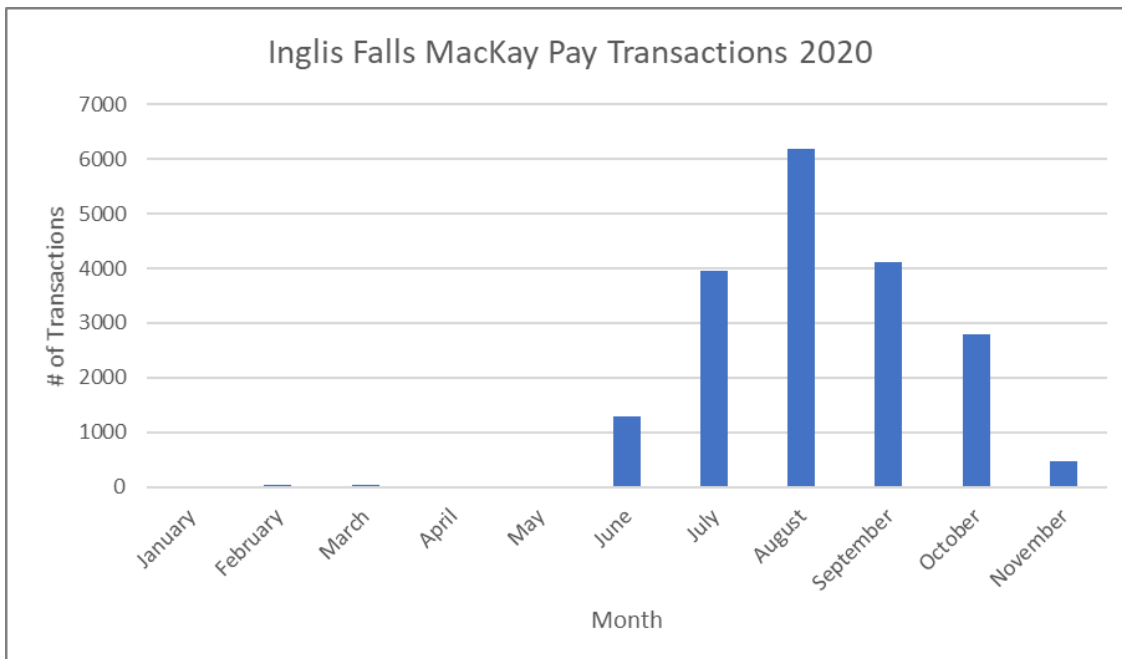


Figure 4. MacKay Pay Parking Transactions for Inglis Falls, 2020.

3.0 Survey Results

3.1 The Visitor and their Visit

The most popular month to visit Inglis Falls was July and August, with 100% of survey participants having visited Inglis Falls before. 38% of survey participants visit Inglis Falls weekly. A large majority of responses were from the Thursday morning walking group. 62% of people stated they typically visit for 1-2 hours at a time and mornings were the most popular time to visit, with 9 people selecting “early morning” and 4 people “late morning”. The number of people in a group varied. The results are as follows: 1 person in a group (1), 2-3 in a group (6), 4-6 in a group (2), 7+ (7). The category of 7+ was likely influenced by the Thursday morning walking group. The majority of survey participants do not buy a season pass. Of those that do buy one, the main reason was to support GSCA.

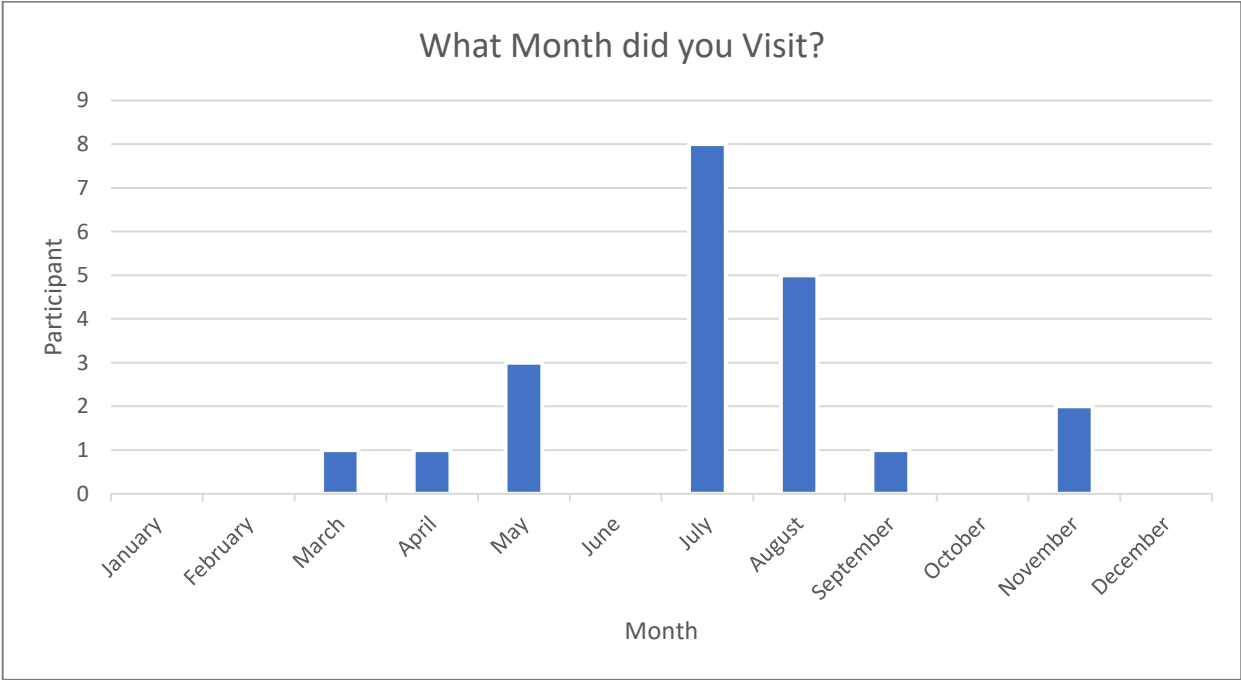


Figure 5. Visitation

by Month

Frequency of Visits

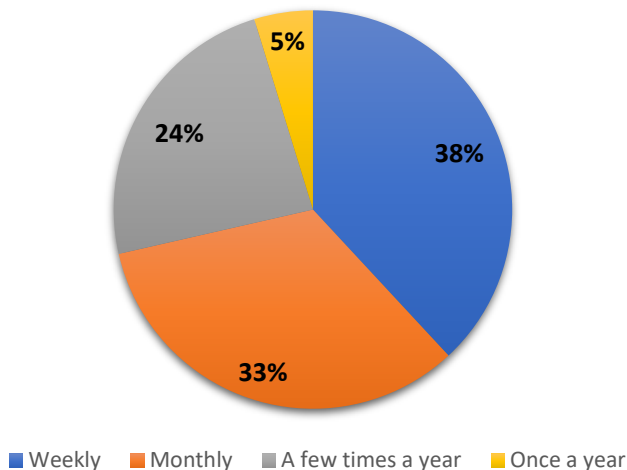


Figure 6. Frequency

of Visits

Do you have a Season Pass?

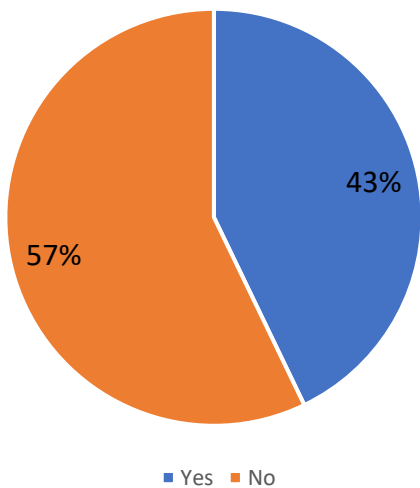


Figure 7. Season Pass Membership

The number one reason survey participants were visiting Inglis Falls was for the trails, and for recreational purposes. The top two activities selected were hiking/walking/running and snowshoeing. When asked what other activities should be added, self-guided interpretive hikes and wetland boardwalks were the top two answers. It is important to note the bias, as if the survey was presented to visitors on the weekend at Inglis Falls gatehouse, the majority of responses would be to see the waterfall. Just based on this response, it is evident that most survey participants were local.



Table 1. Reason for Visit

Reason for Visit	# of Responses
Trails	10
Waterfall	3
Spend time with others	3
Recreational	8
Enjoy nature and scenery	5
Volunteering at native tree nursery	1
Grey County Gardeners Plant Sale, GSCA Board meetings, Arboretum	1
Participated in an organized event	1

Table 2. Typical Activity Participated In

Typical Activity Participated In	# of Responses
Hiking/Walking/ Running	20
Snowshoeing	14
Cross Country Skiing	2
Photography	5
Mountain biking	3
Organized Education Program (OSFN outings)	1
Volunteer events (tree planting, garbage cleanup, BioBlitz)	3
Observe Nature (Flora & Fauna)	1
Picnicking	1
Fishing	1
Volunteering for Arboretum planning, maintenance of Inglis Falls gardens	0

Table 3. Activities that should be added to Inglis Falls Conservation Area

Activities that should be added to Inglis Falls Conservation Area	# of Responses
Mountain biking	4
Fat biking	4
Self-guided interpretive hikes	12
Wetland boardwalks	10
More trails	6

More Signage	1
Food service	1
Geocaching	5
Workshops or guided hikes	7
Trail connecting with the museum	1
Accessible trail network	4
Better wayfinding	1
Additional viewing platforms	3
More benches on trails	1
More garbage cans, or more frequent pickup of garbage	1
Kept as Natural - less infrastructure development	2
Wedding and Event facilities	1
Food Service	1

### 3.2 Feedback on the State of Inglis Falls Conservation Area

Participants were also asked about the current state of the Conservation Area on a scale of 1-5 with 1 being “poor” and 5 being “excellent”. These results are shown in Figures 8-12. The overall state and quality of trails were rated as “good”. Most people selected “not very good” for the quality of signage throughout the property, which could include interpretive signage or wayfinding signs. When asked about parking, the majority of people selected “acceptable/ok” for the availability of parking spaces as well as the cost of parking. Once again, it is important to note that many of these responses were from the Thursday morning walking group, who park at the Administration Centre where there is no charge and availability of spaces is higher than if it were a weekend at the top of Inglis Falls.

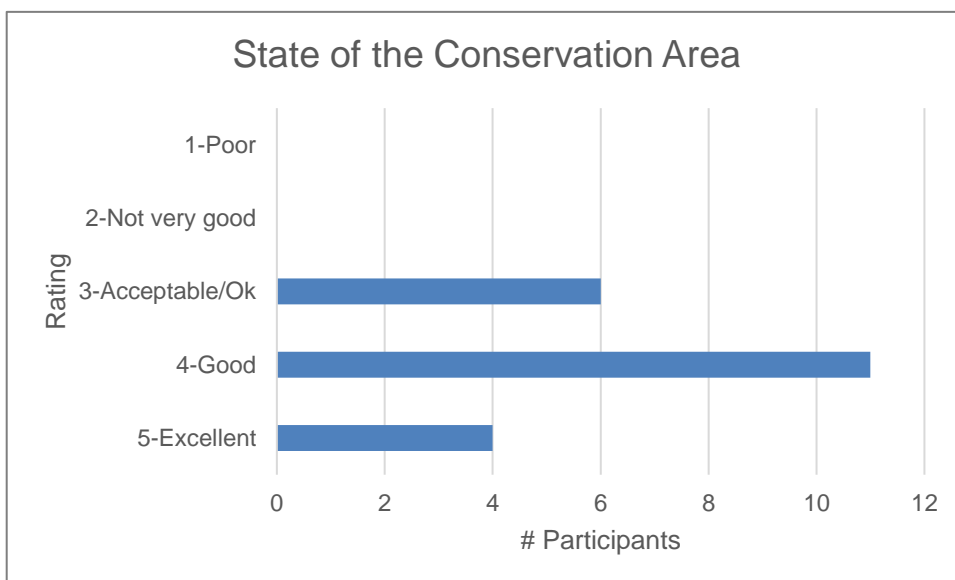


Figure 8. State of the Conservation Area

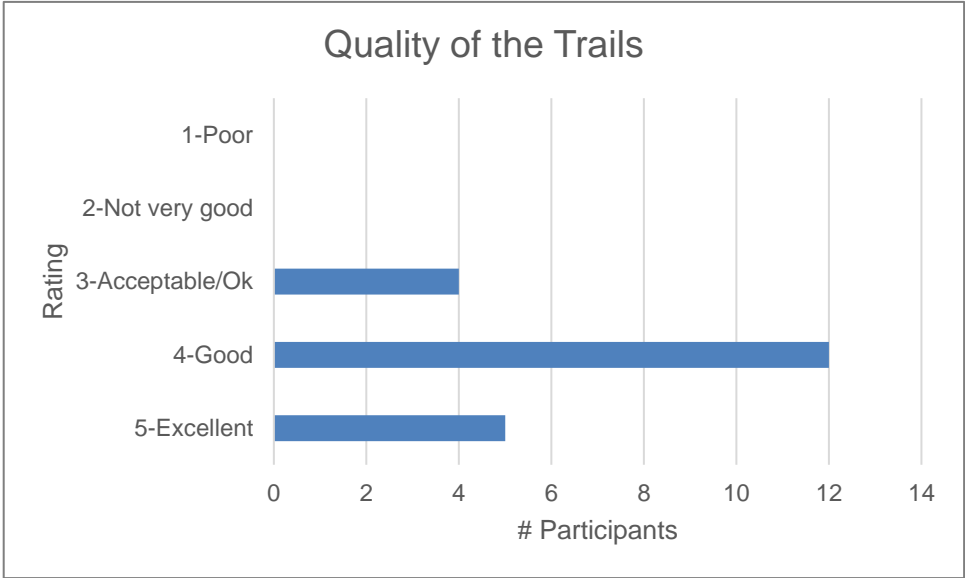


Figure 9. Quality of the Trails

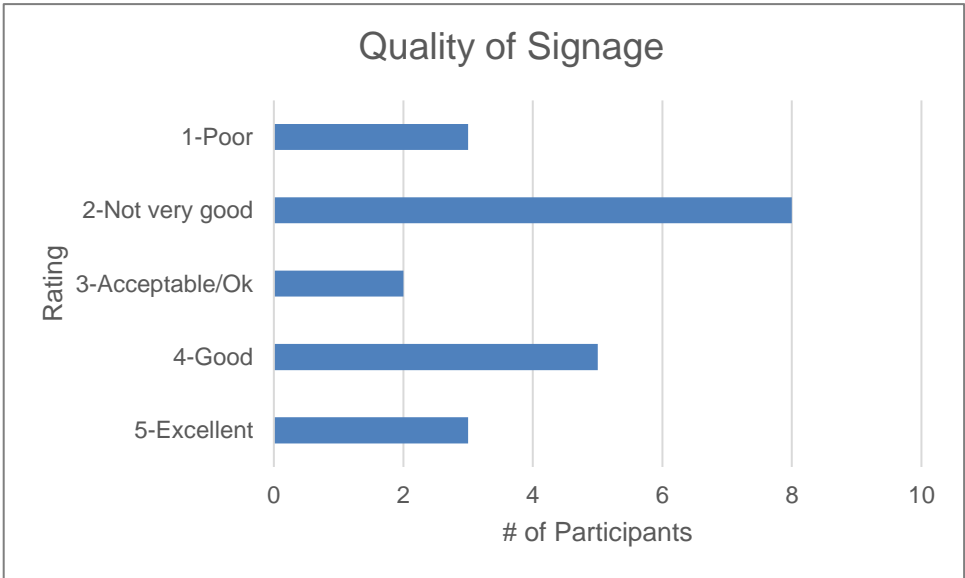


Figure 10. Quality of Signage

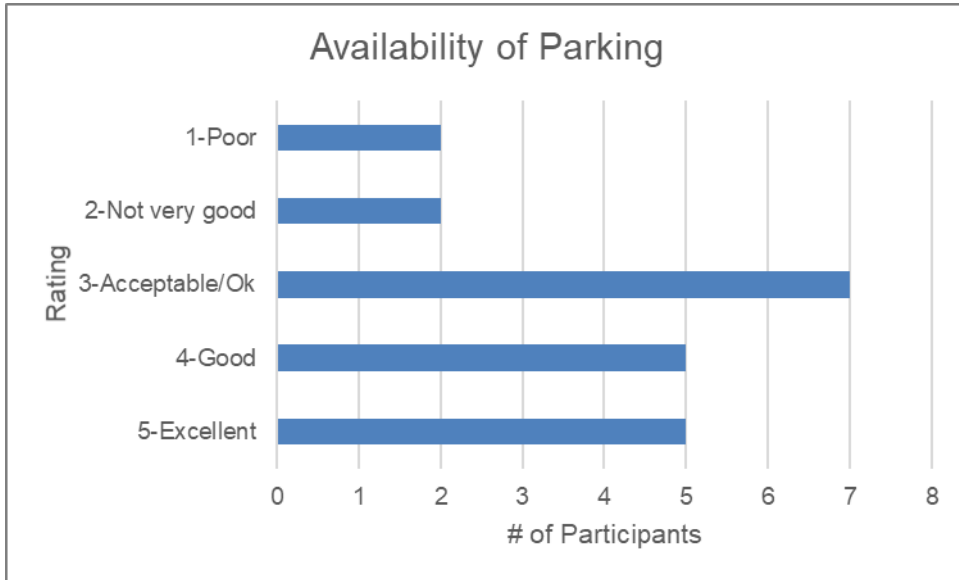


Figure 11. Availability of Parking

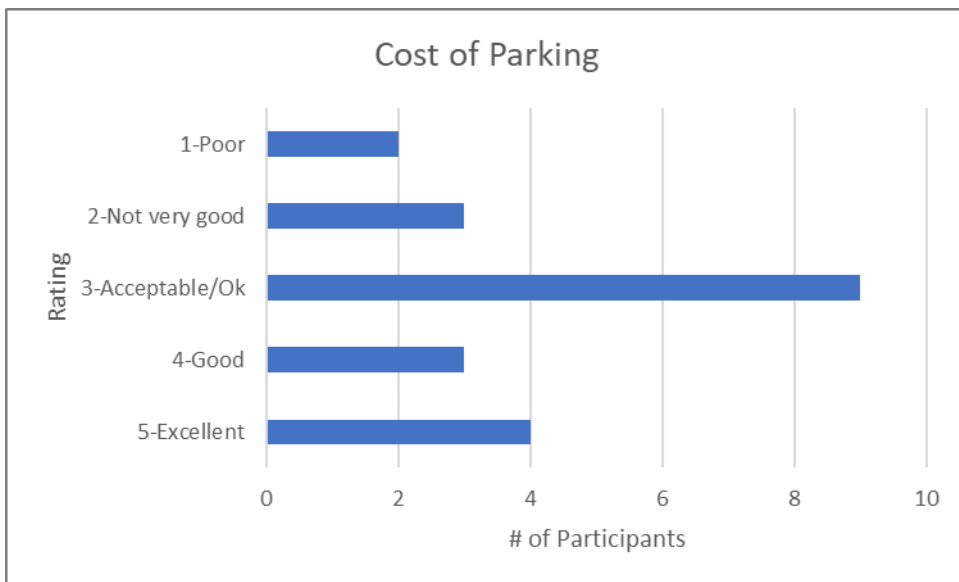


Figure 12. Cost of Parking

### 3.3 Future Recommendations

Based on the below responses (Figures 13-21), it appears that survey participants are not interested in a staff presence at Inglis Falls Conservation Area, as they rated access to friendly staff and weekend programming as “very unimportant”. The categories of accessibility and access to picnic tables and benches were ones that people had very mixed opinions on. Written materials and self-serve experiences such as clear information about rules and safety, visitor guides/maps and interpretive signage were scored primarily as “very important” to the survey participants. Well-kept roads scored as “somewhat important” and access to clean washrooms received mixed reviews as the top two responses were “not important” (6) and “very important” (8).



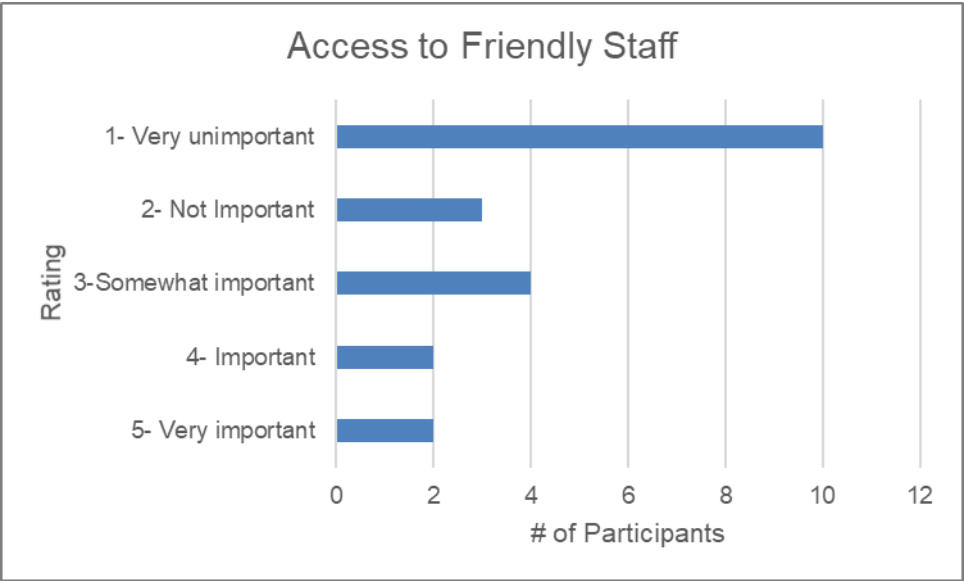


Figure 13. Access to Friendly Staff

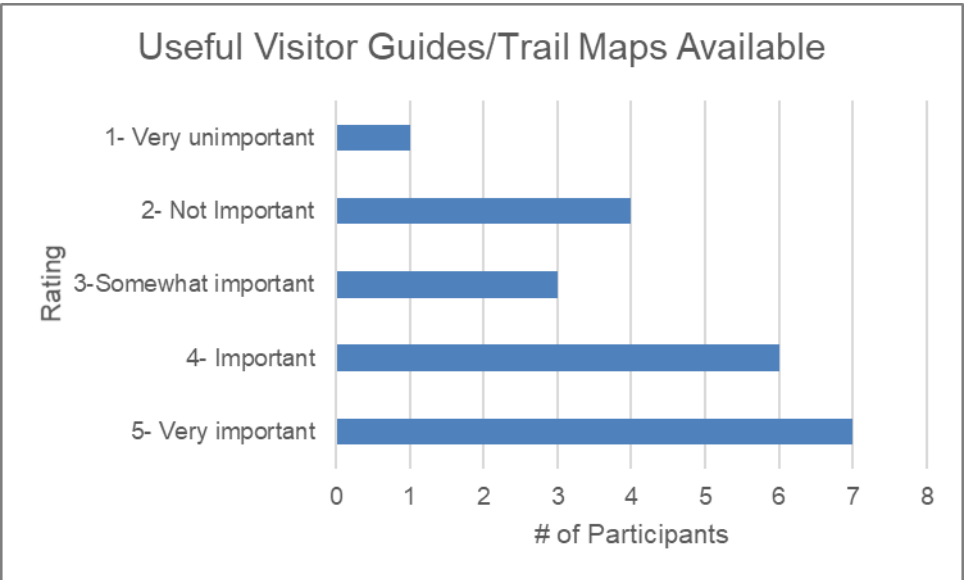


Figure 14. Useful Visitor Guides/Trail Maps Available

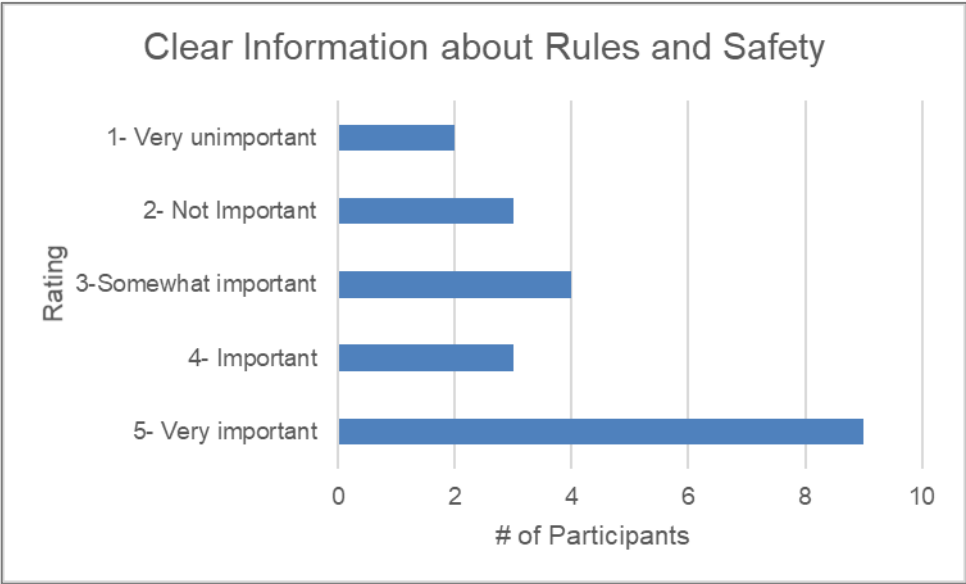


Figure 15. Clear Information about Rules and Safety

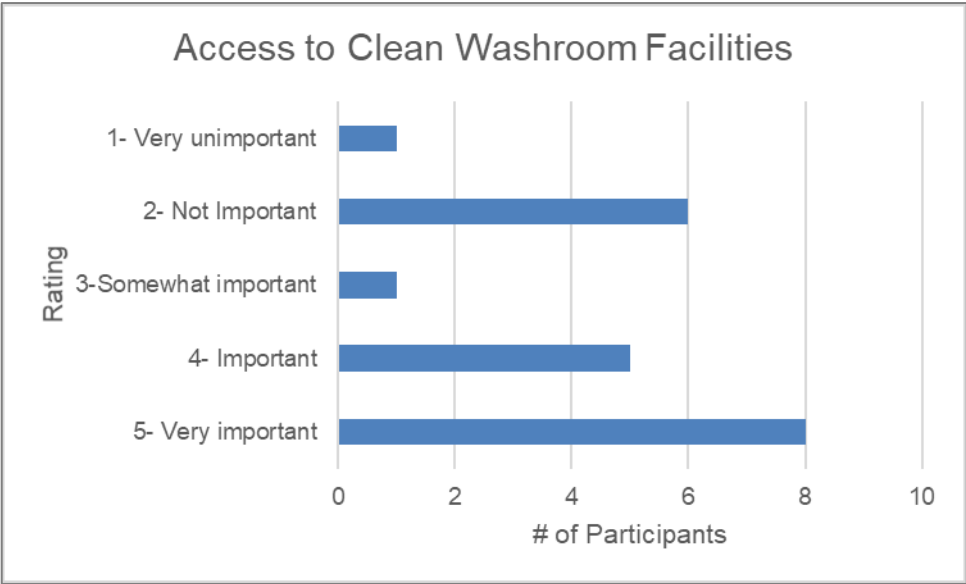


Figure 16. Access to Clean Washroom Facilities

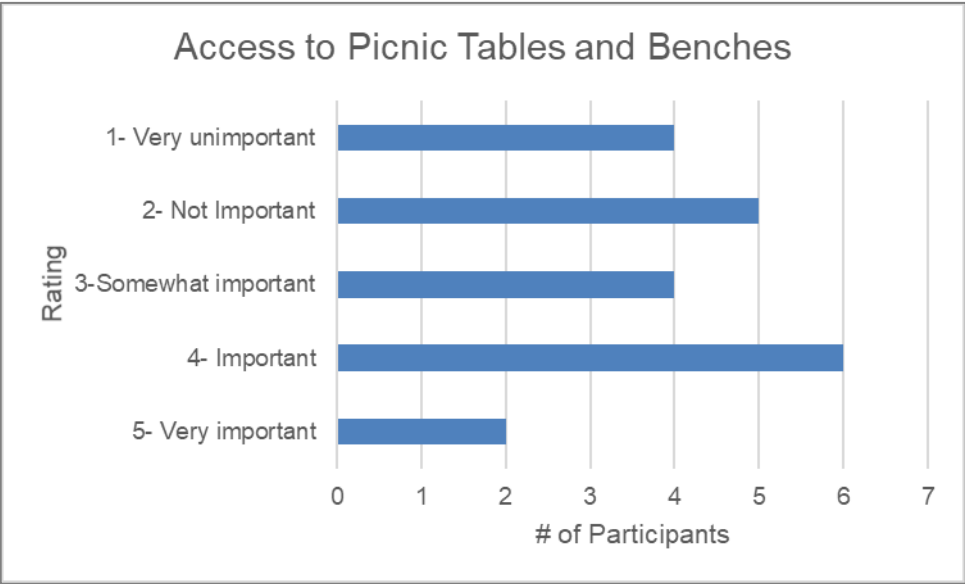


Figure 17. Access to Picnic Tables and Benches

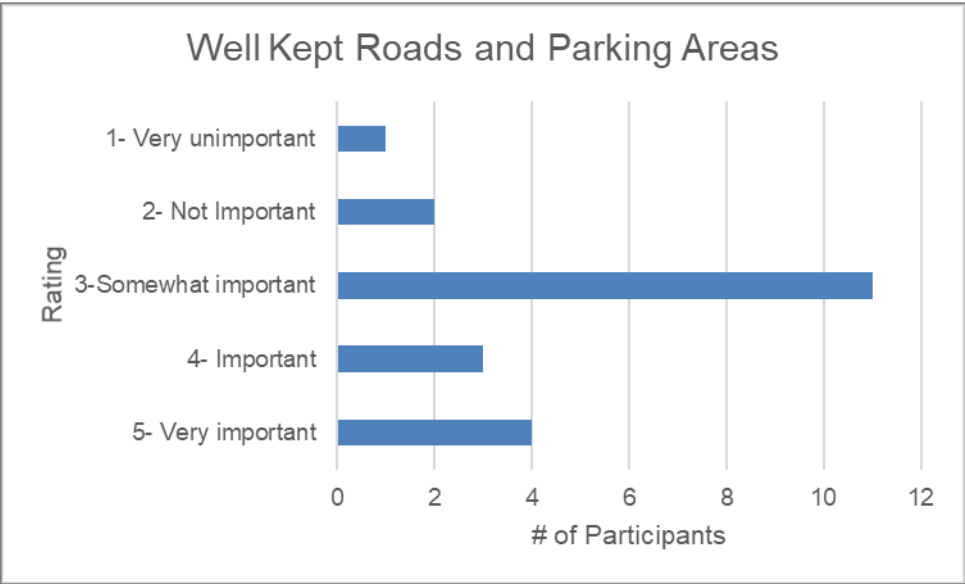


Figure 18. Well Kept Roads and Parking Areas

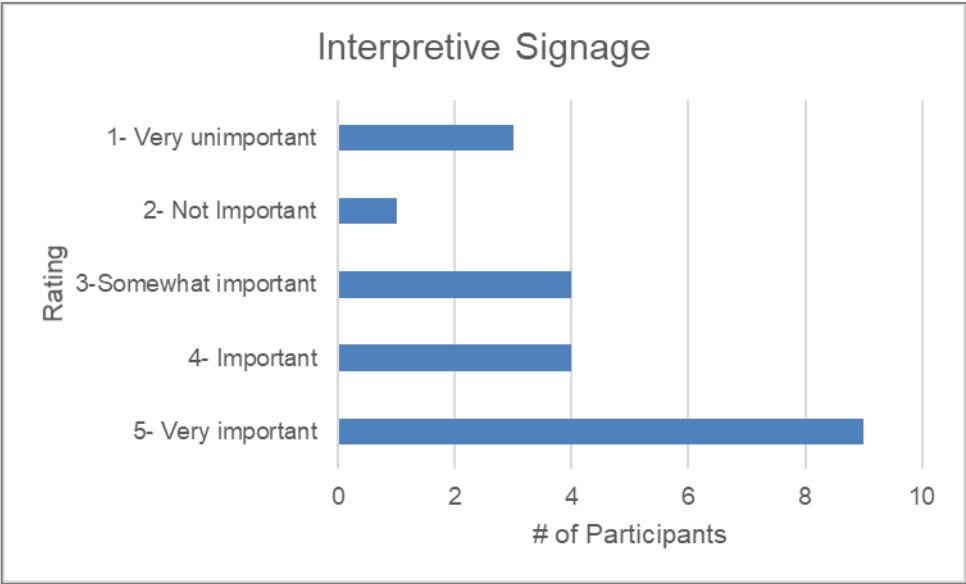


Figure 19. Interpretive Signage

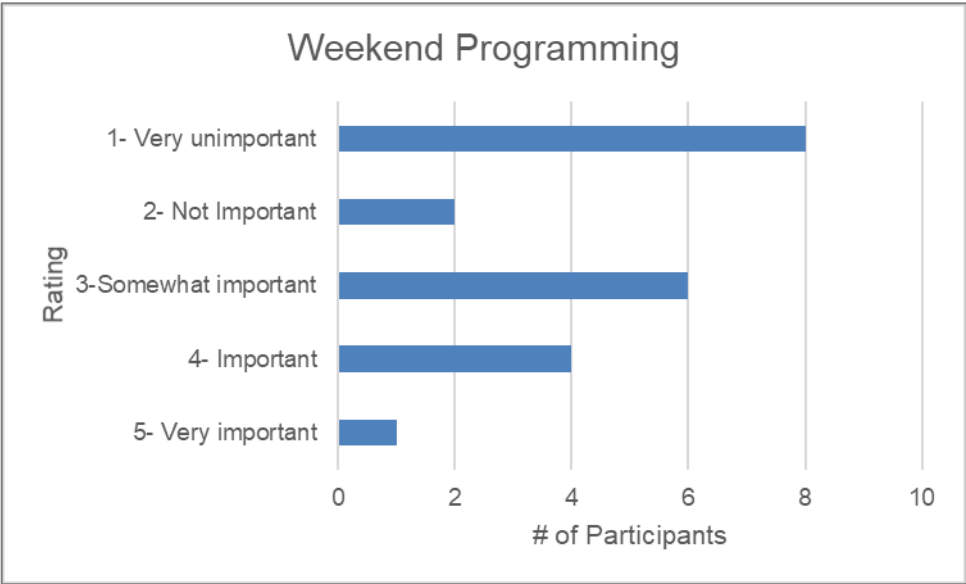


Figure 20. Weekend Programming



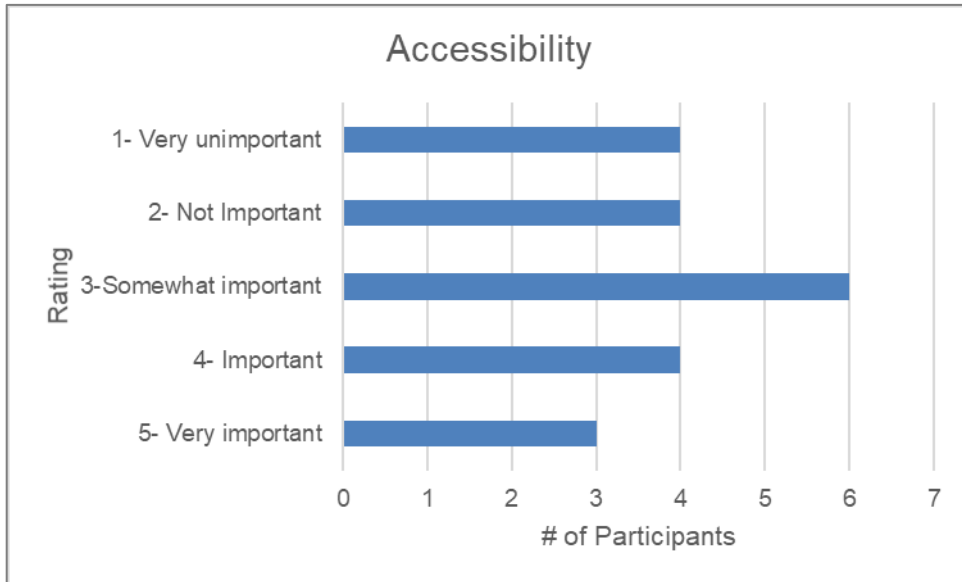


Figure 21. Accessibility

## 4.0 Strengths, Weaknesses, Opportunities, Threats (SWOT)

Written responses were also submitted from neighbours, partners and stakeholders. These results are summarized as a SWOT (Strength, Weakness, Opportunity, Threat) by common themes below.

Table 4. SWOT Analysis

Themes	SWOT	# of Mentions
Better management of garbage cans	W	1
Accessibility (incl. trails and more benches)	W,O	4
Keep as natural as possible	S,O	3
Paid gate at entrance (with arm)	O	1
Increase safety around the falls with added fencing, there are too many openings	W,O,T	1
Add platforms with good views so that people aren't going on the other side of the wall	O	2
Events or functions to add revenue	O	3
Improved usage of the old stone mill room at the falls for information, treats, food, drinks, souvenirs	O	1
Manage invasive species	W,T	2

Signage	W,O	4
Trail connecting Grey Roots	O	1
Trail network	S	2
Bathrooms	W	2
Parking overflow is a hazard	W	1
Over development and promotion of the area	T	2
Balance between safety and people using common sense	T	1
Maintain what you have	O	2
Trail/bench maintenance	W	2
IFAA and upgrades to Arboretum	S	1
Operation of tree nursery	S,O	1
Smoke free park	W,O	1

## 5.0 Focused survey results

A focused survey was sent to the Advisory Committee, subscription list and open house attendees to provide feedback on specific projects that were being proposed as part of the plan. The results are shown in Figures 22-25 and Tables 5-9.

### 1. Do you like the idea of viewing platforms on both sides of the falls?

[More Details](#)

[Insights](#)



Figure 22. Focused survey question 1

Table 5. Focused survey question 2

#### How do you feel about biking being allowed on the Pine Loop and the Arboretum trails?

##### Yes

I feel that allowing biking is good. They seem to go carefully and respectfully.

I support this proposal. May not be that many bikes this far from the city.

Unsure about the biking allowed on all of the trail, there may be parts that bikers may be asked to leave their bike's and walk a short distance to a viewing area's.

I am not a fan of bicycles, as I'm a walker. Also, they will probably go through Smith's Bush, which is not permitted by the landowner, but hard to enforce. I see cyclists in the arboretum from time to time.

No

Unsafe and unnecessary . Pedestrians need to be able to enjoy their walk without fear of being struck by a bicycle or having to step aside constantly

Lol I mean people already do this

Not a fan. We have great bike trails in the area. Let's leave something for walkers/hikers to traverse in peace.

Usually, bikes and pedestrians can share the trail.

That would be OK.

no

As long as biking and hiking the same trails are harmonious. (ie. bikers respect the said property)

I'd be concerned about pedestrian safety. I love biking trails though as well. Is there a way to mitigate the safety concerns for both activities to be allowed?

Yes to Arboretum trails. I think the pine loop would be a safety concern for hikers with narrow trails and reduced visibility (trees, turns, etc.)

While I am supportive of the cycling community I feel there are lots of trails available for cyclists, and would be inclined to favour a hiking only trail for the Pine Loop and the Arboretum.

No objection to non-motorized use of this trail.

I think it is a great idea. Proper signage would be crucial to inform the public that there could be bikes on the trail. And maybe the signage can include alternative trails that are for hikers only.

It happens now, but would not expand beyond these locations (ie trail to filtration plant)

No trail needed

As long as the trails are wide enough to allow bikes to safely pass it sounds good.


I like the area to remain as natural as possible. Having 2 trails open for biking will reduce some of the peace and quiet of the park and maybe increase erosion in the park. I am not in favour of it

No

I think it might make things to busy for walkers, other than that were and tear to trail

3. Would you like to see a trail to the bottom of the falls?

[More Details](#)


 Insights

● Yes	16
● No	4
● Other	6



4. Do you think a parking lot at the Filtration Plant, off Grey Road 18 is a good idea?

[More Details](#)

 Insights

● Yes	18
● No	8




Figure 23. Focused survey questions 3,4



5. Do you like the idea of a boardwalk trail (karst interpretive trail) from the Filtration Plant, north through the marsh to Falls exit road?

[More Details](#)

 Insights



6. Should we remove Inglis Falls dam?

[More Details](#)



Figure 24. Focused survey questions 5,6

Table 6. Focused survey question 7

What are your thoughts on/ideas for the Filtration Plant?
Open for tours on certain weekends.
This is a very unique exhibit that should be available for educational type tours.
It looks like a great asset to go and experience on a visit to the Park.
Open for special events, tours. It's a fascinating piece of local history.
It is unique but it depends on cost. Occasionally open up to public. Possibility for offering "special" events on an annual basis.
Leave it alone. Opening it up will lead to graffiti issues
It's quite a beautiful little piece of history, it would be interesting to let folks check them out more often.
It's a historical site, a fascinating example of technology that was important to OS back in the day.
It is something that we need to educate people on.
Would like to have it open to public at times. Fear if open all the time it would be defaced.

museum, art exhibit/ special events

This place is so unique looking. I can picture specialty events here. Murder mystery dinners, escape rooms, catered receptions, chamber music concerts etc.. If events are held here, it should not interfere with the purpose of the conservation area.

This is a unique space with local history be nice to include this area as part of the site experience. Not sure how this is best accomplished

With more open access to enhance monitoring (to prevent vandalism), and interpretive signage to educate visitors I feel this would enhance the visitor experience for the falls area.

Use as classroom for part of outdoor ed curriculum, part of historical walk with informative signage on clean water/water treatment, host an annual Hallowe'en event here, etc.

You could host school field trips and educational programing here. Also this is out there. but with the new parking lot there, you could set up a haunted house for the month of October as a way to generate revenue. Or you could rent the sapce to someone and they could run the haunted house.

Open it to visitors with displays and historical info

Filtration Plant could be opened if structurally sound. However, consideration wold need to be given to the possibility of trespassers into that area beyond "open times" .

Leave it alone and do tours

It could be an interesting public art or performance space. It reminds me of the industrial location used in Toronto for Nuit Blanche.

I would need to think more about this, no current ideas

Keep as historical site

Table 7. Focused survey question 8

**What are your ideas for the future use of the mill storage building?**

Interpretive and nature education centre. Ice cream cooler in the summer!

Videos of the history of the mill and falls.

During the meeting I mentioned about having a historical video being played and some seething that visitors could stop and rest while watching it.

Perhaps some interpretation boards? I hesitate to suggest snacks for sale, as there's litter, etc. It was a gift shop at one time. Was it profitable?

It would be nice to open it up to the public for some kind of service but it's difficult to be more specific. Not sure of interior space and visitor capacity. Is it illuminated?

Improve the information currently provided .Otherwise leave it be.

Interpretation centre? Cafe?

no ideas presently.

No sure. It would be nice to have a snack bar there but I've never had reason to use it. I did go in once to glance at the displays

Could there be picture of original use but open when guide present so less likely to be defaced.

tourist shop.....music studio

Education Centre?

Interpretative Centre

an ideal location for audio/visual presentations and dioramas depicting the historical aspects of the falls area, the Indigenous stories relating to the area, and the significant features of the larger property.

Cafe with outdoor patio, information centre, gift shop, water refill station, could rotate display/sale of local artisan arts

Hopefully no idea is a bad idea. My background is the Adventure Tourism industry. I think you could partner with someone like At Last Adventures, to set up activities like a zip line across the falls, and if you have a trail down below, maybe having a section where you can rapel. At Last Adventures could rent the storage building to store gear and have a welcome office for clients. They are doing something similar at the Elora Gorge Conservation Area. This could help generate revenue for Grey Sauble.

I like the Plan's suggestion of retail, food and beverage, etc. (assuming the Filtration plant can be used for historical info displays as above)

Satellite for artists co-op, mini information centre with educational video of history

A gift shop/snack stop?

A seasonal cafe could be great to allow some where for folks to get refreshment in the area. Grey Roots has had challenges supporting a viable business in the summer but maybe if we worked together with a partner with more visitors it could work better.

Could it be an art space or educational space

Just as is with no further reasons for people to stay on site longer than to appreciate the beauty of the falls.

Table 18. Focused survey question 9

**Do you have any ideas for a future educational space on this property?**

The ravine behind the pavilion could be considered for an outdoor amphitheater..

Forest bathing.

Not familiar enough to comment.

Yes it is always appreciated when education facilities can be provided and accessible.

I think an educational space is better accommodated at the GSCA admin property with access to Inglis Falls for groups.

Clean up and use above 2 buildings as indoor class space

Use storage building for historic records.

Field trip opportunities for schools. I LOVED all my naturalist field trips in school in Wellington County. Eden Mills was a particular favourite spot. Tree planting, snow shoeing, cross Country Skiing, bug and leaf analysis and more!

I like the idea of including an outdoor classroom on the property.

As the GSCA Board is currently considering renewal of the Administration centre, incorporation of an educational space would be worth consideration. This could enhance availability of outdoor education programming for area schools, improve facilities for day camps, and club activities, or provide space to lease for an alternative education provider.

Outdoor classroom

The logical space at the falls area would be in the open space northeast of the washrooms. If at the lower end of the property it should be east of the picnic pavilion and barn so as not to impose on the neighbouring properties.

Perhaps a really big comfy yurt could be a cheap and cheerful way to make a usable space.

The mill storage building

no leave it and upkeep it in its original state . More tourism results in more destruction.

Around the admin building to keep all noise in one spot, I enjoy the quite !

10. Do you like the proposed black steel fencing to replace the stone wall?

[More Details](#) [Insights](#)

Yes	17
No	9



Figure 25. Focused survey question 10

Table 919. Focused survey question 11

Any other feedback you want to share?

One of the most environmentally important changes should be to clear out all of the invasive species of plants. Periwinkle, chervil, lamium goutweed all abound unchecked on the property at great peril to the natural flora.



My initial answer would be to leave everything the way it is. However if I knew what the GSCA goals and objectives were - and if I agreed with them - I would then be able to comment on your proposed plans for meeting them. Also, Lorraine Brown did a lot of work to promote having a Niagara Escarpment Interpretive Centre based in Owen Sound. Surely any plan for the future should involve investigating what was tried (or worked) in the past. Baa maa pii. Bill Moses.

It is important this area be prepared for the oncoming rush of tourists, We tend to be behind the wave in developing our area for future visitors. As major economic driver with endless possibilities, tourism should receive some undivided attention.

Some of the yes/ no questions are difficult, because I need more information. For example, the dam: many dams are being removed for environmental reasons, so perhaps this one should be too.

The filtration plant seems like a reasonable place for parking, as parking is sometimes an issue on Inglis Falls Road. A second viewing platform is interesting, but I need more information.

I walk through this property often, as I live nearby. It is a gem. It was heartbreaking to see it so heavily used and abused during the pandemic. It is always a very popular spot and I think having ambassadors on the property last summer helped.

#6 - I think this more than personal preference. Need to consider historical value, environmental impact, and actual cost. Is there an environmental benefit to removing the dam? If not, I would suggest keeping the dam, if expense is not the issue - if preservation and removal have similar costs.

Resist the urge to make " improvements" that will be detrimental to the environment and historical aspects of the falls as they are

People seem to enjoy the area as it is and change for change sake is not always needed or wanted

I understand that the metal fence is probably more cost effective than the stone wall, but it's what people are used to so no matter what you're going to get a lot of negative feedback about it. Please make sure you include consultation with Saugeen Ojibway Nation in any major changes to the site. Good luck!

I answered No to removing the dam, due to its part in the history of the place, but I couldn't find any information on any environmental impact, positive or negative. My limited understanding is that often taking a dam out is more destructive because of all the silt that then gets released into the habitat.

I said Yes to parking by the Filtration Plant because on peak days I've seen the overflow at the Falls parking area, but it did make me cringe.

Yes and no isn't an option. I like the stone walls, it blends in with the area. But if the wrought iron is better for viewing then it should be considered.

Like the natural settings & trails at falls.

Besides parking woes, improved signage on both sides of falls entrance would reduce number of people missing turn into Inglis Falls. Clearly-marked 'parking' signs wouldn't hurt either.

Better maps for visitors.

Targeted financial support from parking fees associated with the property could enhance public support for required upgrades and project support. A comprehensive project plan with costing could lead to a complementary fundraising effort as well.

Ensure accessibility, facilitate active, outdoor recreation, incorporate Indigenous history and culture (garden, signage)

There is a great need for signage to direct traffic to the Inglis Falls parking area. There should be a sign coming from Grey Road 18 prior to the exit from the falls, stating Inglis Falls Entrance XXXX metres ahead. This will prevent people from pulling into the exit and then backing out, or people backing up the road thinking they have missed the entrance. We have witnessed several accidents as a result of this. Similarly there should be a sign coming from the north on Inglis Falls Road prior to the Smith farm indicating the entrance is approaching. Prior to the road construction there was a sign across from the entrance (the west side of the road) with arrows on both sides pointing to the entrance that said Inglis Falls. The present sign at the entrance is not visible unless you are already turning into the Falls. The vegetation around the entrance should be cleared so any future signage is more visible.

Better signage will decrease the number of vehicles turning around in the driveways, or across the lawns, of neighbouring properties.

Thank you Rebecca for providing a forum for our feedback. It is greatly appreciated that our opinions are being considered.

I just wanted to flag that ideas about additional turns off County Rd 18 should be discussed with the County of Grey's Transportation dept. There is talk of a temp road access off 18 for the proposed Regional Agriculture and Demonstration Site to the west of Grey Roots. We could end up with three turning opportunities in a short distance.

I value the space as a natural space, so keep it as natural as possible

Drop the fees to see.

Be careful what you wish for, we do not want to over do the great spot where we all live as residents. Too much tourism will ruin it, just look at the north peninsula at the Tub or Loins Head or Sauble beach. Remember conservation means to conserve. Thank you

## Conclusion

This feedback is very important, but as mentioned throughout the report, there was bias in survey participants.

Things that are not as important to locals may be extremely important to visitors that travelled a distance to come, for example washrooms, accessibility, and access to staff, whether through programming or general information. The SWOT analysis provides a lot of value for creating a vision for the property, especially as those participants were neighbours and partners that have a different connection to the property than other single day-use visitors. However, it too must be interpreted carefully due to the limited participation.

This information on visitor numbers and feedback will be considered when drafting the management plan and the public will be able to provide further comments during the public consultation period.

## APPENDIX H



# Invasive Plant Species Strategy

A strategy for monitoring and controlling invasive plant species on GSCA properties.

**Adopted: 22-August-20222**



**PROTECT. RESPECT. CONNECT.**

237897 Inglis Falls Road, Owen Sound ON, N4K 5N6

519-376-3076

[www.greysauble.on.ca](http://www.greysauble.on.ca)



# Table of Contents

<a href="#">INTRODUCTION</a>	246
<a href="#">WHAT ARE INVASIVE SPECIES?</a>	246
<a href="#">IMPACTS OF INVASIVE PLANTS</a>	246
<a href="#">Natural Areas</a>	246
<a href="#">Agriculture</a>	246
<a href="#">Forestry</a>	246
<a href="#">Human Health</a>	246
<a href="#">WHY CONTROL INVASIVE SPECIES?</a>	247
<a href="#">STRATEGIES FOR CONTROLLING INVASIVE SPECIES</a>	247
<a href="#">Prevention</a>	247
<a href="#">Communication</a>	247
<a href="#">Best Management Practices (BMP)</a>	247
<a href="#">Prioritization</a>	247
<a href="#">Implementation</a>	248
<a href="#">Collaboration</a>	248
<a href="#">Policy</a>	248
<a href="#">Monitoring (and Research)</a>	248
<a href="#">PRIORITIZATION OF INVASIVE SPECIES FOR CONTROL</a>	248
<a href="#">PRIORITY SPECIES</a>	248
<a href="#">SELECTING A CONTROL METHOD</a>	250
<a href="#">MEASURING SUCCESSES AND REPORTING</a>	250
<a href="#">SCOPING / FINANCIAL IMPLICATIONS</a>	250
<a href="#">ADDITIONAL RESOURCES</a>	250
<a href="#">REFERENCES</a>	251
<a href="#">APPENDIX A – INVASIVE SPECIES DECISION KEY</a>	253
<a href="#">APPENDIX B – 2023 PRIORITY INVASIVE SPECIES ON GSCA PROPERTIES</a>	255
<a href="#">APPENDIX C – BEST MANAGEMENT PRACTICES</a>	256
<a href="#">APPENDIX D – INVASIVE SPECIES PRESCRIPTION TEMPLATE</a>	257
<a href="#">APPENDIX E – SUMMARY OF INVASIVE SPECIES ON GSCA PROPERTIES</a>	260

## Introduction

Grey Sauble Conservation Authority (GSCA) will aim to control invasive plant species that are present on their properties through various control measures. Selection of species to control and associated control methods will be on a case-by-case basis.

GSCA will work to provide information to its watershed residents about identification, damage, and control measures. This may be through its website or other means.

## What are Invasive Species?

Invasive species are plants, animals, insects, and pathogens that are introduced to an area and cause harm to the environment, economy, or society (Invasive Species Centre, 2022). Invasive species generally do not have any natural predators within these new ecosystems and are able to outcompete native species for scarce resources. An introduced species is not considered an invasive species unless it causes negative environmental, economic, or social impacts. An example of an introduced, non-invasive species is European larch (*Larix decidua*).

## Impacts of Invasive Plants

Invasive plants can cause numerous negative impacts to GSCA properties and associated infrastructure, their visitors, and the surrounding landscape.

### Natural Areas

Natural areas have developed over many years and provide many benefits to society and the environment. These areas provide numerous ecosystem services including water and air filtration, habitat and food for wildlife, production of oxygen, and recreational and educational opportunities. These ecosystems can be sensitive to change and oftentimes when an invasive species is introduced to an area, they will outcompete the native species and alter the species composition and threaten the natural balance and services these areas offer.

### Agriculture

Invasive species can have extremely negative impacts on agricultural activities. Invasive plants can be vectors for pests and diseases that harm crops, reduce crop yields, and require additional use of pesticides to control them. Several invasive species have been known to take over farmland effectively reducing the yield of desirable crops or reducing the amount of area available to pasture livestock. An example is knapweed sp. (*Centaurea spp.*).

### Forestry

Like agriculture, invasive species can have negative impacts on a forest's productivity and its ability to regenerate itself. Invasive species can outcompete desirable native species reducing their overall numbers and growth rates. Within plantations, common buckthorn (*Rhamnus cathartica*) quickly establishes in recently harvested areas and form dense canopies which stops or hinders the regeneration of desirable native species.

### Human Health

Some invasive species are known to cause physical harm to humans. For example, the sap of giant hogweed (*Heracleum mantegazzianum*) is known to cause severe dermatitis if it comes in contact with the skin.

Other species, such as invasive phragmites (*Phragmites australis*) forms dense stands within ditches and rights-of-way that can block visibility. This can increase the chance of car accidents. Dead stalks of Phragmites are also known to become very flammable.

## Why Control Invasive Species?

Due to the lack of natural predators, when an invasive species is introduced to a new environment, they can quickly become established and grow unchecked. Some invasive species prey directly on native species and reduce their populations. This will reduce the amount of biodiversity within an area and in some cases extirpation of native species can occur.

Invasive species management is a difficult task that can be expensive and time consuming. For certain species one intervention is enough while for many others require multiple interventions. For all control efforts, challenges exist in securing funding, expertise, and resources. For certain projects, funding is only available for a single year, potentially causing problems for species requiring multiple years of control. Invasive species management plans are long-term plans but with the uncertainty of funding for multiple years, can be challenging to execute.

Each of the strategies listed below relate to each other and in many cases overlap with at least one other strategy. For instance, preventing the introduction of an invasive species may include an education component, collaboration with other groups, communication with the public about identifying an invasive species, and sharing of best management practices publicly.

## Strategies for Controlling Invasive Species

The following strategies will be used for all invasive species. In many cases, multiple strategies will be utilized for the same occurrence. For instance, if wild chervil (*Anthriscus sylvestris*) is found on a GSCA property, staff may communicate the negative impacts of it through social media channels, implement a control strategy, collaborate with other organizations to develop/influence policy decisions, and after control efforts monitor the site for control efficacy.

For each finding, a property and species-specific plan/prescription will be developed.

### Prevention

- Preventing an invasive species from entering an area is the preferred method of control as it costs the least and has the least impact on the environment, economy, and society.

### Communication

- Along with prevention, communication is a key component of any invasive species strategy. Building awareness of invasive species is key to achieving GSCA's goals and objectives.

### Best Management Practices (BMP)

- Numerous studies have been completed indicating the most effective control means for many different invasive species. There are many factors that go into controlling invasive species and individual results may vary. GSCA will work to incorporate known BMPs into invasive species control methods, while also applying learnings from past control methods.

### Prioritization

- Controlling every occurrence of invasive species on GSCA properties is not possible. Prioritization is required to make headway and allow for focused control efforts. GSCA has adapted a 'Decision Support Key' (Appendix A) from Credit Valley Conservation, to assist with identifying and selecting species and areas for control.

## Implementation

- Implementation is conducting the work to control an invasive species. Control efforts for certain invasive species at specific GSCA properties has taken place. When an invasive species is identified on a GSCA property, the Decision Support Key will be used to determine next steps. Invasive species management requires long-term commitments and available resources. Where possible, GSCA will continue to seek funding.

## Collaboration

- GSCA understands it cannot control all invasive species alone. Working with others through partnerships (formal and informal) is key to long-term success. Staff will seek to maintain current partnership and build additional ones. Groups and organizations may include municipalities, neighbouring Conservation Authorities, or local naturalist groups.

## Policy

- GSCA will aim to work with various levels of government and key stakeholders to create and influence policies and guidelines to assist in the control of invasive species.

## Monitoring (and Research)

- GSCA will seek to stay up to date on current research and control methods. GSCA will aim to support groups monitoring and researching invasive species.

## Prioritization of Invasive Species for Control

Identifying and controlling invasive species before they become established within an area is key. Controlling invasive species once they have become established within an area can become extremely costly and time consuming.

GSCA will follow the 'Invasive Species Decision Key' (Appendix A) to identify appropriate next steps when an invasive species is found on a property.

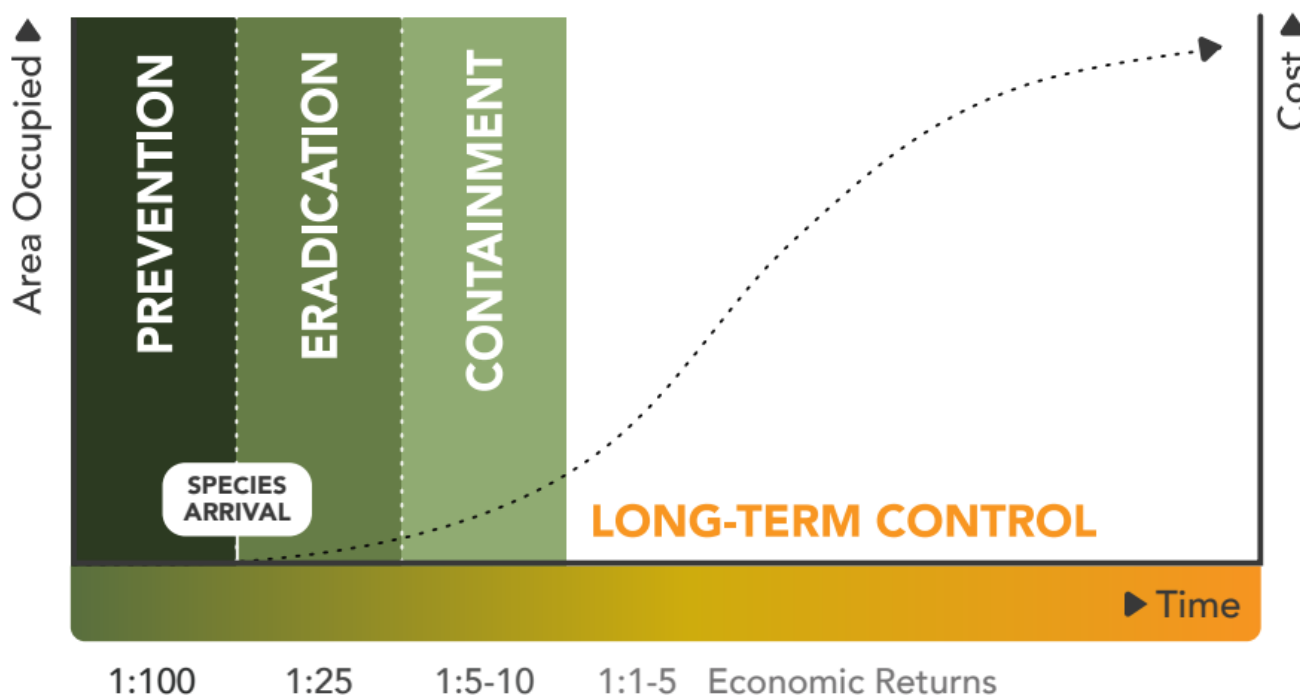
## Priority Species

GSCA aims to ensure safe access to its properties for visitors and staff. As such, invasive species known to cause harm to people will be given top priority. Species listed on the Ontario Noxious Weeds list and located near agricultural properties or species which negatively detract from the ability to use GSCA recreational areas will be given next highest priority, and species known to spread quickly and cause severe harm to the natural environment will be given the next highest priority. Invasive species that do not cause a safety risk to visitors, do not impact agriculture as per the Ontario Noxious Weeds list, do not spread quickly, and those that have no known control tools/techniques will be given the lowest priority. The table below provides examples and potential actions for when an invasive species is found.

Priority Level	Management Trigger	Example	Action
Top priority	<ul style="list-style-type: none"> <li>- Species known to cause bodily harm</li> <li>- Species listed on Ontario Noxious Weeds List*</li> <li>- Species directly affecting GSCA recreational areas</li> </ul>	<ul style="list-style-type: none"> <li>- Giant hogweed</li> <li>- Wild parsnip (<i>Pastinaca sativa</i>)</li> <li>- Wild chervil</li> <li>- Phragmites</li> </ul>	<ul style="list-style-type: none"> <li>- Begin control measures as soon as possible. Close the area, if necessary, and place signs informing the public.</li> </ul>
Medium priority	<ul style="list-style-type: none"> <li>- Species known to reproduce and spread quickly</li> <li>- Small isolated/satellite population</li> <li>- Newly established/detected population</li> <li>- Rapidly expanding population</li> </ul>	<ul style="list-style-type: none"> <li>- Garlic mustard (<i>Alliaria petiolata</i>)</li> <li>- Dog-strangling vine (<i>Vincetoxicum rossicum</i> &amp; <i>Vincetoxicum nigrum</i>)</li> <li>- Buckthorn</li> <li>- Non-native honeysuckle sp. (<i>Lonicera spp.</i>)</li> </ul>	<ul style="list-style-type: none"> <li>- Develop a management plan.</li> <li>- If budget and staffing resources are available, initiate management plan.</li> </ul>
Low Priority	<ul style="list-style-type: none"> <li>- Species known to spread slowly</li> <li>- Species that do not cause physical harm to visitors</li> <li>- Species with no known control tools/techniques</li> </ul>	<ul style="list-style-type: none"> <li>- Periwinkle (<i>Vinca minor</i>)</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor population.</li> <li>- If population grows, affects species-at-risk, or poses safety risk initiate control measures.</li> </ul>

\*[http://omafra.gov.on.ca/english/crops/facts/noxious\\_weeds.htm](http://omafra.gov.on.ca/english/crops/facts/noxious_weeds.htm)

The figure below shows relative cost (economic) ratios of invasive species management at different times of invasion. Preventing entry of an invasive species is 100 times higher than long-term control measures. Eradication is estimated to be 25 times greater, and containment is 5-10 times. This figure highlights the need for prevention of entry and communication of invasive species over control efforts.



Adapted from Generalized Invasion Curve (Agriculture Victoria, 2009).



If an invasive species enters an area, early detection and control are still much cheaper and effective than waiting and implementing control measures after the species is established.

## Selecting a Control Method

Many invasive species there are several control methods to choose from. These may include manually pulling, cutting, solarizing, applying herbicides, and/or using biological control agents. Each control method will have its own advantages and disadvantages. The advantages and disadvantages will be weighed to reduce potential impacts on the environment while meeting the goals of the control program. If possible and where appropriate, partner organizations and/or volunteers will be utilized to control invasive species. Whenever possible, control methods that do as little harm to the surrounding environment will be selected. In some cases, it is not feasible to select a control method with zero off-target impacts. In these cases, the damage to non-target species will be minimized as much as possible.

No matter which control method is selected, Best Management Practices and all laws and regulations will be followed.

## Measuring Successes and Reporting

For all management projects undertaken, follow up monitoring will be conducted. This may include visiting the site to see if a particular species is present again, measuring the size of an area of invasive species to understand if it has become smaller, or completing an inventory to determine the presence and/or abundance of native species before and after management has taken place.

Annually, a report will be developed explaining the management activities for the year, challenges faced, and plans for the upcoming year.

## Scoping / Financial Implications

GSCA identifies the need to control invasive species on its properties and understands that these efforts have a cost. Staff also understand it is not feasible to control every occurrence of an invasive species on an annual basis. Therefore, staff have prioritized several properties and species for initial control efforts. Staff are suggesting \$15,000 per year is earmarked for invasive species control. This includes \$10,000 for staff time and \$5,000 for herbicide/tools. The species and properties located below (Appendix B) are ones that have been identified by staff as having the potential to cause human health problems or negatively affect agricultural production.

## Additional Resources

Below are additional resources that maybe useful for controlling invasive species on GSCA properties.

<https://www.invasivespeciescentre.ca/invasive-species/invasive-species-resources/best-management-practices-database/>

[https://cvc.ca/wp-content/uploads/2021/01/CVC\\_InvasiveSpeciesStrategyWEBsingles-Ir-1.pdf](https://cvc.ca/wp-content/uploads/2021/01/CVC_InvasiveSpeciesStrategyWEBsingles-Ir-1.pdf)

[https://agriculture.vic.gov.au/\\_data/assets/pdf\\_file/0009/582255/Invasive-Plants-and-Animals-Policy-Framework-IPAPF.pdf](https://agriculture.vic.gov.au/_data/assets/pdf_file/0009/582255/Invasive-Plants-and-Animals-Policy-Framework-IPAPF.pdf)

## References

CVC, 2021 - [https://cvc.ca/wp-content/uploads/2020/12/rpt\\_InvasiveSpeciesStrategy\\_v16\\_20201230.pdf](https://cvc.ca/wp-content/uploads/2020/12/rpt_InvasiveSpeciesStrategy_v16_20201230.pdf). Accessed 26-Jan-22.

Invasive Species Centre - <https://www.invasivespeciescentre.ca/learn/>. Accessed 26-Jan-22.

CLOCA, 2010 - Invasive Species Management Strategy (cloca.ca). Accessed 06-May-22.

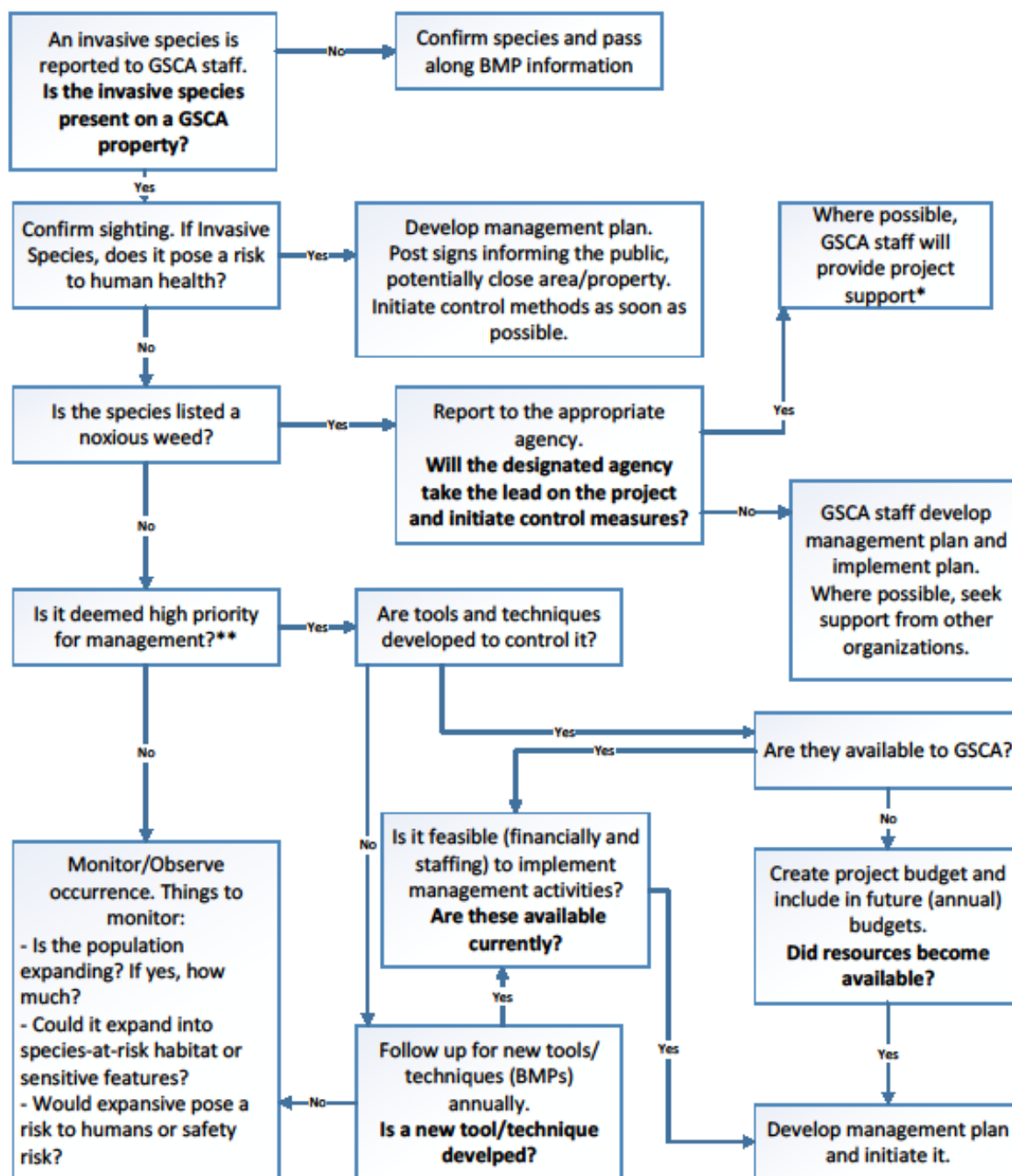
City of Mississauga, 2021 – Invasive Species Management Plan & Implementation Strategy.  
<https://www.mississauga.ca/wp-content/uploads/2021/02/18112420/Invasive-Species-Management-Plan.pdf>.  
 Accessed 04-July-22.

Sherman, Kellie. 2015. Creating an Invasive Plant Management Strategy: A Framework for Ontario Municipalities. Ontario Invasive Plant Council. Peterborough, ON.



Appendix A – Invasive Species Decision Key

## Appendix A - Invasive Species Control Decision Key



\*Project support may include providing staff, equipment/supplies, education/outreach, access to GSCA property.

\*\*High priority includes priority species based on Invasive Species Strategy, high functioning habitat, known species-at-risk habitat

Adapted from CVC Invasive Species Strategy 2020-2030 – pg 58 - [https://cvc.ca/wp-content/uploads/2021/01/CVC\\_InvasiveSpeciesStrategyWEBsingles-lr-1.pdf](https://cvc.ca/wp-content/uploads/2021/01/CVC_InvasiveSpeciesStrategyWEBsingles-lr-1.pdf)



i) Appendix B – 2023 Priority Invasive Species on GSCA Properties

ii)

GSCA Property	Invasive Species			
	Wild Chervil	Giant Hogweed	Wild Parsnip	Dog-strangling Vine
Skinner's Bluff	Yes - small patch			
Skinner Marsh - McNab Lake	Yes - large patch			
Shallow Lake		Yes - medium patch		
The Glen				Yes - small patch
Inglis Falls	Yes - large patch			
West Rocks	Yes - large patch			
Massie Hills	Yes - large patch			
Bognor Marsh	Yes - large patch			
Clendenan		Yes - small patch		
Griersville	Yes - large patch			

### iii) Appendix C – Best Management Practices

Giant Hogweed – [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2020/10/GiantHogweed\\_BMP.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2020/10/GiantHogweed_BMP.pdf)

Wild Chervil – <http://www.invadingspecies.com/invaders/plants/wild-chervil/>

Common Buckthorn – [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/06/OIPC\\_BMP\\_Buckthorn.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/06/OIPC_BMP_Buckthorn.pdf)

Phragmites – [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2021/05/OIPC\\_BMP\\_Phragmites\\_April302021\\_D10\\_WEB.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2021/05/OIPC_BMP_Phragmites_April302021_D10_WEB.pdf)

Garlic Mustard – [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/07/OIPC\\_BMP\\_GarlicMustard.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/07/OIPC_BMP_GarlicMustard.pdf)

Wild Parsnip – [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/07/OIPC\\_BMP\\_WildParsnip\\_Feb182014\\_FINAL2.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/07/OIPC_BMP_WildParsnip_Feb182014_FINAL2.pdf)

Dog-strangling Vine - [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/06/OIPC\\_BMP\\_DogStranglingVine.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2016/06/OIPC_BMP_DogStranglingVine.pdf)

iv) Appendix D – Invasive Species Prescription Template



519.376.3076  
 237897 Inglis Falls Road  
 Owen Sound, ON N4K 5N6  
[www.greysauble.on.ca](http://www.greysauble.on.ca)

Protect.  
 Respect.  
 Connect.

### GSCA Invasive Species Control Prescription

#### Compartment Details:

Property Name/Management Area: \_\_\_\_\_  
 Compartment Number: \_\_\_\_\_  
 Lot: \_\_\_\_\_ Concession: \_\_\_\_\_  
 Municipality: \_\_\_\_\_ Former Township: \_\_\_\_\_

#### Property/Stand Details:

(see attached map)

Invasive Species Found (list all that were found):

\_\_\_\_\_

Current Land Cover:      Forested    Agriculture      Open

Accessibility (able to get a pickup truck to site, is there a long hike, is the site roadside, etc...):

\_\_\_\_\_

\_\_\_\_\_

Potential Concerns (note accessibility by the public, known user groups, etc...):

\_\_\_\_\_

\_\_\_\_\_

Presence of Species-at-Risk?      Yes      No      Unknown

If yes, please let them? \_\_\_\_\_

\_\_\_\_\_

#### Treatment:

Best Management Practices document available?      Yes      No

If yes, can suggested BMPs be applied to site?      Yes      No

#### Recommended Treatment:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#### Follow-up Recommendations:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#### Member Municipalities

Municipality of Arran-Elderslie, Town of the Blue Mountains, Township of Chatsworth, Township of Georgian Bluffs, Municipality of Grey Highlands, Municipality of Meaford, City of Owen Sound, Town of South Bruce Peninsula

**Strategies – where appropriate, describe possible actions for each strategy. If none, put N/A:**

Prevention:

Communication:

Prioritization:

Collaboration:

Policy:

Monitoring (and Research):

Prepared By: \_\_\_\_\_

Date Prepared: \_\_\_\_\_



## Appendix E – Summary of Invasive Species on GSCA Properties

Property	Beech Bark Disease	Beech Scale Insect	Bell's Honeysuckle	Butternut Canker	Coltsfoot	Common Buckthorn	Common Privet	Dog Strangling Vine	Garlic Mustard	Goutweed	Gypsy Moth Caterpillar	Holly Leaved Oregon Grape	Invasive Honeysuckle Sp.	Japanese Barberry	Japanese Knotweed	Lamb's Ear	Lamium	Manitoba Maple	Morrow's Honeysuckle	Norway Maple	Oriental Bittersweet	Periwinkle	Phragmite / Common Reed	Purple Loosestrife	Reed Canary Grass	Scotch Pine	Silver Or White Poplar	Tartarian Honeysuckle	Tufted (cow) Vetch	Wild Chervil	Total by Property
AINSLIE WOOD														1																	1
BIGHEAD RIVER						89			4	4					2							5									104
BOAT LAKE - C																						2									2
BOAT LAKE - D																						2									2
BOGNOR MARSH - C						6																									6
BOGNOR MARSH - D	3	11		4		458			2		1		8	2									5	2						93	589
CLENDENAN			2			1			1																				5	9	
EUGENIA FALLS	2	6				2			4											2	2										18
FISHING ISLANDS - C																							2								2
FOUR CORNERS						3																									3
GIBRALTAR					1	4			25																						30
HEPWORTH	5	34	15	1		3													14		7							2		1	82
HIBOU																							35								35
INDIAN FALLS			1			1			1																					4	7
INGLIS FALLS	3	7	11	1		70	10		23	1		7		4			1		50	7	3	20								34	252
KEMBLE MOUNTAIN - B																														2	2
KEPPEL FOREST			4			3																									7
KOLAPORE UPLANDS	5	2		19	2	92			21									1				2	1								145
LEITH SPIT																							1								1
LITTLE GERMANY		1	3	1	4	36		3	2				2											2					6		60

MASSIE HILLS - A	3	6				277																2							14	302	
MASSIE HILLS - B	1	7		14	4	174						1										2							9	212	
Property	Beech Bark Disease	Beech Scale Insect	Bell's Honeysuckle	Butternut Canker	Coltsfoot	Common Buckthorn	Common Privet	Dog Strangling Vine	Garlic Mustard	Goutweed	Gypsy Moth Caterpillar	Holly Leaved Oregon Grape	Invasive Honeysuckle Sp.	Japanese Barberry	Japanese Knotweed	Lamb's Ear	Lamium	Manitoba Maple	Morrow's Honeysuckle	Norway Maple	Oriental Bittersweet	Periwinkle	Phragmite / Common Reed	Purple Loosestrife	Reed Canary Grass	Scotch Pine	Silver Or White Poplar	Tartarian Honeysuckle	Tufted (cow) Vetch	Wild Chervil	Total by Property
	PEASEMARSH																					7								7	
	ROBSON LAKES - A					201							2																	203	
	ROBSON LAKES - B		1			7																								8	
	ROBSON LAKES - C		1	7	4	63																								75	
	ROCKFORD					44								2								1								47	
	ROCKLYN CREEK - A		1			81			6																				17	105	
	SHALLOW LAKE - A					8																								8	
	SHEPPARD LAKE					111																								111	
	SINKHOLE									2																					2
	SKINNER McNAB - A		1			26				2															1						30
	SKINNER McNAB - B			3		4			1												1									17	26
	SKINNER McNAB - D		5	2		1	32			2											3									33	78
	SKINNER McNAB - E					5			1				2																		8
	SKINNER'S BLUFF - B		3		2		86						6			2					1									1	101
	SKY LAKE - B	1	2																												3
	SKY LAKE - C	1	24																												25
	SPEY RIVER - B		1				3							1																	5
	SPEY RIVER - C		2				3																						2		7
SYDENHAM FOREST	1	3		37		17						5																		63	
SYDENHAM LOWLANDS - B																													2	2	
TELFER CREEK	1	2			5	8																								16	

THE GLEN - A						4		2					6																				12
WALTER'S CREEK - B	1	4				25			2																								32
Property	Beech Bark Disease	Beech Scale Insect	Bell's Honeysuckle	Butternut Canker	Coltsfoot	Common Buckthorn	Common Privet	Dog Strangling Vine	Garlic Mustard	Goutweed	Gypsy Moth Caterpillar	Holly Leaved Oregon Grape	Invasive Honeysuckle Sp.	Japanese Barberry	Japanese Knotweed	Lamb's Ear	Lamium	Manitoba Maple	Morrow's Honeysuckle	Norway Maple	Oriental Bittersweet	Periwinkle	Phragmite / Common Reed	Purple Loosestrife	Reed Canary Grass	Scotch Pine	Silver Or White Poplar	Tartarian Honeysuckle	Tufted (cow) Vetch	Wild Chervil	Total by Property		
	WALTER'S CREEK (HOLLAND AF)					309							1														1		9			320	
	WEST ROCKS	2	1									1	4	1																		9	
	WEST ROCKS - D	1	2			93						1	62	27						1						4			1	2		194	
	WODEHOUSE - B					20																									3	23	
	WODEHOUSE - F	1				4																								1		6	
	WODEHOUSE - G					39																										39	
	Total by Species	31	127	48	83	17	2,412	10	5	99	5	1	9	99	38	2	2	1	1	64	10	17	32	55	4	1	4	1	2	18	238	3,436	