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NIAGARA
OFFICIAL PLAN

NIAGARA REGION ARCHAEOLOGICAL MANAGEMENT PLAN

Main Report

Niagara Region
December 2023

VIBRANT REGION



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Dedication

This archaeological management plan is dedicated to the countless generations of ancestors whose memory is held in the land. Collectively it is our responsibility to appreciate and care for the land and the sacred memory that it holds. We thank all who have contributed to this study, especially the Indigenous communities who have guided us towards a better understanding of our trust relationship with the land and its people, past and present, and with each other.

Executive Summary

Archaeological sites throughout the Regional Municipality of Niagara (hereafter Niagara Region) are the physical remains of the 13,000-year settlement history. They represent a fragile and non-renewable cultural heritage resource that must be conserved and protected. This Archaeological Management Plan (AMP) is a planning tool intended to be used by Niagara Region, Local Area Municipalities, development proponents, and the public. It brings a consistent policy-based approach to the conservation of archaeological resources across the Niagara Region. This AMP includes a Geographic Information Systems (GIS) based Archaeological Potential Map.

This AMP presents planning and management guidelines and an archaeological potential model that are consistent with provincial legislation and policy. In Canada, the conservation of cultural heritage resources –including archaeological resources—is a matter of **Indigenous, Provincial, and National interest**. This AMP addresses archaeological resource planning within the Provincial, Regional, and Local context.

The AMP has three major objectives:

- To outline policy, process, and implementation tools for managing archaeological resources in the planning approvals and environmental assessment processes consistent with provincial legislation and policy and reflecting best-practice archaeological management.
- To compile detailed, reliable inventories of registered and unregistered archaeological sites within Niagara Region; and,
- To develop an archaeological site potential model specific to the Niagara Region, based on known site locations, past and present land uses, environmental and cultural-historical data, and assessment of the likelihood for the survival of archaeological resources in various contexts.

The role of the Niagara Region and the Local Area Municipalities in the conservation of cultural heritage resources is crucial. Implementation of matters of provincial interest, planning, and land use control are predominantly municipal responsibilities and the impact of municipal land use decisions on archaeological resources is substantial. Municipally approved developments constitute most land-disturbing activities in Ontario. The primary means by which these resources may be protected is through the planning and development approvals process.

The AMP provides a series of policy and process recommendations within the planning and development approvals process that will ensure the conservation of archaeological

resources within the Region. Some of these recommendations have already been integrated into Niagara Region's new Official Plan. The AMP policy recommendations and process are consistent with the [Provincial Policy Statement](https://www.ontario.ca/page/provincial-policy-statement-2020) (<https://www.ontario.ca/page/provincial-policy-statement-2020>) (2020) and the [Ontario Heritage Act](http://www.mtc.gov.on.ca/en/heritage/heritage_act.shtml) (http://www.mtc.gov.on.ca/en/heritage/heritage_act.shtml) (2005). This AMP includes recommended policies, processes and standard clauses for Niagara Region and local municipalities.

Through its GIS mapping of known archaeological sites and areas of archaeological potential, the AMP allows the planning staff at Niagara Region, the Local Area Municipalities, property owners, developers, and prospective land buyers, to know if and where archaeological investigations are necessary prior to land disturbing activities. The AMP aims to reduce the risk of unexpected discovery of archaeological remains during land altering activities (such as disturbing an Indigenous burial site or a nineteenth century building foundation) and enhance public awareness of archaeological resources. The AMP also allows residents to know and celebrate their community's history more completely.

The archaeological potential model was developed based on an inductive and deductive approach that predicts where pre-contact Indigenous sites are most likely situated and utilizes detailed historical research to map archaeological potential. The pre-contact Indigenous archaeological site potential layer is based on data from the Ontario Archaeological Sites Database maintained by the Ministry of Citizenship and Multiculturalism (MCM) as of September 2, 2020. The identification of areas in the historical archaeological site potential layer involved the digitization of residential, commercial, and industrial features and transportation routes from historical mapping and cemeteries. The historic archaeological potential layer captures all the historical archaeological sites previously discovered in the Region.

In addition to the 13,000 years of Indigenous settlement, the history of Niagara Region is fundamentally linked to early historical relations and treaties between the Crown and First Nations. Niagara Region was included in the scope of the Nanfan Treaty signed by the British and the Haudenosaunee Confederacy (Five Nations) in 1701. Later, the colonial period was ushered in by the acquisition of settlement lands by the British crown through the Treaty at Niagara in 1764 (renegotiated 1781) and the Between the Lakes Treaty #3 of 1792, both signed with the Mississaugas of the Credit First Nation. It is therefore appropriate that development of Niagara Region's AMP benefitted from engagement with descendant Indigenous communities. The AMP recommends continued engagement with Indigenous communities in Niagara Region's archaeological review and planning application processes in accordance with Section

2.6.5 of the Provincial Policy Statement (2020), and appropriate policies have been incorporated into the Region's new Official Plan.

In having developed this archaeological management plan, the Regional Municipality of Niagara joins with other major municipalities in Ontario in adopting the best approach available to ensuring archaeological site conservation within its jurisdiction.

1. Introduction

An Archaeological Management Plan (AMP) represents a comprehensive approach to the conservation of archaeological resources. One of the most effective means of protecting archaeological sites and areas of archaeological potential is through adoption of planning and management policies, processes, and guidelines that are informed by both the known distribution and character of archaeological sites. In areas of archaeological potential, this may require assessment of the potential location of additional sites that have yet to be discovered. This AMP is a planning tool intended to be used by Niagara Region, Local Area Municipalities, development proponents, and the public to bring a consistent approach to the conservation of archaeological resources across the Region.

The following section outlines the legislative and policy context for archaeology in Ontario and best practices in archaeological planning. This report, its appendices and recommendations are meant to be used in conjunction with Niagara Region's Archaeological Potential Mapping. The archaeological potential model was developed using an ArcGIS® Geographic Information System to summarize and map various data sets as separate, but complementary layers. Modelling criteria specific to Niagara Region were then derived through analysis of these layers and applied to produce a final archaeological potential planning mapping layer. This layer will be used by Regional Municipality and Local Area Municipality planning staff to evaluate planning applications and other municipal infrastructure projects for the necessity of carrying out archaeological resource assessments.

The main report is divided into three main parts. The first (Section 2) addresses archaeological resource management, including the legislative and policy framework for archaeology in Ontario. The second (Section 3) outlines the archaeological process and implementation of this AMP. The third (Section 4) presents the archaeological potential model for both pre-contact Indigenous and post-contact sites. This includes discussion on how the model was developed, the archaeological potential of Niagara Region, archaeological integrity and an archaeological potential planning map based on a Geographic Information Systems (GIS) model.

There are also four appendices, which provide more technical information behind the sections in the main report, as follows:

- Appendix A: Indigenous Archaeological Potential Model, which outlines the theory and methodology for the modelling of pre-contact Indigenous sites in the Region.

- Appendix B: Post-Contact Archaeological Potential Model, which identifies the historical features that may yield associated archaeological deposits in Niagara Region.
- Appendix C: Contingency Plan for Accidental Discoveries, which outlines a process for dealing with the unexpected discovery of archaeological remains during construction; and
- Appendix D: Background Report (Planning Context and Recommended Policies), which includes an analysis and discussion of the legislative and policy context for archaeology in Ontario and best practices in archaeological planning as well as recommended and included policies and process.

1.1. Defining Archaeological Resources

Archaeological resources are scarce, fragile, and non-renewable and therefore must be managed in a prudent manner if they are to be conserved. Efficacy in incorporating archaeological resources within the overall planning and development process requires a clear understanding of their physical nature, the variety of forms they may assume, and their overall significance and value to society.

The Provincial Policy Statement (PPS), 2020, which is issued under the authority of Section 3 of the [Planning Act](https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act) (<https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act>), defines archaeological resources (See Glossary in Section 6) as including “artifacts, archaeological sites, and marine archaeological sites, as defined under the *Ontario Heritage Act*.” Areas of archaeological potential as defined by the PPS means areas with the likelihood to contain *archaeological resources*. Criteria to identify archaeological potential are established by the Province. The *Ontario Heritage Act* requires archaeological potential to be confirmed by a licensed archaeologist.

Individual archaeological sites are distributed in a variety of locations across the landscape. These places are associated with past human activities, endeavours, or events. These sites may occur on or below the modern land surface or may be submerged under water. The physical forms that these archaeological sites may take include: surface scatters of artifacts; subsurface strata, which are of human origin or incorporate cultural deposits; remains of structural features; or a combination of these attributes.

The *Ontario Heritage Act* (*Ontario Regulation 170/04*) provides the following definitions:

- “archaeological site” is “any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest;”
- “artifact” is “any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest;”
- “marine archaeological site” is “an archaeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water;” and,
- “archaeological fieldwork” is “any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring, surveying, recovering, and excavating.”

2. Legislative Framework for Managing Archaeological Resources in Ontario

In Canada, the conservation of cultural heritage resources, including archaeological resources, is a matter of **Indigenous, Provincial and National interest**. This AMP addresses archaeological resource planning within the Provincial, Regional and Local context.

The federal government, which owns a large amount of land in Niagara Region, addresses and manages cultural heritage and archaeology on federal property according to its own policy, management plans and processes that derive from responsibilities under international treaties and federal law.

The *United Nations Declaration on the Rights of Indigenous Peoples (the Declaration)* is increasingly informing or serving as the basis for discussions between Indigenous peoples and governments in Canada, with many Indigenous communities already referencing the document. The Declaration will affect the practice of archaeology in Ontario soon and is supported by the Government of Canada which passed Bill C-15, the *United Nations Declaration on the Rights of Indigenous Peoples Act*, in June 2021. This act requires Federal Law to consider consistency with the Declaration when adopting new statutes and amendments to Canadian Law. The Ontario government has

not yet, at the time of writing, adopted articles of the Declaration into any legislation but this does appear possible.¹

Further, in response to the Indian Residential Schools Settlement Agreement, the Truth and Reconciliation Commission of Canada (TRCC) was established to facilitate reconciliation. The TRCC's final report included 94 "calls to action" to further reconciliation between Canadians and Indigenous Peoples, including recommendations for municipal governments.

Municipal projects and planning activities that touch on Indigenous Peoples' treaty rights, culture, traditional knowledge, and heritage, including archaeology, are advised to consider the Declaration and Calls to Action in processes, consultation and decision making.

2.1. Historical Legislative Context

The earliest legislation dealing with archaeology in Ontario was the 1953 *Archaeological and Historic Sites Protection Act* (Government of Ontario 1960). This legislation provided the Province with authority to designate and protect important archaeological sites, to require permits to excavate or alter archaeological sites, and to seize ill-gotten artifacts. The Archaeological and Historic Sites Board was created to identify these important sites.

In the 1970s, requirements to address archaeological resources during the development process were first incorporated in the *Planning Act* and the *Environmental Assessment Act* (Williamson 2010, p. 7-45). At this time, government recognized that land development posed the most serious threat to the archaeological record. The pace of development increased during the 1980s and several municipalities began to develop archaeological "master plans" and inventories of archaeological resources within their boundaries.

Until the 1990s, the Province acted as the approval authority in terms of archaeological resource management decisions. In the 1990s, the Province re-allocated roles with municipal governments (Williamson 2010). The Provincial government shifted into an advisory role and municipal governments assumed responsibility for reviewing planning applications for Provincial interests.

¹ An NDP private members bill to adopt the Declaration into legislation passed two readings in the Ontario provincial legislature but has not passed the third reading at the time of writing.

The change in approach during the 1990s reflected the role of local planning departments in decision making that affected natural and cultural resources. Locally approved developments did and continue to constitute most of the activities that disturb land where archaeological resources are found in the Province. It was thought that with adequate screening at the municipal level, protection of archaeological resources would be ensured. The Province's view was, and continues to be, that AMPs are the most effective means by which municipalities can carry out this screening. The Niagara Escarpment Commission as an agency of the Government of Ontario still has the responsibility for Provincial Plan review in the Niagara Escarpment Plan Area.

In 1996, as part of the re-allocation of development review responsibilities (i.e., transfer of Municipal Plan Review), the role of identifying requirements for archaeological assessments as conditions of approval was transferred to the Niagara Region, as it was for all other Upper and Single Tier Municipalities in the province. In some jurisdictions, this role has been delegated to Lower Tier Municipalities.

2.2. Current Legislative Context

As a matter of provincial interest, requirements for archaeology are addressed in several pieces of Ontario legislation, associated regulations, and Provincial plans. The *Planning Act* and *Environmental Assessment Act* are the principal pieces of legislation that require archaeological resource management. They are complemented by the *Ontario Heritage Act*, which regulates archaeological practice to maintain a professional standard of archaeological research and consultation. Archaeology can also be requested as part of *Ontario Heritage Act* applications under Part IV and V of the *Ontario Heritage Act*. Several other acts contain provisions, requirements, or direction for archaeological resource management under various circumstances that are relevant to the municipal development approval process.

2.2.1. Planning Act and Provincial Policy Statement

The *Planning Act* states:

The Minister, the council of a municipality, a local board, a planning board and the Tribunal, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest such as...

the conservation of features of significant architectural, cultural, historical, **archaeological**, or scientific interest [Part 1S. 2(d)] ...

The PPS (Section 1.7.1 and 2.6) asserts that cultural heritage and archaeological resources provide important environmental, economic, and social benefits, and directly addresses cultural heritage –including archaeology.

2.2.2. Environmental Assessment Act

The *Environmental Assessment Act* includes a broad definition of ‘environment’, which includes, among other things, the social, economic, and cultural conditions that influence the life of humans or a community, and any building, structure, machine or other device or thing made by humans [Part I1(1, c and d)]. Archaeological sites, artifacts and remains or ruins are included in ‘cultural conditions’ and ‘building, structure... or thing made by humans. Archaeological assessments are required as part of environmental assessments to assess which archaeological resources, sites, artifacts or remains will be affected by a project subject to the *Environmental Assessment Act* [Section 6.1 (2, c)].

2.2.3. Ontario Heritage Act

The *Ontario Heritage Act* enables the Provincial government and municipalities to conserve, protect, and preserve the heritage of Ontario, including archaeology. Part VI of the *Ontario Heritage Act* addresses the Conservation of Resources of Archaeological Value as follows:

- It requires that a person must have a license issued by the Ministry to carry out archaeological fieldwork. [Part VI, Section 48 (1) 1]
- It prohibits disturbance or alteration of a registered archaeological site –marine or terrestrial—by removing artifacts or other physical evidence of past human use or activity from the site. [Section 48 (1) 2]
 - However, where there is a known archaeological site but activity on the site is normal agricultural work or routine maintenance of the property no archaeological license is required. [Section 48 (2)(b)]
- It outlines, under Section 48 (4), limits of the archaeological license. Section 48 (4)(d) enables the Minister to direct terms and conditions for archaeological licenses, which the Ministry of Citizenship and Multiculturalism (MCM) has developed.
- It outlines rules for archaeological inspections.
- It enables the minister to designate a property of archaeological significance.
- It lays out the process and rules for designation and revocation of designation.
- It enables the Minister to stop work on a property that is of archaeological or historical significance.

- It requires reporting of archaeological sites and establishes the Provincial register of archaeological reports.
- It enables artifacts from archaeological sites to be deposited in a public institution and held in trust for the people of Ontario.

Licensed archaeologists are required to submit reports to the MCM for review as a condition of their license.

Marine archaeology is also addressed in the *Ontario Heritage Act*. Only a person licensed by the Province (Minister) may alter a marine archaeological site or remove an artifact or any other physical evidence of past human use or activity from the site. [Section 48 (1)2]

2.2.4. Other Legislation and Policies

Other Ontario legislation, including the *Aggregate Resources Act*, *Environmental Protection Act*, and the *Burial, Funeral and Cremation Services Act*, enables the Minister or a municipality to request/require archaeological assessments or require archaeological assessment for certain processes or applications. Provincial plans including A Place to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan), Greenbelt Plan and Niagara Escarpment Plan (NEP) set out policies for the conservation of cultural heritage resources including archaeological resources. (see Appendix D, Section 3 for more detail on legislation and Provincial plans).

2.3. Municipal Archaeological Policies

Responsibility to ensure archaeology is completed in planning and Environmental Assessment contexts generally falls to municipalities. To ensure archaeological resources in Niagara Region are conserved, policies for archeological conservation and management are included in Regional and Local Area Municipal Official Plans. Foundational policies that meet requirements of provincial legislation and policy are required to be included in the Niagara Official Plan and Local Area Municipal Official Plans. The foundational policies enable consistent approaches to archaeological management across all municipalities in Niagara Region. Each municipality may supplement these policies with more specific policy as required to better reflect their local circumstances. However, any local approach must still comply/ be consistent with the requirements and language used in the *Ontario Heritage Act*, the *Planning Act*, and the PPS. Appendix D, Section 5 includes recommended policies for archaeology.

3. Management of Archaeological Resources

3.1. Provincial Archaeological Assessment Process

The stages of archaeological assessment –for terrestrial sites—in Ontario include:

- **Stage 1: Background Study and Optional Property Inspection**
Consultant archaeologist visits the property and reviews previous archaeological assessments in the area, MCM site database along with geographic, land use, and historical information. If areas of archaeological potential are found, a Stage 2 assessment is required (Ontario MCM 2011a, p. 13).
- **Stage 2: Property Assessment**
Consultant archaeologist will survey the land for archaeological resources using pedestrian and/or test pits and/or other archaeological strategies. If archaeological sites of sufficient cultural heritage value or interest are found, a Stage 3 assessment is required (Ontario MCM 2011a, p 27). Consultant archaeologist conducts further property research, excavations, determines size of site, and degree of cultural heritage value or interest.
- **Stage 3: Site Specific Assessment**
Consultant archaeologist conducts further property research, excavations, determines size of site, and cultural heritage value or interest. This information informs Stage 4 recommendations (Ontario MCM 2011a, p. 45).
- **Stage 4: Mitigation of Development Impacts**
Conservation strategies recommended by the consultant archaeologist are implemented. Long-term protection and avoidance at the location is always preferred but if not possible the site can be documented and removed through excavation (Ontario MCM 2011a, p. 67).

Much of the marine archaeology carried out in Ontario is conducted by avocational divers on shipwreck sites. However, development projects or environmental assessments for work below the high-water mark in Ontario's waterways may have archaeological potential. All marine archaeological work, including work completed by avocational divers for research or site recording purposes or work by consultant marine archaeologists, requires a license.

Recreational divers may dive on underwater sites in waterways in and around Niagara Region if they are not carrying out archaeological research. Marine archaeological sites may include shipwrecks or abandoned vessel sites, remains of marine infrastructure such as wharves, piers, quays, canals, dams, inundated communities or inundated Indigenous sites.

3.2. Archaeology in the Municipal Planning Process

The following recommended process for archaeology assessment on projects in Niagara Region has been written and supported with rationale to provide a baseline reference for clear and consistent guidance across the Region. A quick reference flow chart can be viewed in Appendix D. For planning applications, this process is led by local municipal planners as the approval authority and begins with pre-consultation between the proponent, local municipal planners, and various agencies.

Depending on the location of the proposed development, the Region or Local Area Municipality may require a Stage 1 and 2 archaeological assessment(s) as part of a complete application. This ensures standard due diligence and serves as a risk assessment for proponents. If required, Stage 3 and Stage 4 archaeological assessments may be required as a condition of approval. Council may also require whatever they deem necessary for a complete application as detailed in Official Plan policies. Archaeology in the environmental assessment process and for *Ontario Heritage Act* applications follows similar steps and has similar considerations.

3.2.1. Applicable Planning Applications

All decisions on applications made under the *Planning Act* are required to be consistent with the PPS and conform with Provincial Plans. Therefore, Provincial and Regional archaeological policies and the Region's archaeological assessment process applies to all planning applications **where the property is in an area of archaeological potential**. Consideration may be given to scoping a requirement for an archaeological assessment for certain applications. Additional scoping considerations are outlined in Appendix D.

3.2.2. Roles

The following roles and responsibilities apply through the planning application/development approvals process:

Development Proponent's Role

A development proponent is any person, company, or public body planning to alter or develop land. They could be a private citizen, a development company, or even the municipality. They are responsible for submitting the development application, hiring a licensed consultant archaeologist, ensuring all archaeological reports are completed, and reporting any unexpected archaeological finds during development to the municipality and Province. The development proponent—or their agent—will be responsible for retaining a licensed archaeologist and ensuring copies of archaeological

assessment report(s) and the MCM acknowledgement letter(s) are submitted to the approval authority as part of the development application.

Local Area Municipality's Role

The Local Area Municipality receives the development proposal and reviews the site(s) relative to the archaeological potential mapping to determine if the development is within or adjacent to an identified area of archaeological potential. If archaeological potential is identified, the Local Area Municipality will include the Niagara Region in pre-consultation and/or inform the development proponent about requirements for archaeological assessments to be completed by a licensed consultant archaeologist.

When the required archaeological assessments and the MCM acknowledgement letter(s) are received from the development proponent to deem a development application complete, the local municipal planner will circulate the application to Niagara Region to update the archaeological potential mapping and repository of archaeological assessment reports.

Regional Municipality of Niagara's Role

Niagara Region will participate in pre-consultation meetings to review archaeological potential and convey requirements for archaeological assessment(s) to development proponents. Regional planners will review archaeological assessment(s) circulated by local municipal planners through the development review process to verify the scope of the assessment and update the archaeological potential mapping using information from the archaeological assessment(s). Niagara Region will review archaeological policies and protocols.

Ministry of Citizenship and Multiculturalism (MCM) Role

MCM staff will review the archaeological assessment(s) to ensure it (they) meets provincial standards. The MCM will send an acknowledgement letter to the licensed consultant archaeologist, project proponent and approval authority (local planning department) and if a site is found, register it in the provincial register of archaeological sites. The MCM acknowledgement letter will quote recommendations from the archaeological assessment report(s).

3.2.3. Archaeological Process in Niagara Region

When archaeological assessments are required for *Planning Act* applications, the Archaeological Potential Model (see Section 4) will be used to determine if the application is in an area of archaeological potential. Figure 1 illustrates the general process to address archaeology and Table 1 outlines the process in detail along with a

rationale that outlines legislative and policy requirements as well as general archaeological practice.

In addition to archaeological requirements for *Planning Act* applications, archaeological assessments may be required for Environmental Assessment processes and *Ontario Heritage Act* processes. Generally archaeological assessments under these pieces of legislation follow a similar process as that outlined in Figure 1 and Table 1.

While Niagara Region's AMP will reduce the risk posed to archaeological sites by development, there will still be instances of emergency archaeological finds because no archaeological survey, regardless of its intensity, can entirely negate the possibility of uncovering deeply buried archaeological materials. Therefore, standard warning clauses that outline the protocols regarding unexpected archaeological discoveries must be included in all development agreements that will disturb the ground. Standard warning clause direction is outlined in Section 3.3 below.

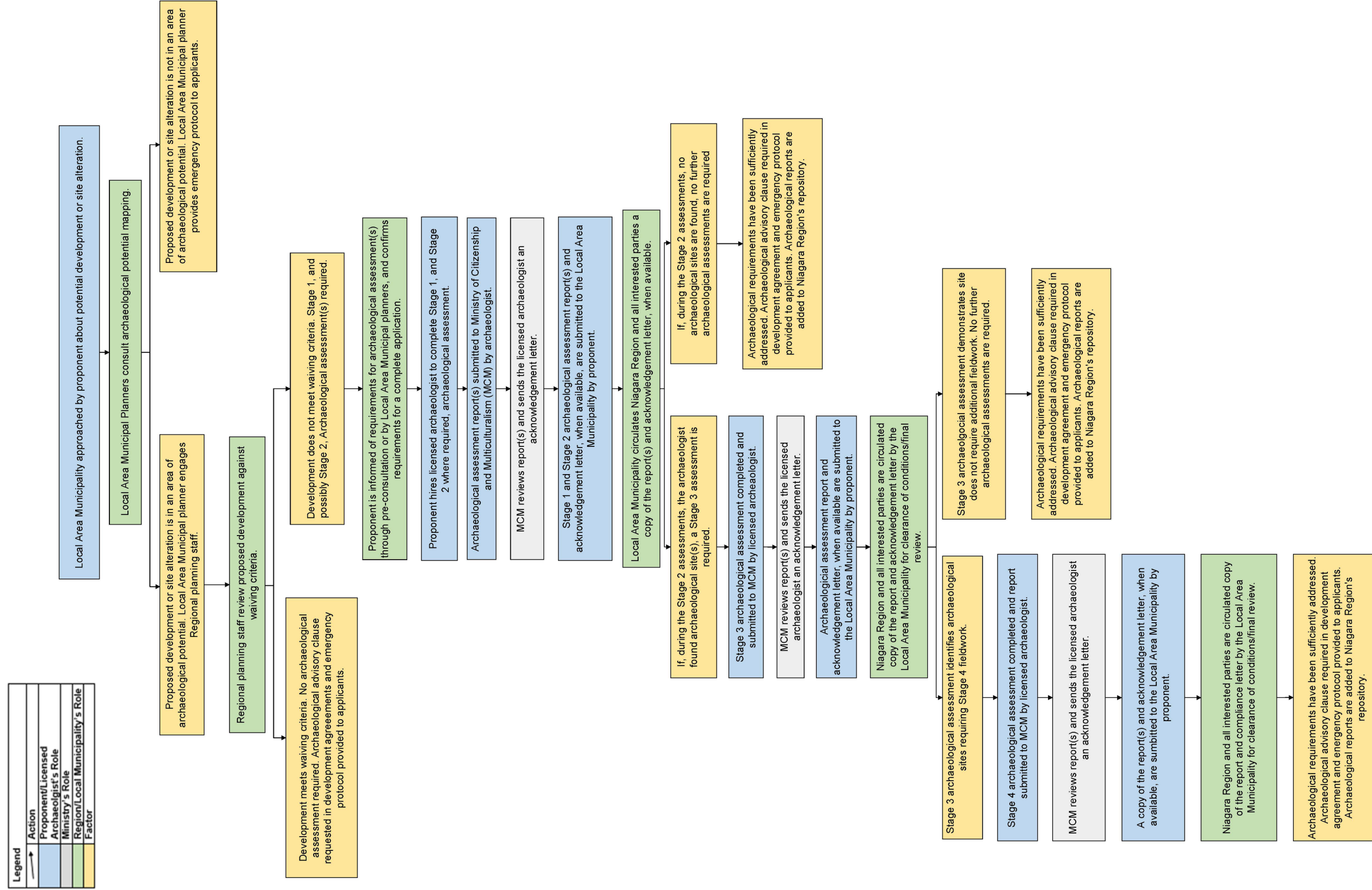


Figure 1: Niagara Region Archaeological Process

Table 1: Archaeological Assessment Process for Planning Applications

Step	Process	Rationale
1.	<p>To begin the process, a proponent will contact the Local Area Municipality for a pre-consultation meeting or preliminary discussion about the proposal. The Local Area Municipality’s planner on the file will check if the proposed project falls within an area of archaeological potential. If archaeological potential is determined to exist on any portion of the proposed development parcel, it will be subject to the archaeological planning process and Regional planning staff should be included in preliminary discussions/pre-consultation. Regional planners will discuss archaeological requirements with the proponent in pre-consultation.</p> <p>If a proponent has completed archaeological assessments prior to pre-consultation, copies of the archaeological assessment reports and MCM—or as superseded—acknowledgement letter should be submitted to the local municipal planners along with other project documentation, for distribution to the Region.</p>	<p>As archaeological assessments are required by the <i>Environmental Assessment Act</i> and the <i>Provincial Policy Statement</i>, and can be required under the <i>Ontario Heritage Act</i>, it is recommended that development applications be assessed for archaeology at the earliest opportunity.</p> <p>Early assessment is encouraged as a form of risk management for the proponent who can use the results of the assessment to determine where and how to design their development. Mitigating potential future costs and extended timelines.</p> <p>As part of the AMP, archaeological potential mapping will be made available for local municipal planners across the region. This mapping will aid planners, both Regional and local, in determining when archaeological assessments are required and increase understanding of archaeology in local municipalities</p>
2.	<p>If the project is not within an area of archaeological potential, the application can be submitted without further archaeological assessment. However, project proponents must be aware of and follow protocols for accidental or unexpected finds and be prepared to engage a consultant archaeologist if necessary. Warning clauses and/or</p>	<p>As required by Section 48 (1) of the <i>Ontario Heritage Act</i> and defined in Ontario Regulation 170/04, it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p> <p>If archaeological resources are found on site unexpectedly, the proponent is obligated by Section 48(1) of the <i>Ontario Heritage Act</i> to hire a licensed consultant archaeologist to complete</p>

	<p>emergency protocol information should be provided to proponents.</p>	<p>an archaeological assessment. It is recommended that the handouts included in this AMP be provided at the pre-consultation meeting to ensure proponents know their role and legislative requirements for unexpected finds.</p>
<p>3.</p>	<p>If a project area or property or a portion thereof is identified as having archaeological potential, an archaeological assessment(s) is required.</p> <p>The Regional planner recommends a combined Stage 1 and Stage 2 archaeological assessment. However, the project consultant archaeologist may – based on their professional opinion— recommend starting with a Stage 1 assessment to be followed by a Stage 2 assessment as required. Where there is uncertainty on past site disturbance or the level of disturbance that will result from specific construction methods, a Stage 1 assessment will assist in verifying risk to archaeological resources from the proposed development.</p> <p>The archaeological assessment(s) will be completed by a licensed consultant archaeologist.</p> <p>It is recommended that engagement be undertaken by project proponents with Indigenous communities, at the earliest opportunity to determine if the site holds Indigenous cultural heritage interests.</p>	<p>Archaeological assessments are required by the MCM in areas of archaeological potential. Detailed steps are explained in the Ministry’s <i>Standards and Guidelines for Consultant Archaeologists</i> (2011).</p> <p>Indigenous engagement is recommended at the earliest opportunity by the MCM in their <i>Engaging Aboriginal Communities in Archaeology</i> (2010) and <i>Standards and Guidelines for Consultant Archaeologists</i> (2011) documents, which is echoed in Niagara Official Plan policy Section 7.11.</p>
<p>4.</p>	<p>The licensed consultant archaeologist will submit the Stage 1 and 2 archaeological assessment(s) to the MCM who will review the report(s). If the Ministry finds that the report is compliant with the terms and conditions of the archaeologist’s license</p>	<p>As required by Section 65 of the <i>Ontario Heritage Act</i>, the MCM is responsible for the review of archaeological assessment reports.</p> <p>To ensure clear communication, it is recommended that a copy of the</p>

<p>and the 2011 Standards and Guidelines for Consultant Archaeologists, they will send an acknowledgement letter(s) to the licensed consultant archaeologist.</p> <p>The project proponent will submit the acknowledgement letter and archaeological assessment(s) to the municipal approval authority.</p> <p>The municipality will then provide the Region with a copy of the archaeological assessment to be added to the Region's archaeological assessment repository and aid in updating the archaeological potential mapping.</p>	<p>acknowledgement letter be received by both the Local Area Municipality (approval authority) and Region.</p> <p>Niagara Official Plan policy 6.4.2.7 requires archaeological assessment to follow the Ministry guidelines and processes.</p>
<p>5. If the Stage 1 and/or 2 archaeological assessment(s) concluded that the property or project site does not require additional archaeological assessment and the Province has provided an acknowledgement letter for the assessment(s), local municipal planners can consider archaeological requirements for the application met.</p> <p>If the Stage 2 archaeological assessment found no significant archaeological sites that are recommended to be of further cultural heritage value or interest and recommends that the property be cleared of further archaeological concern, no further archaeological assessment is required.</p> <p>If the Stage 2 archaeological assessment found a site or sites deemed to have cultural heritage value or interest, and that require more assessment, a Stage 3 archaeological assessment is required.</p>	<p>Indigenous engagement is recommended at the earliest opportunity by the MCM in their Engaging Aboriginal Communities in Archaeology (2010) and Standards and Guidelines for Consultant Archaeologists (2011) documents.</p> <p>A Stage 3 archaeological assessment is required by the MCM if an archaeological site is identified. The detailed steps are explained in the Ministry's Standards and Guidelines for Consultant Archaeologists (2011).</p>

	<p>It is recommended that engagement be undertaken with Indigenous communities when assessing property in Stage 2 to ensure there are no unaddressed Indigenous archaeological interests connected with the property. Direction for early engagement is emphasized in Niagara Official Plan policy Section 7.11.</p> <p>Additional assessment (Stage 3) could be made part of a conditional approval (i.e., site plan, draft plan, holding provision in zoning). Alternatively, the proponent may wish to have Stage 3 work done on identified archaeological sites prior to submitting the application to determine if revisions to the original site layout are required or whether the development is no longer feasible.</p>	
<p>6.</p>	<p>The project proponent will have their licensed consultant archaeologist complete a Stage 3 archaeological assessment.</p> <p>If an Indigenous site(s) will be investigated as part of the Stage 3 archaeological assessment, the consultant archaeologist and project proponent must engage with the required Indigenous communities. Indigenous communities may require the involvement of nation-members in the archaeological assessment process, such as monitors or field liaisons.</p> <p>Any documentation from the MCM which arises from the site must be shared with Indigenous communities by the licensed archaeologist.</p>	<p>The minimum requirement for indigenous engagement is during a Stage 3 when assessing the cultural heritage value or interest of an Indigenous archaeological site by the MCM in accordance with the <i>Engaging Aboriginal Communities in Archaeology</i> (2010) and <i>Standards and Guidelines for Consultant Archaeologists</i> (2011) documents.</p>

7.	<p>Depending on the timeline and archaeological situation of the site, partial/phased development may be permitted while assessments are ongoing. This will be determined on a case-by-case basis with local municipal and/or Regional planners, in consultation with the licensed consultant archaeologist. An acknowledgement letter must be received from the MCM which confirms the recommendation for phasing.</p>	<p>The Ministry's <i>Standards and Guidelines for Consultant Archaeologists</i> allows for the licensed consultant archaeologist to recommend partial clearance in cases where a Stage 2 archaeological assessment was completed for the entire property and found archaeological sites in only certain locations. A Stage 3 and potentially Stage 4 archaeological assessment would then be completed for the archaeological sites, and the partial clearance/phasing would be negotiated through the processes of the <i>Planning Act</i>.</p>
8.	<p>The licensed consultant archaeologist will submit the Stage 3 report(s) to the MCM who will review the report(s). If the Ministry finds that the report is compliant with the terms of the archaeologist's license, they will send an acknowledgement letter(s) to the licensed consultant archaeologist.</p> <p>The project proponent will submit the acknowledgement letter(s) and the archaeological assessment(s) to the Local Area Municipality, who will circulate them to the Region.</p> <p>A Stage 3 archaeological assessment may present different opportunities for a project proponent. It can demonstrate the limits of and give an idea of the significance of an archaeological site. Based on the results of a Stage 3 archaeological assessment, advice from the consultant archaeologist and engagement with relevant stakeholders a project proponent may decide on different courses of action, including: to proceed with their project as planned following archaeological mitigation measures, to redesign the project to avoid part or all of the</p>	<p>As required by Section 65 of the <i>Ontario Heritage Act</i>, the MCM is responsible for the review of archaeological assessment reports.</p> <p>To ensure clear communication, it is recommended that a copy of all archaeological assessment(s) and acknowledgement letter(s) be received by both the Local Area Municipality and Niagara Region.</p>

	archaeological site(s) or to not proceed with the development application.	
9.	<p>A Stage 3 archaeological assessment may be enough to demonstrate a site does not have significant cultural heritage value or interest or that further archaeological investigations will not yield valuable information about the archaeological heritage of Ontario. The archaeological assessment may determine that the site is significant and recommend a Stage 4 archaeological assessment or avoidance measures.</p> <p>If the consultant archaeologist concludes and the MCM agrees that the site(s) do not require a Stage 4 archaeological mitigation, the local municipal planners may consider archaeological assessment components of the application met.</p> <p>If the site(s) are significant but complete avoidance is an option, an archaeological monitoring and protection plan may be required as a condition of approval.</p> <p>If the site(s) are significant and avoidance is not an option, a Stage 4 archaeological mitigation will be required.</p>	<p>A Stage 4 archaeological mitigation is required by the MCM if it is determined through the Stage 3 that long-term mitigation strategies are required before development can proceed. The detailed steps are explained in the Ministry's <i>Standards and Guidelines for Consultant Archaeologists</i> (2011).</p>
10.	<p>The project proponent will have their licensed archaeological consultant complete the Stage 4 archaeological mitigation.</p>	<p>As required by Section 48 (1) of the <i>Ontario Heritage Act</i> it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p>
11.	<p>The licensed consultant archaeologist will submit their report to the MCM who will review the report. If the report meets the terms of the consultant archaeologists</p>	<p>As required by Section 65 of the <i>Ontario Heritage Act</i>, the MCM is responsible for the review of archaeological assessment reports.</p> <p>To ensure clear communication, it is recommended that a copy of all archaeological</p>

	<p>license the Ministry will send a letter of acknowledgement.</p> <p>The project proponent will submit the acknowledgement letter and the archaeological assessment to the municipality.</p> <p>The municipality will then provide the Region with a copy of the archaeological assessment to be added to the Region's archaeological assessment repository and used to update the archaeological potential mapping.</p>	<p>assessment(s) and acknowledgement letter(s) be received by both the Local Area Municipality and Niagara Region.</p>
<p>12.</p>	<p>After Stage 4 archaeological mitigation is complete and accepted by the MCM, the local municipal planners may consider archaeological assessment components of the application met.</p>	<p>The development application may still require further approvals depending on the site, but it is now cleared of further archaeological concerns with approval from the MCM.</p>
<p>13.</p>	<p>Any archaeological assessment reports produced in this process will be added to the Region's archaeological assessment repository and information about sites and properties cleared of archaeological potential will be used to update the Region's archaeological potential mapping.</p>	<p>The municipality and Region are encouraged to update the archaeological potential mapping at regular intervals, at least quarterly.</p> <p>As the mapping is what identifies the need for an archaeological assessment, it is important to ensure accurate archaeological potential mapping is available to municipal and Regional staff and development proponents.</p> <p>Niagara Official Plan policy 6.4.1.3 and 6.4.2.6 require archaeological assessment reports to be sent to the Region and archaeological potential mapping to be updated.</p>

3.3. Standard Warning Clauses

While the Region's AMP will reduce the risk posed to archaeological sites by development, there will still be instances of unexpected archaeological finds.

Section 48 (1) of the *Ontario Heritage Act* states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario. Therefore, for applications that will result in ground disturbance, it is recommended that standard warning clauses be included in pre-consultation comments, Regional comment letters, and in development agreements through conditions of approval, to advise on the protocols regarding unexpected archaeological discoveries. Warning clause wording has been provided in Appendix D.

3.4. Implementation

Implementation of the Niagara Region AMP through the land-use planning process will follow the process outlined above and project proponents are expected to follow the recommendations of any archaeological assessment(s) and in the standard warning clauses. However, based on input from background research and informal consultation with planners at other municipalities with AMPs and with Niagara Region Local Area Municipal planners, additional implementation measures are required as follows:

1. Niagara Region shall maintain a MOU and service level agreement(s) with the Local Area Municipalities to ensure archaeological potential mapping and site identification is available for development application pre-consultation. Specific information about known archaeological sites will be kept confidential to protect against vandalism, disturbance, and the inappropriate removal of artifacts or cultural heritage resources in accordance with Niagara Official Plan policy. Niagara Region will facilitate data sharing of archaeological information in the following ways:
 - a. Niagara Region will maintain their data sharing agreement with the MCM.
 - b. Niagara Region will maintain a legal deposit repository of archaeological assessment reports. Local Area Municipalities should maintain their own legal deposit repository for archaeological assessments completed within their municipal boundaries.
 - i. *A legal deposit repository (which can be virtual or hard copy entity) is a collection of all archaeological reports completed within the*

jurisdiction of the respective municipality. This approach ensures planners and municipal officials are aware of all archaeological works completed within the municipality. It can be integrated into a GIS system or function as a stand-alone entity.

- c. Niagara Region will host and manage archaeological potential mapping via a GIS platform. To ensure consistent and efficient information and updates to the mapping and repository, the Region and Local Area Municipalities will need to maintain their data sharing agreements. This GIS information shall be updated at regular intervals, at least quarterly.
 - d. Local Area Municipality planners will need to access detailed archaeological potential mapping including up-to-date GIS layers with potentially sensitive information provided by the MCM.
2. Niagara Region recommends that Local Area Municipalities incorporate best practise archaeology policies, examples of which are presented in Appendix D, as part of any Local Official Plan updates.
 3. An Indigenous Engagement Procedure shall be established, in collaboration with First Nations, Indigenous Communities and Local Area Municipalities, based on direction from the AMP and shall inform the planning process.
 4. Niagara Region will develop and host online archaeology and archaeological planning training seminars for any Regional and Local Area Municipality personnel who may need to address archaeological resources through their work including—but not limited to:
 - a. Municipal planners.
 - b. Engineering and public works personnel who will make decisions that may relate to archaeology or may come across unexpected finds in the course of their work.
 5. Niagara Region and all Local Area Municipalities are encouraged to review and update, based on updated archaeological policy, by-laws that address site alteration and development where there is potential to impact archaeological sites and resources, including but not limited to:
 - a. Site Alteration By-laws.
 - b. Foundation Permit By-laws.

- c. Property Standards By-laws; and,
 - d. Fence By-laws.
6. Niagara Region shall provide information materials about archaeological processes to all Local Area Municipality planning departments for reproduction and distribution to project proponents. The need for information handouts concerning archaeology in the region was identified through the consultation process.

3.5. Offences under the Ontario Heritage Act

3.5.1. Summary of Offences

Part VI Section 48 of the *Ontario Heritage Act* makes it illegal to carry out archaeological fieldwork, alter an archaeological site or remove an artifact or other physical evidence of past human use or activity from the site without a licence issued by the Minister.

Section 56 specifies that:

56 (1) No person shall excavate or alter property designated under this Part or remove any artifact therefrom without first applying to the Minister and receiving a permit therefor. R.S.O. 1990, c. O.18, s. 56 (1); 2002, c. 18, Sched. F, s. 2 (35).

Section 66 specifies that artifacts may be held in trust and artifacts illegally removed from an archaeological site can be taken and held in trust for the people of Ontario.

66 (1) The Minister may direct that any artifact taken under the authority of a licence, or a permit be deposited in such public institution as the Minister may determine, to be held in trust for the people of Ontario. 2002, c. 18, Sched. F, s. 2 (43).

(2) Any artifact that is taken by a person who is not a licensee or by a licensee in contravention of a licence or this Part may be seized by a person authorized to do so by the Minister and deposited in such public institution as the Minister may determine, to be held in trust for the people of Ontario. 2002, c. 18, Sched. F, s. 2 (43).

Part VII of the *Ontario Heritage Act* is for general provisions including Section 69 which outlines fines and imprisonment terms for contravention of the *Ontario Heritage Act* and

its regulations. Any person who contravenes the *Ontario Heritage Act* is liable to a fine of not more than \$50,000 or to imprisonment for a term of not more than one year, or to both. A corporation convicted of an offence under the *Ontario Heritage Act* can be fined up to \$250,000. Additionally, Section 96 of the *Ontario Heritage Act* states that:

(3) Despite subsections (1) and (2), if a person is convicted of the offence of contravening section 34 or 34.5, demolishing or removing a building or structure in contravention of section 42 or contravening subsection 48 (1) or if a director or officer of a corporation is convicted of knowingly concurring in such an act by the corporation, the maximum fine that may be imposed is \$1,000,000. 2005, c. 6, s. 44 (2).

This means that it is illegal for:

- Someone who does not have an Ontario archaeological licence to dig up artifacts or take artifacts from a site on purpose. This includes metal detecting, field walking and digging.
- A developer or property owner to begin construction on a property where they know there is an archaeological site that has not had archaeological fieldwork completed.
- Someone who does hold an archaeological licence to do things that are outside of that class of licence.

Anyone found guilty of digging up artifacts or taking artifacts from a site on purpose could be:

- Fined up to a million dollars (1,000,000.00) or,
- Sentenced to a jail term of up to one year.

The Ministry does not have investigative powers and cannot lay charges. Ministry inspectors will gather as much information as possible and then contact local police to request a formal investigation. The police will lay charges against an individual if they feel their investigation has provided enough evidence to do so.

3.5.2. What to do When Looting or Illegal Disturbance is Suspected

If you encounter an individual disturbing an archaeological site without a licence, and you feel comfortable doing so, please do the following:

- Inform them of the illegality of their actions

- Ask them if they hold an archaeological licence, what is their licence number and what is the PIF number associated with what they are doing.
- Assuming they are in fact not licensed, use the legal information provided above to politely tell them that what they are doing is illegal.
- If the individual is at all threatening or hostile leave immediately.

Document the incident as much as is safely possible including:

- Date of incident
- Location of incident
- Archaeological site name and Borden number (if known)
- Property address or
- Coordinates or description of where the incident occurred
- Incident description
- Photographs of the individual digging/metal-detecting/removing artifacts
- Written description of the incident
- Perpetrator information
- Name
- Licence plate number
- Physical description

Inform local police:

- Use the legal information above to reference why the activity is a police matter
- Follow any instructions they provide
- Provide as much documentation as you can

Inform the Ministry of the incident:

- Email the Archaeology Program Unit at archaeology@ontario.ca
- Provide as much documentation (as above) as possible

If you have heard of or suspect an archaeological site is being looted or disturbed by construction:

- Inform them of the illegality of their actions
- If online, post comments using the legal information above
- Document the suspected incident as much as is safely possible
- Estimated date of incident(s)
- Location of incident
- Archaeological site name and Borden number (if known)

- Property address or
- Coordinates or description of where the incident occurred
- Incident description
- Photographs of the disturbed site
- Map of where disturbances were noted
- Written description of disturbances and how you found out about them
- Perpetrator information
- Name of the suspected individual(s)
- Links to online information

Inform the Ministry of the incident:

- Email the Archaeology Program Unit at archaeology@ontario.ca
- Provide as much documentation (as above) as possible.

4. Archaeological Potential Model

Areas of archaeological potential are defined in the PPS as:

...areas with the likelihood to contain archaeological resources. Criteria to identify archaeological potential are established by the Province. The Ontario Heritage Act requires archaeological potential to be confirmed by a licensed archaeologist.

A licensed archaeologist can use criteria and indicators outlined in the *Standards and Guidelines for Consultant Archaeologists* to understand and identify archaeological resources and potential. For more than thirty-five years, municipalities across Ontario have been creating detailed archaeological potential models for their jurisdictions, usually within the context of developing archaeological management plans. Since the mid-1990s, these models have been undertaken on a GIS platform to best manipulate and analyse site location attribute data (Figure 2). The result is a simple-to-use digital map of archaeological potential, which can be used by municipal staff to determine the need for archaeological assessment in advance of development and/or soil disturbance.

The model involves the creation of five layers of geo-referenced data specific to the Niagara Region that have been integrated into a single and final archaeological potential planning layer:

- Pre-contact Indigenous Archaeological Site Potential Layer.
- Post-contact Archaeological Site Potential Layer.
- Composite Archaeological Potential Layer.

- Previously Assessed Lands Layer; and,
- Composite Archaeological Potential Layer with Integrity (see Subsection 4.4).

A description of how the layers were created for Niagara Region follows below.

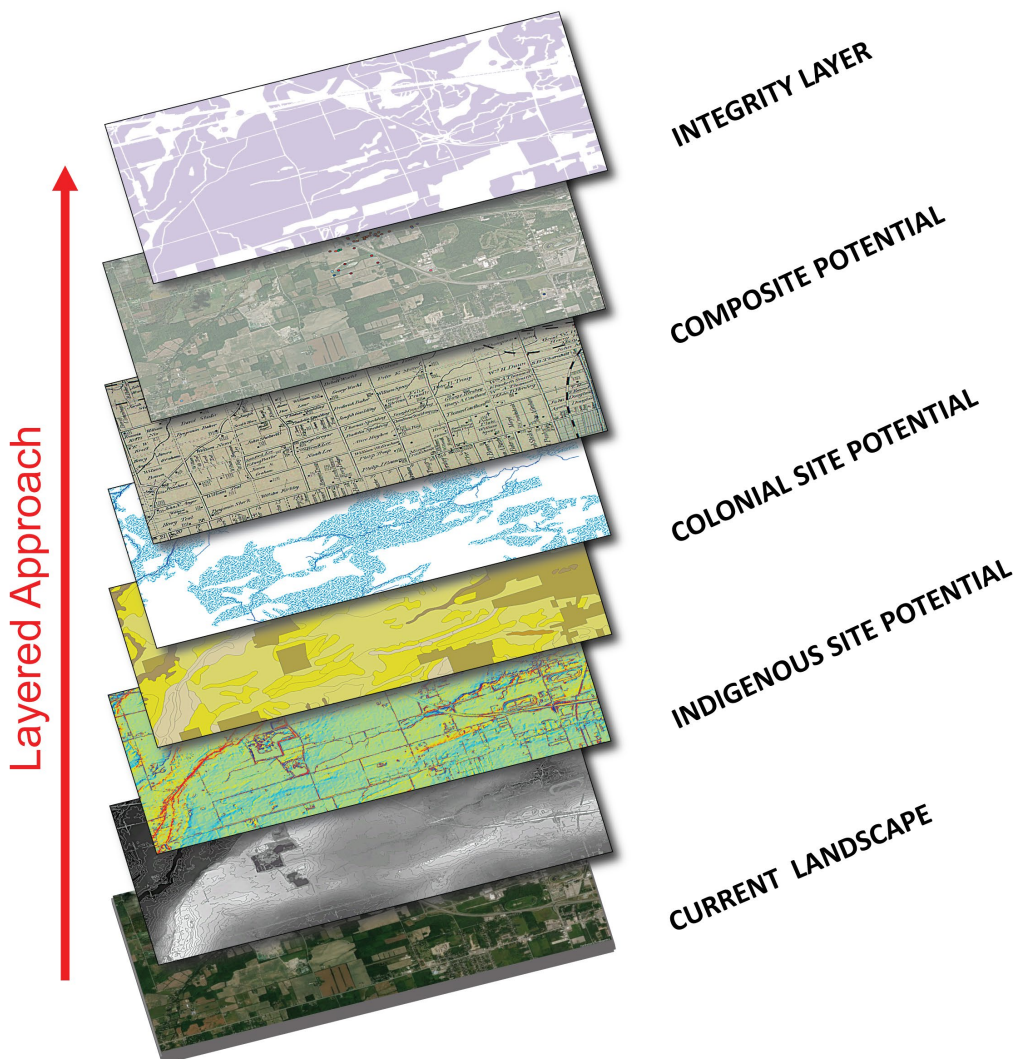


Figure 2: Archaeological Potential Modeling with GIS Datasets

4.1. Pre-contact Indigenous Site Potential

Only limited locational data exist for pre-contact Indigenous archaeological sites in the Niagara Region. While access to distributional information for all sites would be a significant advantage to land-use planners and heritage resource managers, the

undertaking of a comprehensive archaeological survey of Niagara Region to compile a complete inventory is clearly not feasible. As an alternative, therefore, staff must depend on a model that predicts how sites are likely to be distributed throughout the municipality.

Archaeological site potential modelling can trace its origins to a variety of sources, including human geography, settlement archaeology, ecological archaeology, and paleoecology. The basic assumption is that pre-contact Indigenous land use was constrained by ecological and socio-cultural parameters. If these parameters can be discovered, through archaeology and paleoecology, pre-contact Indigenous land-use patterns can be reconstructed.

Two basic approaches to predictive modelling can be described. The first is an empirical or inductive approach which employs known site locations, derived from either extant inventories or through sample surveys, as a guide for predicting additional site locations. The second is a theoretical or deductive approach, which predicts site locations based on expected behavioural patterns as identified from suitable ethnographic, historical, geographical, ecological, and archaeological analogues. The modelling exercise for this study incorporated both inductive and deductive elements.

Throughout much of pre-contact Indigenous history, the inhabitants of Niagara were hunter-gatherers who practiced an annual subsistence round to exploit a broad range of natural resources for food and raw materials for such needs as shelter construction and tool manufacture. Since access to natural resources influenced and constrained the movement and settlement of Indigenous peoples, the goal was to understand what these resources were, how they may have been distributed, how their use and distribution may have changed over time, and how the landscape itself may have constrained movement and access to resources as well as settlement location. The investigation proceeded chronologically since certain aspects of Niagara's geography have changed dramatically throughout the period of human occupation. The most notable change was the rise in Lake Erie water levels that flooded most of the southern Niagara peninsula to create Lake Wainfleet in the intervals between about 13,000 and 12,500 years ago and again between about 6,000 and 3,800 years ago.

Proximity of major lakes and waterways has always been a significant factor influencing land-use patterns in Niagara Region, with waterways acting as travel and settlement corridors. This influence is strongly reflected in the historically recorded network of Indigenous trails, which appears to be of great antiquity. The middle and upper reaches of the inland drainage systems may have comprised warm season hunting and fishing grounds and late fall and winter microband hunting and fishing territories analogous to those recorded historically throughout the Great Lakes-St. Lawrence region. Throughout

these waterways, nodes such as stream confluences may have been routinely used as stop-over spots, leaving traces in the archaeological record. While wintertime land use would not have been constrained by access to well-drained campsites or the limits of navigable waterways, such routes would have still provided familiar, vegetation-free corridors for travel.

Appendix A presents the detailed model of pre-contact Indigenous archaeological site potential developed for the Niagara Region. It begins with a brief review of the method and theory associated with pre-contact Indigenous site potential modelling and is followed by delineation of the modelling approach, which employs a descriptive reconstruction of pre-contact landscapes in Niagara together with a reconstruction of pre-contact Indigenous land-use patterns informed by both known site locations as well as archaeological and ethnographic analogues. This information is brought together in a list of criteria, which are used to define a zone of pre-contact Indigenous archaeological potential on GIS mapping of the Niagara Region (see also Section 4.4, Table 2).

4.2. Post-contact/Historical Site Potential

French explorers and missionaries travelled through Niagara Region in the seventeenth century and the area is included in the scope of the Nanfan Treaty signed by the British and the Haudenosaunee Confederacy (Five Nations) in 1701. While the British military established various facilities in Niagara Region after 1759, the colonial period really began following the acquisition of settlement lands by the British crown through the Treaty at Niagara of 1764 (renegotiated 1781) and the Between the Lakes Treaty #3 of 1792, both signed with the Mississaugas of the Credit First Nation. This allowed for the re-settlement of United Empire Loyalists who began immigrating to Upper Canada following the conclusion of the American Revolutionary War in 1783. When the first counties were established in Upper Canada in 1792, Townships that had been surveyed for settlement were organized as part of the new Lincoln County. In 1845, Lincoln was split to create Welland County, and in 1970 the Regional Municipality of Niagara was created by the amalgamation of Lincoln and Welland counties.

In contrast to the deductive and inductive modelling employed to create the pre-contact Indigenous archaeological potential layer, the post-contact archaeological site potential layer was created primarily from historical mapping, historical thematic research, and the application of buffers to some features of historical interest. A thematic history of the Niagara Region was compiled to identify extant or former historical features that might yield associated archaeological deposits (Appendix B). This resulted in the identification of 5447 features of historical interest (e.g., residential, commercial, and industrial structures), 52 settlement centres, and 289 cemeteries. Each of these was checked

against the historical site archaeological potential layer generated from Tremaine's Map of the Counties of Lincoln and Welland, Canada West (Tremaine 1862), Stotherd's Niagara Frontier, Plan 2 (Stotherd 1865), and the Illustrated Historical Atlas of the Counties of Lincoln & Welland (Page 1876) to ensure that they were included in the mapping. For those sites that were not depicted on these maps, further research was conducted to ascertain the true location of the features so that they could be included in the historical site potential layer. All cemeteries identified on the historical mapping and the Ontario Genealogical Society and Region databases were also added to the historical archaeological site potential layer. This information is brought together in a list of criteria, which are used to define a zone of historical archaeological potential on GIS mapping of the Niagara Region (see also Section 4.4, Table 3).

4.3. Lands Void of Archaeological Integrity

Evaluation of archaeological integrity involves distinguishing between lands where modern development activities or natural processes have likely destroyed any archaeological resources and those lands where resources potentially remain wholly or partially intact, such as parking lots, schoolyards, parks, and golf courses. In certain situations, archaeological integrity may persist even in a built urban environment, and a few such areas have been previously identified for several areas in the Town of Fort Erie AMP and the Town of Niagara-on-the-Lake. These are retained for this AMP.

Archaeological integrity evaluation was based on two factors, as follows: land use, based on current aerial imagery and property parcel data; and the development history of an area, based on the review of historical aerial imagery. Areas deemed to have no remaining archaeological integrity were subsequently excluded from the zone of archaeological potential.

Land use was primarily based on the parcel data. Properties were separated by category type (commercial, farm, government, industrial, institutional, land, residential and special purpose). Parcels that fell under the category of "farm" and "land" were considered to retain integrity. Parcels that fell under the category "commercial", "industrial", "institutional", "government" and "special purpose" were reviewed by a visual inspection of the most currently available aerial imagery. Open spaces, such as golf courses, campgrounds and Hydro corridors were left as having archaeological integrity. Developed lands such as strip malls, shopping centres, manufacturing centres, pits and quarries were identified as having no archaeological integrity. In addition, all major roadways and rail corridors were identified as having no archaeological integrity. This was done by adding a 10 m buffer to major road centre lines and 7.5 m buffer to local road centre lines to capture the entire constructed rights-of-way.

A detailed review of historical aerial imagery was carried out for twenty-eight urban areas. Based on the understanding that, beginning around the middle of the twentieth century, development and construction usually involved wholesale topsoil removal and grading that would eliminate archaeological resources, the following methodology was used in determining archaeological integrity in urban areas based on the age of the development. Areas shown to have been developed prior to circa 1950 and had little or no subsequent land-altering changes were deemed to have archaeological integrity. The assumption is that most of the ground-altering impact would be limited to the footprint of the structures. An example of this would be older residential neighborhoods. In contrast, areas that showed major development after circa 1950 were deemed to have compromised archaeological integrity. This evaluation process was done by reviewing air photo mosaics from 1934, 1954 and 1965, made available through Brock University's GIS services.

It should be noted that refinements to the integrity layer may result from a detailed Stage 1 archaeological resource assessment, which may clearly demonstrate that a study area has been severely disturbed, thereby negating archaeological potential.

4.4. Composite Archaeological Potential

The composite archaeological potential layer consolidates the pre-contact Indigenous archaeological sites potential layer, the post-contact/historical archaeological sites potential layer, and the integrity layer, as defined through application of the various modelling criteria (Table 2 and 3). All areas lacking integrity were excluded from this composite layer.

Table 2: Summary of Pre-contact Indigenous Archaeological Site Potential Modelling Criteria

Environmental or Cultural Feature	Buffer Distance (metres)	Buffer Qualifier
Rivers and streams	250	<ul style="list-style-type: none"> from top of bank for former; from centreline for latter
Lakes and ponds	250	<ul style="list-style-type: none"> exterior buffer from current limits
Wetlands	250	<ul style="list-style-type: none"> including pre-settlement wetlands
Registered Indigenous archaeological sites	100 250	<ul style="list-style-type: none"> Camps and other small settlements Villages

Table 3: Summary of Post-contact/Historical Archaeological Site Potential Modelling Criteria

Environmental or Cultural Feature	Buffer Distance (metres)	Buffer Qualifier
Historical settlement centres	polygon as mapped	<ul style="list-style-type: none"> no buffer, override integrity
Domestic sites	100	<ul style="list-style-type: none"> none
Breweries and distilleries	100	<ul style="list-style-type: none"> none
Hotels/taverns	100	<ul style="list-style-type: none"> none
Historical schools and churches	100	<ul style="list-style-type: none"> none
Historic mills, forges, extraction industries	100	<ul style="list-style-type: none"> none
Early settlement roads	100	<ul style="list-style-type: none"> both sides
Early railways	50	<ul style="list-style-type: none"> both sides
Cemeteries	10	<ul style="list-style-type: none"> Registered cemeteries with known limits. 10 m beyond limits of cemetery
	100	<ul style="list-style-type: none"> Suspected cemetery or pioneer cemetery. 100m around point
Registered historical archaeological sites	100	<ul style="list-style-type: none"> none

4.5. Archaeological Potential Planning Map

The archaeological potential planning map (Figure 3) is the GIS layer that Niagara Region or Local Area Municipality planning staff will employ when assessing a planning application or municipal infrastructure project for archaeological potential. This layer is the composite archaeological potential layer minus areas that have previously been subject to archaeological assessments and require no further work.

Niagara Region has furthered the conservation of its archaeological resources by developing an archaeological potential model. Appendix D of the archaeological management plan will outline how this model will be used to conserve the archaeological record of the Niagara Region.



Figure 3: Archaeological Potential Planning Map

5. References

5.1. Government Documents

Ontario Heritage Act (1990). Retrieved from [Ontario Heritage Act](https://www.ontario.ca/laws/statute/90o18) (https://www.ontario.ca/laws/statute/90o18) Accessed 06, April 2017.

Ontario Ministry of Municipal Affairs and Housing. (2011). Ontario Planning Act. Retrieved from [Ontario Planning Act](https://www.ontario.ca/laws/statute/90p13) (https://www.ontario.ca/laws/statute/90p13). Accessed 06 April 2017.

Ontario Ministry of Municipal Affairs and Housing. (2020). Provincial Policy Statement, Queens Park, Ontario. Retrieved from [Provincial Policy Statement](https://www.ontario.ca/page/provincial-policy-statement-2020) (https://www.ontario.ca/page/provincial-policy-statement-2020). Accessed 06 April 2017.

Ontario Ministry of Heritage, Sport, Tourism and Culture Industries. (2011a). *Standards and Guidelines for Consultant Archaeologists*. Retrieved from [Standards and Guidelines for Consultant Archaeologists](http://www.mtc.gov.on.ca/en/publications/SG_2010.pdf) (http://www.mtc.gov.on.ca/en/publications/SG_2010.pdf). Accessed 06 April 2017.

Ontario Ministry of Heritage, Sport, Tourism and Culture Industries. (2011b). Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario. Retrieved from [Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario](http://www.mtc.gov.on.ca/en/publications/AbEngageBulletin.pdf) (http://www.mtc.gov.on.ca/en/publications/AbEngageBulletin.pdf). Accessed 06 April 2017.

Ontario Ministry of Heritage, Sport, Tourism and Culture Industries. (2013). Winter Archaeology: A Technical Bulletin for Consultant Archaeologists in Ontario. Retrieved from [Winter Archaeology: A Technical Bulletin for Consultant Archaeologists in Ontario](http://www.mtc.gov.on.ca/en/archaeology/WinterArchGuidelines-(2015-09-10).pdf) (http://www.mtc.gov.on.ca/en/archaeology/WinterArchGuidelines-(2015-09-10).pdf). Accessed 06 April 2017.

Ontario Heritage Policy Report. (1990). ***A Strategy for Conserving Ontario's Heritage***, The Report of the Ontario Heritage Policy Review. Ontario Ministry of Culture and Communications, Niagara.

Government of Ontario. (1960). ***Archaeological and Historic Sites Protection Act***. Retrieved from: [Archaeological and Historic Sites Protection Act](#)

(<https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?article=2857&context=rs>o).

5.2. Other Statutory Documents

Canada Shipping Act. (2001). Retrieved from [Canada Shipping Act](http://laws-lois.justice.gc.ca/eng/acts/C-10.15/) (<http://laws-lois.justice.gc.ca/eng/acts/C-10.15/>). Accessed 06 April 2017.

Canadian Environmental Assessment Act. (2012). Retrieved from [Canadian Environmental Assessment Act](http://laws-lois.justice.gc.ca/eng/acts/c-15.21/index.html) (<http://laws-lois.justice.gc.ca/eng/acts/c-15.21/index.html>). Accessed 06 April 2017.

Canadian Environmental Assessment Act, Reference Guide on Physical and Cultural Heritage Resources. (1996). Retrieved from [Canadian Environmental Assessment Act, Reference Guide on Physical and Cultural Heritage Resources](https://ceaa-acee.gc.ca/default.asp?lang=En&n=1BE75513-1&printfullpage=true) (<https://ceaa-acee.gc.ca/default.asp?lang=En&n=1BE75513-1&printfullpage=true>). Accessed 06 April 2017.

Cultural Property Export and Import Act. (1985). Retrieved from [Cultural Property Export and Import Act](http://laws-lois.justice.gc.ca/eng/acts/C-51/) (<http://laws-lois.justice.gc.ca/eng/acts/C-51/>). Accessed 08 June 2017.

Department of Canadian Heritage, Archaeological Heritage Policy Framework. (1990). Retrieved from [Department of Canadian Heritage, Archaeological Heritage Policy Framework](https://www.pc.gc.ca/en/docs/pc/poli/arch) (<https://www.pc.gc.ca/en/docs/pc/poli/arch>). Accessed 06 April 2017.

Ontario Aggregate Resources Act. (1990). Retrieved from [Ontario Aggregate Resources Act](https://www.ontario.ca/laws/statute/90a08) (<https://www.ontario.ca/laws/statute/90a08>). Accessed 06 April 2017.

Ontario Building Code Act. (1992). Retrieved from [Ontario Building Code Act](https://www.ontario.ca/laws/statute/92b23) (<https://www.ontario.ca/laws/statute/92b23>). Accessed 06 April 2017.

Ontario Environmental Assessment Act. (1990). Retrieved from [Ontario Environmental Assessment Act](https://www.ontario.ca/laws/statute/90e18) (<https://www.ontario.ca/laws/statute/90e18>). Accessed 06 April 2017.

Ontario Environmental Protection Act. (1990). Retrieved from [Ontario Environmental Protection Act](https://www.ontario.ca/laws/statute/90e19) (<https://www.ontario.ca/laws/statute/90e19>). Accessed 06 April 2017.

Ontario Freedom of Information and Protection of Privacy Act. (1990). Retrieved from [Ontario Freedom of Information and Protection of Privacy Act](https://www.ontario.ca/laws/statute/90f31) (<https://www.ontario.ca/laws/statute/90f31>). Accessed 06 April 2017.

Ontario Funeral, Burial and Cremation Services Act. (2002). Retrieved from [Ontario Funeral, Burial and Cremation Services Act](https://www.ontario.ca/laws/statute/02f33) (https://www.ontario.ca/laws/statute/02f33). Accessed 06 April 2017.

Ontario Government Efficiency Act. (2002). Retrieved from [Ontario Government Efficiency Act](https://www.ontario.ca/laws/statute/S02018) (https://www.ontario.ca/laws/statute/S02018). Accessed 06 April 2017.

International Council on Monuments and Sites, Charter for the Conservation and Restoration of Monuments and Sites – Venice Charter. (1964). Retrieved from [International Council on Monuments and Sites, Charter for the Conservation and Restoration of Monuments and Sites – Venice Charter](https://www.icomos.org/charters/venice_e.pdf) (https://www.icomos.org/charters/venice_e.pdf). Accessed 06 April 2017.

International Council on Monuments and Sites, Charter on the Conservation of Places of Cultural Significance – Burra Charter. (1979). revised 2013. Retrieved from [International Council on Monuments and Sites, Charter on the Conservation of Places of Cultural Significance – Burra Charter](http://australia.icomos.org/publications/burra-charter-practice-notes/illustrated-burra-charter/) (http://australia.icomos.org/publications/burra-charter-practice-notes/illustrated-burra-charter/). Accessed 06 April 2017.

International Council on Monuments and Sites, Charter for the Protection and Management of the Archaeological Heritage – Lausanne. (1990). Retrieved from [International Council on Monuments and Sites, Charter for the Protection and Management of the Archaeological Heritage – Lausanne](http://www.icomos.org/en/practical-information/179-articles-en-francais/ressources/charters-and-standards/160-charter-for-the-protection-and-management-of-the-archaeological-heritage) (http://www.icomos.org/en/practical-information/179-articles-en-francais/ressources/charters-and-standards/160-charter-for-the-protection-and-management-of-the-archaeological-heritage). Accessed 06 April 2017.

International Council on Monuments and Sites, Charter for the Protection and Management of the Underwater Cultural Heritage. (1996). Retrieved from [International Council on Monuments and Sites, Charter for the Protection and Management of the Underwater Cultural Heritage](http://www.icomos.org/charters/underwater_e.pdf) (http://www.icomos.org/charters/underwater_e.pdf). Accessed 06 April 2017.

National Energy Board Act. (1985). Retrieved from [National Energy Board Act](http://laws-lois.justice.gc.ca/eng/acts/N-7/) (http://laws-lois.justice.gc.ca/eng/acts/N-7/). Accessed 06 April 2017.

Ontario Ministry of Natural Resources and Forestry, Forest Management Guidelines for Cultural Heritage Values (Cultural Heritage Values Guide). (2014). Retrieved from [Ontario Ministry of Natural Resources and Forestry, Forest Management Guidelines for Cultural Heritage Values \(Cultural Heritage Values Guide\)](#)

(<https://www.ontario.ca/document/forest-management-cultural-heritage>). Accessed 06 April 2017.

Ontario Ministry of Transportation. (2006). Environmental Reference for Highway Design (Part of the Environmental Standards and Practices), Ministry of Transportation, Toronto, Ontario. Retrieved from [Environmental Reference for Highway Design \(Part of the Environmental Standards and Practices\)](#)

([http://www.raqsb.mto.gov.on.ca/techpubs/eps.nsf/0/e58d9ad002155fed85257f24005f3824/\\$FILE/Environmental%20Guide%20for%20Highway%20Design%20Final%202013_ACC.pdf](http://www.raqsb.mto.gov.on.ca/techpubs/eps.nsf/0/e58d9ad002155fed85257f24005f3824/$FILE/Environmental%20Guide%20for%20Highway%20Design%20Final%202013_ACC.pdf)). Accessed 06 April 2017.

Parks Canada, Cultural Resource Management Policy. (1994). Retrieved from [Cultural Resource Management Policy](#) (<https://www.pc.gc.ca/en/docs/pc/poli/grc-crm>). Accessed 06 April 2017.

Parks Canada, Guidelines for the Management of Archaeological Resources. (2005). Retrieved from [Guidelines for the Management of Archaeological Resources](#) (<https://www.pc.gc.ca/en/docs/pc/guide/gra-mar/index>). Accessed 06 April 2017.

Parks Canada, Standards and Guidelines for the Conservation of Historic Places in Canada. (2011). Retrieved from [Standards and Guidelines for the Conservation of Historic Places in Canada](#) (<https://www.pc.gc.ca/en/culture/rclp-crhp/standards>). Accessed 06 April 2017.

United Nations Educational, Scientific and Cultural Organization, Convention Concerning the Protection of the World Cultural and Natural Heritage – World Heritage Convention. (1972). Retrieved from [Convention Concerning the Protection of the World Cultural and Natural Heritage – World Heritage Convention](#) (<http://whc.unesco.org/en/conventiontext/>). Accessed 06 April 2017.

United Nations Educational, Scientific and Cultural Organization, Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property. (1970). Retrieved from [Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property](#) (http://portal.unesco.org/en/ev.php-URL_ID=13039&URL_DO=DO_TOPIC&URL_SECTION=201.html). Accessed 06 April 2017.

York Region. 2013 Draft Archaeological Management Plan. Retrieved from [2013 Draft Archaeological Management Plan](#) (<http://www.york.ca/wps/wcm/connect/yorkpublic/447f5fca-d587-41cd-9030->

72b432548ba3/draft+amp+for+public+march+6,+2013.pdf?MOD=AJPERES).

Accessed 06 April 2017.

5.3. Books and Other Resources

Williamson, R. F. 2010. **Planning for Ontario's Archaeological Past: Accomplishments and Continuing Challenges.** *Revista de Arqueología Americana* (28). p. 7-45.

6. Glossary

Aboriginal

Use of the term Aboriginal in this Plan [Niagara Escarpment Plan] is intended to be consistent with the definition provided in the *Constitution Act, 1982*; “Aboriginal peoples of Canada” includes the Indian, Inuit and Métis peoples of Canada (*NEP*).²

Aboriginal peoples of Canada

In this Act, aboriginal peoples of Canada include the Indian, Inuit and Métis peoples of Canada (*Constitution Act, 1982; Funeral, Burial and Cremation Services Act*).³

Aboriginal people’s burial ground

means land set aside with the apparent intention of interring in it, in accordance with cultural affinities, human remains and containing remains identified as those of persons who were one of the aboriginal peoples of Canada; (“cimetière autochtone”) (*Funeral, Burial and Cremation Services Act*).

Adjacent Lands

for the purposes of policy 2.6.3 of the PPS, those lands contiguous to a *protected heritage property* or as otherwise defined in the municipal official plan.

Approval Authority

In the land use and development context, this includes any public body (e.g., municipality, conservation authority, provincial agency, and ministry) that has the authority to regulate and approve development projects, that fall under its mandate and jurisdiction (e.g., *Planning Act, Environmental Assessment Act, Aggregate Resources Act*).

Archaeological Assessment

For a defined project area or property, a survey undertaken by a licensed archaeologist within those areas determined to have archaeological potential to identify *archaeological sites*, followed by evaluation of their cultural heritage value or interest, and determination of their characteristics. Based on this information, recommendations are

2 While the term “Indian” is in the official definition of Aboriginal peoples of Canada it is understood that “First Nations” is preferred.

3 While “Aboriginal peoples of Canada” is used in the Constitution it is understood that “Indigenous peoples of Canada” is often preferred.

made regarding the need for mitigation of impacts and the appropriate means for mitigating those impacts.

Archaeological fieldwork

means any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring, surveying, recovering, and excavating; (“travaux archéologiques sur le terrain”) (O. Reg. 170/04, s. 1.)

Archaeological Resources

In the context of the *Standards and Guidelines for Consulting Archaeologists*, objects, materials and physical features identified by licensed archaeologists during a Stage 2 archaeological assessment as possibly possessing cultural heritage value or interest. Analysis using the criteria set out in the *Standards and Guidelines for Consulting Archaeologists* determines whether those objects, materials and physical features meet the definition of an archaeological site under the *Ontario Heritage Act* and whether Stage 3 archaeological assessment is required. In various planning and development contexts, the term may refer to any or all archaeological potential, artifacts, and archaeological sites.

From the PPS, includes artifacts, archaeological sites, marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*.

Archaeological Site

Defined in Ontario regulation (*Ontario Heritage Act*, O. Reg. 170/04) as “any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest.”

Areas of archaeological potential

means areas with the likelihood to contain *archaeological resources*. Criteria to identify archaeological potential are established by the Province. The *Ontario Heritage Act* requires archaeological potential to be confirmed by a licensed archaeologist (PPS 2020, emphasis added).

Artifact

Defined in Ontario regulation (*Ontario Heritage Act*, O. Reg. 170/04) as “any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest.”

Avoidance

The process by which alterations to an archaeological site are preserved during the short-term period during which development activities are undertaken.

Borden number

Since 1974, all archaeological sites for the Province of Ontario have been registered with the Ontario Archaeological Sites Database (OASD), maintained by the Heritage Branch and Libraries Branch of the Ontario Ministry of Citizenship and Multiculturalism, Toronto. This database is the official, central repository of all site information for the Province collected under the *Ontario Heritage Act* (1990). An associated Geographic Information System has been developed by the Ministry of Citizenship and Multiculturalism. Within the OASD, registered archaeological sites are organized within the “Borden” system and based on blocks of latitude and longitude, each measuring approximately 13 kilometres east-west by 18.5 kilometres north-south. Each block is assigned a unique four-letter designator and sites within each block are numbered sequentially.

Built heritage resource

means a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property’s cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the *Ontario Heritage Act*, or that may be included on local, provincial, federal and/or international registers (PPS 2020).

Burial ground

means land set aside with the apparent intention of interring in it, in accordance with cultural affinities, human remains and containing remains identified as those of persons who were not one of the aboriginal peoples of Canada; (“lieu d’inhumation”) (*Funeral, Burial and Cremation Services Act*).

Conserve/Conserved

means the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment that has been approved, accepted, or adopted by the relevant planning authority and/or decision-maker. Mitigative measures and/or alternative development approaches can be included in these plans and assessments (PPS 2020).

Consultant archaeologist

An archaeologist who enters into an agreement with a client to carry out or supervise archaeological fieldwork on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client. In Ontario, these people also are required to hold a valid professional archaeological license issued by the Ministry of Citizenship and Multiculturalism.

Cultural heritage landscape

means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites, or natural elements that are valued together for their interrelationship, meaning or association. *Cultural heritage landscapes* may be properties that have been determined to have cultural heritage value or interest under the *Ontario Heritage Act* or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms (PPS 2020).

Cultural heritage value or interest

For the purposes of the *Ontario Heritage Act* and its regulations, archaeological resources that possess cultural heritage value or interest are protected as archaeological sites under Section 48 of the *Ontario Heritage Act*. Where analysis of documented artifacts and physical features at a given location meets the criteria stated in the *Standards and Guidelines for Consulting Archaeologists*, that location is protected as an archaeological site and further archaeological assessment may be required.

Cultural heritage value or interest

A property may be determined to have cultural heritage value or interest if it meets one or more of the criteria found in *Ontario Regulation 9/06* under the *Ontario Heritage Act*. A property may be determined to have cultural heritage value or interest of provincial significance if it meets one or more of the criteria found in *Ontario Regulation 10/06* under the *Ontario Heritage Act (Niagara Escarpment Plan)*.

Cultural heritage resource

Property that includes built heritage resources, cultural heritage landscapes, archaeological resources and/or areas of archaeological potential (*Niagara Escarpment Plan*).

Development Proponent

An entity, consisting of individuals, private corporations, or government bodies, which is undertaking a development project.

Development

means the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act, but does not include: a) activities that create or maintain infrastructure authorized under an environmental assessment process; b) works subject to the Drainage Act; or c) for the purposes of policy 2.1.4(a), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a) (PPS 2020)

Diagnostic artifact

An artifact that indicates by its markings, design, or the material from which it is made, the period it was made, the cultural group that made it or other data that can identify its original context (*Standards and Guidelines for Consultant Archaeologists*).

Environment

means, (c) the social, economic, and cultural conditions that influence the life of humans or a community, (d) any building, structure, machine or other device or thing made by humans (*Environmental Assessment Act*).

Field director

means an archaeologist who supervises archaeological fieldwork, and makes day-to-day decisions relating to archaeological fieldwork, under the supervision of a person holding a professional licence; (“directeur des fouilles”) (*O. Reg 8/06, s. 1*).

First Nation

means a band as defined in the Indian Act (Canada); (“Première Nation”) (Municipal Act).

Greenfield

Outlying locations of the Region, within the Region’s Urban Growth Boundary, on lands that have never previously been developed.

Heritage attributes

means the principal features or elements that contribute to a *protected heritage property’s* cultural heritage value or interest, and may include the property’s built, constructed, or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (e.g., significant views or vistas to or from a *protected heritage property*) (PPS 2020, emphasis added).

Heritage attributes (*Ontario Heritage Act*)

means, in relation to real property, and to the buildings and structures on the real property, the attributes of the property, buildings and structures that contribute to their cultural heritage value or interest; (“*attributs patrimoniaux*”) (*Ontario Heritage Act*)

Indigenous (Aboriginal)

Used inclusively in this document to refer to First Nation or Indigenous Communities [also known as “bands” under the [Indian Act](https://laws-lois.justice.gc.ca/eng/acts/i-5/) (<https://laws-lois.justice.gc.ca/eng/acts/i-5/>)], Métis communities, and communities of other Aboriginal peoples who identify themselves as a community, such as those living in urban centres or those belonging to an Indigenous Nation or tribe that encompasses more than one community (e.g., the Pottawatomi, Mississauga, Mohawk).

Inspect

includes to survey, photograph, measure, and record; (“inspector”) (*Ontario Heritage Act*).

Irregular burial site

means a burial site that was not set aside with the apparent intention of interring human remains in it. (“*lieu de sépulture irrégulier*”) 2006, c. 34, Sched. D, s. 66. (*Funeral, Burial and Cremation Services Act*).

Licence

means a licence issued under the *Ontario Heritage Act*; (“licence”) (*Ontario Heritage Act*).

Marine archaeological site

An archaeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water. (*O. Reg. 170/04*, s. 1.)

Project Information Form (PIF)

The form archaeological license-holders must submit to the Ministry of Citizenship and Multiculturalism upon deciding to carry out fieldwork.

Protection

Measures put in place to ensure that alterations to an archaeological site will be prevented over the long-term period following the completion of a development project.

Protected Heritage Property

means property designated under Parts IV, V or VI of the *Ontario Heritage Act*; property subject to a heritage conservation easement under Parts II or IV of the *Ontario Heritage Act*; property identified by the Province and prescribed public bodies as provincial

heritage property under the Standards and Guidelines for Conservation of Provincial Heritage Properties; property protected under federal legislation, and UNESCO World Heritage Sites (PPS 2020).

Province

Refers to the Provincial Ministry responsible for the administration of the *Ontario Heritage Act*, which as of the date of this report was the Ministry of Tourism, Culture and Sport- or as superseded.

Restrictive covenants

Section 119 of the *Land Titles Act* (subject to imminent revision) defines restrictive covenants being placed “upon the application of the owner of land that is being registered or of the registered owner of land, the land registrar may register as annexed to the land a condition or restriction that the land or a specified part thereof is not to be built upon, or is to be or is not to be used in a particular manner, or any other condition or restriction running with or capable of being legally annexed to land. R.S.O. 1990, c. L.5, s. 119 (1).” The land registrar may register as annexed to the land a condition, restriction or covenant that is included in a transfer of registered land that the land or a specified part thereof is not to be built upon, or is to be or is not to be used in a particular manner, or any other condition, restriction or covenant running with or capable of being legally annexed to land. R.S.O. 1990, c. L.5, s. 119 (2).

Significant

regarding cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.

Criteria for determining significance for the resources identified in sections (c)-(d) are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used.

While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation (PPS 2020, emphasis added).

Site alteration

means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site (PPS 2020).

7. Appendices



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NIAGARA
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APPENDIX A: INDIGENOUS ARCHAEOLOGICAL POTENTIAL MODEL

VIBRANT REGION



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1. Introduction

Pre-contact Indigenous archaeological sites in the Niagara Region represent an important heritage resource for which only limited locational data exist. While access to such distributional information is imperative to land-use planners and heritage resource managers, the undertaking of a comprehensive archaeological survey of the region to compile a complete inventory is clearly not feasible. As an alternative, therefore, planners and managers must depend on a model that predicts how sites are likely to be distributed throughout the region. Such a model can take many forms depending on such factors as its desired function, the nature and availability of data used in its development, the geographic scope of the project, and the financial resources available. Ideally these constraints are balanced in order to produce a model of maximum validity and utility.

In the following sections, a model of pre-contact Indigenous site potential is developed for the region of Niagara. It begins with a brief review of the method and theory associated with site potential modelling. A strategy has been selected which employs a descriptive reconstruction of pre-contact landscapes in the region of Niagara together with a reconstruction of pre-contact land-use patterns informed by both known site locations as well as archaeological and ethnographic analogues. This information is brought together in the definition of a list of criteria which are used to define a zone of archaeological potential on GIS-based mapping of the region. The last section presents a series of recommendations for application of the model in a planning context. These sections make only general reference to the rich and varied Indigenous culture history of the region of Niagara, which is thoroughly detailed elsewhere in Indigenous oral and written histories, historical records, academic histories and ethnographies, and archaeological reports and published literature. A brief outline of this culture history is presented in Table A1, below.

Table A1: Outline of Niagara Region Indigenous Culture History

Period	Date Range	Lifeways and Environment
Early Paleo	13,000-12,500 cal. BP	hunters & fishers; early Lake Wainfleet
Late Paleo	12,500-11,000 cal. BP	hunter-gatherers; receding Lake Wainfleet
Early Archaic	11,000-9,000 cal. BP	hunter-gatherers; seasonal round (warm season base camps & cold season dispersal); low water levels in Ontario and Erie basins
Middle Archaic	9,000-5,000 cal. BP	hunter-gatherers; seasonal round; northern hardwood forest established; rising water levels in Ontario and Erie basins; return of Lake Wainfleet ca. 6,000 cal. BP
Late Archaic	5,000-3,000 cal. BP	hunter-gatherers; seasonal round; modern environments; establishment of lake levels close to modern ca. 4,000 cal. BP
Early Woodland	3,000-2,300 cal. BP	hunter-gatherers; seasonal round; introduction of pottery
Middle Woodland	2,300-1,500 cal. BP	hunter-gatherers; seasonal round; introduction of maize
Late Woodland	1,500-300 cal. BP	hunter-gatherers (seasonal round) and farmers (semi-permanent villages and seasonal camps)
Post-contact	AD 1600-1650	initial contact with Europeans
Post-contact	AD 1650-1800	tribal displacements
Post-contact	AD 1800-present	major non-Indigenous colonization

2. Background and Theory

Archaeological site potential modelling can trace its origins to a variety of sources, including human geography, settlement archaeology, ecological archaeology, and paleoecology. The basic assumption is that pre-contact land use was constrained by ecological and socio-cultural parameters. If these parameters can be discovered, through archaeology and paleoecology, pre-contact land-use patterns can be reconstructed.

Two basic approaches to predictive modelling can be described. The first is an empirical or inductive approach, sometimes referred to as correlative (Sebastian & Judge, 1988) or empiric correlative modelling (Kohler & Parker, 1986). This method employs known site locations, derived from either extant inventories or through sample surveys, as a guide for predicting additional site locations. The second is a theoretical or deductive approach which predicts site locations on the basis of expected behavioural patterns as identified from suitable ethnographic, historical, geographical, ecological, and archaeological analogues. While data requirements or availability tend to influence the particular orientation of the study, every modelling exercise will incorporate both inductive and deductive elements. Foremost is the need to employ all available data effectively and expeditiously.

It is important to note that, while heritage planners and resource managers generally prefer to work with specific inventories of resource locations, predictive models do not provide this degree of resolution. Instead, they classify the environment into zones of archaeological potential. Three major factors limit the resolution of our images of the past and hence our ability to predict pre-contact site locations with precision.

First, our knowledge of the structure of the socio-political environment in the past is limited by both the inadequacies of the existing archaeological database and the inherent difficulties in interpreting extinct socio-political systems. With respect to the database, the coverage of archaeological survey in Ontario remains spotty at best. Comprehensive survey, using officially sanctioned methods, has only been implemented for the past three decades in the context of various pre-development approval processes and archaeological management plans. Areas that have been the object of such comprehensive surveys are relatively few. Although coverage in some other areas may be adequate, through the cumulative efforts of both professional and avocational archaeologists over time, there is currently no quantification of this work that would permit analysis of the province-wide quality of coverage. It is known, however, that vast tracts, including most of the Niagara Region, have never been systematically surveyed.

Second, our knowledge of the pre-contact natural environment is limited by both the inadequacies of the existing paleoenvironmental database and the inherent difficulties in interpreting extinct ecosystems. Just as reconstruction of past social environments minimally requires a basic understanding of the structure of pre-contact social networks, so does

reconstruction of past natural environments require some minimal direct evidence of the structure of extinct biotic communities. Although evidence from early historic land surveys, pollen cores, floral and faunal remains, and other sources is slowly accumulating, it remains difficult to carry paleoenvironmental reconstruction beyond a relatively general level. As in archaeology, stochasticity, or randomness, imposes interpretive limits on the data since the dynamic character of biotic systems makes them increasingly difficult to reconstruct at larger scales. More importantly, it is clear that the distribution of natural resources on the landscape merely constrained rather than strictly determined pre-contact land use.

Third, from a modern perspective it is probably not reasonable to assume that decisions made in pre-contact cultural contexts necessarily followed the same lines of economic logic that we might employ today. People in the past possessed a world view that was both structurally and substantively different than our own. Therefore, our own concepts of rational behaviour may not completely apply to the pre-contact case. Moreover, there are certain classes of sites, for example rock art sites or burial grounds, that were situated primarily for ideological or aesthetic reasons and are therefore impossible to assess using economically based methods of spatial analysis.

Despite these limitations, predictive modelling efforts to date have proven successful to the extent that they can permit site potential assessments at a level of probability that is useful in the context of heritage resource assessment and planning.

2.1 Scale and Resolution

The portrayal of land use patterns, in either a modern or pre-contact context, must also address the limitations imposed by mapping scales. Specifically, one must consider the requirements of accuracy and resolution of the intended analysis. In southern Ontario, archaeological sites typically range between about 10 and 500 metres in diameter, although most are probably around 25 metres. It is therefore possible to place known sites on existing 1:50,000 topographic base maps, and in fact the Ontario Archaeological Sites Database (OASD) employed this format for many years. In recent years site locations have been increasingly determined through global positioning system (GPS) technology and the OASD is now maintained on a digital geographic information system (GIS) platform.

Whether working with analogue or digital maps for purposes of mapping archaeological sites, one must consider both the accuracy of the base map and the accuracy with which additional features can be added to it. For example, the accuracy ratings of Class A Standard 1:50,000 N.T.S. maps are as follows: horizontal—90% ± 25 metres; vertical—90% ± 0.5 metres of contour interval (Geomatics Canada, 1996, 2003; Surveys and Mapping Branch, 1974, 1976). In other words, a feature mapped at this scale has a 90% chance of being within 25 metres (0.5 mm on the map) of its actual location on the ground. Displacement of archaeological sites, due to inaccuracies of the base map alone, could therefore range from

250% of the site diameter for the smallest sites to 5% for the largest. Additional displacement, stemming from difficulties in accurately relating the site to existing features on the map, can be expected to be equally, if not more, severe. Such distortion may be entirely acceptable in the context of evaluating broad categories of archaeological site potential. In contrast, it would clearly be unacceptable as the basis for locating the majority of sites in the field.

In addition to accuracy, one must consider the implications of generalization that pertain to various scales. Since maps are abstractions of reality, and given the constraints of accuracy noted above, maps at different scales exhibit different degrees of resolution. In other words, a feature visible on a 1:2,000 scale map may be too small to represent at 1:50,000. Resolution standards are arbitrary and subject to cartographic licence, however published guidelines are available. For example, N.T.S. 1:50,000 series maps employ the following minimum dimensions for topographic features: islands—15 metres (width); eskers—500 metres (length); lakes—60 metres (width); marshes—150 metres (width) (Surveys and Mapping Branch, 1974). The ramifications of generalization apply primarily to the utility of various mapping scales as sources of physiographic data. For instance, at a scale of 1:50,000 one might have difficulty relating known sites to all parts of a drainage system since springs and smallest water courses might not be represented.

For purposes of this study, custom digital base mapping compiled at a scale of 1:2,000 and based on Ontario Base Map (OBM) standards was employed. This provided very high resolution of all topographic and hydrographic features. Scaling of the soils data to the 1:2,000 base will have resulted in some distortion, since the original soils mapping was compiled at a scale of 1:25,000. Any such distortion was deemed to be acceptable for purposes of this study, given that the original soils mapping depicts relatively gross generalizations.

2.2 Modeling Criteria

A useful analogy can be drawn between the criteria used to construct predictive models and the optical filters used in photography: each is used to clarify an image by screening out nonessential information. In predictive modelling, we seek to improve our image of past land-use patterns by focusing on places with a positive attractive value to humans and filtering out places with a neutral or negative value. Some filters are designed to admit a very narrow spectrum while others are less discriminating. Since the efficacy of each filter is in part determined by what is being viewed, none are truly all-purpose. The best image is often achieved by selectively combining several filters. Proper use, therefore, requires knowledge of both the characteristics of the filters and the proposed context of application.

In Ontario, most criteria for predicting pre-contact site potential modelling can be considered narrow-spectrum filters. The best broad-spectrum filter to date, and by far the most methodologically developed, is the one implemented in the “Ontario Hydro Distance to Water

Model,” also known as simply “The Hydro Model” (R. I. MacDonald & Pihl, 1994; Peters, 1986, 1994; Pihl, 1986). The success of this model can be attributed to its focus on a criterion that is arguably the most fundamental human resource: water. Regardless of a group’s subsistence economy, whether based on hunting herds of caribou or growing corn, it will require access to water. The universality of the need for this resource makes its consideration a logical point-of-departure for most predictive modelling exercises. Having considered proximity to water, there are a variety of narrow-spectrum filters that can be considered. Selection of additional criteria will depend on consideration of the context of use as well as a cost-benefit analysis of their application. While the concatenation of various criteria will improve the filtering effect, there will always be residual sites that cannot be isolated by modelling. The objective, therefore, is to implement a logical series of criteria until one reaches a threshold of diminishing returns that is determined by the needs of the particular study.

3. Changing Interactions between People and the Environment

Even before modelling criteria can be applied, however, it must be recognized that the biotic landscape of southern Ontario has not been static during the span of human occupation. Since deglaciation, it has progressed through a sequence of stages in response to climatic warming. In addition to these broad paleoenvironmental trends, fluctuations in regional and local microenvironments have continued up to the present. Fluctuations in the water levels of the Great Lakes basins, for example, had profound effects on early pre-contact settlement and subsistence patterns, alternately opening up and then covering vast land areas which, being at different stages of ecological development, would have been the locale of alternative sets of biota (Lovis & MacDonald, 1999; Monaghan & Lovis, 2005). Therefore, when implementing site potential modelling criteria, it is necessary to reconstruct the pre-contact environment at time intervals and resolution appropriate to the study requirements.

The geological history and structure of the landscape, particularly with respect to the distribution of water, is perhaps the most fundamental aspect of site potential modelling since it not only influenced the distribution of sites in the past, but also may have affected the survival or accessibility of those sites in the present. Related to geology, is the distribution of soil types. Soil distribution affected the distribution of past floral communities and, in turn, faunal communities. Moreover, soils can be considered a resource that, to some extent, influenced the distribution of groups that practised horticulture (R. I. MacDonald & Pihl, 1994).

Climate is another important determinant of the distribution of biotic communities. Ideally archaeologists would like to be able to resolve climatic changes in the past within the range of a century or even a few decades. Although such relatively fine-grained climatic change may have had few recognizable effects in terms of vegetative distributions, it may have

caused significant changes in floral, faunal, and agricultural productivity. At present, however, the resolution of climatic change lies more in the range of centuries. In southern Ontario, paleoclimatic reconstruction is further complicated by the influences of the Great Lakes. Modern climatic data for Ontario are published, although detailed mapping of microclimatic variability, a potentially useful source of analogues for paleoclimatic reconstruction, is very limited (R. I. MacDonald & Pihl, 1994).

The botanical features of the landscape are extremely difficult to retrodict in detail, while at the same time they may have most directly influenced settlement in the past. Various efforts have been directed at using early historical records, such as surveyors' notes, to reconstruct the distribution of botanical communities immediately prior to the onset of land clearance and logging by European settlers (Finlay, 1978; Francescut, 1980; C. Heidenreich, 1971; C. E. Heidenreich, 1973; Puric-Mladenovic, 2003; Puric-Mladenovic et al., 2011). Modelling of forest composition and dynamics in earlier periods has also been undertaken, largely through the compilation of fossil pollen profiles (e.g., McAndrews, 1981). Yet in most cases the spatial and temporal resolution of these reconstructions is either coarser or more geographically restricted than archaeologists would hope for (R. I. MacDonald & Pihl, 1994).

Zoological landscapes of the past may be the most difficult of all to reconstruct in detail given the constant flux of animal populations. Moreover, as Semken (1983) has noted, this difficulty is exacerbated by a general lack of interest in the Holocene among vertebrate paleontologists. Archaeologists have therefore depended on the reconstruction of pre-contact habitats and modern analogues from wildlife ecology to retrodict the availability of faunal resources. Unfortunately, this evidence remains circumstantial, and zooarchaeologists have yet to supersede paleontologists with a paleoecological programme of their own. Ironically, archaeological sites offer one of the best paleofauna data sources, albeit in a culturally selected form (R. I. MacDonald & Pihl, 1994; Sadler & Savage, 2003).

3.1 Research Design

Pre-contact land-use interpretation and modelling has traditionally been conducted on an intuitive and implicit level. This has been possible since it usually involved fairly localized contexts: a single site or a small constellation of regional sites. In recent decades, attempts have been made to make these intuitive concepts explicit and to design predictive models for broader geographic and temporal contexts. Although the work to date has been encouraging, the extant models must still be considered as prototypes requiring field assessment and ongoing development. Two basic approaches can be identified in these modelling exercises: a qualitative approach, wherein the paleoenvironment of the study area is characterized in as much detail as possible as a basis for presenting a narrative description of hypothesized Indigenous land use, and a quantitative approach, which attempts to derive site potential probabilities from the statistical correlations between known sites and quantified environmental attributes. While the former approach may be primarily inductive or deductive

in character, the reliance of the latter approach on known site locations results in a decidedly inductive character.

In southern Ontario, most modelling exercises have employed a qualitative approach which is predominantly deductive, although they have been informed by the reflection of pre-contact land use afforded by known site locations (R. I. MacDonald & Pihl, 1994). Only in regions with robust inventories of registered archaeological sites have quantitative approaches been attempted, and these have been facilitated by the advent of GIS technology and digital environmental and archaeological data.

In the case of the region of Niagara, the possibility of adopting a quantitative approach is facilitated by the substantial inventory of known archaeological sites in the region. As a result, GIS technology was used to both quantify and map environmental data and to evaluate known site locations in a combination of inductive and deductive modeling methods. It began with a deductive assessment of the paleoenvironmental constraints which may have affected pre-contact land use in the region, including geo-physical elements such as bedrock geology, Quaternary landforms, hydrology, climate and soils, as well as bio-physical elements such as flora, and fauna. Modelling criteria were then established through the consideration of both paleoenvironmental and cultural data, and zones of archaeological potential were digitally mapped on the base mapping using ArcGIS® Geographic Information System software. An inductive assessment was then implemented to test the capture rate of various modeling parameters against a robust sample of the registered archaeological sites in Niagara Region.

In the sections which follow, key aspects of the Niagara Region's landscape and natural history are reviewed in order to provide a context for evaluating human land use through time and the associated archaeological site potential.

3.2 Bedrock Geology

A basic knowledge of the geological context of the region of Niagara is important as it not only helps to frame our understanding of landforms in the area, but also helps to evaluate the availability of critical resources such as siliceous toolstone. The region of Niagara is underlain by sedimentary bedrock, which dips gently towards the south (Figure A1). These Paleozoic rocks range in age from Ordovician (ca. 443-488 million years) through Silurian (416-443 million years) to Devonian (359-416 million years). The oldest stratum, which subcrops to the north of the Niagara Escarpment, is Queenston Formation red shale of Upper Ordovician age. The relative softness of this shale, relative to the harder overlying strata, accounts for the formation of the escarpment over millennia of erosion. The Niagara Escarpment, which is the most prominent bedrock geological feature in southern Ontario, trends roughly east-west across the Niagara Region. The brow ranges to over 182 metres above sea level in elevation at a height varying from roughly 55 to 85 metres between base and brow. In some stretches, such as at Grimsby, it forms a single scarp with basal talus slope and relief of 70 to 80

metres. In other stretches, such as south of Vineland, it forms two or three terraces (Hewitt 1971). Numerous smaller, and several larger, watercourses pour over the escarpment as they flow northward into the Ontario basin. The largest of these, the Niagara River, has carved a steep-sided gorge as it erodes southward through the Niagara dip slope. Around Short Hills Provincial Park, Twenty Mile Creek flows through a reentrant valley where the escarpment has been cut back to the south a distance of several kilometres.

The Niagara Escarpment and its adjacent dip slope is composed of Lower Silurian-aged dolostone, sandstone, and shale of the Clinton and Cataract Groups, Lockport Formation, and Amabel Formation. South of a line roughly between Smithville, Fonthill, and Niagara Falls, the subcrop transitions to Upper Silurian to Lower Devonian-aged sandstone, shale, dolostone, and siltstone of the Guelph Formation and then Upper Silurian-aged limestone, dolostone, sandstone, and shale of the Salina and Bertie Formations southward from about the latitude of Welland. The youngest sedimentary rocks, which are of Lower and Middle Devonian age, occur adjacent to, and extending into, Lake Erie. These comprise the Bois Blanc Formation (consisting primarily of cherty limestone); and the Onondaga Formation/Detroit River Group (made up of dolostone and cherty limestone) (Armstrong and Dodge 2007; Feenstra 1984; Freeman 1979). These younger strata form a striking and ecologically significant bedrock outcrop, referred to as the Onondaga Escarpment.

Beginning in Clarence, New York State, the Onondaga Escarpment extends westward through Buffalo, where it crosses the Niagara River and enters the Fort Erie area, eventually disappearing below Pleistocene till near Hagersville, Ontario (Parkins 1977:10). In the study area, it is represented by a number of exposures and by a few low escarpments that are most dramatic in the area of Ridgeway. The Onondaga Escarpment influences local hydrology by preventing effective drainage southward into Lake Erie. As a result, the major watersheds of southern Niagara Region flow northeastward into the Niagara River, and only a few minor streams flow into Lake Erie (Thompson 1981:10). This situation contributes to the poor drainage of lands to the north (Chapman and Putnam 1984:157).

In terms of pre-contact Indigenous subsistence and economy, the most important feature of the local bedrock is the relative accessibility of its chert-bearing deposits. The Niagara Escarpment incorporates three potential chert-bearing formations, Lockport (Ancaster, Goat Island chert), Amabel, and Clinton (Reynales chert). The Lockport Formation outcrops along the brow of the escarpment, although chert-bearing exposures are limited and generally of inferior quality. Subcrops of the Amabel Formation are only mapped for the vicinity of Queenston Heights and there are no known chert-bearing facies at this locality (Eley and von Bitter 1989). Reynales chert of the Clinton Formation has been reported from limited outcrops along the Niagara Escarpment near Niagara Falls (Armstrong 2019: 32).

The more extensive Devonian chert deposits in southern Niagara Region have been examined in detail by W. G. Parkins (1974; 1977). The Bois Blanc Formation contains

medium grey, cherty limestone, comprising up to 50 to 70 percent of the whole rock (Parkins 1977). This chert, which occurs in thin beds and nodules, may have been available for extraction by Indigenous peoples at a number of exposures along the Onondaga Escarpment. These access points include a substantial exposure along Ridge Road near Ridgemount (Telford and Tarrant 1975). Quarrying of the chert would have been required at these localities, although spalling and fracturing due to frost action would have assisted in stone extraction.

In addition to Bois Blanc chert, the Onondaga Formation, which lies stratigraphically above the Bois Blanc Formation, provided one of the most widely used cherts for tool manufacture throughout regional prehistory. The Onondaga Formation is subdivided, from early to late, into the Edgecliff, Clarence, and Moorehouse Members. Commonly known as Onondaga chert, due to its presence in the Onondaga Formation, this material does not outcrop on the Onondaga Escarpment, except where modern day stone quarrying has exposed it. The chert-bearing Clarence Member outcrops northwest of Ridgeway at Cherry Hill (Telford and Tarrant 1975). Parkins (1977:86) states that the Clarence Member outcrops extensively on most of the north shore of Lake Erie from Fort Erie to Nanticoke. In these locations Onondaga chert would have been available in abundance to Indigenous peoples. Quarrying was unnecessary, as large chert cobbles still litter the local beaches, the result of wave action which fractures and reduces the tabular chert. These coastal outcrops exhibit limestone pavement attributes, in particular the typical crosshatched clint (block) and grike (fissure) features that are often associated with alvars in upland situations. At several inland localities within a few kilometres of the Lake Erie shore, on the southern perimeter of former islands in Lake Wainfleet (see below), very shallow subcrops of Onondaga chert have also been identified on the basis of clint and grike structure of the bedrock visible in ortho-imagery. Field reconnaissance of several of these localities has confirmed the presence of Onondaga chert in the topsoil as well as abundant evidence of Indigenous utilization of this toolstone. This suggests that the chert probably outcropped there in the past, likely when these locations were at the shore of Lake Wainfleet.

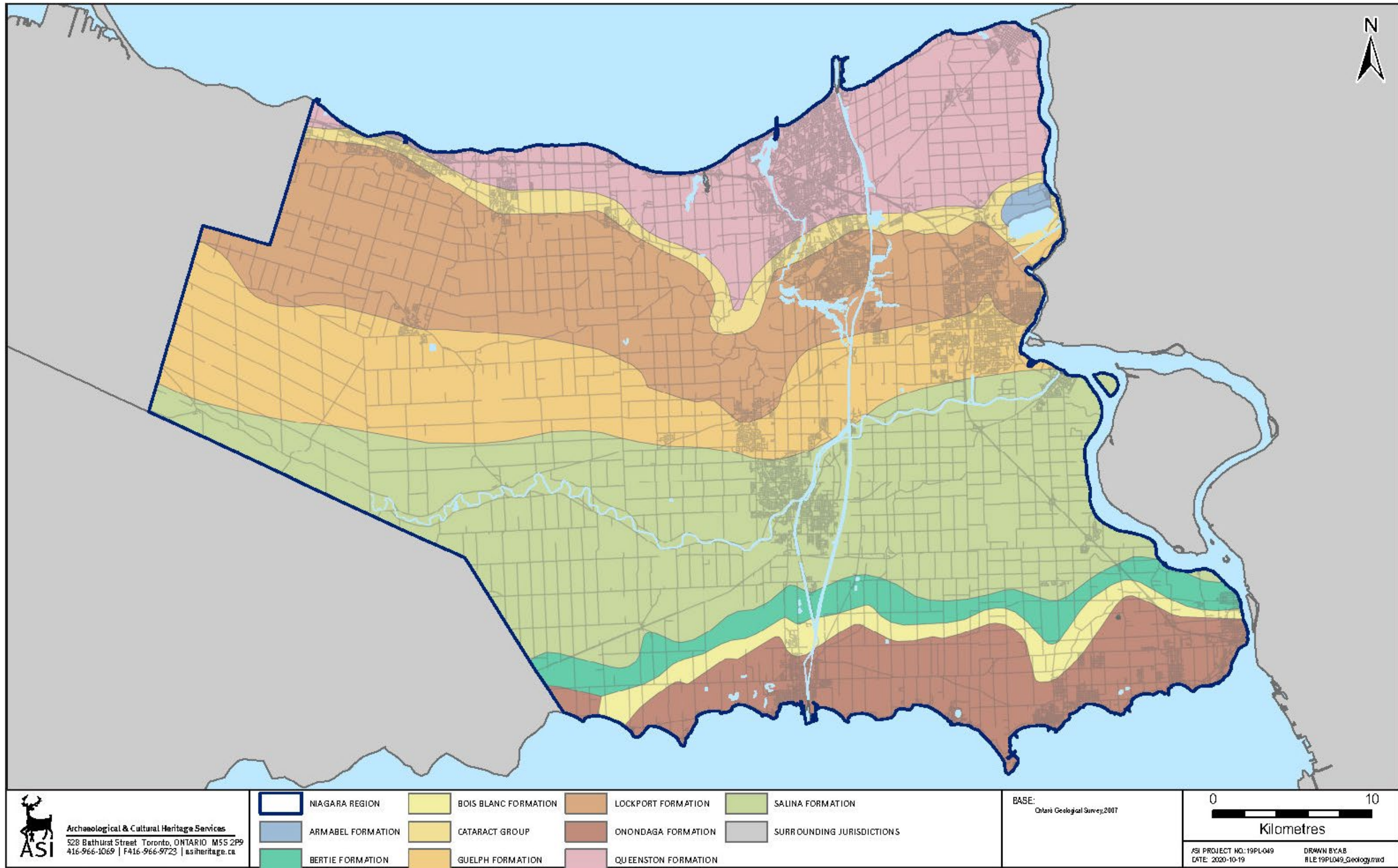


Figure A1: Bedrock Geology of Niagara Region

3.3 Surface Geology

In the following discussion, radiocarbon (¹⁴C) dates are expressed in calibrated or calendar (cal.) years before present (BP). Dates returned by radiocarbon dating methods vary with calendar years through time and, as dating methods improve, calibration algorithms are constantly being refined. More recent dates tend to show better correspondence than earlier dates, for example, currently a date of 11,000 ¹⁴C BP will yield a calibrated date of 12,875 cal. BP whereas a date of 1,100 ¹⁴C BP will yield a calibrated date of 1,010 cal. BP.

Throughout most of the region of Niagara, except as noted above, the bedrock is mantled with Quaternary deposits of Late Pleistocene age ranging in depth from less than one metre to more than 100 metres at the Fonthill Kame (Figure A2). Generally, the drift thickness is on the order of 15 to 20 metres (Feenstra, 1981; Gao et al., 2006).

The earliest deposits occur at the bottom of the St. David's buried gorge, which is a drainage feature that connected the Erie and Ontario basins during Middle Wisconsinan times more than 23,000 years ago. Elsewhere, these deposits have been replaced by Late Wisconsinan glacial and glacio-lacustrine deposits. The principle basal unit in Niagara is Halton till, the product of the last major southwesterly advance of the Laurentide Ice Sheet (Port Huron stadial, ca. 16,000 ¹⁴C cal. BP) (Feenstra 1981; Tinkler 1994).

Several recessional moraines composed of Halton till demarcate pauses in the retreat of the Ontario glacial lobe of the Laurentide Ice Sheet from the Niagara Peninsula. From oldest to youngest, these are the Wainfleet, Crystal Beach, Fort Erie, Niagara Falls, and Vinemount moraines. The most recent and visibly contiguous of these is the Vinemount Moraine, which occurs as a nearly continuous ridge that runs within about 300 metres of the top of the Niagara Escarpment from Queenston to Hamilton. Generally, less than one kilometre wide, it rises up to fifteen metres above the surrounding plain. The Niagara Falls Moraine is named after the city where its most prominent segment occurs, a ridge of eight kilometres in length, two kilometres in width, and up to thirty metres in height. From Niagara Falls it tracks westerly and discontinuously, reappearing briefly near Fonthill before continuing on towards Grimsby. The Fort Erie Moraine is also an intermittently visible ridge. West of the Fonthill Kame it forms the drainage divide between streams flowing northward into Lake Ontario and the Welland River. Most of this moraine has been subdued by wave action and capped by glaciolacustrine clay, but sections of the till rise above these sediments east of Welland. Its main segment, situated in Fort Erie, is about 6.5 kilometres long, up to 1.5 kilometres wide, and rises about seven metres above the Onondaga Escarpment dip slope. The lower part of its northern flank is capped with glacio-lacustrine clay and silt, while gentle slopes and beach ridges have been formed on its southern flank by the action of glacial lake waters. This moraine was breached and separated from its counterpart in New York State, the Buffalo Moraine, when glacial lake levels fell and separated the Ontario and Erie basins. The Crystal Beach and Wainfleet moraines are similar in origin and composition. The former is about 6.5 km long, less than

one kilometre wide, and rises about eight metres above the Onondaga Escarpment dip slope. The latter is about 2.5 kilometres long, 0.5 kilometres wide, and rises about eight metres above the lake plain. Like the Fort Erie Moraine, the northern slopes of these moraines are capped with glacio-lacustrine clay and silt, while the south slopes exhibit wave-worked till with beaches and nearshore deposits (Calkin and Barnett 1990; Feenstra 1981; Tinkler 1994).

The Fonthill Kame is a deltaic complex that was deposited in contact with the receding Laurentide Ice Sheet by meltwater flowing off the glacier when it stood at the position of the Fort Erie and Niagara Falls moraines and was fronting on glacial Lake Warren. Composed of sands and gravels up to 100 metres thick and standing over 76 metres above the surrounding lacustrine plain, it comprises three converging ridges extending three to five kilometres away from the apex in southwesterly, southeasterly, and west-northwesterly directions. Forming an inverted “V” pointing northward, the flat-topped southern ridges join to form a high plateau at their union northwest of Fonthill. At an elevation of 260 meters above sea level (m asl), this is the highest point in the region of Niagara. The steepest slopes of the kame occur on the north (ice contact) sides at elevations above 198 m asl. Interestingly, this feature which initially formed in a north-pointing re-entrant of the ice margin, is itself situated at the head of the south-pointing Twelve Mile Creek/Short Hills re-entrant of the Niagara Escarpment. Along its slopes arise headwater tributaries of Twelve Mile Creek and Sixteen Mile Creek flowing northward, and the Welland River flowing eastward.

As the Laurentide Ice Sheet withdrew from the Niagara peninsula, it was fronted to the south by glacial Lake Warren and its recessional successors (glacial lakes Wayne, Grassmere, and Lundy). These pro-glacial lakes capped the Halton till with lacustrine sediments creating the extensive Haldimand Clay Plain. In addition to vast off-shore deposits of fine-grained clays and silts, the lowering water levels were responsible for the formation of near-shore glaciolacustrine bar, beach, and deltaic deposits at various elevations. Significant examples include the abandoned Dunnville Delta, which extends easterly from Dunnville into Wainfleet, a large delta with nearshore features at Niagara Falls, and numerous smaller beaches and bars which are especially common on and around the rocky uplands of the Onondaga Escarpment. Extending along the southern edge of the Niagara peninsula, these upland features separate the south coast from the central lowland of the Welland River watershed which rises only a few metres above the modern water plane of Lake Erie (Calkin and Feenstra 1985; Chapman and Putnam 1984; Feenstra 1981).

The inception of non-glacial waters, which marks the beginning of Early Lake Erie, occurred around 14,500 14C cal. BP (Calkin and Feenstra 1985:163). The evolution of the lake since then is characterized by a complex sequence of fluctuating levels controlled largely by variations of inflow from the Huron basin via Port Huron, and by changes in the controlling outlet sills of the Niagara River attributable to the countervailing effects of erosion and isostatic rebound. Meteorological conditions have also contributed to fluctuations in lake level. Annual fluctuations historically range about a metre on average, although extreme rises

of up to 2.4 metres have been recorded. From deglaciation until around 13,000 14C cal. BP a sill at Fort Erie/Buffalo was in control. Control then switched to the Lyell/Johnson sill located downstream near Niagara Falls, as isostatic rebound raised it to, and eventually about three metres above, the Fort Erie/Buffalo sill. During this time, the main highstand of glacial Lake Algonquin in the Huron-Michigan basin may have contributed waters to the Erie basin raising the water plane to earlier levels and flooding the southern Niagara Region. The water body created by flooding of the Welland River lowland, north of the Onondaga Escarpment, has been named Lake Wainfleet. In southern Niagara Region, only the uplands of the Onondaga Escarpment and associated moraines would have risen above Lake Wainfleet, creating an archipelago extending along the south coast and northward along the Fort Erie Moraine. This highstand lasted until about 12,500 14C cal. BP, when a new outlet at North Bay was established in the Huron-Michigan basin thereby diverting drainage from the upper Great Lakes down the Ottawa River and cutting off flow into the Erie basin. During the resulting lowstand, the Erie basin was a closed system with no outlet and a water plane up to twenty metres lower than today. The shoreline would have been several kilometres south of its current location. This lowstand lasted until ca. 6,000 14C cal. BP when climate change, closure of the North Bay outlet, and return of drainage from the upper Great Lakes raised levels once again (Lewis *et al.* 2012; Lewis 2016; Pengelly *et al.* 1997).

With the elevation of the Erie water plane controlled by the Lyell-Johnson sill, Lake Wainfleet once again came into existence at this time, lasting until ca. 3,770 14C cal. BP when the sill was breached by headward erosion of Niagara Falls. Lake Wainfleet drained as control was returned to the lower Fort Erie/Buffalo sill. Many wetlands, including the extensive Wainfleet Bog, are vestiges of this large, shallow lake. Throughout the last three millennia, water levels in the Erie basin appear to have been largely within the modern range due to the relative stability of inflow and the controlling sill, although isostatic rebound continues to gradually lift the north shore. Meteorologically produced lake-level fluctuations also occur, and significant rises have been suggested for the periods around 2170, 1350, 820 and 430 B.P. (Pengelly *et al.* 1997).

Since the establishment of Lake Erie at its present level, perhaps the most significant geological development was the formation of extensive sand dune systems along the Lake Erie Coast. The Onondaga Formation adjacent to the north shore of Lake Erie is the source of the sand that is washed and blown ashore during the summer months by the prevailing southwesterly winds. These winds form dunes reaching 21 metres in height at Sand Island on Point Abino. Dune systems along the Lake Erie Coast have been severely impacted over the past century by extensive sand quarrying, and cottage development. A map prepared by the British War Office in 1865 by Stotherd, shows in detail the dunes along the Lake Erie Coast between Port Colborne and Windmill Point. According to the map, dune systems were located in areas exposed to the predominant southwesterly winds. This meant that few locations were free of dunes, and those that did not have dunes were probably sheltered

bays. The locations without major dune systems include the leeward sides of Abino Bay and Thunder Bay.

Lake levels in the Ontario basin have been similarly dynamic through the late Pleistocene and Holocene. During deglaciation, the Halton till was capped by glacio-lacustrine deposits laid down by the short-lived pro-glacial lakes Dana and Dunnville, and finally by glacial Lake Iroquois between about 14,500 to 13,000 14C cal. BP (Feenstra 1981; Lewis & Todd 2019). Pre-Iroquois deep-water clay deposits occur: (1) south of the Niagara Escarpment on the cuesta dip slope; (2) between the toe of the Niagara Escarpment and the Iroquois strand on the terrace which Feenstra (1981:15-16) termed the “Third Plain”; and (3) in the Queenston-St. David’s clay plain. The Bell Terrace at St. David’s is an apron of deltaic sands which were laid down in pre-Iroquois waters by runoff flowing down through the St. David’s re-entrant valley. Lake Iroquois deep-water clays are limited to the Niagara-on-the-Lake clay plain, while shallow-water sands and silts occur extensively through the Lakeshore sand plain. Southwest of Brown’s Point, deposits of deltaic sand were laid down by the Lewiston spillway—the ancestral Niagara River—where it debouched into Lake Iroquois (Feenstra 1981).

As the Laurentide Ice Sheet retreated, lower outlets of glacial Lake Iroquois were opened, resulting in lowering water levels in the Ontario basin after 13,000 14C cal. BP. Between 12,900 and 12,300 14C cal. BP water levels were at a virtual stillstand in the Ontario basin during an interval when Early Lake Ontario was confluent with sea level and the Champlain Sea. A subsequent inflow reduction attributed to a climatic cool and dry period caused water levels in the Ontario basin to fall below the outlet sills around 12,300 14C cal. BP, initiating a closed basin lowstand with a water plane up to forty metres lower than today. The shoreline would have been several kilometres north of its current location. This lasted until around 8,300 14C cal. BP., after which increasing precipitation in the Great Lakes watershed began raising water levels again. This increased notably around 5,800 14C cal. BP when drainage from the upper Great Lakes once again began flowing through the Erie and Ontario basins (Anderson and Lewis 2012; Lewis and Todd 2019). Lake Ontario continues to fill its basin due to the gradual but continuing isostatic uplift of its outlet (McCarthy & McAndrews, 1988).

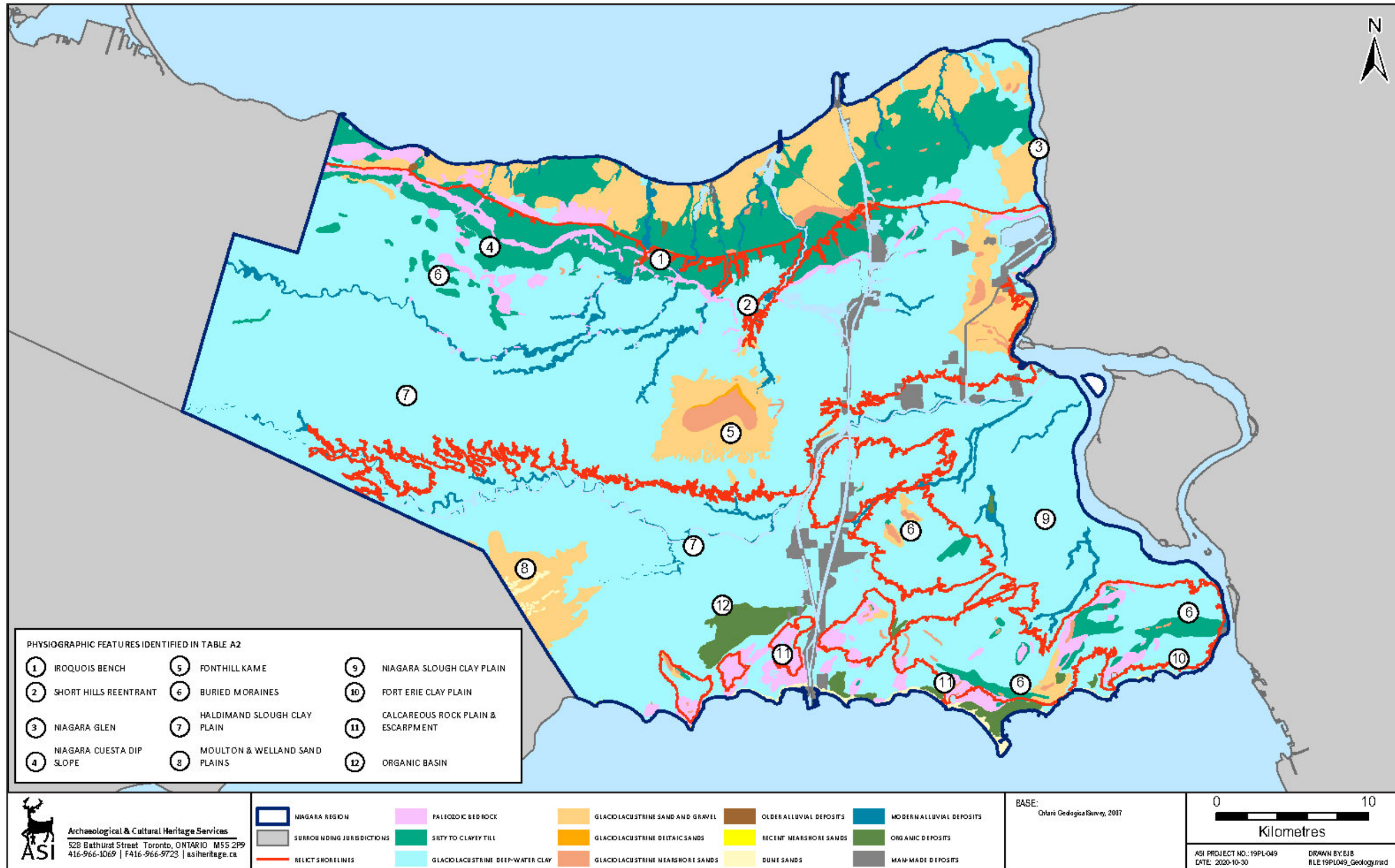


Figure A2: Surficial Geology of Niagara Region

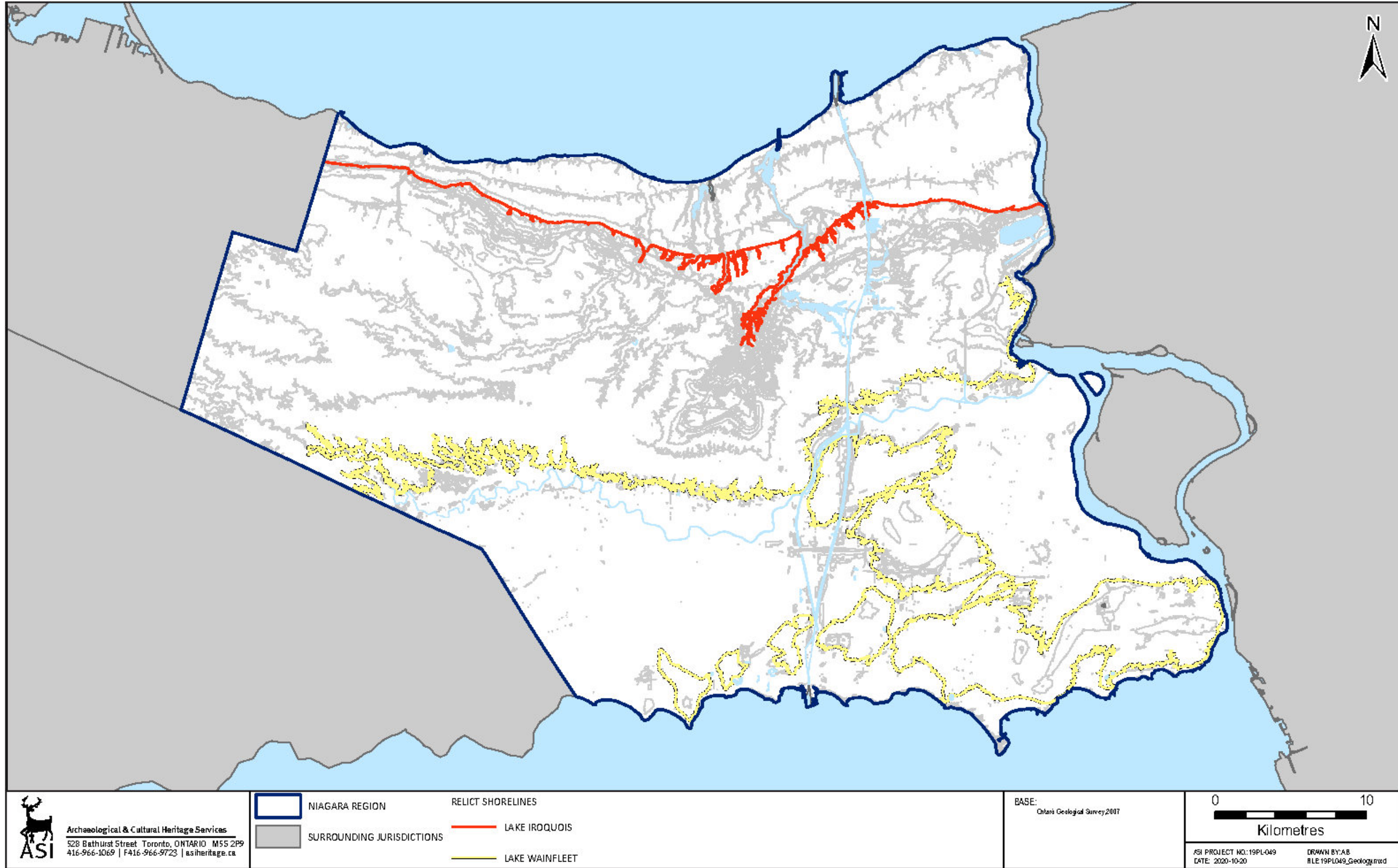


Figure A3: Post glacial Strandlines of Niagara Region

3.4 Physical Geography

To help characterize regional landforms and how they may have influenced human land-use trends over time, the region of Niagara has been grouped into three major physiographic regions (Table A2; Figure A4), based on related physiographic features (Figure A2) classified by Chapman and Putnam (Chapman & Putnam, 1984) and others (Table A2). The physiographic regions trend roughly east-west along the Niagara peninsula. They are, from north to south, the Iroquois Plain, the Niagara Escarpment, and the Haldimand Clay Plain. These are described in the following section.

Table A2: Physiographic Regions and Features of Niagara Region

Physiographic Region	Physiographic Features - Uplands	Physiographic Features - Lowlands
Iroquois Plain	Sand Plains	Till Plains
Iroquois Plain	Sand Plains	Clay Plains
Niagara Escarpment	Iroquois Bench	Niagara Glen
Niagara Escarpment	Short Hills Reentrant	
Niagara Escarpment	Niagara Cuesta Dip Slope	
Haldimand Clay Plain	Fonthill Kame Terrace/Slope ¹	Haldimand Slough Clay Plain ¹
Haldimand Clay Plain	Moulton & Welland Sand Plains ¹	Niagara Slough Clay Plain ¹
Haldimand Clay Plain	Buried Moraines ¹	Fort Erie Clay Plain ¹
Haldimand Clay Plain	Calcareous Rock Plain & Escarpment ¹	Organic Basin ¹
Haldimand Clay Plain	Lake Erie Coast ¹	Niagara River Valley ¹

The strand of glacial Lake Iroquois separates the Niagara Escarpment region from the Iroquois Plain below. The Iroquois Plain can be further subdivided on the basis of dominant glacial sediments, including till plains, glaciolacustrine nearshore gravels and sands, and glaciolacustrine deep water silts and clays.

¹ - Environmental subregions of Haldimand Clay Plain physiographic region after MacDonald (I. D. MacDonald, 1980)

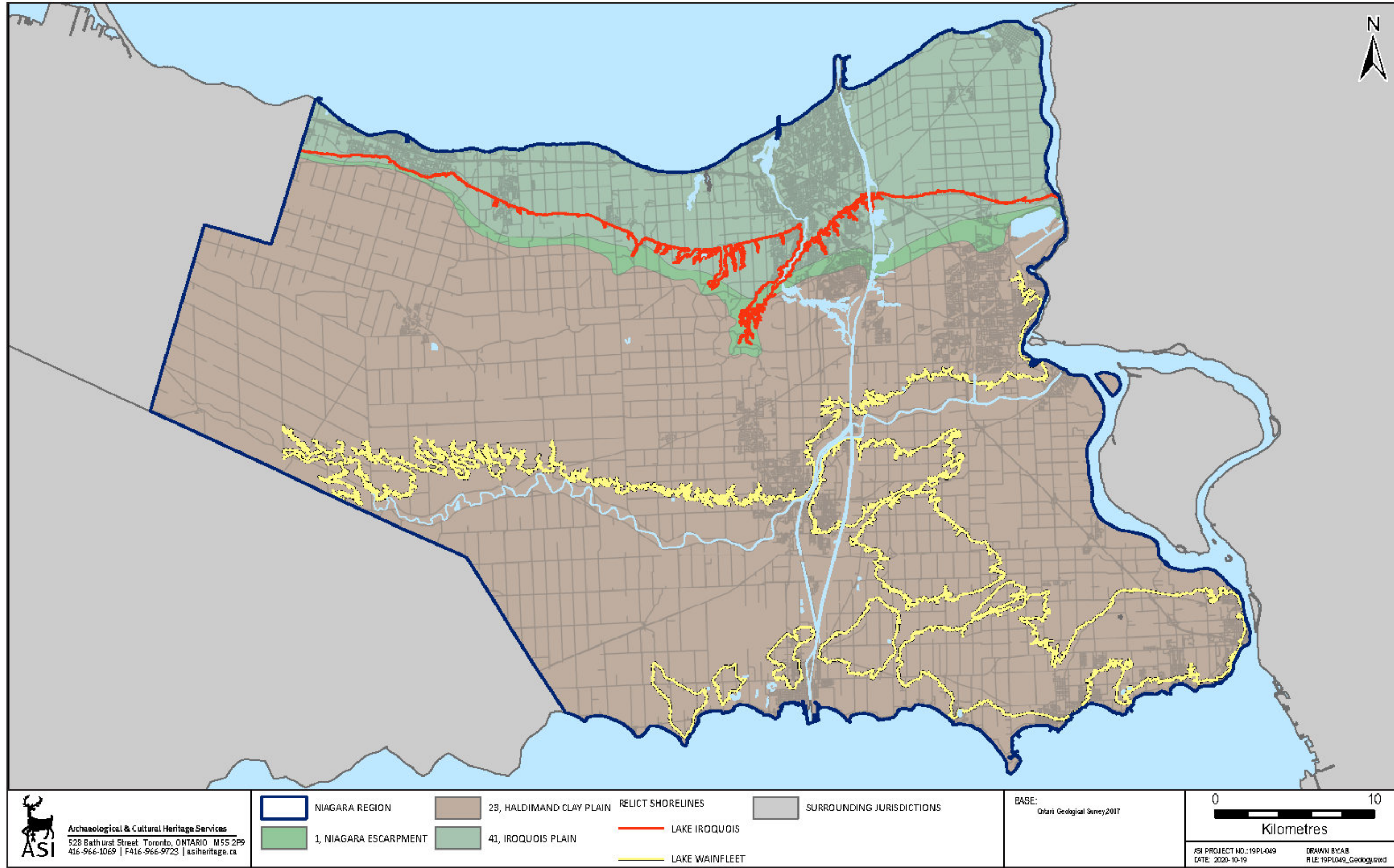


Figure A4: Physiography of Niagara Region

South of the Iroquois strand is a bench of varying width that abuts the Niagara Escarpment. The Niagara Escarpment itself varies from a steep scarp to a terraced ramp rising to the south. In Niagara the cuesta describes a broad V-shape broken by several reentrant valleys. The largest of these is centrally located north of the Fonthill Kame, where Twelve Mile Creek has sculpted the Short Hills as it ascends the notch. Beyond the scarp is the cuesta dip slope, falling gradually towards the south. The Niagara River has carved a deep glen as it traverses these physiographic regions.

Descending the Niagara cuesta dip slope one finds the Haldimand Clay Plain physiographic region (Chapman & Putnam, 1984). Generally, it is flat and poorly drained (Chapman & Putnam, 1984, p. 156), although it includes several distinctive landforms including dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins. Within the study area a number of environmental subregions have been described (I. D. MacDonald, 1980).

The most extensive feature of this physiographic region is the Haldimand Slough Clay Plain, characterised by slough and ridge patterning on a gently rolling plain of heavily compacted, poorly drained, acidic clay soils. The easterly analogue of this feature, situated east of the Moulton and Welland sand plains that extend between the Fonthill kame and Dunnville, is the Niagara Slough Clay Plain.

As previously noted, the buried Vinemount, Niagara Falls, Crystal Beach and Fort Erie recessional moraines comprise subtle but important physiographic features. They are generally well-drained locations and have a great influence on local drainage patterns. In the north they create drainage divides, including the one that separates the Welland River from all of the creeks flowing northward into Lake Ontario.

In the south, together with the Calcareous Rock Plain and Escarpment, they block southerly flow into Lake Erie, creating extensive poorly drained basins on their northern sides. The Calcareous Rock Plain and Escarpment is characterized by thin soils overlying limestone and dolostone bedrock. It includes the Onondaga Escarpment as well as the shelving pavements and rocky headlands along the Lake Erie shore. Filling the gaps between these upland areas is the Fort Erie Clay Plain, consisting primarily of level, former lake bottom. It partially overlays the Calcareous Rock Plain, which outcrops in several places.

The Lake Erie Coast is characterized by diverse landforms indicative of Holocene and on-going coastal processes, including dunes, cobble, clay and sand beaches, limestone pavements, and back-shore wetland basins. The Niagara River Valley contains the broad and fast flowing Niagara River, bordered by shelved dolostone and limestone pavements and low clay plain bluffs.

3.5 Water Features and Related Land Areas

The region of Niagara is strongly characterized by the predominance of its coastlines, comprising over 100 kilometres of lakeshore frontage divided almost equally between Lake Ontario on the north and Lake Erie on the south. The Niagara River adds roughly another 50 kilometres of shoreline, thereby creating the Niagara Peninsula. These three shorelines also define the major drainage basins, with a northern tier of watersheds draining northward into Lake Ontario, the Welland River and several smaller drainages flowing easterly into the Niagara River, and a series of very short watershed flowing southward into Lake Erie. In spite of this three-tiered drainage system, the vast majority (94%) flows into Lake Ontario, split almost evenly between the northern tier of watersheds and the central tier comprising the Welland River and the upper tributaries of the Niagara River. Only a very small portion (6%) of Niagara Region drains into Lake Erie and these watersheds tend to lie on the dip slope of the Onondaga Escarpment. The major named watersheds and sub-watersheds are listed in Table A3, along with their drainage areas to provide a sense of their relative significance (see also Figure A5).

Most of the northern tier of watercourses arise on the Niagara Escarpment dip slope, although several smaller ones, such as Bartlett Creek, find their headwaters at the foot of the escarpment on the Iroquois Bench. The upper reaches of Twenty Mile Creek flow easterly across the level to very gently rolling terrain of the dip slope before turning northward above Balls Falls. Fifteen Mile Creek and Twelve Mile Creek rise on the north- and west-facing slopes of the Fonthill Kame. Constrained by the margins of the Short Hills reentrant valley, the headwaters of Twelve Mile Creek have carved the Short Hills ravine complex into the glaciolacustrine silts and clays.

West of the Fonthill Kame, the gentle rise of the buried Fort Erie Moraine creates a drainage divide between Twenty Mile Creek watershed to the north and the Welland River watershed to the south. The Onondaga Escarpment creates the drainage divide with Lake Erie south and west of Welland. Between these divides the Welland River drains the vast lowland that was once the bed of Lake Wainfleet. East of the Fonthill Kame, the Welland River has breached the buried Fort Erie Moraine before again crossing the former lake plain on its way to its confluence with the Niagara River just above the falls. Between Niagara Falls and Lake Erie a series of smaller creeks drain this lowland. South of the Onondaga Escarpment, several small streams flow southerly directly into Lake Erie down the cuesta dip slope. The farthest inland any of these watersheds extend is about 6 kilometres near Bethel.

Prior to European land clearance and drainage, it is estimated that wetlands comprised 68,929 ha (36.7%) of Niagara Region. As of 2002, it has been estimated that this area had been reduced to 10,269 ha (5.5%), a loss of roughly 85% from the original coverage. This is above the provincial average for southern Ontario, which is estimated to be on the order of 72% (Ducks Unlimited Canada, 2010). More recent data suggests this reduction to be

smaller, with approximately 11% of Niagara mapped as wetland, primarily swamp (92%), with lesser amounts of marsh (7%) and bog (1%) (Ontario Ministry of Natural Resources and Forestry, 1978). The Wainfleet bog, Humberstone marsh, and Willoughby marsh, all of which are remnants of Lake Wainfleet, rank amongst the largest extant wetland complexes in the region of Niagara. Riparian wetlands flanking the low-gradient watercourses are also common throughout the region, particularly along the Welland River and its tributaries. Coastal wetlands are common features on both the Lake Ontario and Lake Erie shores, but these, too, have been reduced in area from their original extents, as illustrated by historical mapping of the Point Abino wetland complex. Richard H. Stotherd's 1865 map of the Niagara Frontier (Stotherd, 1865) shows this complex as incorporating a large pond and extending right to the coast, but neither of these features are extant.

Table A3: Watersheds of Niagara Region

Watershed	Sub-watershed (total drainage area)	Watercourse
Lake Ontario (46%)	Minor Ontario Drainages (135 km ² - 7%)	Bartlett Creek
		Thirty Mile Creek
		Forty Mile Creek
	Twenty Mile Creek (202 km ² - 11%)	Spring Creek
		Gavora Ditch
		North Creek
	Fifteen to Eighteen Mile Creeks (126 km ² - 6%)	Fifteen Mile Creek
		Sixteen Mile Creek
		Eighteen Mile Creek
	Twelve Mile Creek (219 km ² - 12%)	Twelve Mile Creek
	One to Eight Mile Creeks (183 km ²) – 10%	One Mile Creek
		Two Mile Creek
		Four Mile Creek

Watershed	Sub-watershed (total drainage area)	Watercourse
		Six Mile Creek
		Eight Mile Creek
Lake Ontario (Niagara River) (48%)	Welland River (711 km ² – 38%)	Grassy Brook
		Thompson's Creek
		Lyons' Creek
		Tea Creek
Lake Ontario (Niagara River) (48%)		Sucker Creek
		Beaver Creek
		Parker's Creek
		Black Ash Creek
		Wilson Creek
		Mill Creek
		Wolf Creek
		Little Wolf Creek
		Little Forks Creek
		Indian Creek
		Bridgewater Creek
		Moore's Creek
		Mill Race Creek
	Upper Niagara Tributaries (185 km ² – 10%)	Ussher's Creek
		Boyer's Creek
		Black Creek
		Beaver Creek
		Baker Creek
		Miller Creek

Watershed	Sub-watershed (total drainage area)	Watercourse
		Frenchman's Creek
Lake Erie (6%)	Minor Drainages (122 km ²) – 6%)	

3.6 Soils

A wide array of soils has developed on the Quaternary deposits of Niagara Region (Figures A6-A7). These have been mapped according to 46 soil series together with alluvium, escarpment, beach, marsh, water, quarries, and unmapped (urban) lands (Kingston & Presant, 1989) (see Table A4) .

With respect to soil texture, the distribution (Figure A6) is strongly correlated with the geological origins of the parent materials (Figures A2 and A4), with fine-grained materials primarily derived from glacio-lacustrine silts and clays and coarser materials derived from sandy glacial till and sandy to gravelly glacio-fluvial outwash deposits. Heavier soils composed of clays and silts are most common, representing about 52% of Niagara Region, medium-textured loams make up about 21% of the soils, and coarser sands and gravels only comprise about 7% of mapped soils, with unclassified lands comprising the remainder. The coarser soils occur around the Fonthill Kame, on the Iroquois plain, on the deltaic deposits in Wainfleet and Niagara Falls, and on the dunes along the Erie waterfront. Medium-textured loams occur on the plain of former Lake Wainfleet west of Welland and in the middle reaches of the northern watersheds. Heavier texture clays and clay loams occur throughout the upper Welland River watershed and on the Lake Wainfleet plain east of Welland (Kingston & Presant, 1989).

The generally low relief and high density of the surficial deposits has produced soils in the region of Niagara that are predominantly imperfectly to poorly drained (71.3%). By drainage class they break down as follows: rapidly drained (2.2%), well drained (1.3%), moderately well-drained (4.6%), imperfectly drained (37%), poorly drained (34.9%), very poorly drained (0.8%) and chronically wet (organic) (7%) soils, together with a mix of lands without soil classifications, including beach, escarpment, alluvium, quarry, urban land, marsh, and water (20.7%) (Figure A7). The rapidly drained soils are concentrated on the thinly mantled bedrock of the cuestas and the steeper slopes of the Fonthill Kame. The well drained soils are mostly situated on the lower slopes of the Fonthill Kame, in pockets of sand on the Iroquois plain, and on the deltaic sands in Niagara Falls. Moderately well-drained soils are mostly found along the Iroquois strand, along the more deeply entrenched sections of the northern watersheds, and in small pockets on the morainic uplands above the Onondaga Escarpment in the south. Imperfectly drained soils are ubiquitous on the Iroquois Plain and throughout the

incised middle and upper reaches of the northern watersheds and the Welland River. Poorly drained soils occur on more level and less dissected terrain of the northern watersheds and throughout the lowland once occupied by Lake Wainfleet. Very poorly drained and organic soils are almost exclusively mapped in the large remnant wetlands of this basin, such as the Wainfleet bog and Humberstone marsh (Kingston & Present, 1989).

Although the Canada Land Inventory (1965) has rated only about 6% of soils in Niagara Region as Class 1 for agriculture, an additional 20% are rated as Class 2 and 39% are rated as Class 3 (Figure A8), so at least two-thirds of Niagara can be considered arable farmland. The main limitations of the Class 2 and 3 soils are excess moisture and soil density. The remaining soils are divided between Class 4 (12%), Class 5 (1%), and Class 6 (3%). Unclassified lands comprise about 20% of the study area. As illustrated in Figure A8, the soils least suited to agriculture are found on the steep, porous uplands of the Fonthill Kame, around the steep perimeters and shallow soils of the Niagara and Onondaga cuestas, and in wetlands and bottomlands (Kingston & Present, 1989).

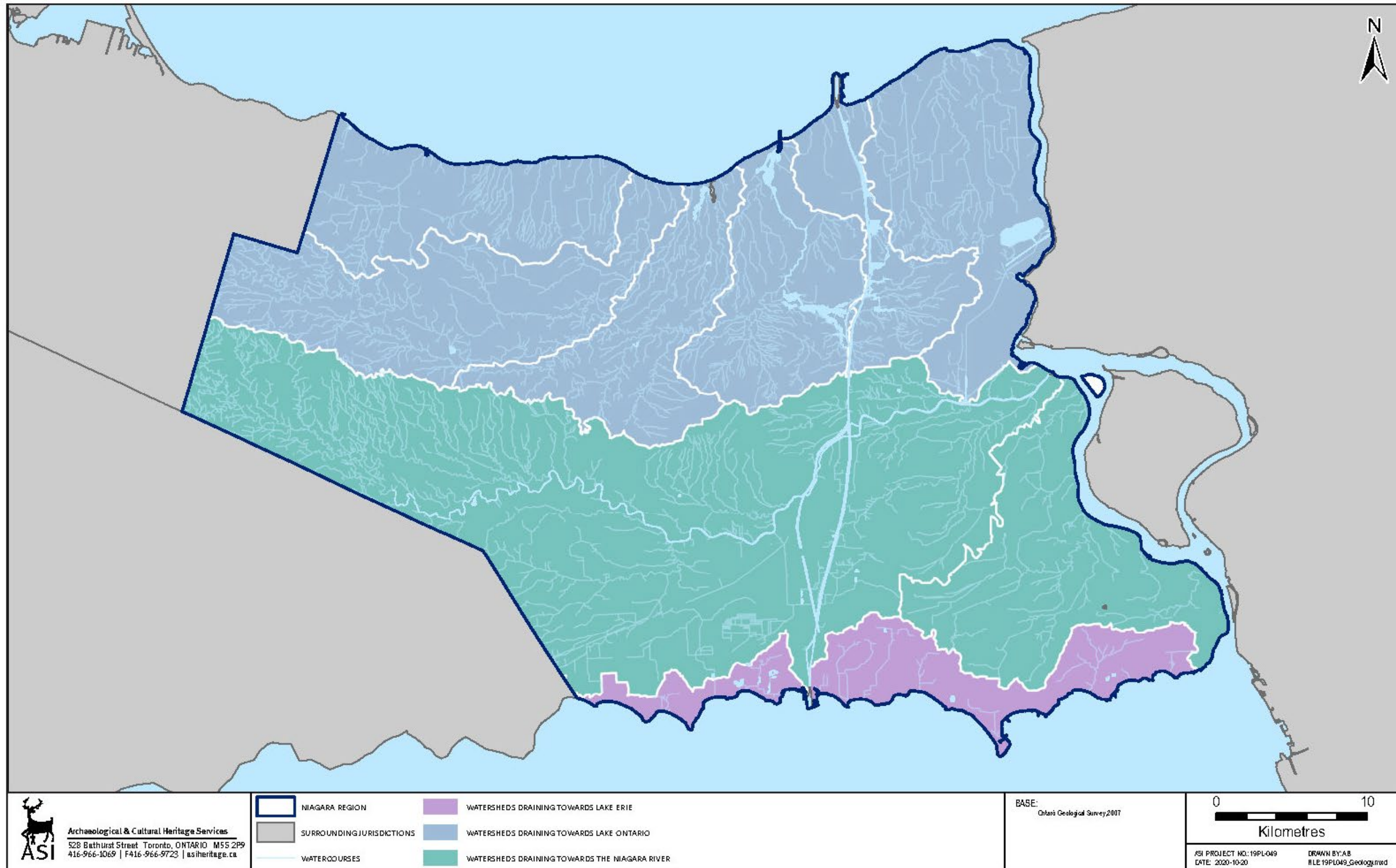


Figure A5: Major Watersheds of Niagara Region

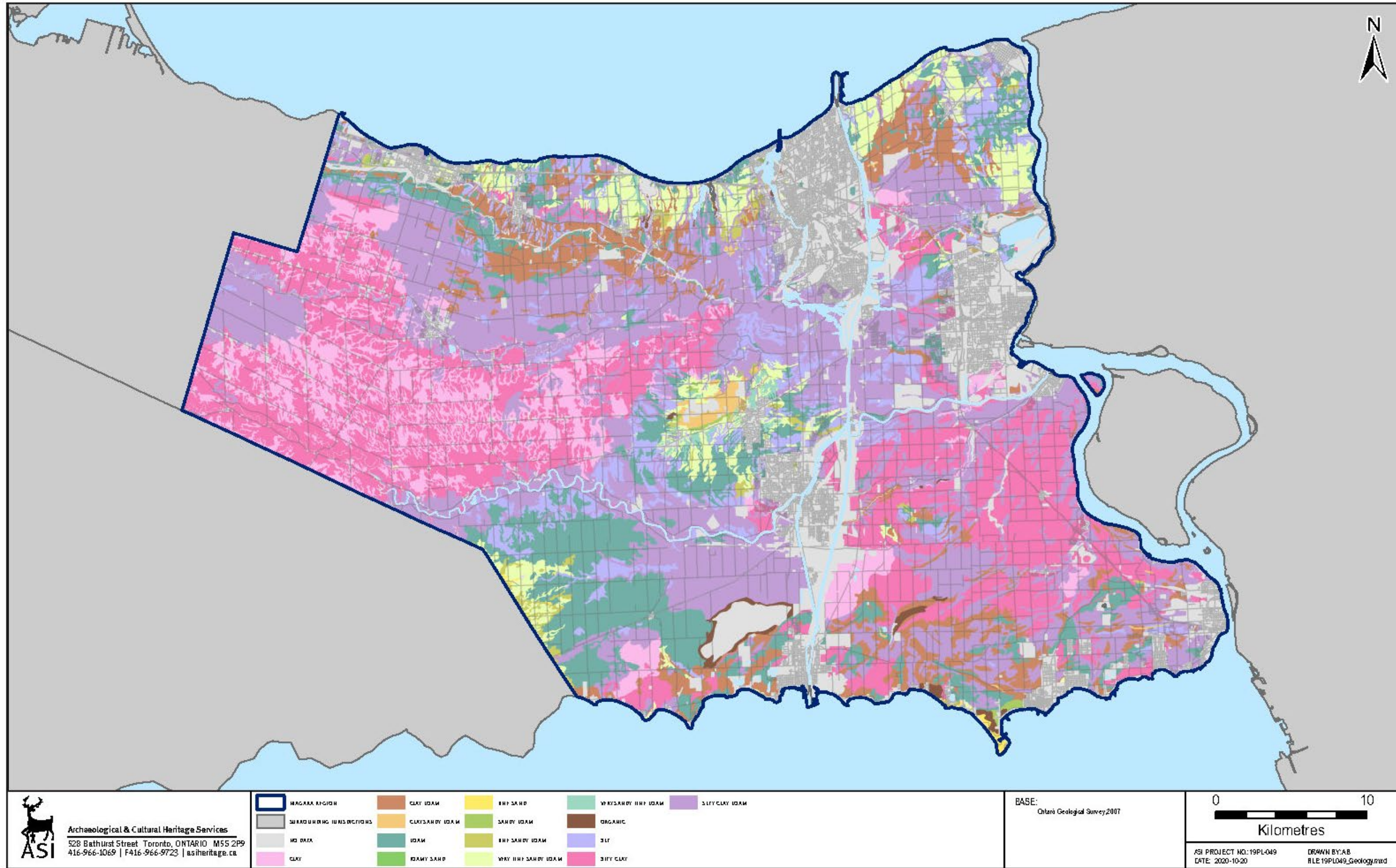


Figure A6: Soil Textures of Niagara Region

Table A4: Soil Series of Niagara Region

Parent Material	Soil Series	%	CSSC Taxon	Agricultural Capability Class (CLI)	Drainage	Texture
fluvial and kame sandy loam and gravelly sand	Ridgeville	0.1	GL.MB	2	I	FSL
fluvial and kame sandy loam and gravelly sand	Fonthill	0.4	O.MB	2	R	CSL
lacustrine heavy clay	Ontario	0.1	BR.GBL	4	MW	SIC
lacustrine heavy clay	Smithville	1.2	BR.GBL	3	MW	SICL
lacustrine heavy clay	Niagara	2.2	GL.GBL	3	I	SICL
lacustrine heavy clay	Haldimand	9.2	GLBR.GBL	3	I	SICL
lacustrine heavy clay	Lincoln	7.8	O.HG	3	P	SICL
lacustrine heavy clay	Welland	7.4	O.HG	4	P	CL
lacustrine sand	Fox	0.1	BR.GBL	2	R	SL
lacustrine sand	Brady	0.0	GLBR.GBL	2	I	FSL
lacustrine sand	beach	0.0	n/a	n/a	V	n/a
lacustrine sand	Granby	0.1	O.HG	2	VP	ORG
lacustrine silts and loams	Brant	0.4	BR.GBL	6	W	SIL
lacustrine silts and loams	Tuscola	0.4	GLBR.GBL	1	I	L
lacustrine silts and loams	Colwood	0.1	O.HG	2	P	SIL
lacustrine silty clay and clay	Brantford	1.5	BR.GBL	3	MW	SICL
lacustrine silty clay and clay	Beverly	9.6	GLBR.GBL	2	I	SIL
lacustrine silty clay and clay	Toledo	10.6	O.HG	3	P	SICL

Parent Material	Soil Series	%	CSSC Taxon	Agricultural Capability Class (CLI)	Drainage	Texture
loam over lacustrine clay	Bennington	0.1	BR.GBL	2	W	SL
sand over lacustrine clay and silty clay	Bookton	0.0	BR.GBL	2	W	L
sand over lacustrine clay and silty clay	Wauseon	0.3	O.HG	2	P	FSL
sand over lacustrine silts and loams	Vittoria	0.2	GLBR.GBL	1	I	VFSL
sand over lacustrine silts and loams	Silver Hill	0.0	O.HG	2	P	FSL
very fine lacustrine sand	Grimsby	0.8	BR.GBL	4	W	VSFL
very fine lacustrine sand	Vineland	1.7	GL.GBL	2	I	VFSL
very fine lacustrine sand	Flamborough	0.1	O.HG	2	P	VFSL
clay loam till	Oneida	1.3	BR.GBL	4	MW	L
clay loam till	Chinguacousy	5.3	GL.GBL	1	I	L
clay loam till	Jeddo	3.6	O.HG	3	P	CL
clay over clay loam till	Cashel	0.6	O.GBL	2	MW	L
clay over clay loam till	Malton	3.0	O.HG	3	P	SICL
clay over clay loam till	Peel	2.7	PZ.GBL	2	I	SIC
loam over clay loam till	Tavistock	2.2	GLBR.GBL	2	I	VFSL
loam over clay loam till	Maplewood	1.4	O.HG	2	P	SIL
sand over clay loam till	Berrien	0.5	GLBR.GBL	2	I	FSL
clay over Queenston shale	Trafalgar	0.3	GL.GBL	2	I	SICL
clay over Queenston shale	Morley	0.1	O.HG	3	P	SICL

Parent Material	Soil Series	%	CSSC Taxon	Agricultural Capability Class (CLI)	Drainage	Texture
thin sediments over Paleozoic bedrock	Franktown	0.9	GL.MB	4	I	L
thin sediments over Paleozoic bedrock	Brooke	0.6	O.HG	5	P	SICL
thin sediments over Paleozoic bedrock	Farmington	1.2	O.MB	4	R	L
Paleozoic bedrock	escarpment	0.4	n/a	n/a	R	n/a
eolian dunes and sand plains	Plainfield	0.1	BR.GBL	3	R	FS
eolian dunes and sand plains	Walsingham	0.2	GLBR.GBL	3	I	VFSL
various	alluvium	2.8	n/a	6	n/a	SICL
organic fen sediments	Wainfleet	0.2	M.F	n/a	VP	n/a
organic fen sediments	Sherkston	0.0	T.F	n/a	VP	ORG
organic fen sediments over clay	Lorraine	0.1	T.M	n/a	VP	ORG
organic swamp sediments	Portsmouth	0.0	TY.M	n/a	VP	ORG
organic swamp sediments over loam	Quarry	0.4	n/a	n/a	VP	n/a
organic swamp sediments over loam	Holly	0.1	T.M	n/a	VP	ORG
n/a	water	1.6	n/a	n/a	n/a	n/a
n/a	not mapped	16.2	n/a	n/a	V	n/a
n/a	marsh	0.0	n/a	7	VP	ORG

Canadian System of Soil Classification (CSSC) Taxons: O.HG=Orthic Humic Gleysol, O.GBL=Orthic Gray Brown Luvisol, O.MB=Orthic Melanic Brunisol, GL.MB=Gleyed Melanic Brunisol, BR.GBL=Brunisolic Gray Brown Luvisol, GL.GBL=Gleyed Gray Brown, GLBR.GBL=Gleyed Brunisolic Gray Brown Luvisol, PZ.GBL=Podzolic Gray Brown Luvisol, M.F.=Mesic Fibrisol, T.F.=Typic Fibrisol, T.M.=Terric Mesisol, TY.M.=Typic Mesisol

Canada Land Inventory (CLI) Soil Capability for Agriculture Classes: 1=no limitations, 2=slight to moderate limitations, 3=moderate limitations, 4=moderate to severe limitations, 5=severe limitations, 6=very severe limitations, 7=unsuitable for crops

Drainage Classes: R=Rapidly, W=Well, MW=Moderately Well I=Imperfectly, P=Poorly, VP=Very Poorly

Texture Classes: CL=Clay Loam, CSL=Coarse Sandy Loam, FS=Fine Sand, FSL=Fine Sandy Loam, L=Loam, ORG=Organic, SIC=Silty Clay, SICL=Silty Clay Loam, SIL=Silty Loam, SL=Sandy Loam, VFSL=Very Fine Sandy Loam

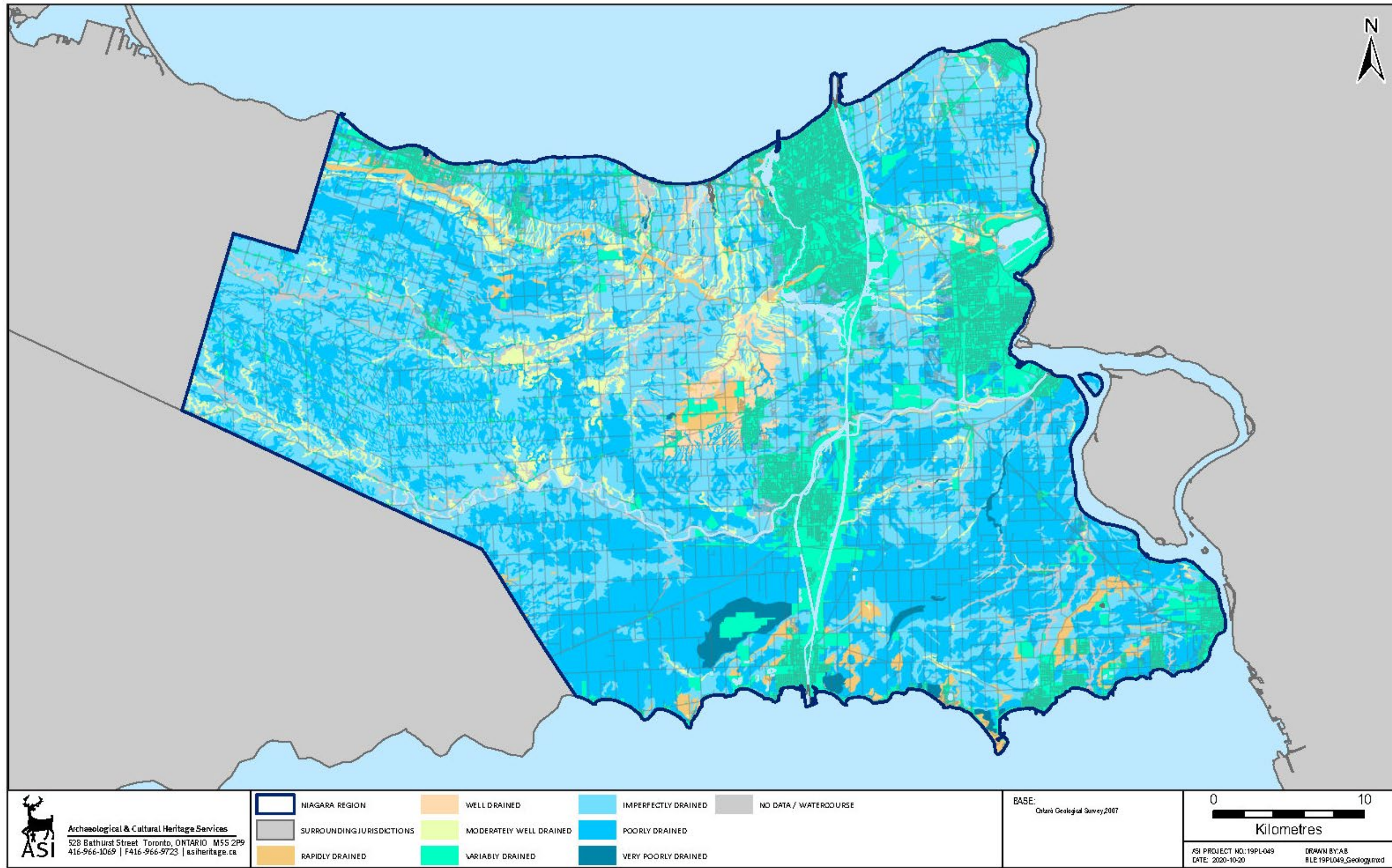


Figure A7: Soil Drainage of Niagara Region

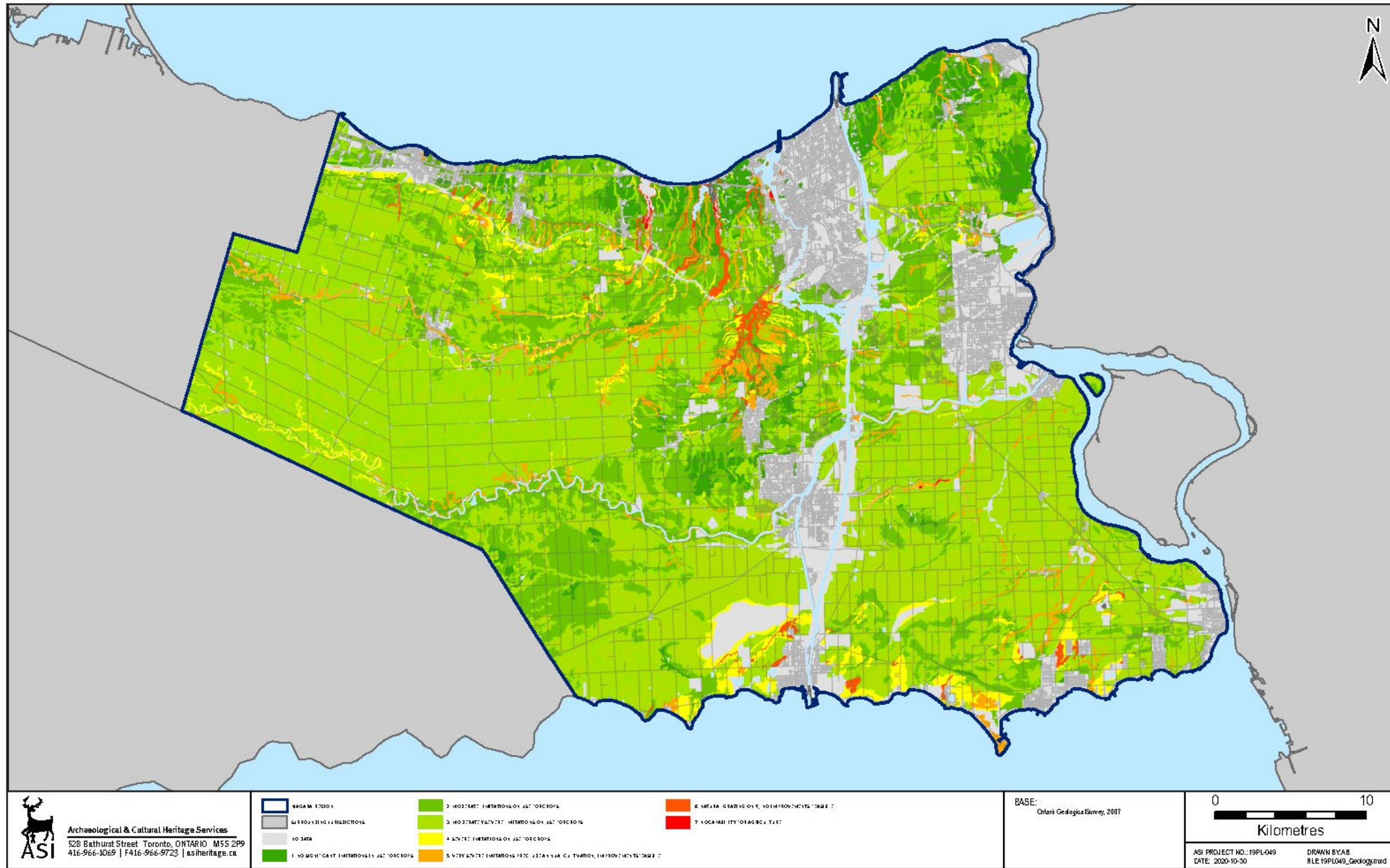


Figure A8: Canada Land Inventory Soil Capability for Agriculture in Niagara Region

Roughly three-quarters of the mineral soils in Niagara Region are represented by the luvisolic soil order (41%), most of which are gleyed luvisols (32%), together with gleysolic soils (35%). There are also minor amounts of brunisols (3%) and organic humisols (1%). About 20% of lands are unclassified (Table A4).

Luvisols are well to imperfectly drained mineral soils that have developed on calcareous parent materials under the influence of the growth and decomposition of forest vegetation in sub-humid to humid, mild to very cold climates. Luvisols are characterized by eluvial Ae horizons and illuvial Bt horizons with silicate clay as the main accumulation product. The A and B horizons are slightly to moderately acidic, and the C horizons are usually neutral to alkaline. The Luvisolic soils of the region of Niagara belong to the Gray Brown Luvisol great group. Gray brown luvisols have developed under deciduous or mixed forest vegetation where high biological activity has resulted in the rapid incorporation of forest litter (L, F, H horizons) to form dark humic Ah horizons. The parent materials are typically till, glaciofluvial, or glaciolacustrine deposits. loamy textures predominate but clayey and sandy loams also occur. The morphological characteristics of the eluvial Ae horizon and textural Bt horizon are most strongly expressed on medium to fine textured soils. On coarser, sandy soils the properties of the profile tend to intergrade with those of brunisolic or podzolic soils. Luvisolic soils usually develop on gently to moderately rolling lands, especially on adequately drained, middle and upper slopes (Agriculture Canada Expert Committee on Soil Survey, 1987, pp. 78–79).

The poorly drained mineral soils of the region of Niagara are orthic humic gleysols. Gleysolic soils are poorly drained mineral soils that are saturated with water and are under reducing conditions, due to lack of aeration, for some or all of the year. Vegetative regimes are hydrophytic and range from tundra to forest and meadow. By definition these soils include dull, greenish to bluish grey gleyed horizons, although surface horizons may vary from organic O horizons to organic-mineral Ah and Ae horizons, with or without a B horizon. In Niagara Region most gleysolic soils belong to the Humic Gleysol great group. These have well-developed humic A horizons, over 8 centimetres in depth, overlying gleyed B or C horizons. Parent materials are typically alluvial, glacio-lacustrine, or resorted till deposits. Where humic gleysols are dominant, the topography is usually level to gently rolling. Where they are subordinate, they often occupy local depressions or kettles, and in Niagara Region they often intergrade with gleyed luvisols. Fertility limitations of humic gleysols are minor and productivity can be high for a variety of crops if drainage is artificially improved. Meadow grasses and sedges are commonly supported in the natural state (Clayton et al., 1977, pp. 136–140).

Brunisols are a broad group of well to imperfectly drained mineral soils that have developed under vegetative regimes ranging from forest to alpine to tundra. They occur in varying climatic zones, from Mesic to Arctic and from semiarid to perhumid. Their distinguishing characteristic is a prominent brownish Bm horizon which has developed *in situ* and hence

mostly lacks the illuviation that typifies podzolic and luvisolic soils. Since leaching and weathering are relatively poorly developed in brunisolic soils, their chemical characteristics tend to reflect those of the parent material. In the region of Niagara, soils of the Melanic Brunisol great group, formerly referred to as Brown Forest soils, are the only representatives of the brunisolic order. Developed under deciduous or mixed forests, these soils exhibit a pronounced humic A horizon as a result of the degradation of forest litter by soil fauna. Parent materials are most frequently loamy to clayey, moderately to strongly calcareous, glacial till and lacustrine deposits. Topography is typically gently to moderately rolling. Fertility limitations of melanic brunisols are generally slight to moderate and productivity is often high. While structural limitations are generally not a problem, steepness of terrain, shallowness of bedrock, and low natural fertility can be limitations of melanic brunisols in the region of Niagara (Clayton et al., 1977, pp. 124–131; Kingston & Presant, 1989).

Organic soils contain more than 30% organic matter by weight and meet certain criteria of thickness within a defined control section. Unless artificially drained, they are water saturated or nearly saturated throughout the year, and as such are derived from the decomposition of hydrophytic vegetation. Organic soils are classified on the basis of degree of decomposition within the control section, which is divided into an upper tier (30–60 centimetres), middle tier (60 centimetres thick or to contact with water or sediment/bedrock), and lower tier (40 centimetres thick or to contact with water or sediment/bedrock). Fibric layers are composed of poorly decomposed fibres which are readily identifiable to botanical origin, and soils with predominant middle or middle and upper tier fibric layers are termed fibrisols. Mesic layers are composed of organic matter in an intermediate stage of decomposition, and soils with predominant middle or middle and upper tier mesic layers are termed mesisols. Fibrisols and mesisols are commonly referred to as peat. Humic layers are composed of highly decomposed organic material, and soils with predominant middle or middle and upper tier humic layers are termed humisols (formerly known as muck soils) (Agriculture Canada Expert Committee on Soil Survey, 1987, pp. 82–92; Clayton et al., 1977, pp. 142–143).

3.7 Pre-contact Climate

The climate of southern Ontario is described as having warm summers, mild winters, and a long growing season with usually reliable rainfall. Precipitation is fairly evenly distributed throughout the year. Regional climatic variations are due primarily to elevation and topography, prevailing winds, and proximity to the Great Lakes. Year to year variability is attributable to the nature and frequency of weather systems which cross the area (Brown et al., 1980, pp. 1–2).

As illustrated in pollen diagrams from sediments in eastern Lake Erie (Lewis et al., 2012) and the Willoughby bog (Pengelly et al., 1997) (Figure A9), the fossil pollen record provides an outline of the regional paleoclimate. After adjustments are made for the differential dispersion

of pollen by various plant species, a reconstruction of the prevailing climatic conditions through time can be undertaken on the basis of the preferred habitats of those species, especially trees.

During the period of initial deglaciation (ca. 14,000 cal. BP), a harsh climate characterized by cool and extremely dry conditions prevailed in the study area. Mean annual temperatures in the study region were probably less than -3° Celsius (McAndrews, 1981). Some have attributed these low temperatures throughout the Great Lakes-St. Lawrence region to the inflow of large volumes of glacial meltwater or proglacial lake water (Lewis et al., 2008; Lewis & Anderson, 1989). However, more recent research suggests that the residual Laurentide Ice Sheet north of the Great Lakes continued to affect the climate by favouring the flow of cold dry Pacific and Arctic air masses across the basin thereby blocking the northward flow of moist subtropical air masses leading to a much cooler and drier climate through the early to middle Holocene (Lewis, 2016). This resulted in a protracted lowstand throughout the Great Lakes watershed between roughly 12,300 and 8,300 cal. BP (Lewis, 2016; Lewis et al., 2012).

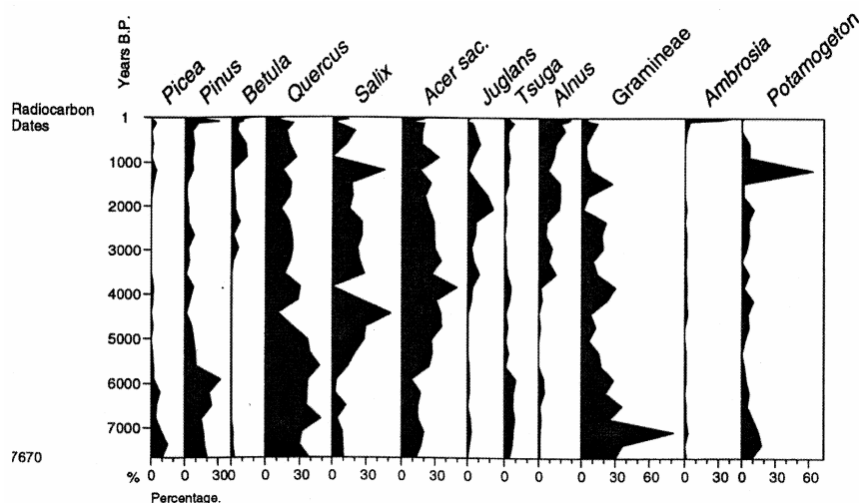


Figure A9: Pollen Diagram from Willoughby Bog (Pengelly et al., 1997)

After about 8,300 cal. BP, the regional climate became more moderate, experiencing warmer mean annual temperatures and greater precipitation (Lewis, 2016). At their maximum, during this Holocene Climatic Optimum (also known as the Altithermal or Hypsithermal), temperatures probably exceeded present levels by 1° to 2° Celsius. It is unlikely, however, that this climatic amelioration was sufficient to affect the zonal vegetation (McAndrews, 1981). Essentially modern mean annual temperatures and precipitation levels were reached by around 7,000 cal. BP.

Climatic trends and fluctuations play a significant role in determining the character of the natural environment to which human populations must adapt. As the shift in climatic conditions which occurred following deglaciation was very gradual, the concomitant changes which were necessary to the subsistence modes of Indigenous populations were also gradual. While long-term climatic trends did not directly influence the subsistence practices of a population in the short term, there are many short-term climatic factors that had significant implications for local settlement-subsistence practices, the most critical of which were temperature, precipitation, potential evapotranspiration, frost-free days, snowfall, and wind-speed and direction. Short-term climatic irregularities may have been most keenly felt during the last millennium before European contact, as Indigenous groups became increasingly reliant upon agriculture to supplement their dietary requirements.

The number of frost-free days, which represents the effective length of the growing season for agriculture, would have been of importance to Indigenous horticulturalists. The mean length of the frost-free period is about 165 days in the Niagara Region (Brown et al., 1980, p. 60), which is more than adequate for traditional Indigenous agriculture. Moreover, Niagara lies within the 3100-3300 range for corn heat units (CHU), a measure of capacity for corn maturation based on maximum and minimum daily temperatures. Grain corn is typically grown in areas exhibiting >2500 CHU, while corn can be grown for silage in areas of only 2100 CHU (Brown et al., 1980, pp. 37–38).

The mean annual precipitation in the Niagara Region is about 76-86 centimetres, with monthly means fairly evenly distributed at about 76 millimetres. Factors influencing precipitation at the mesoclimatic scale in southern Ontario are slope, elevation, proximity to the large lakes, and the prevailing winds (Brown et al., 1980, p. 39). The last two variables exert considerable influence on local precipitation patterns. For Indigenous horticulture, the amount of precipitation during the growing season would have been sufficient throughout Niagara, ranging above 33 centimetres, except in areas with poor moisture retention and steep terrain. In several areas, these xeric conditions likely contributed to the development of oak- and pine-dominated forests.

In the region of Niagara, local topography and proximity to large bodies of water would have created many distinct mesoclimates. In particular, the upland locations may be exposed to greater winds, cooler temperatures and a shorter frost-free period as compared to lowland valleys and coastal locales. However, it should be stressed that local topography and prevailing winds would have also influenced the Niagara mesoclimate with respect to temperature. For example, valleys provide channels for both up-valley and down-valley air flow under certain conditions (Greenland, 1977, pp. 23–27).

Climatic conditions have been far from constant over the last millennium. Of particular importance is a climatic period characterized by cooling and referred to as the "Little Ice Age" (Bryson & Murray, 1977; Grove, 2004). This episode, which is conventionally dated to

between A.D. 1550 and 1880, may have reduced average daily temperatures in southern Ontario by about one-half degree Celsius. In addition, early fall temperatures may have been reduced by about 1.5 degrees Celsius (Bryson & Murray, 1977).

3.8 Pre-contact Vegetation

While a comprehensive discussion of the pre-contact vegetation of the region of Niagara is beyond the scope of this study, it is possible to draw some general conclusions regarding the development of plant communities within the region since the Pleistocene. In addition, as the nature of understorey and forest floor vegetation is often dependent on the same factors which determine forest cover, and on the forest cover itself, an understanding of these factors may be useful in the recognition of particular floral resources within the environment which may have been actively sought out by past populations. The identification of these potential resources, and the determination of their general spatial and temporal variation within the study area, will further assist in reconstructing the subsistence strategies of Niagara's pre-contact Indigenous occupants and the changes these practices may have undergone over time.

Since the geographical distribution of forest communities is significantly influenced by factors such as soil texture and drainage, terrain, and climate, it is important to remember that these attributes of the Niagara Peninsula have changed significantly over time. During the first millennium of human occupation, water levels in the Great Lakes were high, although the level in the Ontario basin was still lower than now. In the Erie basin, though, the presence of Lake Wainfleet reduced the southern extent of the Niagara Peninsula by more than 10 kilometres and created a large archipelago east and south of Welland. The situation was much different over the next six millennia, as levels in the Ontario and Erie basins dropped during a cool, dry climatic regime. These lower base levels would have promoted downcutting of tributary watercourses, thereby locally lowering the water table and likely shifting the location of wetlands and forest communities adapted to moist conditions onto the former Ontario and Erie lakebeds. This was reversed again during the roughly two millennium Nipissing high water phase of the Great Lakes and the re-establishment of Lake Wainfleet. Essentially modern conditions developed over the final four millennia.

Pollen spectra from regional sites like the Willoughby bog (Figure A9) (Pengelly et al., 1997) and eastern Lake Erie (Lewis et al., 2012) indicate that spruce (*Picea* sp.) and pine (likely Jack pine (*Pinus banksiana*)) dominated the regional forest in the period following deglaciation until around 11,000 cal. BP. Pine (likely white pine (*Pinus strobus*)) assumed dominance at that time and was joined by oak (*Quercus* sp.), likely the more dry-adapted species of oak given the climate at the time. After about 8,300 cal. BP, as the climate became more moist, additional northern hardwood taxa became established, including maple (*Acer* sp.), hemlock

(*Tsuga canadensis*), ash (*Fraxinus* sp.), sycamore (*Platanus* sp.), walnut (*Juglans* sp.), birch (*Betula* sp.), alder (*Alnus* sp.), and willow (*Salix* sp.).

Although this northern mixed hardwood forest prevailed in the region of Niagara until the land clearances of the nineteenth century, there would have been fluctuations in forest composition due to climatic change and regional processes of forest succession. These processes would have included centuries of Indigenous farming up to the middle of the seventeenth century that would have been a local agent of land clearance triggering forest succession. This succession would still have been in progress when Euro-Canadian settlement began roughly two centuries later.

Since the beginning of the nineteenth century, the forest-cover of the region of Niagara has been severely reduced with only isolated remnants still extant. A number of sources are available to permit the reconstruction of local vegetation immediately prior to Euro-Canadian settlement. These include historical descriptions, early land surveyors' notes and maps, phytosociological reconstruction based on soils, and extrapolation from extant forest stands in, and adjacent to, the study area.

Under the widely used ecological land classification system developed for Ontario by Hills (1958), revised by Burger (1993), and others (Crins et al., 2009; Wester et al., 2018), Niagara Region lies within Ecoregion 7E Lake Erie. Characteristic tree species for various soil moisture and ecoclimatic regimes within these site regions are presented in Table A5.

Table A5: Characteristic Tree Species - Site Relationships in Ecoregion 7E2

ECOCLIMATE (TEMPERATURE)			ECOCLIMATE (TEMPERATURE)			ECOCLIMATE (TEMPERATURE)		
Hotter			Normal			Colder		
SOIL MOISTURE			SOIL MOISTURE			SOIL MOISTURE		
Drier	Fresh	Wetter	Drier	Fresh	Wetter	Drier	Fresh	Wetter
r, b, ch Oak	w,r Oak	<i>r, si Maple</i>	w Pine	h Maple	sw, pi Oak	<i>e Hemlock</i>	w Elm	<i>ba Fir</i>
	w Ash	<i>w, r Ash</i>	r w Oak	Beech	r, b Ash	<i>w Pine</i>	b Ash	<i>w Spruce</i>
sb Hickory	h maple	<i>w Elm</i>	sb, p Hickory	Basswood	w Elm	<i>h Maple</i>	r Maple	<i>r Maple</i>
Butternut	b Walnut	<i>Sycamore</i>	w, ro Elm	r, w Oak	bn Hickory		e Hemlock	<i>y,w Birch</i>
	Tulip	<i>Tulip</i>		sb, bn Hickory				<i>ew Cedar</i>
t,l Aspen	p Hickory	<i>e Cottonwood</i>		e Cottonwood				
	Butternut	<i>b Gum</i>		b Cherry				

Ontario's ecoregions have been further classified into ecodistricts (Wester et al., 2018). Niagara Region straddles two ecodistricts, 7E3 (Grimsby Ecodistrict) extending from the Niagara Escarpment northward and 7E5 (Niagara Ecodistrict) extending to the south. Tree species typical of the Grimsby Ecodistrict (7E3) on fresh sites include sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), American basswood (*Tilia americana*), and white ash (*Fraxinus americana*), while on drier sites northern red oak (*Quercus rubra*) and

2 Bold = High proportion of site region, Normal = Moderate Proportion of site region, *Italics* = Low Proportion of site region

For each site region, upper row taxa are climax species and lower row are pioneer species.

Abbreviations: b=black, ba=balsam, bn=bitternut, ch=chinquapin, e=eastern, ew=eastern white, h=hard, l=largetooth, p=pignut, pi=pin, r=red, ro=rock, sb=shagbark, si=silver, sw=swamp, t=trembling, w=white, y=yellow (Burger, 1993)

white oak (*Quercus alba*) are common. Subordinate species include bur oak (*Quercus macrocarpa*), black cherry (*Prunus serotina*), eastern hop-hornbeam (*Ostrya virginiana*), balsam poplar (*Populus balsamifera*), yellow birch (*Betula alleghaniensis*), red maple (*Acer rubrum*), black walnut (*Juglans nigra*), large-toothed aspen (*Populus grandidentata*), trembling aspen (*Populus tremuloides*), paper birch (*Betula papyrifera*), black oak (*Quercus velutina*), shagbark hickory (*Carya ovata*), bitternut hickory (*Carya cordiformis*), slippery elm (*Ulmus rubra*), butternut (*Juglans cinerea*), and blue-beech (*Carpinus caroliniana*). On wetter sites, silver maple (*Acer saccharinum*), green ash (*Fraxinus pennsylvanica*), black ash (*Fraxinus nigra*), eastern cottonwood (*Populus deltoides*), American elm (*Ulmus americana*), and Manitoba maple (*Acer negundo*) are typical (Wester et al., 2018).

Forest communities of the Niagara Ecodistrict (7E5) on fresh sites may feature sugar maple, American beech, northern red oak, red maple, white ash, American basswood, eastern hop-hornbeam, white oak, balsam poplar, yellow birch, large-toothed aspen, black cherry, butternut, blue-beech, trembling aspen, and paper birch. Subordinate species include shagbark hickory, northern pin oak (*Quercus ellipsoidalis*), eastern cottonwood, bitternut hickory, black walnut, American chestnut (*Castanea dentata*), sycamore (*Platanus occidentalis*), black willow (*Salix nigra*), rock elm (*Ulmus thomasi*), slippery elm, and black maple (*Acer nigrum*). Wetter sites may feature green ash, black ash, silver maple, American elm, bur oak or Manitoba maple (Wester et al., 2018).

Many Carolinian species reach the northern limit of their range in Niagara Region, thus forest communities may include trees uncommon in the rest of Ontario, such as black gum (*Nyssa sylvatica*), swamp white oak (*Quercus bicolor*), black oak, chinquapin oak (*Quercus muehlenbergii*), shellbark hickory (*Carya laciniosa*), pignut hickory (*Carya glabra*), tulip tree (*Liriodendron tulipifera*), sassafras (*Sassafras albidum*), cucumber tree (*Magnolia acuminata*), pawpaw (*Asimina triloba*), and red mulberry (*Morus rubra*) (Wester et al., 2018).

The hilly terrains of the Niagara Escarpment and Fonthill Kame create opportunities for ecological toposequences to develop. These are ecological structures in which the dominant taxa tend to develop continua along topographic gradients leading to stacked or nested bands of different microenvironments. For example, one might find a dry-adapted forest community along the edge of a porous upland grading into a mesic community downslope grading into a wetland community in the valley below. Such toposequences exhibit much more biotic diversity than a flat area of similar size (R. I. MacDonald, 2002, p. 234).

The use of historical survey data involves the reconstruction of vegetation based on the observations of early land surveyors. These surveyors routinely recorded information about trees located along their survey lines. These data are found in the surveyor's notebooks, diaries, and maps, compiled when the original land surveys were carried out in the early nineteenth century. The quantity and quality of information regarding vegetation in these notebooks, however, is quite variable (Gentilcore & Donkin, 1973). The procedure for

transcribing vegetational data from the notebooks to topographic maps has been outlined by Heidenreich (1973), and carried out for parts of the region of Niagara (Finlay, 1978). While the necessary survey records are incomplete or missing for most of Niagara, this evidence can be augmented by tree species frequency data collected by Robert Gourlay in 1817 and published in 1822 (Gourlay, 1822; Moss, 1994; Moss & Hosking, 1983). Together, fairly clear forest communities and associations of these with physiographic and edaphic conditions can be elucidated and extrapolated.

In its climax state on mesic substrates, the closed canopy northern hardwood forest exhibits a heavily shaded understorey of limited biotic diversity and productivity, hence it is relatively impoverished as habitat for game animals or plant resources. This may be mitigated locally by the relative complexity of the vegetation as determined by the terrain and to historical contingencies, such as windthrow, which created gaps in the forest canopy. This variability can be best characterized with reference to the physiographic regions of the study area and to the various substrates within those regions (Table A6).

As illustrated in Table A5, oak can be difficult to use as an indicator species when interpreting historical survey records because its various species cover the spectrum of edaphic preferences from dry to swampy and early surveyors rarely identified it to species. Nevertheless, by comparing its location to the edaphic attributes of the substrate and to companion species, especially pine, useful interpretations can be made, as red and white oak often occur together with white pine on drier substrates and these taxa may form oak savannahs or pine barrens, respectively, under particularly dry conditions. A remnant of black oak savannah at Paradise Grove in Niagara-on-the-Lake may be indicative of a once more common ecosystem on the sandy substrates of the Iroquois Plain. This includes the large sand plain underlying St. Catharines, which was documented as “dry land” by the early surveyors, implying an open landscape with minimal tree cover as one would find in a savannah or pine barren. Other drier areas where oak and pine occurred include the Fonthill Kame, the uplands of the Buried Moraines, and the dunes of the Lake Erie Coast.

Oak was also predominant on the Haldimand Slough Clay Plain in the upper reaches of the Welland River. There, the dissected landscape presents a complex interplay of well, imperfectly, and poorly drains soils, and this seems to be reflected in the mix of tree species that span this spectrum of soil moisture preferences. In contrast, the Niagara Slough Clay Plain is younger and lower in elevation, so has not been dissected to the same degree. There, poorly drained soils are much more uniformly distributed, and this seems to have contributed to a much different array of forest communities favouring tree species adapted to fresh and wet conditions. It is also worth noting that the forests of the Haldimand Slough Clay Plain have been evolving in that area since the mid Holocene (ca. 8,300 14C cal. BP), whereas the forests of the Niagara Slough Clay Plain have only been developing there since the last retreat of Lake Wainfleet (ca. 3,770 14C cal. BP)—indeed the large wetland complexes in this area are the residual vestiges of that lake.

The frequency of wetlands, such as the large black ash swamp documented in Niagara-on-the-Lake, extensive black ash swamps in Wainfleet Township, the tamarack swamp component of the Wainfleet Bog, and many other swamps comprising mixes of black ash, alder, willow, and elm, can be attributed to the frequency of the poorly and very poorly drained soils that comprise 42% of Niagara Region. These occur as both extensive complexes (e.g., Wainfleet Bog, Humberstone Marsh, Willoughby Marsh) and more localized slough and riparian wetlands distributed across the landscape in flat and depressional terrain.

A portion of Niagara roughly equal in size (42%) to the poorly drained land is moderately well to imperfectly drained. On these substrates, beech and hard maple tend to form co-dominant forest communities often in association with shade-tolerant basswood and various other hardwood and softwood companion species, as noted above.

Table A6: Characterization of Historic Vegetation by Physiographic Region

Physiographic Region	Physiographic Sub-region	Historical Forest Communities	Historical Forest Communities
		Dominant	Subordinate
Iroquois Plain	Sand Plains	maple, beech, basswood, oak	oak (savannah), pine (barrens), hickory
	Till Plains	maple, beech, basswood, oak	hickory
	Clay Plains	maple, beech, black ash	oak, elm, basswood
Niagara Escarpment	Iroquois Bench & Short Hills Reentrant	maple, beech, basswood, oak	hickory
	Niagara Glen	maple, beech, basswood, oak	oak (savannah), black ash, elm,
Haldimand Clay Plain	Fonthill Kame Terrace/Slope	oak, pine, hickory	white ash, walnut
	Moulton & Welland Sand Plains	maple, beech, elm, ash	oak, pine, basswood, alder
	Buried Moraines	oak, pine	maple, beech, basswood, black ash
	Calcareous Rock Plain & Escarpment	maple, beech, basswood, oak	black ash

Physiographic Region	Physiographic Sub-region	Historical Forest Communities	Historical Forest Communities
		Dominant	Subordinate
	Lake Erie Coast	oak, black ash, elm	alder, willow
	Haldimand Slough Clay Plain	oak, pine, hickory, basswood	maple, beech, walnut
	Niagara Slough Clay Plain	maple, beech, basswood, oak	black ash, white ash, elm, alder, willow, tamarack (Wainfleet bog), hickory, hemlock
	Fort Erie Clay Plain & Niagara River Valley	maple, beech, basswood, oak	black ash, elm, alder, willow, hickory

3.9 Plant and Animal Resources

A wide variety of wild plant resources was available to the Indigenous populations residing in the region of Niagara. Of particular importance to this study were plant species that appear to have been integral to subsistence. Historically, and likely since oak arrived about 11,000 years ago, nut-bearing trees were abundant throughout the study area and could have provided an important and storable source of protein and fat. High in calories and rich in oil, nuts may have provided an important diet supplement. However, certain nuts required a considerable expenditure of energy for collection and processing, and nut masts are not consistent from one year to another. Nut-bearing trees found in the study area include oak, butternut, black walnut, hickory, chestnut, and beech. The floodplains of major watercourses and associated wetlands also would have offered a wide variety of resources, including foods such as roots, tubers, greens, as well as fibre and building materials, such as bark and cedar poles.

Fleshy fruits were an important resource in Indigenous subsistence systems, as they are high in energy and are a good source of Vitamin C, an antiscorbutic. Elderberry (*Sambucus canadensis*), serviceberry (*Amelanchier* sp.), hawthorn (*Crataegus* sp.), cherry (*Prunus* sp.), plum (*Prunus nigra*), currant (*Ribes* sp.), strawberry (*Fragaris* sp.), viburnum (*Viburnum* sp.), and bramble (*Rubus* sp.) all flourished within the study area, the majority favouring disturbed or forest-edge habitats. The remains of these species are commonly recovered from archaeological sites where conditions have favoured their preservation.

As with vegetation, a comprehensive discussion of fauna within the study area is not relevant to this study, however, local fauna did provide an extensive resource base for pre-contact

populations and are worthy of consideration. Different vegetation communities can be considered as micro-environments to which certain animal species may be principally adapted, although clearly, faunal habitats are of a clinal rather than a discrete nature. Generally, biotic diversity tends to be greatest where topography, drainage, and soils are most variable, resulting in a broader range of habitats per unit area. In contrast, areas with uniform topography, adequate drainage, and suitable soils tend to produce closed canopy climax forest with an impoverished under-storey that is less attractive to many animals.

For most of the pre-contact period, ungulates represented potentially significant resource in the region of Niagara. During the Late Pleistocene and Early Holocene, herds of caribou (*Rangifer tarandus*) may have traversed the upland spruce parklands. Woodland caribou range over areas of 200 to 4000 km², territories 5 to 100 times larger than moose and deer. In part, they require such large areas because they prefer relatively un-fragmented patches of open, mature forest through which they can navigate relatively easily and where they can find adequate supplies of ground lichen, especially in the winter when this is their primary food. Such areas tend to support little browse for moose and deer, and relatively low densities of predators such as wolves (Banfield, 1974, pp. 383–388; Rothfels & Russell, 2005; Species at Risk Public Registry, 2010).

Archaeological evidence indicates that elk or wapiti (*Cervus elaphus*) were present in southern Ontario throughout the Holocene, preferring early successional communities with conifers such as red pine, white pine, cedar, and balsam fir that provided shelter, security, and good browse. Dense conifer forests, though, are not preferred by elk. Similar to woodland caribou, elk are not migratory, yet range over relatively large areas of about 500 to 1000 km² (Ministry of Natural Resources, 2010; Telfer, 1990). Since ridge habitats seem to be important to elk, the fringes of the escarpments may have provided suitable range.

Moose (*Alces alces*) have similar habitat needs, preferring a mix of early successional—especially conifer—forest to provide browse and cover, as well as late successional conifer forest to provide shelter and protection in winter. In summer they also require lakes and rivers with aquatic vegetation. Unlike caribou and elk, though, moose are relatively solitary, with population densities on the order of 10 to 30 per 100 km² and ranges of only about 40 km² (Banfield, 1974, pp. 395–398; Telfer, 1997). The most likely moose habitat in the region would have been the coastal wetlands of Lake Ontario and Lake Erie.

White-tailed deer (*Odocoileus virginianus*) are browsers adapted to forest edge environments. As such, they would have been attracted to wetland margins for spring and summer forage, to stands of mast-producing trees such as oak, hickory, and walnut during the fall, and to conifer groves for winter browse and shelter. Deer are known to “yard” in the dense wooded areas to help mitigate harsh winter conditions and deep snow. Large areas of windfall or otherwise open canopy would also have provided a shifting habitat for deer whereas the closed canopy mixed hardwood forest would have provided very limited browse.

The highly variable and open forest communities of the Niagara Escarpment and Iroquois Plain would seem to have provided the best potential deer habitat, although they may have also been seasonally attracted to mast-producing forests in the fall. Moreover, during the Late Woodland period, deer would also have been very attracted to the cornfields and forest edges created by Indigenous farmers on the margins of the Iroquois strand and escarpments.

Forest and swamp edges would also have attracted snowshoe hare (*Lepus americanus*) and eastern cottontail (*Sylvilagus floridanus*), while marshes, swamps, kettle ponds and riparian wetlands would have provided suitable habitat for beaver (*Castor canadensis*) and muskrat (*Ondatra zibethica*). Wetland margins, stream valleys, and river floodplains, especially those with access to mast-producing beech forest, would also attract raccoon (*Procyon lotor*). Black bears (*Ursus americanus*) are wide-ranging omnivores with home territories of between 10 and 100 km² and typical densities of about two per 10 km². They prefer heavily wooded areas with access to food sources such as berry patches and mast-producing forest and would have occurred throughout the region of Niagara in small numbers.

Lake Ontario, Lake Erie, and the major rivers and streams would have provided an important fishery to Indigenous peoples. Resident populations of such species as brook trout (*Salvelinus fontinalis*) in the cold in-land streams and freshwater drum (*Aplodinotus grunniens*), brown bullhead (*Ictalurus nebulosus*), and smallmouth bass (*Micropterus dolomieu*) in the weedy river shallows, would have been available through much of the year. More important, however, may have been seasonal spawning shoals and runs of species such as walleye (*Sander* sp.), and sucker (*Catostomus* sp.) in the spring, and Atlantic salmon (*Salmo salar*) and lake whitefish (*Coregonus clupeaformis*) in the fall. For example, a significant pre-contact Indigenous walleye fishery spanning the last three millennia has been documented in the upper Niagara River at the Peace Bridge site (AfGr-9) (Needs-Howarth & MacDonald, 2012) and other sites in the vicinity (Ingleman et al., 2012).

Three principal fish habitats can be identified within the region of Niagara watersheds: the littoral waters of Lake Ontario and Lake Erie; the pool and riffle sequences of headwater streams and rivers; and the larger channels and riparian wetlands of the middle and lower reaches of the major rivers. Although it is likely that all these habitats would have been exploited, fish productivity would have been highest in the larger stretches of the rivers, especially where obstructions would have constrained and concentrated fish movements. The higher fish productivity of these areas can be attributed to the high primary production of riparian wetlands and the greater area and diversity of the habitat structure.

Archaeological investigations help to characterize the three major seasonal fisheries available to Indigenous populations in the Great Lakes watershed (Cleland, 1982; R. I. MacDonald & Williamson, 2001; Needs-Howarth, 1999; Needs-Howarth & Thomas, 1998). The first group, including lake whitefish, cisco or lake herring (*Coregonus artedii*), and lake trout (*Salvelinus namaycush*), are typically harvested during spawning runs near the shores

of large lakes in the fall. The second fishery comprising lake sturgeon (*Acipenser fulvescens*), longnose sucker (*Catostomus catostomus*), yellow perch (*Perca flavescens*), and walleye (*Sander* sp.), occurs during spring spawning runs and often involves intercepting fish coming from large lakes into rivers and streams. The third fishery occurs throughout the warm seasons and is a generalized harvest of fish available from inland waterways and lakeshores. These include northern pike (*Esox lucius*), white sucker (*Catostomus commersoni*), brown bullhead (*Ictalurus nebulosus*), bass (*Micropterus* sp.), sunfish (*Lepomis* sp.), and yellow perch. While there have been changes to the aquatic ecosystems by post-settlement land clearance and damming of rivers for water power and flood control as well as the introduction of non-indigenous species, the fish species present on pre-contact archaeological sites are generally still extant and within their historical ranges, although their specific distributions have changed (Metzger, 2010, 2011; Scott & Crossman, 1973). A noteworthy exception is Atlantic salmon which was extirpated from the Ontario watershed in the nineteenth century (Scott & Crossman, 1973).

4. Indigenous Archaeological Site Potential Model: GIS Layers and Analysis

This section considers the human paleoecology of the Niagara Region in order to develop a deductive narrative which outlines probable pre-contact Indigenous land-use trends through time.

The archaeological potential model was developed using an ArcGIS® Geographic Information System to summarize and map various data sets as separate but complementary layers. Modelling criteria were then derived through analysis of these layers, and these criteria were applied to produce a final, composite layer which maps archaeological site potential within the region of Niagara.

Digital data for the initial base layer was provided by Niagara Region. Included on this layer were hydrographic features, including watercourses, lakes, ponds, and wetlands, the road network and current vegetation. Through the research process, many additional datasets were reviewed and incorporated in order to inform the development of the model.

4.1 Environmental Layers

4.1.1 Water

Hydrographic features, including major rivers, creeks and their tributaries, as well as other bodies of water, such as ponds and wetlands already existed as layers on the digital base mapping, yet when overlaid on the ortho-imagery, there are clearly historical or intermittent

watercourses that are not included. Therefore, it became necessary to improve the resolution of hydrographic features by digitizing data from other sources, such as historical maps.

While the main source of hydrographic data used in the site potential model was modern watercourse data, recorded at a scale of 1:250,000, retrieved through Land Information Ontario, these data were found to under-represent third-order streams compared to various historical and modern map sources. Tertiary streams are particularly important in areas such as the region of Niagara, which contain the headwaters for several sub-watersheds, particularly in upland environments. In order to improve the resolution of the hydrographic dataset, all natural watercourses were selected from Niagara Region's 1:2,000 scale Contemporary Mapping of Watercourses dataset and imported into the hydrographic dataset. Another potential source of error in the hydrographic dataset comes from the extensive improvements to the drainage networks within the region, such as agricultural tiling and the rerouting of streams. As such, various historical Department of Militia and Defense topographic maps dating to the first half of the Twentieth century, recorded at a scale of 1:63,360 and modern National Topographic Survey maps, recorded at a scale of 1:50,000, were consulted for additional missing watercourses. Lastly, historical and modern aerial photography and ortho-imagery was consulted for areas where research would dictate that a water source should be close by. Digital versions of these maps were imported into GIS software and georeferenced using present lot boundaries, as well as modern landmarks, such as roads. The final watercourse dataset was then cross-referenced against historical mapping, whereby any streams absent in the modern dataset but shown on historical maps were added. Lastly, given the large amount of suspected wetland loss in the region since settlement, it was determined that a layer representing the full pre-settlement wetland extent would be necessary to evaluate pre-settlement period land use. This dataset was provided by Ducks Unlimited Canada, and was created using a model which combined edaphic variables such as drainage and soil type with local topography (Ducks Unlimited Canada, 2010; Snell, 1987). While these efforts greatly improved the resolution of the hydrographic layer, it was recognized that a small percentage of site locations may have been influenced by water sources than could not be practically resolved through available mapping.

Another important consideration is the location of former strandlines within the region during various hydrographic highstands. As discussed in Section 3.3, the two major former shorelines present in the region are the glacial Lake Iroquois shoreline and the Lake Wainfleet shoreline (Figure A3). Although differential isostatic rebound would have caused some warping of these strandlines, with minor upwards tilting from south to north, this would have been mitigated in the region of Niagara by the fact that both trend primarily east-west. To approximate their location for the purposes of this study, they were mapped using the following elevations above mean sea level in accordance with published observations (Feenstra, 1981; Lewis et al., 2012; Pengelly et al., 1997): Lake Iroquois - 110 m asl (Feenstra, 1981) and Lake Wainfleet - 180 m asl (Lewis et al., 2012; Pengelly et al.,

1997). Elevational data were drawn from a 1 m contour dataset provided by Niagara Region. This dataset was derived from a Digital Terrain Model of the region and has an error range of ± 0.5 m. Given that coastal environments are highly dynamic, and strandlines simply demarcate locations where the water plane persisted long enough to cut a beach ridge, this level of accuracy was deemed to be quite sufficient. Fluctuations in the position of the shoreline may have been particularly noteworthy for Lake Wainfleet, as this water body was never more than about 5 metres deep, thus would have been prone to significant lateral movement of the shoreline with even modest changes in water plane elevation.

4.1.2 Soils

Digital soils data were acquired from the Geomatics Service Centre, Ontario Ministry of Agriculture, Food and Rural Affairs. This layer is essentially a digital version of the soils mapping contained in the Ontario Soil Survey Report for Niagara Region (Kingston & Presant, 1989).

The soil survey for the region of Niagara had mapped some 7887 discrete soil series polygons within the region at 1:25,000 scale (Kingston & Presant, 1989), providing relatively high resolution of soil variability across the region. At the same time, however, this complex array of mapped soils made it difficult to interpret gross regional trends. Accordingly, the soil series were re-grouped in order to provide mapped summaries of relevant attributes, including soil texture, drainage, and agricultural capability. The soil texture layer discriminated between the following, from coarsest to finest grained: fine sand, loamy sand, coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, silty loam, loam, silty clay loam, clay loam, silty clay, clay, and organic. The soil drainage layer discriminated between the following: well drained, moderately well drained, imperfectly drained, poorly drained, and very poorly drained. The soil capability for agriculture layer discriminated between: Class 1, having no significant limitations for agriculture; Class 2, having moderate limitations that restrict the range of crops or require moderate conservation practices; Class 3, having moderately severe limitations that restrict the range of crops or require special conservation practices; Class 4, having severe limitations that restrict the range of crops or require special conservation practices; Class 5, having very severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible; Class 6, which are capable only of producing perennial forage crops, and improvement practices are not feasible; and Class 7, having no capability for arable culture or permanent pasture (Canada Land Inventory, 1965).

The objective in aggregating the soils data this way was to facilitate its use as proxy measures for physiographic attributes for which there was no digital mapping, such as preferred growing conditions for various tree species (Burger, 1993; Crins et al., 2009; Hills, 1958; Wester et al., 2018). The soil texture layer reveals the strong correlation between parent materials associated with certain surficial (Quaternary) deposits and soils.

As noted in Section 3.6, the soil capability for agriculture layer reveals that more than half (65%) of the land in Niagara Region is arable farmland (Class 1 to 3). This indicates that availability of good quality soil would generally not have been a concern for Indigenous farmers. It also indicates that the substrate would generally have not been a significant constraint on the development of climax forest, although as noted in Section 3.8, edaphic variation due to slope and/or texture may have locally favoured certain vegetative associations over others.

4.2 Indigenous Archaeological Site Potential Layer

For the purposes of inductively modeling potential for the discovery of pre-contact Indigenous archaeological sites, based on the locations of previously registered sites, the total number of archaeological sites in the region of Niagara is 1703, of which 1385 have Indigenous components. Of the Indigenous sites, 894 lack artifacts that would allow dating or attribution of cultural affiliation. Understanding roughly when a site was occupied is important for modeling in order to tie settlement trends to contemporary environments. Over 500 sites are listed as isolated artifact finds, typically projectile points lost while hunting. While they may confirm the presence of Indigenous people in an area if they are temporally diagnostic tools, the relative randomness of their distribution limits their utility for understanding contemporary land-use patterns. About 700 sites are described as artifact scatters or campsites, but most have yielded no temporally or culturally diagnostic artifacts and are therefore of limited utility in the modeling exercise. Having reviewed all the sites with Indigenous components, the total number of substantial and datable Indigenous occupation sites most useful for inductive modeling was 283. Nevertheless, all 1385 registered Indigenous archaeological sites were included in the project GIS as a discrete layer and all 755 archaeological sites which represent more than a findspot were used in testing validity of the model.

While the number of registered Indigenous sites within the region of Niagara was sufficient to permit development of an inductive model to extrapolate archaeological potential based on locations of known sites, any trends so identified should also be consistent with expectations arising from deductive modeling. The following deductive model paints a general picture of pre-contact Indigenous land use throughout the millennia in the region of Niagara, based on an understanding of regional site types, ages, and evolving land-use patterns.

Throughout much of prehistory, the inhabitants of the region were hunter-gatherers who practised an annual subsistence round to exploit a broad range of natural resources for food and raw materials for such needs as shelter construction and tool fabrication. Assuming that access to natural resources influenced and constrained the movement and settlement of Indigenous peoples, our goal was to understand what these resources were, how they may have been distributed, how their use and distribution may have changed over time, and how the landscape itself may have constrained movement and access to resources as well as

settlement location. Given the requirements of this study, and our limited ability to precisely resolve details of past environments, we began by considering the relative merits of the physiographic areas, as it could be demonstrated that these represented certain constellations of environmental attributes. We proceeded chronologically in this investigation since certain aspects of Niagara had changed dramatically through the period of human occupation.

Hunter-gatherer bands have occupied Niagara from as early as 13,000 years ago, as illustrated by the presence of several Paleo period campsites and isolated finds (see Figure A11). Nine of these are situated in close proximity to the Lake Wainfleet strandline. Unfortunately, any similar coastal camps in the Ontario basin would now be submerged. At that time, the open boreal woodlands likely offered a rather limited selection of floral resources, hence subsistence would have been primarily oriented towards hunting and fishing. Paleo period foragers, with base camps situated in proximity to lakeshore resources such as fish and waterfowl, would have ranged widely in pursuit of other game, including browsers such as mastodon and grazers such as caribou and woolly mammoth. Onondaga Formation chert, a popular toolstone, appears to have had limited accessibility east of the Grand River at this time, as most of the outcrops would have been inundated by Lake Wainfleet. Exceptions may have occurred along the Onondaga Escarpment, on the contemporary archipelago of islands, where wave action and downcutting of streams may have exposed the chert. Discussions with knowledgeable archaeologists have revealed several such localities (personal communications with ASI Senior Associate Martin Cooper and ASI Lithic Analyst Douglas Todd). It is expected that Paleo period archaeological sites in Niagara Region will be similar to those already documented, ranging from isolated finds of chipped stone projectile points lost while hunting to small scatters of chipped stone debitage indicative of ephemeral campsites or the occasional larger campsite. Currently, there is only one registered Early Paleo period site, although a few fluted points have also been documented in local collections. Fourteen sites date to the Late Paleo period, and there are seven unspecified Paleo period sites in the region of Niagara. Thirteen of these sites have been identified as campsites while seven are identified as findspots and one is undetermined.

Through Late Paleo (ca. 12,500 – 11,000 cal. BP) and Early Archaic (ca. 11,000 – 9,000 cal. BP) times, the shorelines of Lake Ontario and Lake Erie receded significantly from their current locations and remained so until after 6,000 cal. BP. Onondaga Formation chert outcrops, likely accessible where streams eroded down to the bedrock south of the current Lake Erie shore, would have become more widely available at this time. Hunter-gatherer bands would have established warm season base camps at river mouths adjacent to these lakeshores where resources such as spawning fish could support small communities of perhaps 35 to 50 people. Such sites would now be submerged, although a cluster of campsites and findspots in the Ussher's Creek watershed near the Niagara River may represent a substantial warm season occupation. Some contemporary interior sites may have

also been eradicated by the later rise of Lake Erie waters and the return of Lake Wainfleet around 6,000 cal. BP. Resources may have been initially quite limited, as the forest evolved from a conifer-dominated community to a more mixed community with nut-producers like oak. Although the ability of interior habitats to sustain hunter-gatherer bands through the warm season improved over time, reduced cold season carrying capacity would require bands to spread out their population over the winter. During the cold seasons, these bands likely dispersed themselves by smaller kinship groups into interior hunting territories. Such hunting territories would likely have been organized on a sub-watershed basis, with individual families occupying adjacent stream catchment areas. Riparian wetlands and swamps would have provided fuel, building materials, roots and tubers, and small game. Archaeological evidence of such sites may be difficult to distinguish from warm season hunting camps, although the sustained occupation of a site over several months would likely leave a more substantial artifact assemblage. In the region of Niagara, a notable trend of sites situated in the middle and upper reaches of headwater streams, with consistency through Late Paleo and Early Archaic times, may reflect this land-use pattern or seasonal forays from coastal base camps. In addition to the Late Paleo period sites noted above, there are 24 campsites, 18 lithic scatters, one quarry, and 28 find spots with Early Archaic components.

By the beginning of the Middle Archaic period (ca. 9,000 – 5,000 cal. BP), adaptive patterns would have completed the shift from the initial ecological framework outlined above in response to the establishment of the northern mixed hardwood forest, with many nut-producing trees, abundant wetlands, and the wider range of available plant and animal resources. While warm season macroband camps would have still been situated at river mouths to intercept spawning fish, the major valleys seem to have increased somewhat in importance, particularly where camps could be situated on river terraces with better-drained soils and access to rich riparian habitat.

The consistency of land-use patterns noted for the Late Paleo and Early Archaic periods seems to continue, with notable clustering of sites in certain localities growing. For example, the headwaters rising on the apron of the Fonthill Kame seem to have been particularly popular, perhaps related to the predominance of well-drained sandy soils that likely supported considerable mast-producing forest communities. The sites on the south side of the kame are upstream from a cluster along the Welland River in Welland. The latter group is, in turn, upstream from sites arrayed along the lower reach of the river and the aforementioned and continuing cluster of sites near the confluence of Ussher's Creek with the Niagara River. One can imagine a long-established community moving seasonally between the Niagara River and the Fonthill Kame.

In the Lake Ontario basin, sites in the Twelve Mile Creek watershed also cluster on the apron of the Fonthill Kame as well as other headwater locations. In contrast, there are very few Middle Archaic sites or find spots along the middle or lower reaches of rivers flowing into Lake Ontario. Coastal base camps would also now be submerged there. This, and an

apparent decline in the location of sites in the upper reaches of other headwater streams, may suggest increasing territoriality or strategic use of base camps, or it may just be an artifact of the limited sample size. One possibility, tied to environmental change, is that the sparse understorey of the closed-canopy hardwood upland forests may not have attracted much interest through most of the year. In the autumn, however, stands of mast-producing trees (e.g., oak, beech) would have attracted both Indigenous foragers and game animals (e.g., deer, raccoons, squirrels, passenger pigeons) to these interior forests.

Another continuous and expanding group of sites can be seen clustering around the headwaters of streams flowing off the former islands that make up the Calcareous Rock Plain and Onondaga Escarpment. Some sites in these areas would likely be seasonal camps associated with coastal base camps now submerged. However, the refilling of Lake Ontario and Lake Erie after 6,000 cal. BP once again changed the coastline of the region of Niagara, re-establishing Lake Wainfleet and reducing the land available for occupancy. Some of these sites may therefore be base camps forced to move to higher ground by advancing Lake Wainfleet. The largest cluster overlooks the Wainfleet bog where rich wetland resources and potential chert outcrops may have been especially attractive. Wave action and lacustrine sediments below the strand of Lake Wainfleet likely erased all evidence of any occupation there post-dating its earlier retreat during the Late Paleo period. Currently, there are 32 Middle Archaic period camp sites, 30 lithic scatters, and 28 find spots in Niagara Region.

The clustering of sites at these locations (Figure A12) highlights the significance of proximity to waterways as a factor influencing Indigenous land-use patterns in the region of Niagara throughout human history. Entrenchment and floodplain evolution of regional watercourses notwithstanding, the fundamental layout of the major drainage systems in the study area has remained the same since the final retreat of Lake Wainfleet ca. 4,000 cal. BP, and the waterways have likely always acted as travel and settlement corridors. The middle and upper reaches of the inland drainage systems may have comprised warm season hunting and fishing grounds and late fall and winter microband hunting and fishing territories analogous to those recorded historically throughout the Great Lakes-St. Lawrence region. Throughout these waterways, stream confluences may have been routinely used as stop-over spots, leaving traces in the archaeological record. While wintertime land use would not have been constrained by access to well-drained campsites or the limits of navigable waterways, such routes would have still provided familiar, vegetation-free corridors for travel.

Supporting evidence for the antiquity of overland travel oriented along waterways and other physiographic features can be found in the historically recorded network of Indigenous trails, many of which subsequently became early colonization roads (Burghardt, 1969; Turner, 1994). In Niagara, the main east-west trail in the centre of the Niagara peninsula followed the Welland River, with branches extending southward to Point Abino and to the mouth of the Grand River. As would be expected, there were also east-west trails following the coastlines of Lake Ontario and Lake Erie connecting to a north-south trail following the Niagara River.

Another major trail ran along the top of the Niagara Escarpment, and this was paralleled by a lower trail running along the crest of the glacial Lake Iroquois beach ridge. At various points, these corridors were connected by shorter trails to form a comprehensive overland transportation network (see Figure A15).

By about 4,000 cal. BP the physical and biotic landscape of the region of Niagara was essentially similar to that which existed immediately prior to the colonial period. While the environment continued to fluctuate and evolve as a result of natural processes such as forest fire and windthrow, re-modelling of waterways, organic in-filling of wetlands, animal population cycles, and others, these generally cannot be resolved with currently available paleoenvironmental data. Nor is it necessary to do so given the scope and analytical scale of this study. The lifestyle of Late Archaic (ca. 5,000 - 3,000 cal. BP) and Woodland (ca. 3,000 - 300 cal. BP) period hunter-gatherers seems to have been relatively unchanged from that practised by their ancestors, although certain technological changes are noted, such as the advent of ceramic vessels during the Early Woodland period (ca. 3,000 to 2,300 cal. BP). Given the general continuity in environmental and cultural practices after about 5,000 cal. BP, it is suggested that the land-use patterns described above for the Early and Middle Archaic periods, and based on ethnohistoric analogues, continued with only local variation up to the end of the Middle Woodland period (2,300 – 1,500 cal. BP). Particularly noteworthy is the seeming lack of settlement expansion into the lowlands vacated by Lake Wainfleet. Whereas much earlier sites, contemporary with the lowstand of Lake Erie, may have been eradicated by the return of Lake Wainfleet, the same is not true for sites that after the final retreat of that lake. This apparent lack of sites might be attributable to limited archaeological survey in these areas, but it might also be that, at least for the Late Archaic and Woodland periods, these lowlands remained relatively damp and unattractive for sustained settlement.

While the land-use pattern seems to remain essentially the same through the Late Archaic and into the Woodland period, large macroband base camps were no longer rendered invisible by fluctuating water levels along the Lake Erie coast. The Peace Bridge site (AfGr-9) at Fort Erie, extending over roughly 24 hectares and spanning nearly 4,000 years of virtually continuous occupation, is an outstanding example. Other extensive occupation areas exist at Erie Beach, Point Abino and along Tennessee Avenue in Port Colborne, among others. The local availability of Onondaga Formation chert, together with the rich aquatic resources of Lake Erie, appear to have attracted more settlement to the Erie coast than to the coast of Lake Ontario, although the on-going transgression of the Ontario basin may have inundated some coastal sites.

Currently, there are 58 Late Archaic period camp sites, six quarry or lithic processing sites, 30 lithic scatters, and 51 find spots in the region of Niagara. Representing the Early Woodland period are 16 camp sites, one burial, three quarry or lithic processing sites, 11 scatters, and 28 find spots. The Middle Woodland period is represented by nine camp sites, one burial, two quarry or lithic processing sites, 11 scatters, and seven find spots. The Late

Woodland period is represented by 54 settlements, including 20 villages, 20 camp sites, eight cemeteries, four quarry or lithic processing sites, 24 scatters and 39 find spots.

The adoption of maize agriculture during the Late Woodland period introduced the need for suitable farmland into the suite of factors that influenced Indigenous land use. Initially, during the experimentation phase with agriculture, intensive gardening was simply an adjunct to macroband camps. As gardening evolved into full-scale farming, and community populations grew in response to better nutrition and a more secure food supply, settlement location preferences changed. Suitability of farmland became an important land-use criterion, including adequate drainage, adequate moisture and moisture-holding capacity, adequate natural fertility and low to moderate slope. Upland locations provided Late Woodland farmers with access to good quality farmland with good cold air drainage to avoid early or late frosts along with proximity to ecological toposequences downslope to provide for their other resource needs (R. I. MacDonald, 2002).

In contrast to other parts of southern Ontario, where population growth and culture change associated with the development of maize agriculture seems to be reflected in significant changes in settlement location preferences (ASI, 2019; R. I. MacDonald, 2002), no major change in land-use patterns is evident for Late Woodland farmers in the region of Niagara. While some range expansion is detectable, probably due to population increases, the continuity with earlier site distributions suggests a regional population very comfortably situated in a familiar environment that was able to meet all their evolving hunting, fishing, gathering, and farming needs. Most noteworthy in this regard is the proximity of Late Woodland settlements to the historically recorded Indigenous trail system (Cooper, 2020).

To summarize our inductive modelling observations, the proximity of major waterways is considered to have always been a significant factor influencing land-use patterns in the region of Niagara. Entrenchment and floodplain evolution of regional watercourses notwithstanding, the fundamental layout of the major drainage systems in the study area has remained the same since about 4,000 cal. BP, and the waterways have likely acted as travel and settlement corridors ever since. This influence is strongly reflected in the Indigenous trail network that appears to be of great antiquity, judging from the distribution of sites of many time periods situated in close proximity to it. The middle and upper reaches of the inland drainage systems may have comprised warm season hunting and fishing grounds and late fall and winter microband hunting and fishing territories analogous to those recorded historically throughout the Great Lakes-St. Lawrence region. Throughout these waterways, nodes such as stream confluences may have been routinely used as stop-over spots, leaving traces in the archaeological record. While wintertime land use would not have been constrained by access to well-drained campsites or the limits of navigable waterways, such routes would have still provided familiar, vegetation-free corridors for travel.

Having considered all the environmental parameters reviewed above, and subjecting key parameters to iterative buffering trials, it was determined that a buffer of 250 metres from a historic or current water source captures 97% of the sites (n = 723), with 466 of the Indigenous modelling sites (62%) within 50 metres, 615 sites (81%) within 100 metres, 677 (90%) within 150 metres, and 701 sites (93%) within 200 metres (Figure A10). To evaluate the efficacy of this buffer against the background landscape, in terms of the presence of water, the GIS program was employed to generate 1,000 random points. Of these randomly generated points, only 82% were captured by the 250-metre buffer, with 46.5% within 100 metres of any water source. This confirms the applicability of the model to the pre-contact data.

In light of these considerations, four criteria were used to create the pre-contact archaeological potential layer. First, all river and major stream segments were buffered at 250 metres from the top of bank. Second, all subordinate streams were buffered by 250 metres from the centre line. Third, all lakes, ponds, wetlands-including pre-settlement wetlands, were buffered at 250 metres. The 250 metre buffer was employed since it captures 97% of the sites employed for inductive modeling within the region of Niagara.

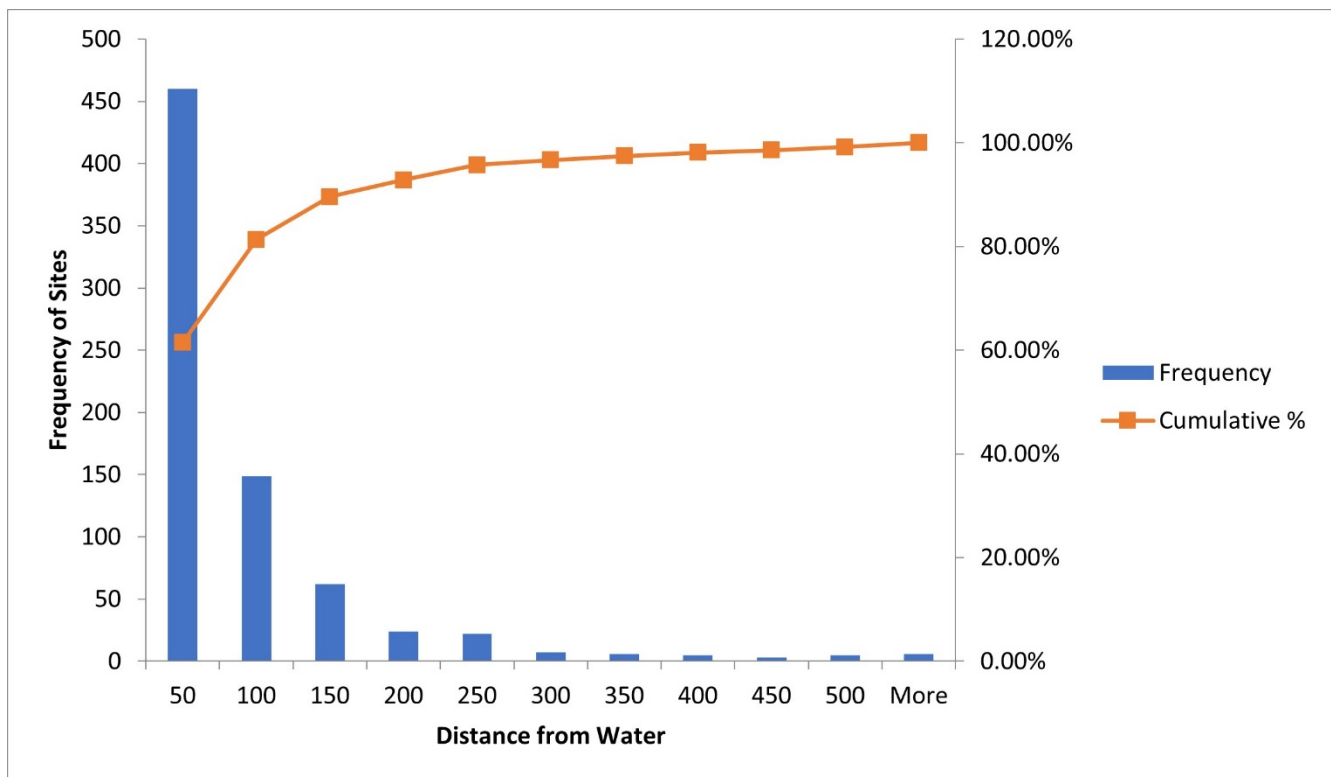


Figure A10: Distance of Modellable Archaeological Sites from Water in Niagara Region

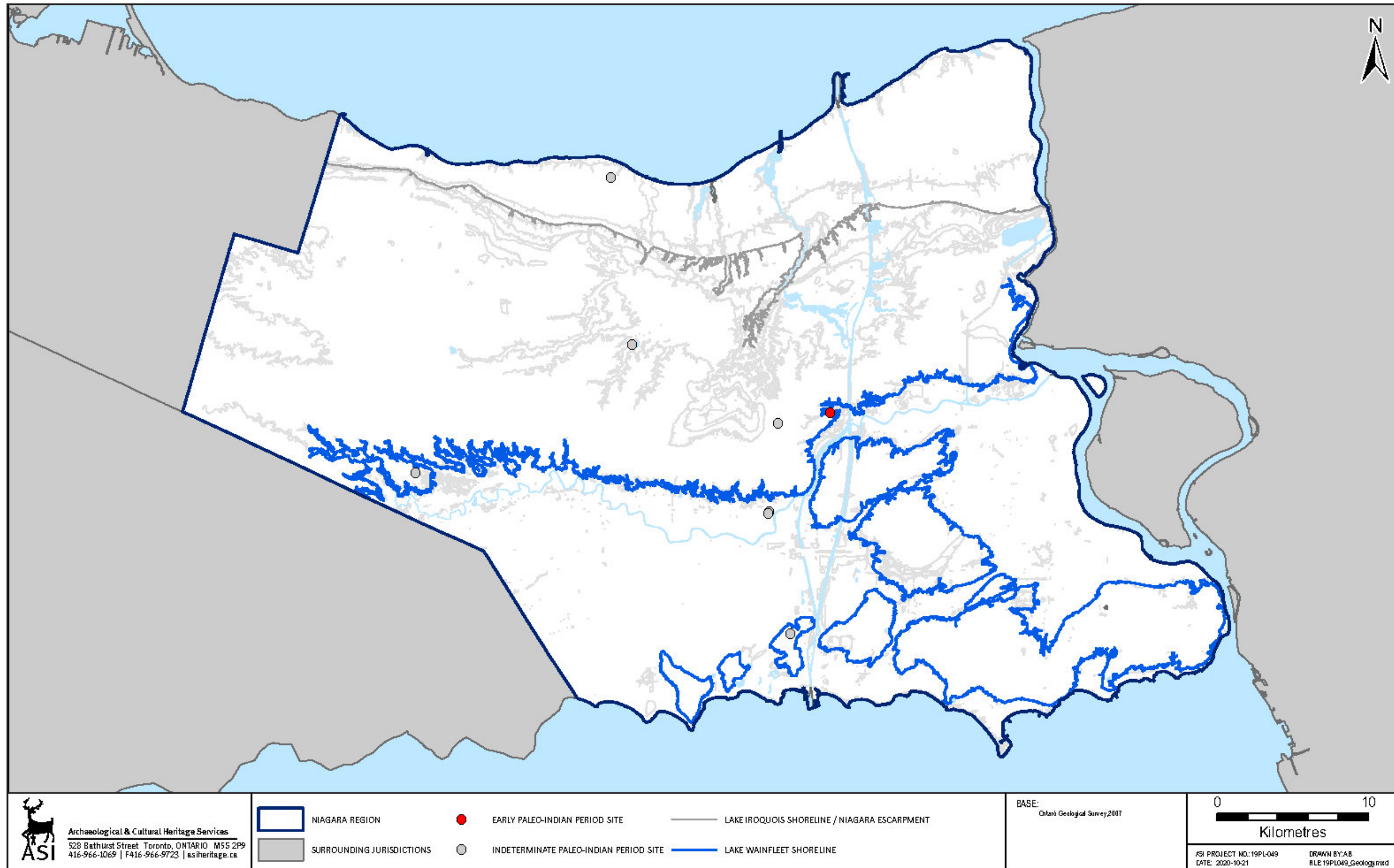


Figure A11: Early Paleo Period Sites and Lake Wainfleet

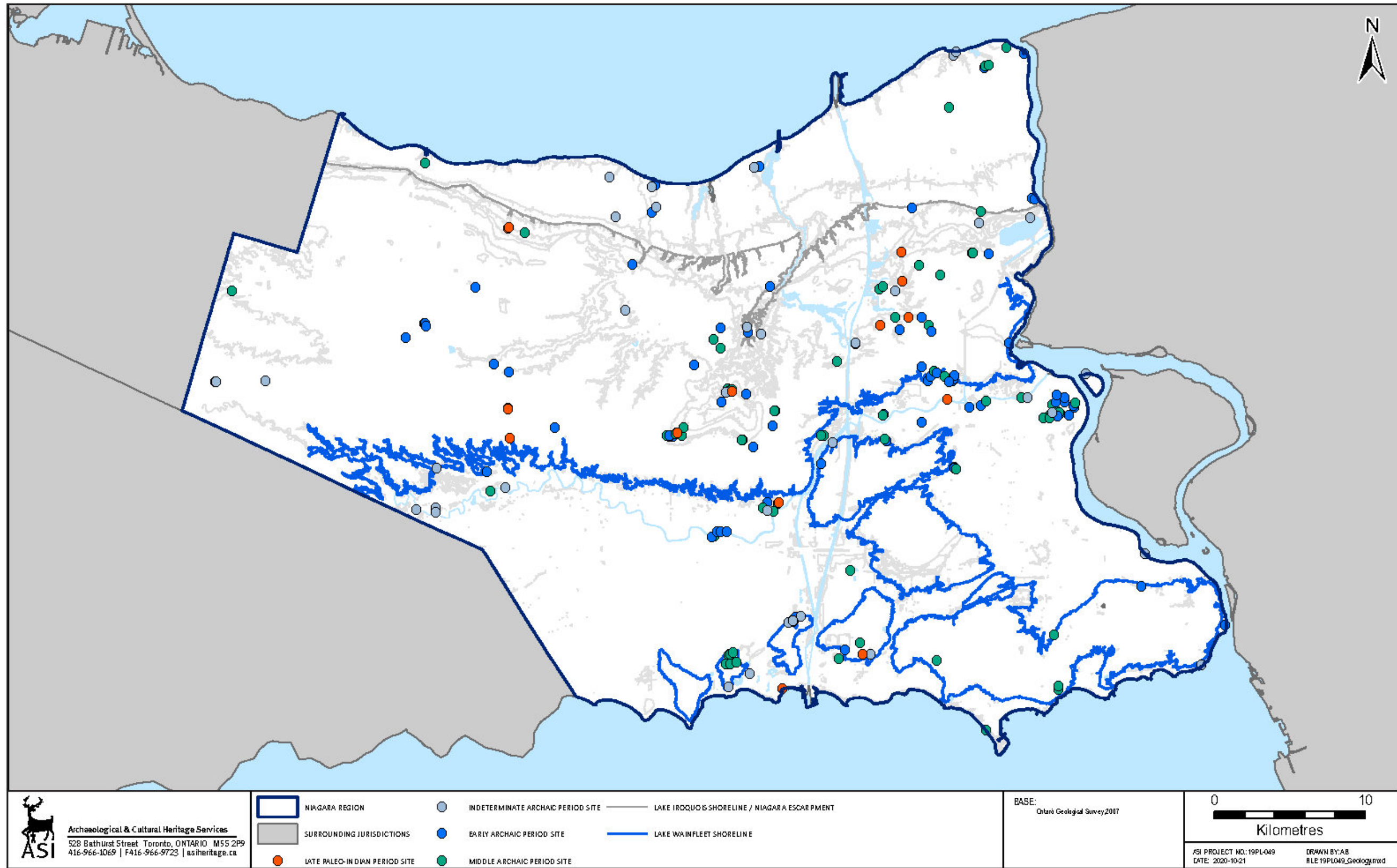


Figure A12: Late Paleo Period to Middle Archaic Period sites and Lake Wainfleet

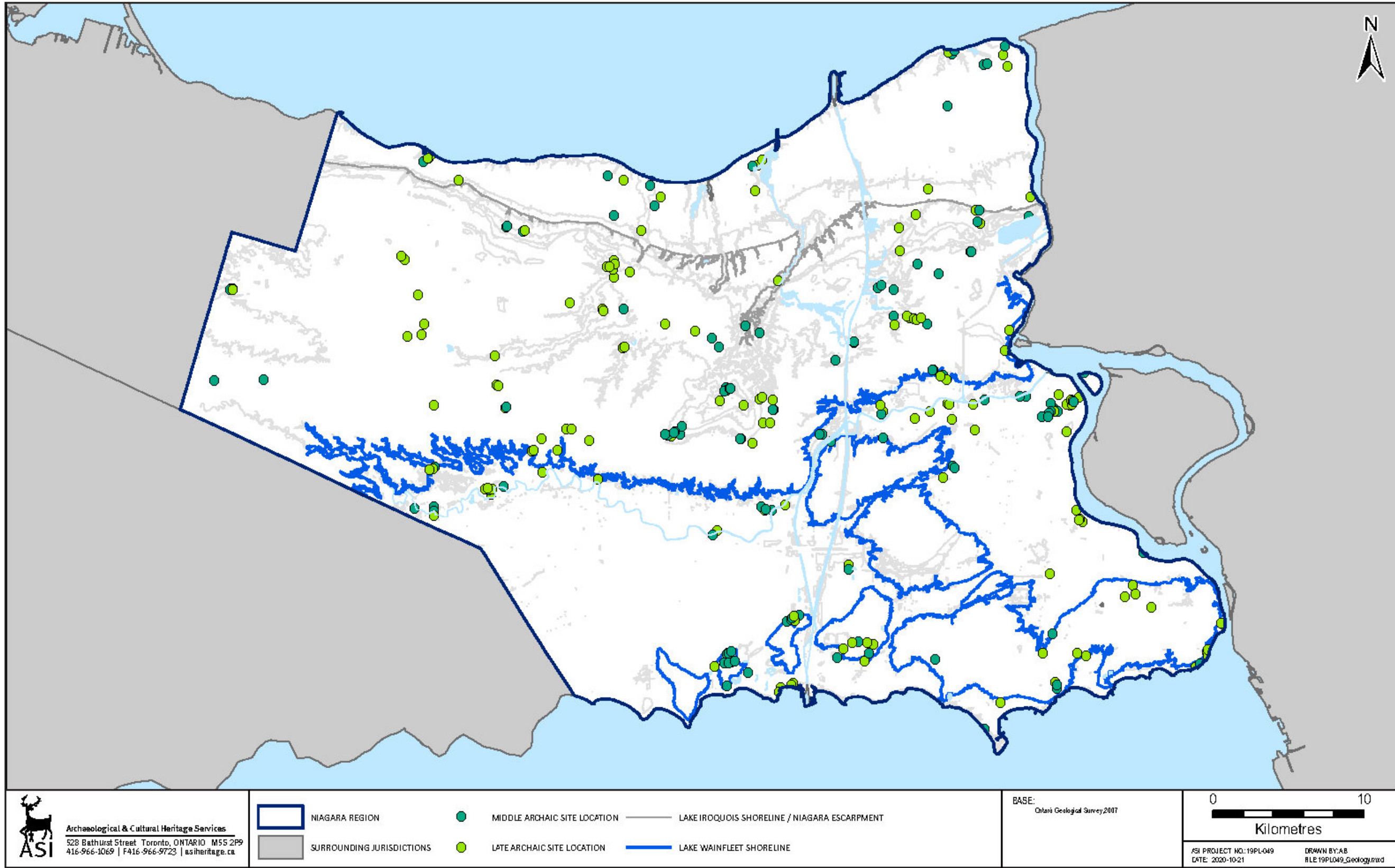


Figure A13: Middle Archaic Period to Late Archaic Period sites and Lake Wainfleet

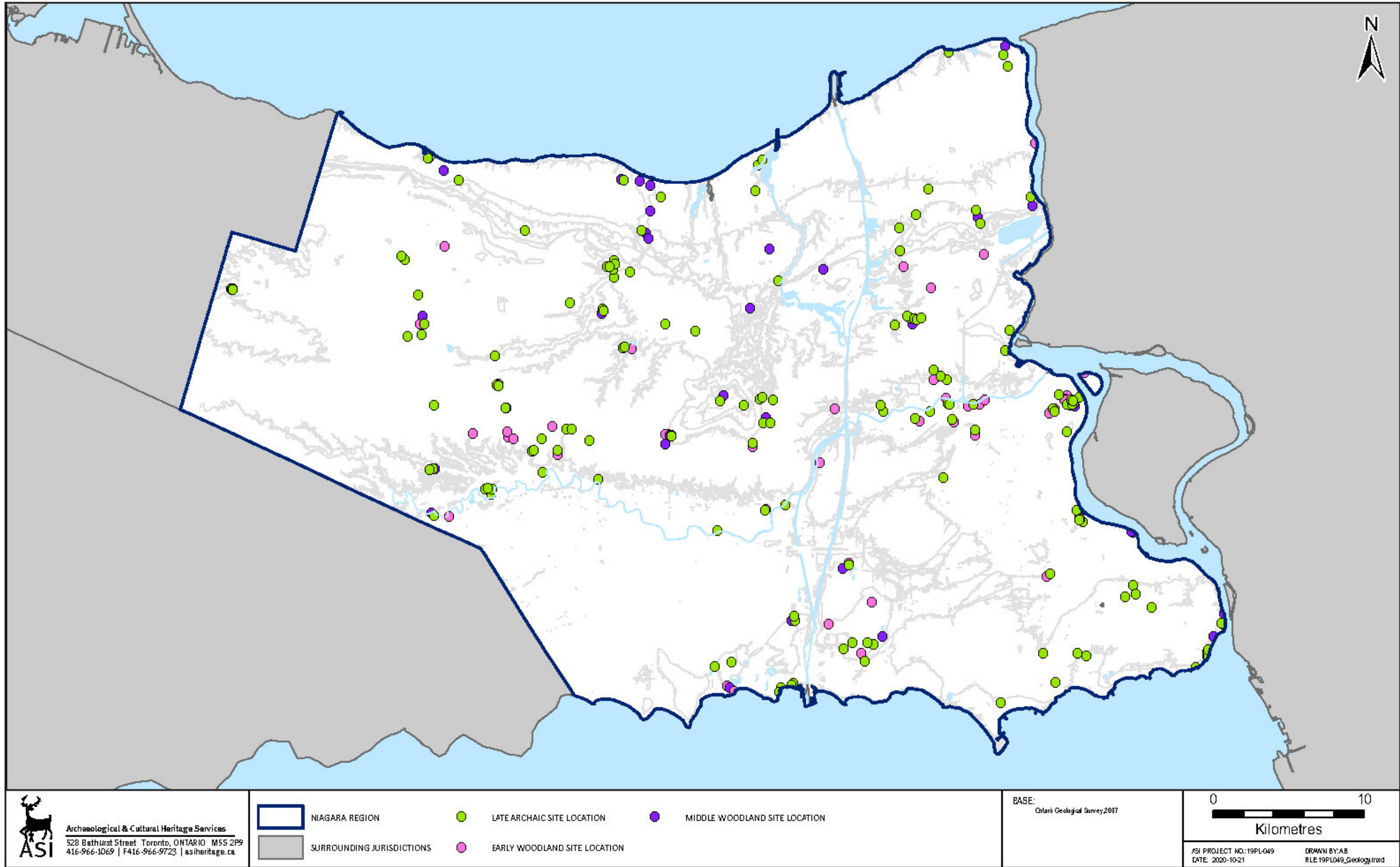


Figure A14: Late Archaic Period to Middle Woodland Period sites

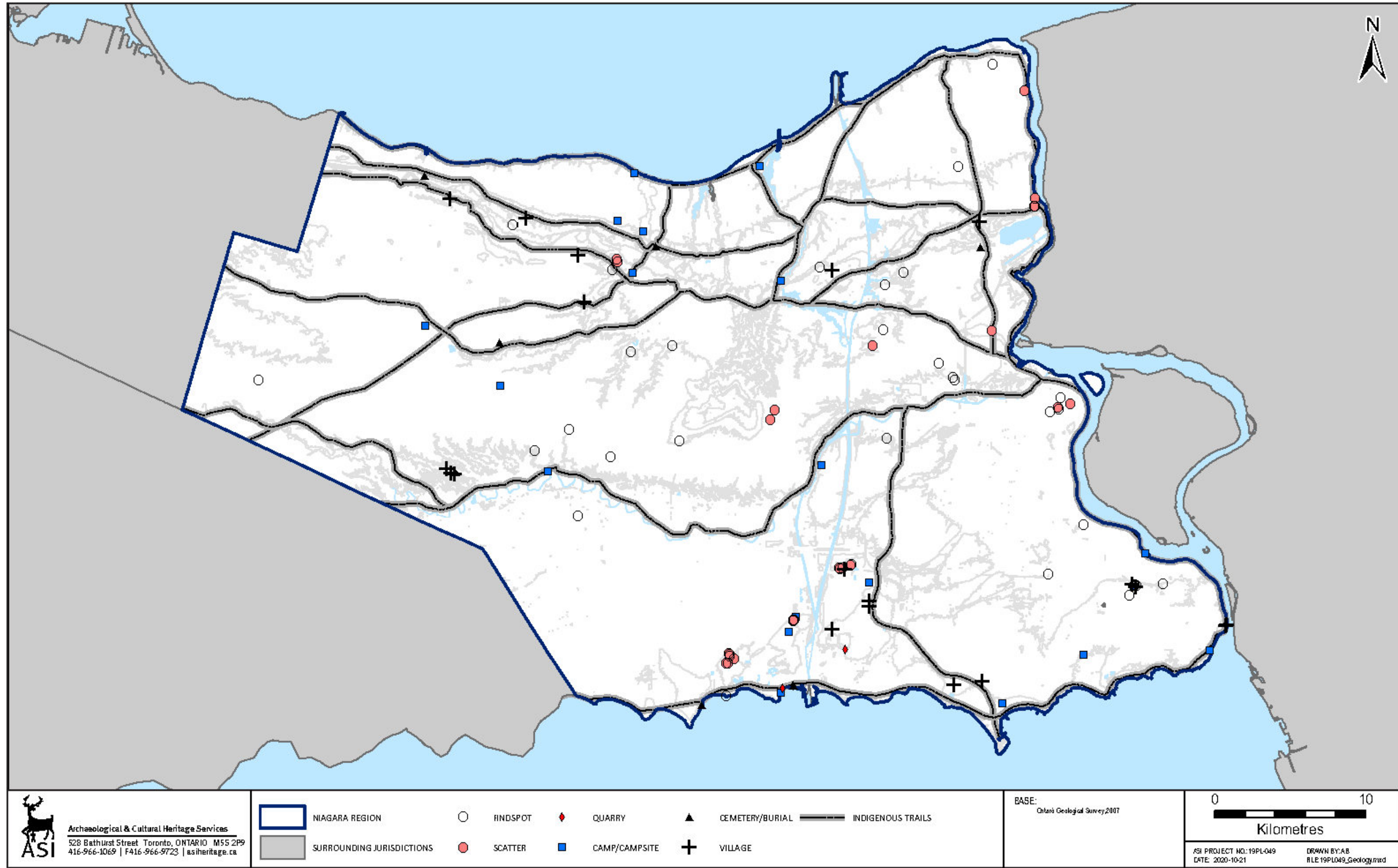


Figure A15: Late Woodland Period Sites and Trails

5. Model Evaluation

The modelling exercise undertaken above presents a first approximation of the overall distribution of Indigenous archaeological resources in the region of Niagara. The purpose of this exercise has been to provide land-use planners and heritage resource managers with a theoretically supported estimate of the scope of a resource for which there is limited substantive data available. Given the hypothetical nature of such a model, however, potential users must be fully aware of its limitations in order to employ it appropriately.

The unknown, but undoubtedly complex, distribution of sites in the region of Niagara can be described in terms of a geographical continuum of density, or potential for discovery, ranging from none to very high. In this study, the continuum has been subdivided into two classes: areas that demonstrate archaeological potential and areas that do not demonstrate potential. Through a deductive and inductive modelling procedure, involving interpretation of the changing pre-contact landscape and the expected land-use patterns of its pre-contact and historic human occupants, the region of Niagara has been tentatively partitioned into zones representing these categories. Since the principal orientation of the model revolves around access to water for travel and subsistence, it is anticipated that certain site classes, sacred sites for example, may not conform to the mapped zonation. Residual sites of this kind, and sites in localized zones of potential that could not be resolved at this mapping scale, can be expected to occur throughout the region of Niagara. The validity and utility of archaeological site potential models can be assessed in terms of predictive capacity or gain. Predictive gain has been explicitly defined as follows (Kvamme, 1988, p. 326):

$$Gain = 1 - \left(\frac{\text{percentage of total area covered by model}}{\text{percentage of total sites within model area}} \right)$$

where the total sites variable would represent all known and unknown archaeological sites within the region of Niagara. Of course, since the total number of sites is never known, the evaluation of gain cannot be based on a random sample of sites. One way of dealing with this problem is to undertake a random sample of the study area in the hope that this will constitute a suitable proxy for a random sample of sites. In most cases, where there is reason to believe that site distributions may be non-random, the confidence of this approach can often be improved by stratifying the sample into hypothetical density classes. For example, the site potential model for the region of Niagara has suggested that sites may be non-randomly distributed and has defined two zones to predict the nature of the distribution. A stratified random sample of the region suggested the model was effective at this point for capturing Indigenous sites. An alternative approach for evaluating gain is to employ relatively large samples or data acquired through some sort of preliminary investigation (Altschul & Nagle, 1988, pp. 265–268; Kvamme, 1988, pp. 403–404; Rose et al., 1988, pp. 173–255). Systematic archaeological survey, undertaken in Niagara Region in the context of the pre-

development approvals process, will provide just this sort of information, and once the site sample has grown even further, the gain statistic can eventually be evaluated. This is one reason why it is recommended that, where any part of a development application falls into the zone of archaeological potential, the entire application should be subject to assessment. This will continue to afford the opportunity of examining lands beyond the archaeological potential zone, thereby improving the site sample and avoiding the self-fulfilling prophesy of only finding sites where one looks for them.

6. References

- Agriculture Canada Expert Committee on Soil Survey. (1987). *The Canadian System of Soil Classification* (Vol. 1646). Agriculture Canada.
- Altschul, J. H., & Nagle, C. L. (1988). Collecting New Data for the Purpose of Model Development. In W. J. Judge & L. Sebastian (Eds.), *Quantifying the Present and Predicting the Past: Method, Theory, and Application of Archaeological Predictive Modelling* (pp. 257–299). U.S. Department of the Interior, Bureau of Land Management Service Center.
- ASI. (2019). *County of Simcoe Archaeological Management Plan* (pp. i–93) [Archaeological Management Plan]. ASI.
- Banfield, A. W. F. (1974). *The Mammals of Canada*. University of Toronto Press.
- Brown, D. M., McKay, G. A., & Chapman, L. J. (1980). *The Climate of Southern Ontario* (Vol. 5). Environment Canada, Atmospheric Environment Service.
- Bryson, R. A., & Murray, T. J. (1977). *Climates of Hunger: Mankind and the World's Changing Weather*. University of Wisconsin Press.
- Burger, D. (1993). *Revised Site Regions of Ontario: Concepts, Methodology and Utility* (Vol. 129). Ontario Ministry of Natural Resources, Ontario Forest Research Institute.
- Burghardt, A. (1969). *The Origin and Development of the Road Network of the Niagara Peninsula, Ontario 1770-1851* (59th ed.). Annals, Association of American Geographers.
- Canada Land Inventory. (1965). *Soil Capability Classification for Agriculture. Report No. 2.: Vol. Report No. 2* (1972nd ed.). Environment Canada, Lands Directorate.
- Chapman, L. J., & Putnam, F. (1984). *The Physiography of Southern Ontario* (Vol. 2). Ontario Ministry of Natural Resources.
- Clayton, J. S., Ehrlich, W. A., Cann, D. B., Day, J. H., & Marshall, I. B. (1977). *Soils of Canada* (Vol. 1–2). Canada Department of Agriculture.
- Cleland, C. E. (1982). The Inland Shore Fishery of the Northern Great Lakes: Its Development and Importance in Prehistory. *American Antiquity*, 47(4), 761–784.

- Cooper, M. S. (2020). *Neutrals on the Frontier: History and Ecology of the Lake Erie Hatiwendaronk* [Unpublished PhD dissertation submitted to the Department of Anthropology]. University of Toronto.
- Crins, W. J., Gray, P. A., Uhlig, P. W. C., & Wester, M. C. (2009). *The Ecosystems of Ontario, Part I: Ecozones and Ecoregions* (Technical Report SIB TER IMA TR-01; SIB TER IMA, pp. i–77). Science & Information Branch Inventory, Monitoring and Assessment Section, Ontario Ministry of Natural Resources.
- Ducks Unlimited Canada. (2010). *Southern Ontario Wetland Conversion Analysis*. Ducks Unlimited Canada.
- Feenstra, B. H. (1981). *Quaternary Geology and Industrial Minerals of the Niagara-Welland Area, Southern Ontario*. (No. 5361; Ontario Geological Survey Open File Report). Ontario Ministry of Northern Development and Mines.
- Finlay, P. J. (1978). *Late Eighteenth—Early Nineteenth Century Vegetation Patterns, Native Population Records and Wildlife Sightings in the Counties of Lincoln and Welland* (p. 2) [Unpublished report]. Ontario Ministry of Citizenship and Culture, Archaeology and Heritage Planning Branch.
- Francescut, N. (1980). *Forest Associations and Drainage Patterns 1790-1865 (1:506,880 scale map)* [Map]. Ontario Ministry of Culture and Recreation, Historical Planning and Research Branch.
- Gao, C., Shiota, J., Kelly, R. I., Brunton, F. R., & Van Haaften, S. (2006). *Bedrock Topography and Overburden Thickness Mapping, Southern Ontario* (Vol. 207). Ontario Geological Survey.
- Gentilcore, L. R., & Donkin, K. (1973). *Land Surveys of Southern Ontario: An Introduction and Index to the Field Notebooks of the Ontario Land Surveyors 1784-1859* (Vol. 10). Canadian Geographer.
- Geomatics Canada. (1996). *Standards and Specifications of the National Topographic Data Base* (3.1). Minister of Supply and Services Canada.
- Geomatics Canada. (2003). *National Topographic Data Base, Edition 3.1 Simplified User's Guide* (3.1). Geomatics Canada, Centre for Topographic Information, Customer Support Group.
- Gourlay, R. (1822). *Statistical Account of Upper Canada with a View to a Grand System of Emigration*. Simpkin and Marshall.

- Greenland, D. (1977). *Aspects of the Mesoclimatology of the Toronto Area: Vol. Number 29*. Fisheries and Environment Canada.
- Grove, J. M. (2004). *Little Ice Ages: Ancient and Modern* (2nd ed.). Routledge.
- Heidenreich, C. (1971). *Huronia: A History and Geography of the Huron Indians, 1600-1650*. McClelland and Stewart.
- Heidenreich, C. E. (Ed.). (1973). Appendix: A Procedure for Mapping the Vegetation of Northern Simcoe County from the Ontario Land Survey. In *Land Surveys of Southern Ontario: An Introduction and Index to the Field Notebooks of the Ontario Land Surveyors, 1784-1859: Vol. Canadian Geographer Volume 10, Supplement No. 2* (pp. 104–113). The Canadian Geographer.
- Hills, G. A. (1958). Forest-Soil Relationships in the Site Regions of Ontario. In *Proceedings of the First North American Forest Soils Conference* (pp. 190–212). Agricultural Experiment Station, Michigan State University.
- Ingleman, D. A., Thomas, S. C., & Perrelli, D. J. (2012). The Pre-contact Upper Niagara River Fishery: Shadows of a Changed Environment. *Ontario Archaeology*, 92, 38–73.
- Kingston, M. S., & Presant, E. W. (1989). *The Soils of the Regional Municipality of Niagara* (No. 60). Ontario Ministry of Agriculture and Food, Agriculture Canada.
- Kohler, T. A., & Parker, S. C. (1986). *Predictive Models for Archaeological Resource Location* (pp. 397–452). Academic Press.
- Kvamme, K. L. (1988). Development and Testing of Quantitative Models. In W. J. Judge & L. Sebastian (Eds.), *Quantifying the Present and Predicting the Past: Method, Theory, and Application of Archaeological Predictive Modelling* (pp. 325–428). U.S. Department of the Interior, Bureau of Land Management Service Center.
- Lewis, C. F. M. (2016). Understanding the Holocene Closed-Basin Phases (Lowstands) of the Laurentian Great Lakes and Their Significance. *Geoscience Canada*, 43, 179–197. <http://www.dx.doi.org/10.12789/geocanj.2016.43.102>
- Lewis, C. F. M., & Anderson, T. W. (1989). Oscillations of levels and cool phases of the Laurentian Great Lakes caused by inflows from glacial Lakes Agassiz and Barlow-Ojibway. *Journal of Paleolimnology*, 2, 99–146.

- Lewis, C. F. M., Cameron, G. D. M., Anderson, T. W., Heil, C. W., Jr., & Gareau, P. L. (2012). Lake levels in the Erie Basin of the Laurentian Great Lakes. *Journal of Paleolimnology*, 47, 493–511. <https://doi.org/10.1007/s10933-012-9578-5>
- Lewis, C. F. M., Karrow, P. F., Blasco, S. M., McCarthy, F. M. G., King, J. W., Moore, T. C., Jr., & Rea, D. K. (2008). Evolution of lakes in the Huron basin: Deglaciation to present. *Aquatic Ecosystem Health & Management*, 11(2).
- Lovis, W. A., & MacDonald, R. I. (1999). Archaeological Implications of Great Lakes Paleoecology at the Regional Scale. In R. F. Williamson & C. M. Watts (Eds.), *Taming the Taxonomy: Toward a New Understanding of Great Lakes Archaeology* (pp. 125–149). The Ontario Archaeological Society & Eastendbooks.
- MacDonald, I. D. (1980). *Life Science Features of the Haldimand Clay Plain Physiographic Region*. Ontario Ministry of Natural Resources, Parks and Recreation Section, Central Region.
- MacDonald, R. I. (2002). *Late Woodland Settlement Trends in South-Central Ontario: A Study of Ecological Relationships and Culture Change* [Doctoral Dissertation, Faculty of Graduate Studies and Research]. McGill University.
- MacDonald, R. I., & Pihl, R. H. (1994). Prehistoric Landscapes and Land Uses: The Role of Predictive Modelling in Cultural Resource Management. In R. I. MacDonald (Ed.), *Great Lakes Archaeology and Paleoecology: Exploring Interdisciplinary Initiatives for the Nineties* (Vol. 10, pp. 25–59). Quaternary Sciences Institute, University of Waterloo.
- MacDonald, R. I., & Williamson, R. F. (2001). Sweat Lodges and Solidarity: The Archaeology of the Hubbert Site. *Ontario Archaeology*, 71, 29–78.
- McAndrews, J. H. (1981). Late Quaternary Climate of Ontario: Temperature Trends from the Fossil Pollen Record. In W. C. Mahaney (Ed.), *Quaternary Paleoclimate* (pp. 319–333). GeoAbstracts.
- McCarthy, F. M. G., & McAndrews, J. H. (1988). Water levels in Lake Ontario 4230–2000 years B.P.: Evidence from Grenadier Pond, Toronto, Canada. *Journal of Paleolimnology*, 1(2), 99–113.
- Metzger, T. (2010). *Lake Erie North Shore Watershed Plan* (p. 303) [Watershed Plan]. Niagara Peninsula Conservation Authority.

- Metzger, T. (2011). *Upper Welland River Watershed Plan* (p. 219) [Watershed Plan]. Niagara Peninsula Conservation Authority.
- Ministry of Natural Resources. (2010). *Backgrounder on Elk in Ontario*. Ontario Ministry of Natural Resources.
- Monaghan, W. G., & Lovis, W. A. (2005). *Modeling Archaeological Site Burial in Southern Michigan: A Geoarchaeological Synthesis* (D. L. Ruggles, Ed.; Vol. 1). Michigan State University Press.
- Moss, M. R. (1994). Forests in the Niagara Landscape: Ecology and Management. In *Niagara's Changing Landscapes* (pp. 139–175). Carleton University Press.
- Moss, M. R., & Hosking, P. L. (1983). Forest Associations in Extreme Southern Ontario c. 1817. A Biogeographical Analysis of Gourlay's Statistical Account. *The Canadian Geographer*, 27, 184–193.
- Needs-Howarth, S. (1999). *Native Fishing in the Great Lakes—A Multidisciplinary Approach to Zooarchaeological Remains from Iroquoian Villages near Lake Simcoe, Ontario* [PhD Dissertation]. University of Grouingen.
- Needs-Howarth, S., & MacDonald, R. I. (2012). The Walleye Fishery at the Peace Bridge Site, Fort Erie, Ontario. *Ontario Archaeology*, 92, 74–94.
- Needs-Howarth, S., & Thomas, S. C. (1998). Seasonal Variation in Fishing Strategies at Two Iroquoian Village Sites Near Lake Simcoe, Ontario. *Environmental Archaeology*, 3, 109–120.
- Ontario Ministry of Natural Resources and Forestry. (1978). *Wetland Unit Mapping* [Dataset]. Ontario Ministry of Natural Resources and Forestry - Provincial Mapping Unit. <https://geohub.lio.gov.on.ca/datasets/mnrf::wetlands>
- Pengelly, J. W., Tinkler, K. J., Parkins, W. G., & McCarthy, F. M. (1997). 12,600 Years of Lake Level Changes, Changing Sills, Ephemeral Lakes and Niagara Gorge erosion in the Niagara Peninsula and Eastern Lake Erie Basin. *Journal of Paleolimnology*, 17(4), 377–402.
- Peters, J. H. (1986). Transmission Line Planning and Archaeological Resources: A Model of Archaeological Potential for Southwestern Ontario. In *Archaeological Consulting in Ontario: Papers of the London Conference 1985* (Vol. 2). London Chapter, Ontario Archaeological Society.

- Peters, J. H. (1994). Geographic Information Systems, Environmental Reconstruction, and Archaeological Resource Management. In *Great Lakes Archaeology and Paleoecology: Exploring Interdisciplinary Initiatives for the Nineties* (Vol. 10, pp. 95–115). Quaternary Sciences Institute, University of Waterloo.
- Pihl, R. H. (1986). Site Potential Modeling in Archaeological Consulting. In *Archaeological Consulting in Ontario: Papers of the London Conference 1985* (Vol. 2). London Chapter, Ontario Archaeological Society.
- Puric-Mladenovic, D. (2003). *Predictive vegetation modeling for forest conservation and management in settled landscapes* [Doctorial Dissertation, Department of Forestry]. University of Toronto.
- Puric-Mladenovic, D., Buck, J., & MacIntosh, A. (2011). *Pre-settlement Landscape Vegetation Modeling and Mapping for the Southwestern Golden Horseshoe, including Hamilton, Halton, Peel, Toronto and York Regions and the Credit Valley Watershed: Frequently Asked Questions*. Ontario Ministry of Natural Resources, Science and Information Branch.
- Rose, M. R., Altschul, J. H., Judge, W. J., & Sebastian, L. (1988). An Overview of Statistical Method and Theory for Quantitative Model Building. In *Quantifying the Present and Predicting the Past: Method, Theory, and Application of Archaeological Predictive Modelling* (pp. 173–255). U.S. Department of the Interior, Bureau of Land Management Service Center.
- Rothfels, M., & Russell, D. (2005). *Caribou* (2005th ed.). Environment and Climate Change Canada. <http://www.hww.ca/en/wildlife/mammals/caribou.html>
- Sadler, D. C., & Savage, H. G. (2003). *Birds from the Ground: The Record of Archaeology in Ontario* (Vol. 15). Trent University Department of Anthropology.
- Scott, W. B., & Crossman, E. J. (1973). *Freshwater Fishes of Canada. Bulletin 184*. Fisheries Research Board of Canada.
- Sebastian, L., & Judge, W. J. (1988). Predicting the Past: Correlation, Explanation, and the Use of Archaeological Models. In W. J. Judge & L. Sebastian (Eds.), *Quantifying the Present and Predicting the Past: Method, Theory, and Application of Archaeological Predictive Modelling* (pp. 1–18). U.S. Department of the Interior, Bureau of Land Management Service Center.
- Semken, H. A. (1983). Holocene Mammalian Biogeography and Climatic Change in the Eastern and Central United States. In H. E. Wright Jr. (Ed.), *Late-quaternary*

-
- Environments of the United States, Volume 2, The Holocene* (Vol. 2, pp. 182–207). University of Minnesota Press.
- Snell, E. A. (1987). *Wetland Distribution and Conversion in Southern Ontario* (Vol. 48). Inland Waters and Lands Directorate, Environment Canada.
- Species at Risk Public Registry. (2010). *Species Profile: Woodland Caribou (Boreal population)*. Environment Canada, Species at Risk Act (SARA) Public Registry. http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=636
- Stotherd, R. H. (1865). *Niagara Frontier, Plan 2*. [Map]. Topographical Department of the War Office, Southampton. <http://dr.library.brocku.ca/handle/10464/10532>
- Surveys and Mapping Branch. (1974). *Topographic Mapping Manual of Compilation Specifications and Instructions*. Topographic Mapping Division, Surveys and Mapping Branch, Ministry of Energy, Mines and Resources.
- Surveys and Mapping Branch. (1976). *A Guide to the Accuracy of Maps*. Topographic Mapping Division, Surveys and Mapping Branch, Ministry of Energy, Mines and Resources.
- Telfer, E. S. (1990). *North American Elk*. Canada Ministry of the Environment.
- Telfer, E. S. (1997). *Moose*. Canada Ministry of the Environment. <http://www.hww.ca/en/wildlife/mammals/moose.html>
- Turner, W. B. (1994). The Early Settlement of Niagara. In *Niagara's Changing Landscape* (pp. 179–207). Carleton University Press.
- Wester, M. C., Henson, B. L., Crins, W. J., Uhlig, P. W. C., & Gray, P. A. (2018). *The Ecosystems of Ontario, Part 2: Ecodistricts* (Technical Report TR-26; Science and Research Technical Report, p. 474). Ontario Ministry of Natural Resources and Forestry.



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APPENDIX B: POST-CONTACT ARCHAEOLOGICAL POTENTIAL MODEL

VIBRANT REGION



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1. Introduction

This document is not intended to be an exhaustive history of the region of Niagara, although the main focus of the text is historical in terms of subject matter. Rather, it serves to identify the extant or formerly present historical features that might yield associated archaeological deposits and that were mapped for the GIS layer of historical features. To standardize the documentation process, maps ranging in date from 1815 to 1924 were consulted, although the prime sources, in terms of their level of detail are *Tremaine's Map of the Counties of Lincoln and Welland, Canada West* (Tremaine 1862), *Stotherd's Niagara Frontier, Plan 2* (Stotherd 1865), and the *Illustrated Historical Atlas of the Counties of Lincoln & Welland* (Page 1876). The boundaries of the settlement centres were plotted based on the above maps, as well as specific plans of select centres (see Section 9.1 for a more detailed list of maps consulted) and serve to indicate those areas where most of the building activity was concentrated at the time the source maps were produced. Individual public buildings and homes were not mapped within these centres, although the settlement centre overlay is indicative of those areas that exhibit potential for the presence of meeting halls, schoolhouses, blacksmith shops, stores, grain warehouses, hotels, taverns, and other commercial service buildings. All schools, places of worship and commercial buildings, such as inns, that occur outside of the major settlement centres have also been mapped individually, if their locations were shown on the historical maps.

1.1. The French Colonial Period in Niagara Region

The Niagara Peninsula and Lake Ontario and Lake Erie were known to French explorer Samuel de Champlain as early as 1615, and Etienne Brûlé (Champlain's interpreter) may have visited the peninsula in 1625. It is known that a Recollet missionary named Daillon spent three months visiting various Indigenous villages in the area in the fall and winter of 1626-1627. By the early 1630s, this large geographical area had been mapped by explorers, traders, and missionaries. Lake Ontario was named "Lake St. Louis" or "Lake of Saint Louys" (*Lacus Sancti Ludovici*) by the French and was referred to by this name on the Champlain map (1632), as well as on the Sanson (1656) and Bressani (1657) maps. By the 1670s, Lake Ontario had been re-named *Lac Frontenac* in honour of the Governor of New France. Lake Erie appears to have always retained its present name, derived from the native word *Erieehronons* or "Nation of the Cat." The Niagara River was known to the early French Jesuit missionaries by the native name of *Onguiaahra*. These early French maps clearly show many of the creeks that drain into Lake Ontario, as well as the Niagara and Grand rivers. The French did not establish any permanent settlements within the Niagara Peninsula, despite their contact with the peoples of the area.

As early as 1671-1672, the French proposed erecting a fort at or near the mouth of the Niagara River. The purpose of this establishment was to hinder, as much as possible, the fur trade between the Iroquois and the British and Dutch merchants at New Amsterdam/New York. Construction on this stronghold, which was named Fort Denonville, commenced in late July 1687 on the present site of Fort Niagara. The fort was abandoned in 1689 after most of the garrison died from scurvy (Robinson 1933:55).

In 1679, it is known that the French established a shipyard at the mouth of Cayuga Creek in Niagara County, New York. This creek and a small island by the same name are situated a short distance upstream from the Horseshoe Falls, opposite to Grand Island. It was there that LaSalle's ill-fated barque, *Le Griffon*, was built.

In May 1720, the French constructed a *Magasin Royal* in what is now the village of Lewiston, New York. This was succeeded in 1725, with the construction of the "stone house" or "stone castle" at Fort Niagara. This fortification was fully completed and surrounded by palisades by mid-October 1727. The older *Magasin* at Lewiston was then refitted for use as a blockhouse and was shown on maps from the 1750s named "Little Fort Niagara." It seems unusual that the French did not make greater attempts to establish a settlement on the west bank of the river, opposite to Fort Niagara, based upon a similar system which had been laid out at Detroit and Windsor two decades earlier. This may not have been possible due to the fact that during the late seventeenth and early eighteenth centuries, the region of Niagara was occupied by the Mississaugas, an Algonquian people whose subsistence economy was based on garden farming, as well as hunting, fishing, and gathering wild plants. The Mississauga, who were on friendly trade terms with the British, may not have welcomed a permanent French settlement on the east bank of the Niagara River.

Maps of the mouth of the Niagara River and of its west bank produced during the period 1755-1760, show that the point of land now occupied by the Town of Niagara-on-the-Lake was known as *Pointe du Montreal* while other contemporary maps showed that it referred to as *Pointe Amascou*. The west bank of the river, a short distance to the south was marked *la Prairie*, and beyond that the names *Pointe au Mascoutin* or *Pointe au Mascouten* are shown. British maps produced in 1759 show that a large, rectangular plot of "plough'd land" had been laid out on the higher, flat ground on the west bank of the river. Other contemporary British maps show this same feature which was described as a "Garden Plott." This land was situated in the vicinity of the Military Reserve or Garrison Common at Niagara, approximately between the spot where Fort George would be constructed during the 1790s and the top of the bank near the point of termination of Byron and Ricardo streets (overlooking the former Niagara Dockyards). This land, approximately five acres or more in extent, may have been used as a garden which supplied the garrison at Fort Niagara with additional seasonal produce. The rich,

alluvial mud flats along the river slightly to the southeast are shown on the early British maps labelled as “garden over the river” (*Fort Niagara 25 July 1759; Plan of Niagara, 1762*).

The French occupation of the Niagara Frontier came to an abrupt conclusion in July 1759, when Fort Niagara was captured by Sir William Johnson (Robinson 1933:72, 77, 81, 138-139, 143; Dunnigan 1996:13, 14, 72, 89). The British crown recognized the Mississaugas as the “owners” of the west shore of the Niagara River and later entered into negotiations to facilitate the settlement of Loyalists and the Six Nations allies after the American Revolution.

1.2. Early British Presence

The first British presence on the west bank of the Niagara River was established during the siege of Fort Niagara in 1759. At that time, the British set up a gun “Battery over the River” on “Montreal Point” within the limits of the present Town of Niagara-on-the-Lake. This battery mounted four cannons, trained on Fort Niagara. It was located a short distance away from the “Garden Plott,” probably somewhere between St. Mark’s (Anglican) Churchyard and Queen’s Landing Hotel in the present-day community of Niagara-on-the-Lake (Dunnigan 1996:66,67, 72).

Between 1763 and 1783, the British continued to garrison Fort Niagara, but did little on the east bank of the Niagara River. The period was, however, marked by the construction of the “first” or “old” Fort Erie in July 1764, which was built to safeguard the head of the Niagara River at Lake Erie. The official instructions called for the construction of “a proper Entrepot for Provisions for facilitating the supplying the vessels for Detroit,” i.e., it was to serve as a fortified depot and terminus point on the westerly Niagara Portage route. This fort was hastily built and located close to the lake on low-lying, marshy ground. Part of the “public land” on the west side of the fort was leased to local merchants, who constructed stores and warehouses there. These storekeepers traded in goods to and from the Upper Great Lakes, and particularly with merchants at Detroit such as John Askin and Jacques Duperon Baby. The fort was damaged by winter weather in 1779, and a severe winter storm in 1803 eroded 25 feet (7.62 m) of shoreline “destroying the entire north-east face of the fort.” A new, nearby location for the “second” Fort Erie was selected behind the first fort on higher ground, and construction of that timber and stone fortification began in 1804. Work on the new fort continued until 1807, but it remained in an unfinished state when the War of 1812 commenced in June 1812.

2. Treaty History

Niagara Region is covered by several treaties related to the earliest period of land cessions in southern Ontario, beginning in 1764 with the purchase of a narrow strip of land on either side of the Niagara River and continuing to 1793 with the ratification of Treaty #4. These treaties describe the historical groups with whom the Crown negotiated the transfer of land and in some cases the rights that are assured to these groups within the lands.

The advent and significance of historical treaties are rooted in the Royal Proclamation of 1763, issued by King George III. The Proclamation affirmed that Indigenous people lived under the protection of the Crown and that they were not to be “molested or disturbed in the Possession of such Parts of Our Dominions and Territories as, not having been ceded to, or purchased by Us, are reserved to them, or any of them, as their Hunting Grounds...” This statement recognized the existence of Aboriginal rights and title to vast areas within North America. In particular, the Royal Proclamation identified the lands west of the Appalachian Mountains, not including Rupert’s Land in the north, as being Indigenous land, and therefore subject to land acquisition agreements between the Crown and the affected nations. Between 1764 and 1815, the government acquired the lands of the shoreline of the upper St. Lawrence as well as the lower Great Lakes. While the earliest treaties were related to the use of land for military and defensive purposes, following the American Revolutionary War many treaties were for the purposes of settling the roughly 30,000 United Empire Loyalists who refused to accept American rule. After the War of 1812, the colonial administration of Upper Canada focused on greater settlement of the colony, and land purchases were then concerned with those lands beyond this first range of settlement. These involved a swath of about 7 million acres from the Ottawa River to the eastern shores of Georgian Bay. After 1836, many portions of the northern and northwestern sections of the province were acquired, including the Saugeen Peninsula, Manitoulin Islands and the north shores of Lake Huron and Lake Superior (Department of Indigenous and Northern Affairs 2010; Hall 2018; Surtees 1984).

Niagara Region has some of the earliest treaties in the province and is evidence of the importance of the region to the Colonial Administration during and immediately after the American Revolutionary War.

2.1. The Niagara Purchase (1764 / 1781)

The first formal treaty negotiated after the Royal Proclamation was for a narrow strip of land on either side of the Niagara River in order to allow for the secure movement of supplies and troops along the river.

After the British capture of Fort Niagara in July 1759, the contract for transporting goods along the portage on the east bank of the Niagara River was awarded to John Stedman. This caused conflict with the local Seneca community who had historically been employed by the French government for transporting goods between the lakes along the Niagara River. On September 14, 1763, John Stedman and convoy were attacked by an estimated 500 Seneca as retaliation to British control in the area. As a result of this affair, a peace treaty was negotiated with the Seneca and several other Indigenous communities by Sir William Johnson in April 1764. Under the terms of this treaty, a six-mile-wide strip of land was ceded to the British. This strip measured two miles in width on the west bank of the Niagara River and four miles in width along the east bank, and fourteen miles in depth (e.g., to a point just above the “Great Cataract”) and included the islands within the river. In August 1764, a similar sized tract of land was ceded to the Crown which extended from the Falls to the mouth of the Niagara River at Lake Erie (Brodhead 1856:562, 621, 647-649, 652-653). The Treaty of Niagara was signed by Sir William Johnson and Seneca representatives. The Treaty was concluded on August 1, 1764.

This treaty was renegotiated in 1781 for the areas to the west of the Niagara River. The original document stipulated that this land was only to be used by the Crown for the movement of goods and troops and was not to be set aside for settlement. Furthermore, the Mississaugas of the Credit First Nation claimed that the area west of the Niagara River was within their Traditional Territory but were not included in the original 1764 treaty. The Niagara Purchase, registered as Crown Treaty 381, was signed on 9, May 1781, between representatives of the Crown and representatives of Mississauga and Chippewa peoples. The land under negotiation consisted of a four-mile strip on the west side of the Niagara River from Lake Ontario to Lake Erie. This area included the current communities of Niagara Falls, Niagara-on-the-Lake, and Fort Erie. In payment for these lands, the Crown provided 300 “suits of clothing” to the Mississauga. The signees of the treaty on the side of the British included Colonel Guy Johnson, Superintendent General of Indian Affairs, Captain Andrew Parke, Captain William Potts, and John Dease and Alexander McKee, Deputy Agents of Indian Affairs. The signees of the treaty on the side of the Chippewa and Mississauga included Nanibizure, Paghquan, Wabicanine, and Minaghquat (Department of Indigenous and Northern Affairs 2016; Surtees 1984).

This renegotiated treaty allowed for the settlement of these lands for agricultural purposes, which was necessary in order to provide food for the growing military in the area. This treaty also recognized Mississauga sovereignty in the region and became the basis for future negotiations between the Crown and the Mississauga (Department of Indigenous and Northern Affairs 2016; Surtees 1984).

2.2. The Between the Lakes Purchase and the Haldimand Grant (1784)

Following the American Revolutionary War, the British Crown needed to find lands on which to settle United Empire Loyalists, including approximately 2,000 members of the Six Nations confederacy who had fought alongside British troops. Led by Sir Frederick Haldimand, who was the governor of Quebec at that time, the Crown was initially planning on providing lands for Loyalist settlers in Quebec and southeastern Ontario, including providing land in the Bay of Quinte for Six Nations refugees. This was not suitable for many of the members of Six Nations and a contingent of approximately 1,800 community members, led by Chief Joseph Brant, requested land north of Lake Erie along the Grand River. Brant felt that the location in the Bay of Quinte was too isolated and that his followers could be better served by being closer to the Six Nations communities that chose to remain in the United States in western New York (Surtees 1984:21).

Recognizing that, under the terms of the Royal Proclamation, the land needed to be purchased prior to settlement, Colonel John Butler was sent to negotiate with the Mississaugas of the Credit for lands east of Lake Ontario and north of Lake Erie. On May 22, 1784, the Mississaugas of the Credit agreed to cede approximately 3,000,000 acres of land containing all or part of Brant, Elgin, Middlesex, Oxford, and Wellington Counties as well as the Regions of Haldimand-Norfolk, Halton, Hamilton-Wentworth, Niagara, and Waterloo. In exchange for these lands, the Mississaugas received £1180.74 worth of trade goods (Department of Indigenous and Northern Affairs 2016; Surtees 1984). Of the 3,000,000 acres, approximately 550,000 acres was set aside for the settlement of Six Nations people.

On October 25, 1784, Haldimand signed a proclamation that allotted land six miles (10 km) on either side of the Grand River from its mouth at Lake Erie to its headwaters near Dundalk, Ontario. This land was to be used solely by the people of Six Nations, who were also granted the right to sell or lease the land within this territory providing the Crown was first offered to purchase the land. The present-day communities of Six Nations of the Grand River First Nation and Mississaugas of the Credit First Nation are within these lands (Filice 2018; Surtees 1984).

2.3. Renegotiation of Treaty 3 and the Simcoe Patent/Treaty 4 (1793)

Due to uncertainties with the description of the lands in the original surrender, Treaty 3 was renegotiated on December 7, 1792, to clarify what was ceded. The signees of the

treaty on the side of the British included Lieutenant Governor John Graves Simcoe, John Butler, Robert Kerr, Peter Russell, John McGill, and Davie William Smith. The signees of the treaty on the side of the Mississauga included Chiefs Wabakyne, Wabanip, Kautabus, Wabaniship and Mottotow (Department of Indigenous and Northern Affairs 2016; Surtees 1984).

As part of the 1792 renegotiation of Treaty #3, the Crown also redefined the boundaries of the Haldimand Tract. Upon review of the Haldimand Proclamation, politician, and Indian Department official Sir John Johnson noted an error involving the location of the northern boundary of the tract. Haldimand had mistakenly assumed in 1784 that the headwaters of the Grand River resided within the area negotiated under Treaty #3. However, the northern reach of the Haldimand Tract was within lands that were not negotiated until 1818 under treaties #18 and 19 (Department of Indigenous and Northern Affairs 2016; Filice 2018; Surtees 1984). In order to clarify the boundaries of the tract, the Crown appointed surveyor Augustus Jones to complete a survey of the Haldimand Tract in 1791. In so doing, Jones redefined the borders of the Six Nations' land parcel. This included defining the northern limit of the Haldimand Tract as Jones Base Line near the Town of Fergus in the Township of Centre Wellington. In addition, Jones established straight-lined boundaries, rather than sinuous boundaries following every curve in the river, which can still be seen in today's municipal boundaries. Six Nations and Joseph Brant were not in agreement with this new definition and petitioned the government for control over the tract. This eventually led to the 1793 Simcoe Patent (Treaty 4) which defined the rules of land ownership and leasing within the revised 30,000 acres of land provided to Six Nations. This 1793 patent did not address those lands northeast of the Jones Base Line and continues to be a source of dispute between Six Nations and the Crown.

3. Early Immigration and Settlement

At the conclusion of the Seven Years War in 1763, the British Crown asserted sovereignty over land in North America previously claimed by France but was owned by a diverse number of First Nations (Careless 1970:97). Initially, no attempt was made by the British Colonial government to colonize land west of the St. Lawrence valley in order not to upset the ecosystem of the lucrative fur trade in the Great Lakes region (Harris and Warkentin 1974:110; Turner 1994:183-186). This attitude changed towards the end of the American Revolutionary War when it became necessary to settle United Empire Loyalist farmers on the west bank of the Niagara River to provision Fort Niagara, which was the base of Butler's Rangers. The Rangers were a provincial military unit formed by wealthy landowner John Butler of the Mohawk Valley in New York State. The British government provided seed and farm implements and under the direction of Butler, in

1780 the first disbanded Rangers and their families began to settle a strip of land west of the Niagara River acquired from the Mississaugas under the Niagara Purchase (Cruikshank 1893b; Ormsby 1991:16; Surtees 1994:97).

3.1. Early Settlement and Surveys 1780-1820

After a treaty of peace was signed between Great Britain and the United States of America in 1782, it quickly became apparent that extra land would be required for the growing number of Loyalists who arrived at Fort Niagara seeking restitution for the loss of their homes. In May 1784, the British purchased a tract of land from the Mississaugas that extended westward from the new international boundary of the Niagara River towards Burlington (Wilson 1981:82). This large tract was surveyed into 14 townships for the purpose of granting land by surveyor Philip Frey between 1787 and 1788 (Hughes 1994). It should be noted that Caistor, which today is one of the 15 geographical townships of the Niagara Region, was not part of Frey's survey. The survey pattern was variable, with rectangular townships measuring 12 by 9 miles on navigable waterways, and ten miles square townships placed in the interior (Harris and Warkentin 1974:123). Within the townships, 100- or 200-acre farm lots were bounded by road allowances. The early economic development of each township depended upon grantees making improvements to their property as per the settlement duties imposed by the land grant system in Ontario, including clearing obstructions and keeping open the road allowance surveyed in front of their lot in each concession (Weaver 1968:14).

A district land board composed of civic leaders was established in 1788 to select town sites, grant land to Loyalists with a claim, and lay out other roads deemed necessary for communication. The amount of land awarded to each person depended upon their service to the Crown and/or military rank during the late war. The land board continued to operate in Niagara until it was abolished in 1794 (Wilson 1991:62). The American-born Loyalists primarily originated from New York and Pennsylvania, with a lesser number from other states like Connecticut and New Jersey. Settlement of the townships commenced in 1787-88, and by 1792, many farms were cleared of timber and under cultivation (Burtniak and Dirk 1981).

In 1791, the British Parliament passed the Canada Constitutional Act that established Upper Canada (Ontario) by dividing the old province of Quebec into two entities. Lower Canada retained its French laws and language while Upper Canada received English law and institutions to accommodate the Loyalists. Present day Niagara-on-the-Lake (NOTL), also known as Niagara, was chosen as the first capital of the new province (Careless 1970:144). The new province included the townships in the Niagara Region that comprise the geographic counties of Lincoln and Welland. In 1795, the Upper Canadian government decided that a freehold system of land tenure based upon the

English model was preferred, and a Land Registry Act was passed. In 1796, the first lands were patented from the Crown by private owners. To increase the population of the province, and to bring more land under cultivation, during the mid-1790s and early 1800s, the Upper Canadian government offered grants of land to attract new settlers and replaced the oath of allegiance to the King with a Christian oath (Wilson 1981:102). Historians sometimes call the Americans who responded to this offer “Late Loyalists” to distinguish them from the people who arrived from the United States before 1788 (Wood 1988:56). During this period, many Quakers took up land in Pelham Township, and Mennonites settled in parts of Louth and Clinton Townships (Groh 1977; Coffman 1979, 1982).

3.2. Population Growth 1820-1860

The population of Upper Canada remained largely that of Loyalist and later American immigrants and their children until the end of the War of 1812. The colony at that time was not the prime concern of the home government back in Britain. America’s declaration of war on Great Britain changed that attitude and emigration from the United States was discouraged (Turner 1994:195). Instead, the emigration of people from the British Isles was encouraged, many of whom were landless veterans of the Napoleonic Wars. Between circa 1815 and 1830, the majority of the new immigrants were from Northern Ireland, England, or Scotland (Wood 1988:56). During the construction of the first Welland Canal, and continuing into the 1840s, there was an increased number of immigrants from Ireland. The number of Irish increased substantially during the late 1840s following the Great Hunger. Immigration to the Niagara area from other European countries was relatively low during much of the nineteenth century (Burtiak and Dirks 1981; VanAsten 1983).

During the early period of settlement, some Loyalist immigrants brought enslaved African Americans with them. Legislation passed by the government of Upper Canada in 1793 called for the gradual abolition of slavery within the province, and freedom seekers who made it across the border from the United States as well as African North American freedom seekers, such as Richard Pierpoint, were attracted to Canada for that reason. By the 1820s, African North American settlements were flourishing in many parts of the province including St. Catharines, which was a safe distance away from the border (Anon. 1974; Wood 2000:47).

In the period leading up to the American Civil War, the African North American population swelled in Niagara following the passage of the Fugitive Slave Act in the United States in 1850. St. Catharines in particular was one of the final destinations or stops on the Underground Railroad for freedom seekers and free African North Americans alike. St. Catharines also provided more employment opportunities than in

border towns such as Niagara, Niagara Falls, or Fort Erie, and there was a large and well-established African North American community centred around North and Geneva Streets. Moreover, there were two churches that served their spiritual needs (Salem Chapel BME, and Zion Baptist) as well as a resident African North American preacher, the Reverend Anthony Burns. Harriet Tubman lived on North Street in St. Catharines for about a decade before returning to the United States (Jackson 1976).

4. Military History

4.1. The War of 1812

An uneasy peace existed between Great Britain and the United States at the conclusion of the American Revolutionary War. Hostility erupted again when President James Madison declared war on Great Britain in June of 1812. Little fighting took place in the United States, however, as it was chiefly a war in the Canadas (Careless 1974:131). In particular, the Niagara peninsula witnessed a great number of battles and skirmishes between 1812 and 1814 (Turner 1990). The War of 1812 has been chronicled by scholars such as Lossing (1869), Cruikshank (n. d.), Wood (n. d.), and Dale (2011). Significant War of 1812 sites have been marked by the Canadian government, the Ontario Heritage Trust, the Niagara Historical Society, and by the Lundy's Lane Historical Society. A guidebook to these sites was published by Gilbert Collins (2006).

The action in the region was confined largely to the geographic townships of Bertie, Willoughby, Stamford, and Niagara that bordered on the Niagara River. The main battle in the first year of the conflict was the Battle of Queenston Heights on October 13, 1812, in which the British Major-General Isaac Brock lost his life (Malcomson 1994, 2003; Riley 2011). A lesser-known engagement related to the American invasion of the Niagara peninsula is the Battle of Frenchman's Creek (November 28, 1812), in which an American force attempted to capture and dislodge a British gun battery and earthworks located north of Fort Erie (Davies 1996).

In the second campaign season, the Americans were victorious at the Battle of Fort George on May 27, 1813 (Cruikshank 1904; Last 2105). On that day they also captured the Town of Newark (NOTL) and afterwards established advance piquets along the Niagara River Road to the vicinity of McFarland House and as far west as the Two Mile Creek. The Americans were reluctant to advance their lines too far inland; their base of operations at Fort George and the protective buffer zone of the town provided them with a position that was easily defended and in close proximity to the safety of Fort Niagara on the American side of the river. Small skirmishes were fought between the British and Americans during the course of the year, such as the Battle of Butler's Farm

(MacDonald and Narhi 2015), and raiding and scouting parties were despatched from Niagara into the neighbouring townships, particularly Grantham. Residents in Louth, Clinton, and Grimsby were also plundered by armies from both sides, as well as by the First Nations allies of Great Britain, while marching towards Burlington Heights (Cruikshank n. d.).

One of the main objectives for the Americans was to capture the supply depot at DeCew House in Thorold. Laura Ingersoll Secord, wife of UE Loyalist James Secord, overheard the American plans and she set out on her epic walk to warn James Fitzgibbon about the attack. The result was the Battle of Beaverdams on June 24, 1813, sometimes known as the Fight in the Beechwoods (Cruikshank 1895; Dewar and Taillefer 1991). The campaign season ended in December when the Americans withdrew to the New York side of the Niagara River, but not before setting the Town of Niagara ablaze (Merritt 2005).

The action during the third and final year of the war along the Niagara frontier saw a shift of events to the south end of the Niagara Peninsula (Anger 2008). The Americans secured their position when they captured Fort Erie (Cruikshank n. d.). From there they staged maneuvers in July 1814 that resulted in the Battle of Chippawa (Graves 1994), the Battle of Lundy's Lane (Cruikshank 1893a; Graves 1993, 1997; Feltoe 2014), and the burning of Bridgewater Mills (Cruikshank n. d.). In particular, the location of the Battle of Chippawa is a largely undisturbed site, believed to contain the remains of soldiers who fell there, and therefore, is of major significance (Graves 1991). During the Siege of Fort Erie, the British fought to regain the fort (Litt 1991; Pfeiffer and Williamson 1991). The last engagement fought before the Americans withdrew from the Fort Erie area was the Battle of Cook's Mills on October 19, 1814 (Cruikshank n. d.).

4.2. Surviving Pre-1812 Structures in the Niagara Region

Most of the heritage structures in the Niagara Region date to the period of reconstruction after the War of 1812. There are relatively few known structures that were built prior to the War of 1812 that survived either the conflict, accidental fire, or later changes in land use. In Niagara, for example, it was recorded that only one house survived intact the burning of the town in December 1813, that of Ralf Clench, but it was destroyed accidentally a few months later (Stokes and Montgomery 1971). A number of heritage buildings in NOTL are known to have been rebuilt on older pre-war foundations and may have incorporated salvaged building materials within their structural fabric. Some of the houses with a pre-War of 1812 core have been enlarged or modified at a later date and are not easily recognized as a house from the early period of settlement

in the region (Flemming 1971; Stokes and Montgomery 1971; Dunn and Romanowich 1995; Bernat and Ormsby 2003).

Buildings in other settlements were burned or damaged during the war, but Niagara and the village of St. David's sustained the greatest losses in property. The further away a settlement was from the Niagara River and the American lines ensured greater safety. The following list of structures is organized by geographical township and is partially informed by properties listed on heritage inventories maintained by the relevant municipality.

4.2.1. Bertie Township (including the Town of Fort Erie)

Four structures in the geographical township of Bertie pre-date the War of 1812. The three domestic structures are listed on the Town of Fort Erie's Municipal Register of Properties of Cultural Heritage Value and Interest, and one is designated under Part IV of the *Ontario Heritage Act* (Town of Fort Erie 2017). Fort Erie is recognized as a place of national historic significance under the *Historic Sites and Monuments Act* (RSC 1985).

Fort Erie (350 Lakeshore Road). The present Fort Erie is the second fort that was built near the confluence of the Niagara River and Lake Erie. The earlier structure built 1764 was constructed closer to the water's edge and was badly damaged by ice in 1803. The present stone fortification was built by the British between 1805 and 1808. The fort was attacked and captured by the Americans during the War of 1812, and it was partly destroyed by an explosion in August 1814 and further destroyed by the retreating American forces in November 1814. The British occupied the site until 1823, after which it was gradually allowed to decay. Maps from the mid-nineteenth century show the ruins of the old fort. Ownership of the site was transferred to the Niagara Parks Commission in 1901. Like Fort George, it was restored by the Niagara Parks Commission in 1937-39 to reflect the War of 1812 period. It is presently operated as a museum (Owen 1986).

Haun-Lawson House (3555 Yacht Harbour Road). This house is believed to have been built circa 1812. It is on the Town of Fort Erie's municipal register of heritage properties (Town of Fort Erie 2017).

Miller Farm log cabin (2029 Ridge Road North). This log cabin is believed to have been built circa 1803, on part Lot 8, Concession 8 NR, Bertie Township. It is designated as a property of cultural heritage value or interest under Part IV of the *Ontario Heritage Act* (Town of Fort Erie 2017).

Wintermute House (487 Niagara Boulevard). This two-storey, three-bay clapboard house is believed to have been built sometime during the early 1800s. It is more likely

the structure dates from the late first quarter or from second quarter of the nineteenth century. It was enlarged at a later period and has been heavily renovated during the last few years. It is on the Town of Fort Erie's municipal register of heritage properties (Town of Fort Erie 2017).

4.2.2. Clinton Township (Town of Lincoln)

There are no known pre-War of 1812 structures in the geographical township of Clinton.

4.2.3. Crowland Township (including the City of Welland)

There are no known pre-War of 1812 structures in the geographical township of Crowland (Duff 1928; Morris 1967).

4.2.4. Gainsborough Township

There are no known pre-War of 1812 structures in the geographical township of Gainsborough (Narlatt n. d.).

4.2.5. Grantham Township

There are no known pre-War of 1812 structures within the geographical boundary of the township (Grantham Women's Institute 1946).

4.2.6. North Grimsby Township (Town of Grimsby)

North Grimsby Township contains three pre-War of 1812 structures, all of which are designated under Part IV of the *Ontario Heritage Act* as properties with cultural heritage value or interest by the Town of Grimsby (2020).

Stone Shop (271 Main Street West). This one-storey, four-bay stone structure was built by Allan Nixon around 1800 and was used as a blacksmith shop by his family during the War of 1812. It was later known as the Van Buskirk blacksmith shop. In the late twentieth century it was known as the Stone Shop Museum. A vintage photograph taken in the 1880s showed that the building contained a second storey, constructed out of frame and clapboard, with a "boom town" front. This has since been removed (Turcotte 1995, 2007; Town of Grimsby 2020).

Nelles-Fitch House (125 Main Street West). This 1½-storey, five-bay, Georgian-style frame dwelling is believed to have been constructed by the UEL Colonel Robert Nelles (1761-1842) around 1785 or 1787, while other sources attribute a date to the house of 1791. It was built by him as a temporary dwelling while his main home, Nelles Manor,

was under construction across the street. Part of this house contains a log section, while the rest is timber frame covered in clapboard. The house was inherited by Henry Nelles, and then sold to the village physician, Dr. William Fitch (Turcotte 1995, 2007; Town of Grimsby 2020).

Nelles Manor (126 Main Street West). This large, 2½-storey, five-bay Georgian-style stone house was constructed by Robert Nelles sometime around 1788. Other sources attribute a construction date to the dwelling as 1798, although that may be when the house was completed. It is a designated structure, and now operates as a museum (Turcotte 1995, 2007; Town of Grimsby 2020).

4.2.7. Humberstone Township (including Port Colborne)

There are no known pre-War of 1812 structures within the geographical boundary of Humberstone township (Ott 1967; Smy n. d., 1996).

4.2.8. Louth Township (including St. Catharines and the Town of Lincoln)

A number of contextual histories have been written about the geographical township of Louth (Duquemin n. d.; Rennie 1967a) and the Town of Lincoln (Rennie 1974, 1975, 1986). Only one pre-War of 1812 structure, the Fry House, has been designated under Part IV of the *Ontario Heritage Act* as a property with cultural heritage value or interest by the Town of Lincoln (2020).

Fry House (3802 Main Street). This log house covered in clapboard was the home of the Mennonite weaver Samuel Fry. It is believed to have been constructed sometime around 1815 and is one of the oldest buildings in the Town of Lincoln. It was moved to this site beside the old stone schoolhouse and cemetery (Coffman 1982; Jansen and Rittenhouse 2007).

Ball Grist Mill (3292 Sixth Avenue). Located in the former village of Glen Elgin on the Twenty Mile Creek at Ball's Falls, this mill was constructed sometime around 1807-09. It was of such importance that a detachment of troops was stationed there to guard the building during the War of 1812. Part of the building was demolished during the late 1800s leaving just the east half of the original structure. Today the structure sits in the Ball's Falls Conservation Area (Goldring 1972).

Brown-Jouppien House (1317 Pelham Road). This two-storey, five-bay Georgian-style house was built in two stages by John Brown, a UEL and member of Butler's Rangers. The rear or north kitchen wing was the original stone settlers house constructed around

1796. The front or brick portion of the house was added a few years later, possibly around 1802-04. The house is believed to have served as a tavern as well as a family farm dwelling.

Schram-Gregory House (1258 Lakeshore Road West). This two-storey, three-bay, Dutch Colonial-style house is believed to have been built by Frederick Schram, UEL, a Butler's Ranger, sometime during the 1790s. The original structure was probably a symmetrical, Georgian style house, which was renovated during the 1870s. The Dutch Colonial elements may have been added to the house at that time.

4.2.9. Niagara Township (Town of Niagara-on-the-Lake)

Numerous contextual histories have been written about Niagara (Kirby 1896; Carnochan 1914; King 1981; Merritt 2005). The Town of Niagara-on-the Lake maintains a heritage inventory of properties with cultural heritage or interest that includes pre-War of 1812 structures (NOTL 2019).

Fort George (51 Queen's Parade). This fortification, mainly of wood construction, was built near the mouth of the Niagara River between 1796 and 1799 (Desloges 1980). Prior to 1796, there was no need of a fort to defend the Town of Niagara and the west side of the mouth of the Niagara River since the British still held possession of Fort Niagara on the opposite shore. Fort George was besieged by the American forces during the War of 1812 and held by them between May and December 1813. The fort was later allowed to fall into decay, but it was restored by Parks Canada in 1937 (Haldorson 19910. The stone powder magazine is the only authentic, pre-1812 structure within the walls of the fort (Merritt 2012:79).

Fort Mississauga (223 Queen Street). This fortification, of brick and stone construction, was built on Mississauga Point where the old Niagara lighthouse stood between 1803 and 1814. Fort Mississauga was intended to be a stronger and more easily defended site than nearby Fort George. This structure was built using the stone from the demolished lighthouse and from the rubble of the recently burned town of Niagara. The fort has unique, star shaped earthworks surrounding it. The work at the site was completed around 1816 (Flemming 1982).

St. Mark's Anglican Church (41 Byron Street). The congregation of St. Mark's was established in 1792 and originally met in the nearby Masonic Hall. Construction of the church commenced in 1804 and it is the oldest Anglican Church in the Niagara Region (Garret 1892). It fell behind the American lines during the War of 1812, and the building was occupied by troops and used as a hospital during May-December 1813. The building was burned in late 1813 when the American forces retreated across the river, leaving the stone walls standing. The church was repaired after the war, and it was

rededicated and used for divine services in the 1820s. The structure was enlarged to its present form in the 1840s (Stokes and Montgomery 1971). The block of land occupied by the church appears to have been used as a cemetery from the earliest period of settlement, as the oldest recorded tombstone is that of “Lenerd Blanck,/ Deseaced/ 5 Aug./ 1782” (Carnochan 1912). It is listed as a property with cultural heritage value or interest by the Town of NOTL but is not designated under Part IV of the *Ontario Heritage Act* (NOTL 2019).

The Wilderness (407 King Street). Opinions differ as to the age of this one storey frame and stucco “L” shaped house that is located in the centre of a large block of land that retains many of its original trees, from which the name is derived. The grounds were a meeting place between William Claus, the deputy superintendent of the colonial Indian Department, and the First Nations allies of the British Crown. The yard once contained a large pear tree said to have been planted by Isaac Brock, as well as a very large Gingko tree. The house either was constructed by Claus in 1799 and partly survived the burning of the town of Niagara or was constructed (not rebuilt) in 1816 (Carnochan 1914; Stokes and Montgomery 1971). It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

McFarland House (15927 Niagara River Parkway). This two-storey, five-bay Georgian-style brick house was built by John McFarland, a boat builder, in 1800. The bricks used in its construction were fired across the road from the site. The house was occupied by American troops and used as a field hospital by them in 1813. The house and surrounding farm were partly ruined during the war, but later restored by the family. The house is now operated as a museum by the Niagara Parks Commission (Hemmings 2011).

The Halfway House (15540 Niagara River Parkway). This house is believed to have been built around 1800. It is a two-storey, five bay, stucco-covered brick structure built in the Georgian style. The house contains four large chimneys and a covered entrance portico. Stagecoaches running between Niagara and Queenston would stop to change horses here. It is listed as a property with cultural heritage value or interest by the Town of NOTL but is not designated under Part IV of the *Ontario Heritage Act* (NOTL 2019).

Field House (15284 Niagara River Parkway). This two-storey, five-bay, Georgian-style Flemish bond brick house was built by Gilbert Field in 1800. The structure narrowly escaped destruction during the War of 1812 when it was struck by a cannon ball fired from the American shore. It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

Stone barn (17 Queenston Street). This barn in the village of Queenston is believed to have been built around 1805 (Stokes and Smith 2012).

Laura Secord House (29 Queenston Street). This house in the village of Queenston is a 1½-storey, three-bay frame house that was built by James Secord for his family around 1803. The building was restored by the Laura Secord Candy Company in 1971 and gifted to the Niagara Parks Commission in 1998. It now operates as a museum (Stokes and Smith 2012).

Hamilton-Kormos House (93 Queenston Street). This house in Queenston is a two-storey, five-bay Georgian-style red brick structure. It is said that it was built by the prominent merchant-entrepreneur Robert Hamilton in 1808 as a wedding gift to his son Robert F. Hamilton (Stokes and Smith 2012). It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

36 Princess Street. This 1½-storey, three-bay limestone house in the village of Queenston may have been built in 1812 or earlier. It may have housed prisoners during the War of 1812 and was a storehouse for illegal liquor during the Prohibition era (Stokes and Smith 2012). It is listed as a property with cultural heritage value or interest by the Town of NOTL but is not designated under Part IV of the *Ontario Heritage Act* (NOTL 2019).

Lake Lodge (1122 Lakeshore Road). This frame house overlooking Lake Ontario was the home of the Reverend Robert Addison, the first Anglican rector at St. Mark's Church, and where he resided from 1792 until his death in 1829. It was then occupied by his descendants until it was acquired by the Onslow family in the late nineteenth century. The house is thought to have been built around 1790 and is believed to be the oldest standing structure between Niagara and Grimsby (Carnochan 1914). It remained the home of Miss Valentine Onslow until her death in the 1980s. It was then bought and restored by Ed Werner, the inventor of the board game Trivial Pursuit. It is listed as a property with cultural heritage value or interest by the Town of NOTL but is not designated under Part IV of the *Ontario Heritage Act* (NOTL 2019).

James Clement House (1126 Four Mile Creek Road). This two-storey, five-bay frame house was built circa 1805. It is said that the Americans spared the house during the occupation of Niagara in 1813 because Catherine Clement was pregnant and had a young family. It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

Secord-Paxton House (46 Paxton Lane). This house was built circa 1785-95 in the village of St. Davids. It is a 1½-storey, three-bay, Georgian-style limestone structure. It

is thought to have been built by David Secord. The house was modified through the addition of a dormer at a later period. It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

Secord Mill (137 Four Mile Creek Road). This building was constructed by Peter Secord on Lot 91, Niagara Township, in the village of St. David's circa 1790. It was one of the original "King's Mills" on the Four Mile Creek. It is a two-storey, three-bay structure. It was operated by members of the Secord family until 1833 when it was sold to John Murray. It was converted into a restaurant briefly but was purchased in 1989 and renovated for use as a private residence. It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

Secord-Murdoch House (215 Four Mile Creek Road). This building was constructed in St. David's circa 1790 and enlarged around 1830. It is a 1½-storey, five-bay, Georgian-style limestone building. The house was probably constructed by Peter Secord, and ownership of it remained in the possession of his family until the 1860s. It was purchased by the Murdoch family in the 1920s. It is now operated as an inn and is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

James Clement House (290 Four Mile Creek Road). This house was constructed circa 1805 in St. David's by James Clement (1764-1813), who served with Butler's Rangers and was an officer with the Lincoln militia during the War of 1812. It is a Georgian house with five bays and two storeys. Due to the presence of charred timbers, it is believed that the house was partially burned in July 1814. A central dormer was added at a later date, as well as an enclosed entrance portico. It is designated as a property with cultural heritage value or interest under Part IV of the *Ontario Heritage Act* by the Town of NOTL (NOTL 2019).

De Puisaye House (15506 Niagara River Parkway, at Line 3). This 1½-storey, five-bay frame house with dormers was said to have been constructed in 1799 by Joseph Genevieve, Comte de Puisaye, a refugee French Royalist. He planted fruit trees on the property and composed a vindication of his role in the French Revolution which was later published. He returned to England in 1802. The original house was cut in half, and one part was removed and believed to have been used as a barn. The present house contains a later brick addition built on its south side, which is a two-storey, five-bay, Georgian-style structure. There is a stone monument on the Parkway, placed there by the Niagara Historical Society, commemorating the significance of the house (Carnochan 1914:285). It is listed as a property with cultural heritage value or interest

by the Town of NOTL but is not designated under Part IV of the *Ontario Heritage Act* (NOTL 2019).

4.2.10. Pelham Township (Town of Pelham)

There are no known pre-War of 1812 structures within the geographical boundary of Pelham township (Grol 1980; Hansler 1993).

4.2.11. Stamford Township (City of Niagara Falls)

Numerous contextual histories have been written about the geographical township of Stamford and its largest city, Niagara Falls, including surveys of historic buildings (Ferris 1967; Seibel 1967; Didemus 1970; Long and Jay 1981; Burton 1992). The inventory of buildings with cultural heritage value or interest prepared by the Niagara Falls Heritage Advisory Committee (NFHAC 2020) lists 14 structures that are believed to pre-date the War of 1812, four of which are designated under Part IV of the *Ontario Heritage Act*.

Whirlpool House (3011 Portage Road). This building was constructed in 1796 for Andrew Rorback, a Loyalist from New Jersey, who first operated a saddlery, and later a tavern at this location. The main floor ballroom was a popular venue for social and political meetings. It is a rare example of lath and plaster construction of the late eighteenth century. It is designated under Part IV of the *Ontario Heritage Act* (NFHAC 2020).

Buchner House (6172 Buchner Place). The core of this house is a two-bay frame structure built in 1799 for the Buchner family. It was central to the Battle of Lundy's Lane on July 25, 1814. It is designated under Part IV of the *Ontario Heritage Act* (NFHAC 2020).

Lemon Homestead (6993 Thorold Stone Road). Loyalist Lawrence Lemon, originally from Pennsylvania, was granted Lot 71 of Stamford Township in 1798. He constructed his stucco over frame house in 1800 and it served as an army barracks during the War of 1812 (NFHAC 2020).

Niagara Parks Commission School of Horticulture Building (2565 Niagara River Parkway). The core of the school is a two-storey stone house constructed in 1800 (NFHAC 2020).

Collard House (3369 St. Paul Avenue). This house was constructed for the Collard family in 1805 (NFHAC 2020).

Mitchell Cottage (3360 St. Paul Avenue). The core of the house is a log cabin constructed in 1805 by John Mitchell on Crown land granted to the Presbyterian Church to assist early settlers. It is designated under Part IV of the *Ontario Heritage Act* (NFHAC 2020).

Toad Hall (3357 St. Paul Avenue). This house was constructed in 1805. It is designated under Part IV of the *Ontario Heritage Act* (NFHAC 2020).

Karn-Brown-Gauld House (8865 Mountain Road). The house was constructed in 1809 by Andrew Karn, who used heavy oak and walnut beams, and built the walls of local limestone nearly three feet thick (NFHAC 2020).

Corwin House (4751 Montrose Road). This house was constructed in 1810 for the Corwin family (NFHAC 2020).

Danner-Sherk House (12549 Niagara River Parkway). This house is designated under Part IV of the *Ontario Heritage Act* as an example of the early Georgian-Loyalist style of Upper Canada, with a central hall plan, massive stone walls, and a low-pitched gable roof. The original owner was Ulrich Strickler and during the War of 1812 the house was used by the British army as a headquarters and commissary for officers (NFHAC 2020).

Munson Church Residence (3000 Portage Road). This two-storey house was constructed in 1810 for Matilda and Andrew Rorback, whose tavern was located across the road. It is designated under Part IV of the *Ontario Heritage Act* (NFHAC 2020).

5810 Drummond Road. The core of this small house was constructed in 1812 (NFHAC 2020).

6270 Dunn Street. This house was constructed for Frank Heximer in 1812 (NFHAC 2020).

Cole House (5837 Main Street). Also known as the Johnson Inn, this structure was built in 1812 (NFHAC 2020).

4.2.12. Thorold Township (City of Thorold)

Numerous contextual histories have been written about Thorold (Thompson 1897; Harvie 1950; Michael 1967; Lorriman 1968; Orr 1978). Heritage Thorold LACAC (2020) maintains a list of cultural heritage properties designated under Part IV of the *Ontario Heritage Act*. Three of these are included in the list below.

Decou House Monument (2350 DeCew Road.) The foundations for a stone house built by Captain John DeCew (also spelled DeCou) in 1808 have been made into a

monument on DeCew Road just west of the channel that connects Lakes Gibson and Moodie. They are designated under Part IV of the *Ontario Heritage Act*. The house was used as a supply depot by the British forces after the Town of Niagara was captured in May 1813 during the War of 1812. It was the American objective to capture the house in the following month and Laura Secord made her famous walk to warn the British of the American plans. The Battle of Beaverdams was fought nearby. The house was occupied by subsequent families until 1950, when the interior of the building was heavily damaged by fire. The heavy stone walls were demolished, but the lower courses of masonry were repaired and reset. The original house was a two-storey, five-bay Georgian-style structure, similar in appearance to the Jacob Upper house in Allanburg, and the nearby John Brown house in Louth (Heritage Thorold LACAC 2020).

DeCew-Young House (2440 DeCew Road). The exact date of construction for this frame house known as *Morningstar Cottage* is not known, but the east wing is thought to date from circa 1815 while the rest of the house was built around 1830 or later. It is designated under Part IV of the *Ontario Heritage Act* (Heritage Thorold LACAC 2007, 2020).

Hagar House (2432 Seburn Road.) This 1½-storey, five bay Georgian-style brick house was built on part of Thorold Township Lot 82. The exact date of this house has not been determined. Some sources attribute a construction date for it circa 1813, while others list circa 1818-1837. It was probably built by one of the children of Jonathan (1765-1813) and Azubah Hopkins Hagar (1770-1847). The house remained in the possession of the family until 1853 when it was sold to Levi Swayze (Thompson 1897; Thorold LACAC 2007).

St. John's Common Schoolhouse (Hollow and Hill Roads.) This one-storey, two-bay, log structure is believed to be the oldest common school building within the province. It was originally a log cabin built by John Darling around 1799 and converted into a school in 1804. It was used until a new school was built in 1844 (Thompson 1897; Timlock n.d.). It is still used by the Niagara South Board of Education as an outdoor education site (Duquemin 1980).

Summers House (1922 Beaverdams Road). The core of this house on Thorold Township Lot 54 is believed to have been built by Israel Swayze prior to the War of 1812. It was later enlarged and renovated by the Summers family during the 1880s (Thompson 1897).

Carroll-Tracy House (14 Carlton Street North). This two-storey, three-bay Georgian style stone house may have been constructed as early as 1810 according to family tradition (Thompson 1897; Thorold LACAC 2007). Stylistic details suggest that it may

have been constructed slightly later, with the date of 1865 listed on its designation under Part IV of the *Ontario Heritage Act* (Heritage Thorold 2020).

Jacob Upper House (13252 Lundy's Lane). This two-storey, five-bay stone house is located in the Allanburg neighbourhood. It was the home of Jacob Upper and family tradition relates that it was under construction circa 1809 but work was halted on it during the War of 1812. It is believed to have been completed around 1817, when Upper was rated with the second highest assessment for Thorold Township at £2.19.6. Some sources refer to it as the Anthony Upper house (Thompson 1897; Timlock n.d.).

4.2.13. Wainfleet Township

There are no known pre-1812 structures within the geographical township of Wainfleet (Michener 1967; Moore 1967; Gawlina and Hanuska 1986).

4.2.14. West Lincoln Township (formerly South Grimsby, Caistor, Gainsborough Townships)

There are no known pre-1812 structures within the geographical townships included within the West Lincoln municipal boundaries (Powell and Coffman 1956; Finn 1985).

4.2.15. Willoughby Township

There are no known pre-1812 structures within the geographical township of Willoughby (Ort 1967).

4.3. The Fenian Raids of 1866

In the spring of 1866, a number of Irish immigrants, many of whom were discharged American Civil War veterans (Rescher 2003), put together a plan to invade Canada. They were members of the Fenian Brotherhood, an Irish Republican organization based in the United States. Their goal was to capture Canada, and then to exchange it with Britain in order to gain independence for Ireland. It was estimated that the Fenian membership may have numbered between 10,000-14,000 at its peak. The Canadian government, through a small network of spies working in the United States, were aware of the Fenian plot and small militia detachments were stationed at various points along the border (including the crossing points at Niagara) as a precaution.

Fewer men than expected joined the Fenian army, and it was decided that the force of approximately 850 under the command of John O'Neill would cross the Niagara River from Buffalo to Fort Erie on June 1, 1866. The Fenians marched west on June 2, where

it was rumored that they planned to destroy the Welland Canal lock at Port Colborne. Telegraph lines were cut along the way to interrupt communications. The Fenians encountered the British and Canadian militia forces that had been despatched at Ridgeway where a sharp battle ensued.

The history of the Battle of Ridgeway has been chronicled in various published eyewitness accounts (Taylor 1866; Beatty 1910; Macdonald 1910; Davies and Scott 2016) and has formed the subject of articles and books by modern historians (Quealey 1961; Plato 1991; Chipp 2016), one of whom has termed it the “battle that created Canada” (Vronsky 2011). The Fenians retreated towards Fort Erie where another battle was fought before they retreated across the river where O’Neill was arrested. In total, the Fenians suffered 19 deaths and 14 wounded, while the Canadian and British militia lost 15 men and 38 wounded. Another 36 men were taken captive during the day. Some of the wounded men were transported to St. Catharines where a temporary hospital was established in the County building (the old Lincoln County Courthouse), before being released to return home.

The events at Ridgeway were captured in a series of 23 water-colour paintings executed by the artist Alexander von Erichson around the time of the battle. They are on exhibit at the Fort Erie Museum. Period photographs exist of some of the militiamen who took part in the action on that day. The battlefield was declared a National Historic Site in 1921, and a memorial cairn was erected on the battlefield. In 1976 a small house, owned by the Roadhouse family, was moved to the site, and is used as a museum. The house stood on Ridge Road at the time of the battle.

4.4. Niagara Commons and Camp Niagara

The Niagara Commons is a large tract of land originally located just outside the original Town of Niagara on the west bank of the Niagara River. The colonial use of the Commons probably began with the French, who grew crops to supply their garrison at Fort Niagara with fresh produce. During the early British period it was set aside by the British Crown as a 444-acre (179 ha) military reserve for Fort George that encompassed the fort, Navy Hall adjacent to the river (Flemming 1976), and the barracks built for Butler’s Rangers in advance of Loyalist resettlement (Merritt 2012:11). The Commons also contained a military hospital, the colonial Indian Department’s Council House (McConnell 1976), and quarters for officers in the Indian Department; the Indian Department had been created by the British government in the 1750s as the Crown’s military liaison with First Nations allies in North America (Merritt 2012:33). The centrality of these places to the founding of Ontario and its defence during the War of 1812 prompted historian Janet Carnochan to assert that the Commons are as important as

the Plains of Abraham and the battlefields of Waterloo and Bannockburn (Merritt 2012:7).

Records show that a “commodious dwelling” had been constructed on the Niagara Commons during the 1790s for Peter Russell, the Receiver General and President of Upper Canada, and his wife Elizabeth prior to the colonial government’s relocation from Niagara to York (Merritt 2012:32). Part of the original Commons was subdivided in the early 1820s to extend the limits of the Town of Niagara. Today, it is roughly bounded by King, Wellington and Melville Streets, the Niagara River, and John Street East. The centre of the Commons is bisected by the Queen’s Parade, once known as the Queenston Road.

A fair ground and racetrack were set up on the Common in 1850 to host the annual Provincial Agricultural Exhibition that rotated through various towns and cities. Fall fairs and horse racing continued at this location for another 150 years (Merritt 2012:181). The far south end of the Commons contains a wooded area, long known as a beauty spot, named Paradise Grove. The “Grove” is a savannah that contains many ancient oak trees and rare examples of native plants (Carnochan 1914).

The Commons was used for military training exercises from the 1850s until the 1960s (Merritt 2012, 2015). Between 1917 and 1919 the Commons was also the site of a Polish Army training camp; several of these men died during the Spanish Influenza epidemic in 1918-19 and were interred in a special plot at St. Vincent de Paul Cemetery (Skrzeszewski 2015). In 1969, the site was transferred by the Department of National Defence to Parks Canada.

5. Transportation

5.1. Early Roads

The newcomers found utility in the ancient trail network established by the Indigenous inhabitants of the Niagara peninsula. The roads based on these trails are distinct from the geometric grid system imposed by colonial surveyors and follow natural topography to overcome obstacles (Hughes 2019). Examples include Lakeshore Road, Niagara Street, Queenston Street, Oakdale Avenue, Pelham Road, and Beaverdams Road. Other roads followed along creeks and rivers, such as the Niagara River Road and Four Mile Creek Road.

During the late 1780s, the survey grid of townships was laid down to provide for a network of concession and sideline roads that gave access to the emerging settlements. The roads were intended to follow the straight lines and right angles of the survey

(Wood 2000:20). Surveying the great forested tracts of land was difficult and the results sometimes were far from perfect. While not a huge problem during the nineteenth century, the fact that concession and sideline roads do not meet at right angles in the geographical township of Grantham, now part of St. Catharines, is a cause of annoyance to modern motorists. Still other roads are man-made features known as “forced roads” that were constructed to avoid obstacles in the landscape such as deep ravines or steep hillsides. Examples are Highway 55 formerly known as the Black Swamp or Niagara Stone Road, and the various roads that provide access up the slope of the Niagara Escarpment. Other early pre-canal era roads include Lundy’s Lane, Canborough Road, Forks Road, Lyons Creek Road, Ridge Road, Garrison Road, Sherk’s Road, and many others.

The early roads came under the jurisdiction of township officials named Path Masters who were elected to serve each year. Each township was divided into sections, and it was the responsibility of the Path Master to ensure that all able-bodied men performed their share of annual “statute labour” on maintaining the roads. Failure to perform statute labour would result in a fine that was paid to the magistrates at the Niagara District Quarter Sessions. The money collected in fines would then be applied to other infrastructure projects such as bridge construction. The roads were often impassable for a time following a rain, and therefore travel by water was preferred by many. Sleighing during the winter made long distance travel possible and more convenient when the road surface was frozen (Crysler 1943).

During the second quarter of the nineteenth century, some roads were improved as macadamised roads (i.e., a form of hard-packed gravel was applied), while others were turned into plank roads. The money required to maintain them was collected through tolls, and nineteenth-century maps show the location of some of the early tollgates in the area. During the late nineteenth century, larger communities such as St. Catharines, Thorold and Niagara Falls began to pave their roads with alternate types of material, such as bricks or tarred wooden blocks that were still susceptible to frost heave. Poured concrete came into use during the Good Roads movement in the early 1900s, as well as asphalt surfaces (Krueger 2002).

5.2. Railways

The Niagara Region is crossed by a number of railway corridors (some still active, some abandoned) that provided freight and passenger service during the nineteenth century (Andreae 1997). The earliest railway was a horse drawn line that was constructed from Chippawa to Queenston between 1835 and 1839. Service was extended from Queenston to the Town of Niagara in 1854, when the line was converted to steam service. This railway was known as the Erie and Ontario (E&O), which was later

acquired by the Michigan Central. It continued to provide rail service to NOTL until 1959 (Mulcaster 2019).

The Great Western Railway (GWR) was constructed across the north end of the peninsula across Grimsby, Clinton, Louth, and Grantham Townships, then it ascended the escarpment into Thorold and Stamford. Service commenced in 1853 (Andreae 1997). The cut stone piers that carried the line of track across the Twenty Mile Creek at Bridgeburg in Louth Township are still extant and are a conspicuous heritage landmark.

Construction of the Buffalo and Lake Huron (B&LH) railway commenced in 1852 and about 80 miles of track was completed by 1856. This railway ran from Fort Erie across parts of Bertie, Humberstone and Wainfleet Townships. This line was acquired by the Grand Trunk in 1870 (Andreae 1997).

In 1853, construction was started on the Port Dalhousie and Thorold (PD&T) railway. This line was later extended south to Port Colborne. Its terminal was on the east side of the old canal in Port Dalhousie. The name was changed to the Welland Railway in 1857 (Andreae 1997). One of the bridge abutments, which carried this railway across the third Welland Canal, may still be seen in John Page Park in St. Catharines.

The Fort Erie railway was constructed between Fort Erie and Chippawa in 1860. This line provided a connection to the Buffalo ferry. It was consolidated with the Erie & Ontario in 1863 to become the Erie and Niagara (E&N) railway (Andreae 1997). A branch was constructed to the town of Niagara in the late nineteenth century (Ross 1888).

In 1869, the Canada Southern Railway was opened for service. The line of track was built across parts of Wainfleet, Crowland, Humberstone and Bertie Townships (Andreae 1997).

A popular tourist attraction known as the Great Gorge route was constructed along the Niagara River between Queenston and Chippawa. The Niagara Falls Park and River Railway was granted a charter to build a single line of electrified track in 1891. Completed in 1893, it offered passengers a breathtaking close-up view of the lower river and rapids when the train descended into the gorge. This attraction was marred by a few accidental deaths and injuries sustained in the 1915 and 1917 tourist seasons. The line remained in service until 1932 when declining ridership forced the closure of service on the Canadian side of the river. The land was transferred to the Niagara Parks Commission and the tracks were removed (Way 1946; Greenhill and Mahoney 1969).

Inter-urban railway service was started in St. Catharines in 1879. Trains ran from the city to Port Dalhousie, Thorold, Niagara Falls and Niagara-on-the-Lake. The NS&T

service to NOTL ceased in 1931, and the final trains on all lines were replaced by bus service in 1959. Sections of the NS&T line have been converted into a network of walking trails (Mills 1967, 2007).

Special railway lines were laid down in 1913 during the construction phase of the Welland Ship Canal. These lines were used to transport construction materials to various points on the project and carried excavation debris away from the site which was then used in the construction of the Lake Ontario piers (Stryan and Taylor 2016). The bed of the construction railway still exists in Mary Malcolmson Park and runs parallel with Cumberland Avenue in the north end of St. Catharines.

5.3. The Welland Canals

During the early 1820s, construction was started in New York state on the Erie Canal that linked Buffalo to Albany and the Hudson River, which provided a direct route for freight and passenger service between New York and the Upper Great Lakes. This prompted William Hamilton Merritt to organize a similar project in Niagara, which would create a navigational link between Lakes Erie and Ontario, and thereby eliminate the costly transportation of goods up the escarpment along the old Niagara Portage. In particular, the construction of a canal following the Welland River valley would be beneficial to his mills on the Twelve Mile Creek at St. Catharines. The additional water from the Welland River would augment the hydraulic power at the Twelve, which often experienced a reduced flow during the hot summer months (Coombs 1930; Greenhill and Maloney 1969; Seibel 1990; Jackson et al. 2003; Stryan and Taylor 2001, 2012; Percy 2007).

In 1824, Merritt received a government charter to establish the Welland Canal Company (Aitken 1954). Construction was started on the canal following the line of the Twelve Mile Creek and the Welland River and it was opened for navigation between Port Dalhousie and Chippawa in 1829. The first Welland Canal contained 40 wooden locks. The route was later extended to Port Colborne in 1833. A “feeder canal” from the Grand River was constructed across parts of the geographic townships of Wainfleet and Humberstone that provided additional water for the canal. During the early 1830s, a series of hydraulic raceways were built, which allowed for the establishment of additional mills and factories in canal-side communities such as St. Catharines, Merriton, Thorold, Welland and Port Colborne. Other businesses such as shipyards and drydocks were quickly established along the canal (Jones and Meighan 1967; Michael 1979; Shipley 1987; Burtniak and Hughes 1990; Burtniak 1992; Jackson and Wilson 1992).

By the late 1830s, larger steam ships were being constructed that could not navigate through the canal due to the size of the locks. This, as well as a government inquest into mismanagement of the Welland Canal Company, prompted the government to acquire ownership of the canal and to plan for a new, enlarged canal. Construction of the second Welland Canal commenced in 1842 and was completed in 1845. This canal followed the same route as the first but was wider and deeper with larger stone locks (27 in number) that required less maintenance. The greatest number of locks was required at the escarpment and is nicknamed Neptune's Staircase (Stryan and Taylor 2012).

Construction was undertaken on a third Welland Canal in 1872, which was completed in 1881. This canal started in Port Dalhousie and ended in Port Colborne and contained 26 stone locks. The main difference was that this canal was built in a south-easterly direction across Grantham Township to the escarpment below Thorold and the Ten Mile Creek, at which point the canal climbed the escarpment. This canal remained operational until 1932. Lock 1 at Port Dalhousie remained in use (providing access to the drydock) and was not decommissioned until 1969 (Stryan and Taylor 2012).

Construction started on the fourth canal, known as the Welland Ship Canal, in 1913 but was interrupted during the Great War in 1916-18. Work resumed on the project in 1919 and was completed in 1932. This canal followed the line of the Ten Mile Creek from Port Weller to Thorold, and then paralleled the routes of the earlier canals to Port Colborne. This canal was much wider and deeper than the others and contains just eight reinforced concrete locks (Duff 1930; Stryan and Taylor 2016).

There are a few remains from the first canal, including the submerged entrance piers and entrance lock at Port Dalhousie (Jouppien 2008); part of the channel on the west side of the old Welland Vale site (below and just north of Welland Avenue in St. Catharines); Lock 6 in Centennial Gardens Park below Gale Crescent between Geneva Street and Oakdale Avenue in St. Catharines; and Lock 24 in Mountain Locks Park in Merritton where ribs from a sunken barge are visible in the buried canal channel (Pihl and Shipley 1990; Bradshaw 2019). Other buried portions of the channel, and wooden locks, may still exist *in situ*.

There are more extensive remains from the second Welland Canal, which is still open and watered between Merritton and Port Dalhousie. The stone locks are generally in good repair, and sections of the timber floor and gate sills are partially extant. Sections of this canal are buried but features such as locks and waste weirs remain partially visible (e.g., Mountain Locks Park, Beaver Dams Park in Thorold, the Aqueduct at Welland, and Lock 27 in Port Colborne.) A few stone houses, used by the lock tenders,

are still standing. Traces of the hydraulic mill races may be discerned below St. Paul Street in St. Catharines (Pihl and Shipley 1990; Bradshaw 2019).

The third Canal has been almost entirely filled in along its route through St. Catharines. Parts of Locks 1 and 2 at Port Dalhousie are still watered. Stone bridge abutments that carried the Welland Railway across the canal are visible in John Page Park in St. Catharines, on the south side of Scott Street mid-way between Lake and Geneva Streets. The locks at the escarpment at Thorold are still open and watered and serve as additional waste weirs and reservoirs for the present Welland Ship Canal. Portions of the gates and sills are visible at these sites, and Lock 21 contains the remnants of a sunken barge within the lock chamber. Lock 26 of the canal is still watered at Port Colborne (Pihl and Shipley 1990; Bradshaw 2019).

5.4. Lighthouses

5.4.1. Lake Ontario

Lighthouses have been a navigational aid in many parts of the world for centuries, safely guiding ships into ports after dark and during stormy weather. In 1803, the government of Upper Canada passed legislation which established the first three lighthouses on Lake Ontario at Kingston, Toronto and at Niagara-on-the-Lake. The cost of construction was supported through tariffs collected on goods shipped to Upper Canadian ports. Although the invading American forces destroyed various private and public buildings during the War of 1812, the lighthouses were spared.

Mississauga Point. This lighthouse was constructed in 1803-04 just outside the Town of Niagara on the bluffs overlooking Lake Ontario near the mouth of the Niagara River. The structure was a 45-foot tall (13.17 m), hexagonal stone tower with an adjoining log house for the keeper who was named Dominic Henry. Since the tower was useful for both sides during the War of 1812 it was spared the burning of the town in December 1813. However, the British decided in early 1814 that a stronger fortification was required at Niagara and Mississauga Point was the site that was selected. The lighthouse was demolished, and the stones were used in the construction of Fort Riall, later renamed as Fort Mississauga. After the demolition of this structure, mariners on Lake Ontario were reliant upon a light located behind Fort Niagara that was not always clearly visible which resulted in a number of ships being wrecked or grounded (Wright and Wright 2006:58).

Niagara River Range Lights. These two lighthouses and a foghorn were constructed at the mouth of the Niagara River between June and October 1904. The Front Range light is 21 feet (6.40 m) in height and was built at the dockyard on the Canada

Steamship Lines wharf. The Rear Range light, 33 feet (10.05 m) in height, was built 685 feet (208 m) to the south, adjacent to the waterworks pumphouse on Collingwood Street. Both lighthouses are squared, white structures clad in clapboard siding (Wright and Wright 2006:59).

Port Dalhousie Range Lights. It was necessary that a lighthouse be established at Port Dalhousie since it was located on the Lake Ontario terminus of the first three Welland Canals. It is not known for certain whether a lighthouse existed on the first Welland Canal piers, but a light was in existence for the second canal by 1852. This was a 44 foot (13.4 m) white wooden tower which stood on the east pier. In 1879, a second “outer range” lighthouse was built 289 feet (88 m) to the north at the end of the pier. This four-sided, frame tower stood 38 feet (11.6 m) in height. The older rear or inner range lighthouse was replaced with a new tower in 1893, which was unfortunately struck by lightning in August 1898 and set ablaze. Construction commenced immediately on a new inner range lighthouse which was nearly completed by November of the same year. It was not officially relit until August 1899. The inner range is an octagonal tower, covered in cedar shake shingles, standing 54 feet (16.5 m) in height. A foghorn was added to the outer range light in the early twentieth century. The outer range light is still used but the rear or inner range light was extinguished in 1988. Both lighthouses received heritage designation in 1997, and afterwards ownership of the structures was turned over to the City of St. Catharines (Wright and Wright 2006:66-67).

Port Weller Lighthouse. Port Weller is located at the Lake Ontario end of the present day or fourth Welland Ship Canal. The harbour is man-made, created by widening and deepening the mouth of the original streambed of the Ten Mile Creek. The harbour is protected by two long piers extending 1.5 miles (2.4 km) into the lake and built up using cribbing and material excavated during the construction of the canal channel. The distance between the piers is only 400 feet (121 m), therefore, a navigational light was a necessity. Between 1921 and 1931, the end of the pier and entrance to the canal was marked by a wooden mast with electric lights and a foghorn, which was later replaced by a concrete mast. The new lighthouse was a skeletal, steel structure which stood 95 feet (29 m) in height built on the west pier in 1931. The upper part of the tower was enclosed to protect the equipment from the elements. A concrete, art deco style house was built a short distance away which served as a residence for the keeper. A foghorn and pierhead light were constructed at the end of the west pier in 1947. A new pebble dash bungalow was added to the complex of structures in 1953. It then served as the primary residence for the keeper, and the older structure was used for equipment. In 1969 it was announced that the lighthouse would be closed, and the structure was demolished about a year later. The 1931 and 1953 houses remain standing, used by the Canadian Coast Guard as a Search and Rescue station, and the pierhead light and foghorn remain operational. Cyril Williamson was employed as the lighthouse keeper for

25 years and was an avid ham radio operator. His wife, Ethel, published a book called *A Light on the Seaway* chronicling their years at this station (Williamson 1972; Wright and Wright 2006:68-69).

5.4.2. Lake Erie

Prior to 1917, the location of some of the dangerous hidden reefs and shoals on the north shore of Lake Erie were marked by navigational beacons. In that year, the Dominion Government made the decision to replace some of the beacons with actual lighthouses.

Point Abino Lighthouse. This lighthouse and foghorn were built by the Dominion Government in 1917 on a rock shelf in Lake Erie. The structure was placed where it was due to the fact that the land at the point itself had been held in private ownership since 1892 by Allen Holloway of Buffalo. Holloway had established the Point Abino Association, a real estate company, which marketed the land as a site for cottages which were privately held by vacationing Americans. The Dominion Government entered into an agreement with the Association that the lighthouse would only be accessible by water. Around 1920 an agreement was reached which permitted road access to the site by the keeper and his family. The tower is approximately 98 feet (29.87 m) in height and is built upon a raised concrete platform. It rises four levels with the light being at the fifth level. An on-shore, Tudor-style residence was constructed for the keeper around 1920. The light was fully automated in 1989 and does not require the presence of a full-time keeper at the site. The building was restored/repared by the government in 1987, new windows were installed in 1991 and the delivery doors were bricked over (Wright and Wright 2006:144-145).

Port Colborne Lighthouses. The first lighthouse at Port Colborne is thought to have been built in 1829 at the end of a 1,200 foot (365 m) long pier that extended into Lake Erie from the entrance of the first Welland Canal. This date may be in error since the canal was not extended to Port Colborne until 1833. A second light was added on the east pier in 1844 thereby forming a range light. One of these lights was a wooden tower that stood 26 feet (8 m) in height, while the other was 44 feet (13.4 m). Both structures were decaying by the late 1870s and replaced by a new tower 80 feet (24.5 m) in height constructed south of Sugarloaf Street in 1879. This building was demolished in 1930 following the construction of a new lighthouse and keeper's residence. In 1903, a 42 foot (12.8 m) tall, square lighthouse was built out of concrete at the end of a new west break wall. It was the main or inner range light. The break wall was extended in 1927-28, at which time a smaller square light or beacon was built to serve as an outer or front range light. The main light became a meteorological observation station in 1966, and

the light and foghorn were later fully automated. The last full-time keeper left the station in 1986 (Wright and Wright 2006:148-150).

6. Economic Growth

6.1. Agricultural Roots

Upper Canada was destined to be a settler colony based on agriculture as the Loyalists who arrived in the 1780s had been engaged in farming before the disruption of the Revolutionary War (Gentilcore 1963; Wood 2000:6). Indeed, some farms have remained in the possession of descendants of the original Crown grantees to the present day (Powell n. d.) and during the year that marked the centennial of Canadian Confederation, “Century Farms” were recognized by the Junior Farmers Association of Ontario.

The early period before the development of a market economy (circa 1780-1820) is characterised as subsistence farming. The earliest census record for Niagara compiled in 1782 by John Butler recorded the number of acres cleared by 16 families, livestock such as horses, cattle, sheep and hogs and the amount of buckwheat, maize, oats, and potatoes that had been produced on each farm (Ormsby 1991:17). It should be noted that the cultivation of maize, called “Indian corn” in the census document, was adopted from the cultural practices of the First Nations by colonists in North America, who quickly added corn and other native cultigens and plants to their diet and medicine cabinet (Duncan 1991:143). Records show that tender fruit production had commenced in the Niagara district at a very early period. Elizabeth Simcoe referred to local peaches and cherries in her diary in 1793, and in 1794, Queenston merchant Robert Hamilton sent money to an agent in New York for “fruit trees from the nursery of Mr. Prince on Long Island.” Cherries, plums, and pears were all referred to in records between the 1790s and 1820s. Apple trees were being cultivated in the region by the 1780s, and a variety of Russet named Swayze appears to have been a locally developed cultivar in Thorold in the early 1800s.

Given the importance of agriculture to the success of the new province, an agricultural society was formed in Niagara in 1792 to promote good husbandry. The membership dues were used to purchase a reference library that included titles such as *Young’s Agriculturalist* and the *Gentleman Farmer*. These volumes were donated to the public library in Niagara in 1805. This formative organization eventually lapsed and was replaced by the Niagara District Agricultural Society established in 1831. Other local township societies were established afterwards. The district agricultural fall fair was held in rotation in various communities such as Niagara, St. David’s, Queenston, St.

Catharines, and Chippawa (Merritt 2012:181). By 1854-55, there were branches of the Lincoln County Agricultural Society in Caistor, Gainsborough, Grantham, Grimsby, Louth, and Niagara townships, and in Welland County at Bertie, Crowland, Humberstone, Stamford and Thorold townships (Dodds 1967).

Settlement centres that provided goods and services to the farming communities developed throughout the Niagara peninsula (Burtiak and Turner 1980). The agricultural census returns from the period between 1851 and 1871 showed that a wide variety of grain, root, and vegetable crops were being produced in the Niagara region. The census frequently referred to bushels of wheat, rye, oats, peas, Indian corn, turnip, potatoes, mangel wurtzel (a form of turnip), carrots, beans, and hops. Flax was also grown to be spun into linen thread. The fruit that was enumerated in the census returns was limited to apples, pears, plums, and grapes. Other varieties of fruits and vegetables appear to have been included in a category simply referred to as orchard/garden produce. Livestock included horses, oxen, cattle, "horned" cattle, sheep, and pigs. Dogs were listed in some records. Many farmers maintained beehives, and honey was listed in the census returns.

Grape growing became a significant industry in the Niagara peninsula starting in the middle of the nineteenth century. These were table grapes such as the Concord and Niagara, which were suitable for eating out of hand and making jams and jellies. Local grape growers also made wine for their own consumption, but the first commercial winery was not established until 1874. Although based at first in Toronto, the Niagara Falls Wine Company changed its name to T. B. Bright & Company Ltd. when it moved its operations to Niagara Falls in 1911; the Brights wine label is still in use today (Duncan 1991:156). Specialty vinifera grapes such as those used in fine wines, ice wine, and champagne were not introduced into the region on a large scale until the 1970s.

Nurseries were established in the mid-nineteenth century to supply local growers with choice fruit trees, flower and vegetable seeds, ornamental shrubs, and annual and perennial plants. One of the oldest was the St. Catharines Nursery, established by the Beadle family in 1854. In 1872, Delos W. Beadle (1872) published the *Canadian Fruit, Flower, and Kitchen Gardener*, an important book to the history of gardening that drew upon his family's knowledge and experience (Martin 2000:67).

6.2. Industries, Mills and Factories

The first industries that developed in Niagara during the late eighteenth century were the grist and sawmills. These were of vital importance to the early settlers. The first mills were water-powered and therefore had to be constructed on rivers or streams that had

a sufficient flow of water to run the machinery efficiently. In 1792, D.W. Smith compiled a list of not less than 18 saw and grist mills that had been built, or which were under construction, in the Niagara District. These mills were located in the geographical township of Niagara (n=4), Grantham (n=1), Louth (n=1), Grimsby (n=4), Bertie (n=2), Pelham (n=1), Stamford (n=2), Thorold (n=2), and Humberstone (n=1) (Burtiak and Hughes 2001).

Several of the first mills were constructed on the Four Mile Creek, which was referred to as the Mill Creek in an early census document. A few mills were located at St. Davids and were operated by members of the Secord family, and another mill was located further north near Lakeshore Road and operated by the Servos family. The machinery and stones for some of these early mills were supplied by the Crown, and therefore they were referred to in some sources as the “King’s Mills.” In Grantham Township a Loyalist named Duncan Murray built a saw and grist mill on the Twelve Mile Creek in the area now known as Power Glen. The Ball grist and sawmills at Glen Elgin were constructed at a slightly later date, between 1807 and 1809. Another early mill was built in 1786 on the Niagara River above the falls which was known as the Bridgewater Mills. It was operated by John Burch but destroyed by the retreating American army in 1814.

The construction of the first Welland Canal in the 1820s meant that additional mills and factories could be established that were no longer reliant on natural streams of a certain size. The addition of mill races in the 1830s, fed by water drawn from the canal, meant that factories did not have to be located directly on the canal bank itself. In a survey of the corridor of the first and second Welland Canals, between St. Catharines and Thorold, it was found that at least 109 assorted mills and factories had been established in direct relation to the canal in the period between 1816 and 1946. They included grist and sawmills, breweries, shipyards, a macaroni factory, paper mills, vinegar works, cooperages, tanneries, woollen mills, cast iron works, distilleries, gas works, cement and plaster mills, wheel works, knife works, biscuit manufacturer, hair cloth factory, electric generating plants, and the REO Motor Car Company in 1909 (Pihl and Shipley 1990).

Significant visible remains are still standing *in situ* in the old canal valley in St. Catharines at the Taylor and Bate brewery site (1834), as well as at the Collier sawmill site (circa 1851), and buried remains are presently being excavated at the largely undisturbed Shickluna shipyard site. Remnants of other mills, factories, and the hydraulic raceways exist at other locations along the old canal corridor.

Plans of subdivision found in the Land Registry Office showed that mills and factories were similarly established along the old Welland Canals in Thorold, Welland, and Port Colborne. It was recorded that George Keefer constructed his first mill in Thorold in the

1820s before the Welland Canal had been constructed, under the assumption that the canal would be built in proximity to the structure. A later mill, the 3½ story, 5 bay, stone structure known as the Welland Mills, was built by Jacob Keefer in 1846. This structure on Pine Street north of Albert remains a landmark building in downtown Thorold (Orr 1978).

Smaller industrial sites were established in villages such as St. John's in the Short Hills. Located on the headwaters of the Twelve Mile Creek, this village contained a tannery and three mills by the mid-1830s.

During the second half of the nineteenth century, a number of steam mills were established. These mills were not reliant on the power provided by streams and many only ceased operations when the supply of inexpensive, local wood for fuel was exhausted.

Records indicate that brothers John P. and James E. Abbey, originally from Port Dalhousie, established the Abbey Shipyard in Port Robinson circa 1850. This shipyard/drydock was located adjacent to the old Welland Canal, near two disused wooden locks (Locks 38 and 39) from the first canal and near a stone lock of the second Welland Canal. This site is immediately south of the intersection of Canby and South Streets. The shipyard remained in business until circa 1876 when it was closed.

The Niagara Harbour and Dockyard company was established in 1831 in front of the Town of Niagara. The company dredged out a marshy area that was a hindrance where slips, wharves and a foundry were built. The company annually employed between 150 and 300 men; 28 ships (schooners and steamers) and 18 barges were built there between 1832 and 1845. During the 1840s, this company also issued its own bank notes. The company remained in business until at least 1864. One of the offices from the company remains standing, and the site is commemorated by a provincial plaque.

6.3. Natural Gas Development

The existence of natural gas was first recorded in 1817, when Robert Gourlay referred to the curiosity known as the Burning Spring above Niagara Falls. This phenomenon later became one of the must-see Victorian-era tourist attractions in the area (Seibel 1967).

Natural gas on a large scale was first discovered in Welland County in May 1866, when wells were drilled on the David Steele farm (Lot 31 Concession 1, Humberstone) in search of petroleum. In August 1866, gas was discovered on the Lemon Dell farm (Lot 5 Concession 11, Crowland). A small well was drilled near Point Abino which did not produce large volumes of gas. At that time, the gas and accompanying salt water were

viewed as products of little value, and wells that yielded no petroleum were simply abandoned. In 1889, however, the discovery of large pockets of natural gas in Essex County and improvements in technology (e.g., improved gasometers, regulators, and burners) showed that natural gas production would become a viable industry (WCHS 1926).

Natural gas was discovered when a well was drilled on Lot 35 Concession 3 in Bertie Township in May 1889. The gas in what became known as the Welland Field was found at a depth of 836 feet (254 m) in the White Medina Sandstone layer, and the first well yielded 1,700,000 cubic feet of gas per day. The Provincial Natural Gas and Fuel Company of Ontario was established shortly thereafter, and pipes were laid which supplied gas to the City of Buffalo. An additional 25 wells had been drilled by 1890. The village of Bridgeburg (now part of the Town of Fort Erie) was first piped for gas in 1891. The Bertie Natural Gas Co. was founded in 1891 which provided gas to customers in Ridgeway, and the Mutual Natural Gas Co. supplied gas to homes and businesses in Port Colborne, Humberstone village, and Welland. In 1903, natural gas was being piped to the City of Niagara Falls (WCHS 1926).

By 1926, there were at least 466 natural gas wells in production in various parts of Welland County, and perhaps an addition 150-200 privately owned wells. Records in the Land Registry Office showed that gas has been discovered in other locations such as Caistor Township, and farmers often entered into agreements with gas companies which permitted drilling on their lands (WCHS 1926).

6.4. Hydro-Electric Development

The earliest hydro-electric development in the Niagara area commenced in 1886 when the St. Catharines Electric Light and Power Company set up a small generator below Lock 5 of the second Welland Canal, near the Westchester-Oakdale intersection. The facility provided direct current which illuminated lights on St. Paul Street and provided power for the electrified streetcar system. Other small generators were set up at the Canada Hair Cloth factory which utilised waterpower from the canal raceway to produce power for the factory and a few homes, and a small plant was established below Lock 3 on the Second Canal. A steam-powered generator was set up by Cooke & Sons in 1897. In 1898, the Cataract Power Co. constructed the first power plant at DeCew Falls which provided electricity for the City of Hamilton. Water for the plant was diverted from the third Welland Canal along a power canal that was named the Klondyke by local residents and stored in large reservoirs now named Lakes Gibson and Moodie. A subsidiary company, the Lincoln Electric Light & Power Co., provided St. Catharines with power that was generated at DeCew. The DeCew plant was enlarged in 1900 and again in 1912. DeCew I and DeCew II remain operational.

The first electricity was not generated at Niagara Falls until 1902, since the legislation that created the Queen Victoria Parks Commission in 1885 deemed the lands along the river under its jurisdiction to be park land. In 1902-04, two small turbines were installed which generated power to run the electric Great Gorge Railway trains. Other power generating stations were operational in 1905-06 (Canadian Niagara Power Co., the Ontario Power Co., and the Toronto Electric Light and Toronto Power Generating Station plants). These plants were decommissioned in 1973 and 1999.

In 1921, the Queenston-Chippawa Hydroelectric Plant was completed. It drew water from the Chippawa Creek (Welland River) along an open cut hydro canal. Water is stored in a large reservoir constructed immediately to the west of the power plant. This station was renamed Sir Adam Beck 1 in 1950. A second generating station was completed in 1954 that draws its water from the Niagara River through underground tunnels. It was named Sir Adam Beck 2. A new underground tunnel with larger capacity was the most recent upgrade to the Sir Adam Beck plants. The work was undertaken by the Ontario Power Commission using a tunnel boring machine named “Big Becky” in honour of Adam Beck. The work commenced in 2006 and was completed in 2013.

7. Cemeteries

The locations of most historic period internments are known and a database with over 200 entries for the Regional Municipality of Niagara has been compiled by the Niagara Branch of the Ontario Genealogical Society (n. d.). The list includes War of 1812 battlefield sites, small private family plots, church yards, and municipal cemeteries. Some of the cemeteries are detailed in published accounts (Carnochan 1912; Green 1912; Rittenhouse 1922; Ronnow 1987; Reive 1991; Robbins 1991; Habermehl and Combe 1995; McKendry 2003; Anger 2004a; Hemmings 2010). Some cemeteries are known from historical map sources (Gardiner 1871, 1896; Ross 1886, 1893, 1898, 1900, 1902, 1906a, 1906b, 1913a, 1913b, 1919, 1920; Ross & McCaw 1910; Steele 1891; Ross & Scott 1922; Scott 1924). A McMaster University PhD graduate has explored the history of Niagara settlement through the changing patterns of burial and commemoration visible in historical family cemeteries (Paterson 2013).

Other cemeteries are known to have existed, but their exact location was not fully described. An example of this is the Benjamin Pawling burial plot in St. Catharines, which was referred to in Pawling’s will in 1818 as being “on his farm.” The question remains, which township lot was it on? Some of the small plots with few or no remaining tombstones have been marked by commemorative plaques; some examples being the Darby, the Hostetter-Cooke, May, and the TenBroeck family plots in north-end St. Catharines.

Other burial plots are unmarked and to the casual observer there is no visual clue that the site contains burials. An example of this is the site known as “Negro Point” on the east side of the Eight Mile Creek in Grantham, where the enslaved African Americans brought to Ontario by the McNab family and other early African North American residents of the township were buried. Some local legend relates that the site was washed away into Lake Ontario, whereas several area residents have clearly identified the site on the east bank of the Eight Mile Creek, on the west side of McNab Road, and well set back from the lake (Hemmings 2010, 2013).

Other small family burial plots remain *in situ* but were levelled by later landowners and used for agricultural purposes. A number of family burial plots were located near the lakeshore in Louth Township. Some of the graves (but not all) are known to have been moved to larger municipal cemeteries, whereas local tradition maintains that some of these small plots had been destroyed due to the encroachment of Lake Ontario. A number of graves found in family burial plots and in at least one instance part of a churchyard were moved to municipal cemeteries during the construction of the present Welland Canal. The affected cemeteries were located in Grantham, Thorold, Crowland, and Humberstone Townships.

For a complete descriptive inventory of the cemeteries for the region, please refer to the database of cemeteries listed geographically by township (Appendix B1).

8. Settlement Centres

There were a number of small towns and villages established in Niagara Region during the Victorian era, some of which were merely crossroads settlements that have since vanished. These places were given various names (often after the first settler, or the most prominent individual in the community); these names could (and did) change, but settlements acquired permanent names once they were selected to become post office villages. A few of the settlements became major centres, due to their location (e.g., on a railway, or a harbour), or on account of local industries (milling, manufacturing, etc.).

Today they may be classified as examples of rural service centres, post office villages, crossroads hamlets, and industrial/commercial centres. Others are vanished or “ghost” settlements that appear on historic maps but no longer exist today. Some of these communities contain many significant examples of nineteenth-century built heritage. While every effort was made to identify the historical limits of the following settlement centres, such as in regional maps, town plans and patent plans, some were only identified on published summaries of the County, such as *Lovell’s Gazetteer of British North America* (Crossby 1873). For these particular settlement centres, the assumption

is that the historic roads network which forms part of the historical potential model will capture the limits of these smaller settlement centres.

8.1. Settlement Centres in Lincoln County

8.1.1. Caistor Township

Abingdon. This village was located on part Lots 15 and 16 in Concessions 4 and 5, around the intersection of present-day Abingdon Road and Silver Street. It contained two stores, a post office, church, two sawmills and a shingle factory. The post office was opened in December 1856 when Andrew Wilson was appointed to serve as the first postmaster. The office was closed in September 1915 when A.M. Snyder was the postmaster. By the 1870s the population was estimated to number approximately 150 inhabitants (Crossby 1873:15).

Attercliffe. This village is located in the south-east corner of Caistor Township, on part Lots 1 and 2 in Concession 1. It contained a sawmill, post office, and three stores. Due to its proximity to the Canada Southern Railway, “considerable quantities of lumber and railroad ties are shipped from this point” (Crossby 1873:23).

Basingstoke. This community is located on the Twenty Road just west of Smithville. The post office in this community was opened in July 1882 when James Heaslip was appointed to serve as the first postmaster. The office was closed in December 1914 when Robert Quinlan held the appointment (Carruthers 2009).

Caistor Centre. This village is located on the centre of the township, on part Lots 10 and 11 in Concessions 4 and 5, Caistor Township.

Caistorville. This post office village is located in the south-west corner of the township, on part Lots 20 and 21 in Concessions 1 and 2. The earliest registered plans of the village were surveyed by Edmund DeCew (1855, 1856) in July 1852, September 1854, and April 1856. The population numbered approximately 100 inhabitants during the 1870s (Crossby 1873:53).

Warner. This post office village is located on part Lots 9 and 10 in Concessions 1 and 2, Caistor Township (Crossby 1873:351).

Wilcox Corners. This community is located on part Lot 1 in Concessions 6 and 7, Caistor Township, at the intersection of Sixteen Road and Smithville Road (Niagara Road 14). In the 1870s, there was a school there, and a church was located just to the east in Gainsborough Township. The place was undoubtedly named in honour of the

family of Ramsay Wilcox (born circa 1832), a farmer who owned much of the land on the west side of the intersection at the time of the 1871 Census of Caistor Township.

8.1.2. Clinton Township

Beamsville. This village is located on the Queenston-Grimsby Road (Highway 8) on part Lots 16 and 17 in Concession 3 as shown on Registered Plans 60 and 62 (Brownjohn 1881; Law 1884). By the mid-1840s this village contained a population of about 250 inhabitants and a variety of businesses: one physician and surgeon, four general stores, two hardware stores, two taverns, two foundries, a bookseller, druggist, tannery, chair maker, baker, saddler, two blacksmiths, cabinet maker, two tailors, two shoemakers, and three wagon makers. The village then had a post office, and three churches (Presbyterian, Methodist, and Baptist). By the 1870s, the businesses included three sawmills, a distillery, a potash factory, carriage factories and a telegraph office. The population had increased to approximately 1,000 residents (Smith 1846:12; Crossby 1873:29).

Campden. This post office village is located on part Lots 8 and 9 in Concessions 6 and 7. One of the early registered plans for the village showed that it contained two main streets: Ontario Street North and South and Main Street East and West (Brownjohn 1875) The village then contained a school (SS No. 6.) In the 1870s the population numbered approximately 90 inhabitants (Crossby 1873:55).

Pelham Union. This community is located near the intersection of Victoria Avenue and Twenty Road, near the point where the Townships of Pelham, Louth, Clinton, and Gainsborough meet. During the early 1870s, this post office village contained a population of approximately 50 inhabitants. It contained a schoolhouse that served the local School Section at the south-west corner of Lot 20 Concession 1 in Pelham (Crossby 1873:246).

Tintern. This village is located in the south-east part of Clinton township on part Lots 6 and 7 in Concessions 9 and 10.

8.1.3. Gainsborough Township

Bismarck. This post office village is located on part Lots 10 and 11 in Concessions 3 and 4, Gainsborough Township (Crossby 1873:36).

Boyle. This community is located on part Lots 24 and 25 in Concessions 1 and 2, Gainsborough Township, around the intersection of Boyle Road and Canborough Road (Niagara Road 63).

Candasville. This post office village is located on part Lots 24 and 25 in Concession 1, Gainsborough Township, around the intersection of Boyle Road, Wiley Road, and East Chipawa Road (Crossby 1873:71).

Elcho. This village is located on part Lots 4 and 5 in Concessions 1 and 2, Gainsborough Township.

Pelham Union. This community is located near the intersection of Victoria Avenue and Twenty Road, near the point where the geographic townships of Pelham, Louth, Clinton, and Gainsborough meet. During the early 1870s, this post office village contained a population of approximately 50 inhabitants. It contained a schoolhouse that served the local School Section at the south-west corner of Lot 20 Concession 1 in Pelham (Crossby 1873:246).

Port Davidson. This community is located on or around part Lot 3, Concession 1, Gainsborough Township.

Rosedene. This post office village, also known as Vienna, is located on part Lot 6, Concession 5, Gainsborough Township. The population numbered approximately 100 during the 1870s (Crossby 1873:281).

Silverdale. This community is located at the intersection of Silverdale and Sixteen Roads, around Lots 13 and 14, Concession 5 and 6, Gainsborough Township. It contained a church and school, now used as a community centre.

St. Ann's. This village is located on part Lot 22, Concession 6, Gainsborough Township. During the 1870s it contained several stores and mills as well as a post office. The post office was opened in October 1851 with Jacob Upper appointed to serve as postmaster. The population then numbered approximately 200 inhabitants (Crossby 1873:284).

Vienna. (see Rosedene).

Wellandport. This village is located in the south part of the township on part Lots 14, 15 and 16 in Concession 1. The first registered plan to show the village was surveyed in 1857, and showed the location of the "schoolhouse lot," a "wheat store," a "steam sawmill" and a bridge across the Welland River (McFall 1857). It was described as a "thriving" post office village during the 1870s, with several stores, hotels, and a sawmill; the population numbered approximately 300 inhabitants (Crossby 1873:353). The 1876 map of the village showed the school, three hotels, post office and Presbyterian church (Page 1876:34).

Winslow. This community is located on part Lot 1, Concession 4, Gainsborough Township, at the intersection of the Caistor-Gainsborough Townline Road and Silver Street (Niagara Road 65).

8.1.4. Grantham Township

Centreville (see Slabtown).

DeCew Falls. This spot was selected as a milling site by John DeCew during the early years following the end of the War of 1812 and a small settlement was established nearby. The original route of the first Welland Canal caused a reduction in waterpower to the DeCew mill. DeCew received compensation for damages to his business caused by the canal but moved to Cayuga where he established new businesses. One of DeCew's sons remained in the Niagara area and managed the family farms. The mill built by DeCew was offered for sale in 1837 but appears to have been in ruins by 1860. Robert Chappell built a new stone grist mill at the site in 1872. The site also contained a sawmill on the opposite side of the Twelve Mile Creek.

DeCew Town (see DeCew Falls).

Homer. This village was located at the point where the Ten Mile Creek crossed the Queenston-Grimsby Road, on part Lots 5-8 in Concessions 7 and 8, Grantham Township. It was originally known as the Upper Ten and settled at a very early date. Land was donated here for an Anglican church and burial ground in 1795. By the mid-1870s, Homer had a population of about 200 inhabitants and contained a post office, school, two or three stores, an Anglican church, and a couple of hotels (Crossby 1873:146). Part of the village was razed during construction of the present Welland Ship Canal, and other structures were demolished when the QEW was built during the 1930s. A few brick-construction Victorian era homes remain standing there today, as well as the historic cemetery and cairn. The Homer hospital, a temporary facility used to treat injured workers during the construction of the Welland Canal, stood on the east side of the village near the junction of Dunkirk Road and Queenston Street (Ferguson 2015).

McNab. This village was located on the banks of the Eight Mile Creek, on Lots 4 and 5, Concessions 1 and 2, Grantham Township. This small community grew up at the intersection of Lakeshore and McNab Roads. The polychrome brick Anglican church was constructed on lands donated to the congregation in 1853. The surrounding cemetery has been in use since that time and remains open for burials. McNab school was located on the south-west side of the intersection and is used today as a private residence. In the 1870s there was a blacksmith shop located at the south-west corner of township Lot 4, near the north-east corner of the intersection (Hemmings 2013).

Merritton. This former town, now part of the City of St. Catharines, is located on part Lots 11 and 12, Concession 9, and on part Lots 9-12, Concession 10, Grantham Township. It was also known as Welland City and Thorold Station. The community was established during the late 1820s at the mountain descent between Thorold and Grantham Townships during the construction of the first Welland Canal. A number of mills and industries were able to take advantage of the hydraulic power provided by the canal and so were attracted to the area. One of the oldest homes in the city, a Georgian style stone residence, was built by the Ball family sometime around 1820. It still stands part way up the escarpment just off Mountain Street. The land upon which a formal settlement was laid out (500 acres/202 ha) was acquired by the Welland Canal Loan Co. headed by William Hamilton Merritt in 1851. Merritton was incorporated as a town in 1874 and was amalgamated with the City of St. Catharines in 1961 (Leeson 1974). The first consolidated, registered plan of subdivision for the town was made by **George Z. Rykert** (1867). The Rykert map and others (Anon. n. d.; Gibson 1875b) featured a number of structures such as the canals, locks, pondage areas, waste weirs, raceways, water tanks, the Welland Railway, bridges, taverns, the cotton factory, and a cooperage. Merritton was by-passed by the third Welland Canal, which took a more direct route across Grantham Township rather than following the older lines along Dick's Creek and the Twelve Mile Creek. At its peak in the 1870s, when the population numbered 1,000 inhabitants, Merritton contained numerous businesses and factories, including a grist mill, spoke factory, two cotton factories, a woollen mill, sawmill, paper mill, telegraph office, carriage bent stuff" factory. The village also contained three churches, a school, a Great Western and Welland railway stations, seven taverns, leather works, an oil refinery, and a knife factory (Crossby 1873:192). There are still a number of Victorian era structures (both residential and commercial) in Merritton, as well as well-defined remains from the first and second Welland Canals and ruins of industrial structures that were built along the lines of those canals.

Port Dalhousie. This town, now part of the City of St. Catharines, is located on part Lots 21-23 in the Broken Front and in Concession 1 in Grantham, and on part Lots 1 and 2 in the Broken Front Concession in Louth. The village was first laid out on the land owned by the Pawling family around 1826 and it was originally known simply as Dalhousie. It acquired its present name following the construction of the first Welland Canal. Port Dalhousie was connected by the Welland railway and the NS&T railway to other communities in Niagara during the 1850s. Three steamers (Lakeside, Dalhousie City, Garden City, Northumberland) provided service to Toronto from the late 1880s until 1958. The community was officially incorporated as a village in 1862, and it retained its status as an independent municipal corporation until it was amalgamated by the City of St. Catharines in 1961 (Aloian 1978). The village owed its prosperity due to the presence of the first three Welland Canals. A variety of businesses were established here that were directly connected with the canal, such as dry docks and shipyards (Muir

and Donaldson), stores, and a government works yard for repairing the lock gates. A customs office was located beside Lock 1 of the second canal. Industries such as saw and grist mills (Lawrie's grist mill, Smiley's sawmill), and the Maple Leaf Rubber Factory took advantage of the hydraulic power provided by the canal (Turcotte 1986; Caplan 1999). By the mid-1840s, the population of the village numbered about 200, and businesses included two stores, two taverns, and two blacksmiths (Smith 1846:149). A mid-century *Plan of the Town of Port Dalhousie* (Anon. 1851) and several registered plans of subdivision (Rykert 1864b; Gibson 1870) detail the economic development. A grain elevator was built on the east (Michigan) side of the harbour during the third quarter of the nineteenth century. The village contained two telegraph offices during the 1870s, and the population had increased to approximately 1,000 inhabitants (Crossby 1873:256). The religious needs of the community were met by three churches: St. John's (Anglican), St. Andrew's (Presbyterian) and the Star of the Sea (Roman Catholic.) There were two schools in the village (public and separate). Port Dalhousie became a popular summertime destination for vacationers and day-trippers following the opening of Lakeside Park in the late 1890s, and the waters of the old canal provided an ideal site for the Royal Canadian Henley rowing regatta established in 1903 (Robertson and Serafino 1999; Burtniak and Bradshaw 2019).

Port Weller. This proposed townsite, now part of the City of St. Catharines, was located on either side of the Welland Ship Canal. Port Weller East also called Jones' Beach is located on part Lot 10 in the Broken Front and in Concession 1, Grantham Township. Port Weller West is located on part Lots 12 and 13 in the Broken Front and in Concession 1, Grantham Township. There was an early settlement at this place that was known as the Lower Ten in order to distinguish it from Homer or the Upper Ten. During the nineteenth century there was an early log school and store in the area, and worshippers could attend the nearby Anglican church at McNab. There were at least four private family burial grounds in the vicinity of Port Weller, three of which remain in situ. The fourth, known as the Hodgkinson Family Plot, was removed in 1913 in order to allow for construction of the present Welland Ship Canal. Port Weller Drydocks has provided employment in the area since the 1940s. Port Weller was connected by rail to St. Catharines and Niagara-on-the-Lake, but the lines have been removed and now form part of a network of walking trails. Port Weller was subdivided for building purposes in 1913, and it was envisioned that it would grow to become a port town or city not unlike Port Colborne at the south end of the canal (Rauberford 1913).

Power Glen (see Reynoldsville).

Reynoldsville. This village was located in the southwest corner of the township, on part Lots 22 and 23 in Concessions 9 and 10, Grantham Township. The village site was located just off Pelham Road on the Twelve Mile Creek. An early grist mill was

established there by a Loyalist named Duncan Murray sometime around 1786, which was followed by the Crown Mills in 1810. Some well-defined ruins of stone walls from the mills remain in the creek valley, as well as part of the walls which formed part of the dam for the mills. The mills may have been operated for a time by Samuel Beckett of Pelham and were known for a time as the Crown Mills. The complex became the property of Benjamin Franklin Reynolds during the 1850s after whom the settlement was named. The frame house constructed by Reynolds still stands today. The DeCew hydro generating plant was constructed on the escarpment on the south side of the site in the 1890s, after which time the area acquired its present name. During the 1870s, the population numbered approximately 60 inhabitants, the majority of whom were undoubtedly mill employees. The settlement included a sawmill, blacksmith shop, and a carriage shop (Crossby 1873:274). Reynolds retired from business following an accident in 1886, and his mills were shut down in 1893. The mills were destroyed by fire around 1895 and the ruins remained standing in situ. The sandstone walls have been clandestinely utilized as a source of building materials by local inhabitants for a number of years. The Cataract Power Company began construction on a hydro-electric generating station at DeCew Falls in 1896, and the first electricity was generated at the new facility in August 1898. Two new reservoirs (Lakes Moodie and Gibson) were created in 1904, and additional penstocks were added which increased the capacity of the station. During this period of expansion, the area on top of the escarpment was nicknamed "the Klondike." The post office at Reynoldsville was re-named Power Glen in June 1904.

St. Catharines. The historical, pre-amalgamation boundaries for the City of St. Catharines were defined by Carlton Street to the north, Grantham Avenue to the east, Vansickle Road and the Twelve Mile Creek to the west, and Rykert Street to the south. St. Catharines was initially settled by disbanded soldiers from Butler's Rangers who took up their lands during the late 1780s. One of the major landowners was Robert Hamilton, a Queenston merchant, who had constructed some warehouses along the bank of the Twelve Mile Creek. Early names for the settlement included The Twelve and possibly Shipman's Corners. When the first church was constructed in the settlement in early 1796 it was referred to as the church "at St. Catharines." It is believed by most historians that the place was named in honor of Catharine, the wife of Robert Hamilton. The settlement saw limited action during the War of 1812, and the place began to flourish during the 1820s following the construction of the first Welland Canal. It became a post office village in 1826 and was incorporated as a town in 1845. By the 1870s, the population of St. Catharines had reached 7,864. At that time the town contained seven churches, a convent, three banks, post office, insurance agencies, public and separate schools, a grammar school, commercial college, hospital, printing offices, two newspapers, stores, flour and saw mills, planing mills, foundries, machine shops, sewing machine factory, tanneries, a brewery, soap and candle factories, woollen mills,

shipyards, and a few spa hotels that were famed for the curative properties of their mineral waters (Crossby 1873:287). St. Catharines was incorporated as a city in May 1876. The construction of the third Welland Canal encouraged new development as shown on numerous plans of subdivision from the 1870s and 1880s (Gardiner 1872; Gibson 1875a, 1875c, 1876, 1886).

Shipman's Corners (see St. Catharines).

Slabtown. This small settlement, also known as Centreville, was located between Merritton and St. Catharines on the Thorold Road or present-day Oakdale Avenue. The community was near the farm of Oliver Phelps, an American contractor who became wealthy through his work on the Welland Canal. The settlement acquired its name from the wooden shanties that housed the itinerant canal workers. The community also contained a tavern. Slabtown is now generally considered to be a part of Merritton.

The Twelve, Twelve Mile Creek (see St. Catharines).

8.1.5. Grimsby Township

Adam's Corner. This community was shown on the 1862 Tremaine map, on part Lot 17 in Concession 8 in South Grimsby. It was named after the family of George Adams who owned the land around the intersection.

Allen's Corners. This community is located near the intersection of Grimsby Road 12 and Highway 20, between Kimbo and Smithville.

Buckbee Settlement. This community may have been named in honour of the family of Almer Buckbee, who was an early settler near Smithville.

Fulton. This former post office village is located near the intersection of Highway 20 and South Grimsby Road (Niagara Road 18). It was shown on a map of Grimsby in 1876, around part Lot 33 Concession 9, South Grimsby. This post office was opened on June 1, 1853, with L. C. Greenman appointed to serve as the first postmaster. The Fulton office was permanently closed on November 30, 1915. In the 1870s, Fulton had a population of approximately 150 inhabitants (Crossby 1873:122).

Grassie. This community is located around the intersection of Mud Street West and Woolverton Road (Niagara Roads 8 and 73).

Grimsby. The main core of this town is located on the Forty Mile Creek, on part Lots 8-12 (inclusive) in the Broken Front Concession and in Concessions 1 and 2, North Grimsby Township. This place was originally called Forty Mile Creek and it was settled by Loyalists, many from New Jersey, during the 1780s (Bromley 1976). Some early

industries such as mills were built here. One of the first plans for part of the village was surveyed by George A. Ball (1833). By the mid-1840s, the village contained a population of about 200 inhabitants, and the businesses included two physicians and surgeons, two grist mills, two sawmills, brewery, distillery, foundry, two wagon makers, three blacksmiths, two shoemakers, cabinet maker, three tailors, saddler, three stores and two taverns (Smith 1846:72). The village then contained two churches: St. Andrew's (Anglican) and another that was "free to all denominations." By the 1870s, there was a cheese factory at Grimsby and the population had then increased to approximately 1,000 inhabitants (Crossby 1873:134). Several nineteenth-century plans chart the economic development of the town (Rykert 1858; Brownjohn 1873, 1877).

Grimsby Beach. This neighbourhood, now within the Town of Grimsby, originated with a park on Lake Ontario (DeCew 1875; Gardiner 1880, 1885) that was laid out like one founded in Chautauqua, New York, the purpose of which was to provide religious instruction as well as recreation (Turcotte 1985).

Grimsby Centre. This community is located around the intersection of Mountain Road and Mud Street East (Niagara Roads 12 and 73).

Kimbo. This post office community is located around the intersection of Grassie Road and Highway 20, possibly on part Lots 21 and 22, Concession 8, South Grimsby. The post office was opened on July 1, 1892, with Mrs. Mary Newnham appointed to serve as the postmistress. She held this appointment until the office was permanently closed on March 1, 1913.

Merritt Settlement. This settlement, located near the townline between Grimsby and Caistor, was named in honour of Joseph Merritt (1741-1813), a Loyalist from New York State who took up his land grant (Lot 5, Concession 9) circa 1787. The settlement once contained a school and Methodist Church. The Merritt family donated the land upon which the cemetery was established.

Smithville. The main core of this village was located on the banks of the Twenty Mile Creek on part Lots 7-9 (inclusive) in Concession 9, South Grimsby. It was established by Smith Griffin who was the namesake for the community (Page 1923). By the mid-1840s the village contained a population of about 150 inhabitants, and several industries that took advantage of the hydraulic power provided by the headwaters of the Twenty Mile Creek: grist mill, sawmill, carding machine, cloth factory, iron foundries, machine shop, and tannery (Smith 1846:174). Other businesses included the post office, telegraph, four stores, two blacksmiths, two tailors, and two shoemakers. The village then contained two churches, Episcopal Methodist, and British Wesleyan. By the 1870s the population had increased to approximately 350 inhabitants (Crossby 1873:316).

8.1.6. Louth Township

Ball's Falls (see Glen Elgin).

Bridgeport. This village is located where the Great Western Railway crossed the Twenty Mile Creek, on part Lots 17 and 18 in Concession 2, Louth Township. This community was established on the east bank of the creek in the 1850s following the construction of the railway; the land belonged to Solomon Secord (Gardiner 1874). The railway depot was located on the south side of the tracks between Maiden Lane and Martha Street. There was a small Roman Catholic Church (St. Mary's) here during the 1860s and 1870s, located directly opposite to the depot on the north side of the tracks (south side of Chestnut Street, between Park Lane and John Street). Most of the graves were removed from the site after the church burned down. A few tombstones and burials were uncovered when the site was redeveloped; they were removed to nearby St. John's Anglican Church in Jordan. The limestone stone piers that were built in the 1850s to carry the railroad across the Twenty Mile Creek remain *in situ* and are a landmark feature in the area. In the 1870s, the village contained five stores, a post office, hotel, and tannery. The population numbered approximately 150 inhabitants (Crossby 1873:154).

Glen Elgin. This community was located at Ball's Falls on part Lots 19 and 20, Concession 5, Louth Township. It was a milling centre, established in 1809 on land that was granted by the Crown to the Ball family. The grist mill, which still stands on Twenty Mile Creek, was of vital importance to the area and it was guarded by a detachment of troops from the Lincoln Militia during the War of 1812. Other industries established here included an adjacent lime kiln.

Jordan. This village is located on part Lot 19, Concession 4, Louth Township. By the mid-1840s, the population had increased to about 200 inhabitants. It then contained several businesses: three stores, post office, two taverns, saddler, cabinetmaker, two wagon makers, four blacksmiths, two shoemakers, a tailor, tannery, a carding machine, and cloth factory (Smith 1846:89). Jordan contained four churches: St. John's (Anglican), British Wesleyan, Canadian Wesleyan, and Presbyterian. At least one small cemetery was located near the village core on the south side of Church Lane west of Main Street. The location of this cemetery was shown on an early untitled and undated registered plan for the village (*Registered Plan 3*). The stone schoolhouse was constructed in 1859. By the 1870s, the population was estimated to number 200 inhabitants (Crossby 1873:154).

Jordan Station (see Bridgeport).

Pelham Union. This community is located near the intersection of Victoria Avenue and Twenty Road, near the point where the Townships of Pelham, Louth, Clinton, and Gainsborough meet. During the early 1870s, this post office village contained a population of approximately 50 inhabitants. It contained a schoolhouse that served the local School Section at the south-west corner of Lot 20 Concession 1 in Pelham (Crossby 1873:246).

Rockway. This community is located where Pelham Road crosses the Fifteen Mile Creek, around Lot 10, Concession 8, Louth Township. The spot is best known for its waterfall. During the 1870s, there was a mill at this location, as well as two lime kilns on either side of the falls near the base of the escarpment. There was also a nearby schoolhouse, church, and cemetery.

St. Mary's (see Bridgeport).

8.1.7. Niagara Township

Crossroads (see Virgil).

Lawrenceville (see Virgil).

Town of Niagara. This town is located in the north-east corner of the township at the confluence of the Niagara River and Lake Ontario, on part of the former Fort George Military Reserve. The survey for the original town site was made in 1790, and the town was later enlarged when the area south of the dockyard and east of King Street was laid out into building lots. The town was originally named Lennox, but other early names included Butlersburg, West Niagara, and Newark. The first settlers took up their town lots prior to 1794, and Niagara was the provincial capital between 1792 and 1796 (Merritt et al. 1991). It then served as the county seat for the Niagara District until 1866 when the court, jail, and other local offices (Land Registry, sheriff, surrogate court &c) were moved to St. Catharines. The town was captured by the invading American forces in May 1813 and occupied by them until December 1813. The town was almost destroyed when the retreating American forces set fire to the place (Cruikshank n. d.). Reconstruction commenced in 1815, and many of the fine houses date from the second and third quarters of the nineteenth century (Stokes and Montgomery 1971). Niagara was incorporated as a town in 1845. The prosperity of the town was eclipsed following the completion of the first Welland Canal, since much of the trade that Niagara merchants enjoyed was diverted to St. Catharines. Niagara retained some major businesses, most notably the Niagara Harbour and Dock Company, which was chartered in 1830 (Ridgway 1989). This company built many schooners and steam vessels during its existence. The town contained a number of trades and professions: physicians and surgeons, lawyers, druggists, booksellers and stationers, telegraph

office, watchmakers, saddlers, wagon makers, gunsmiths, merchants, printers, two newspapers, cabinet makers, hatter, bakers, tallow chandlers, marble works, cabinet makers, livery stables, tinsmiths, blacksmiths, tailors, shoemakers, tobacconist, a branch of the Bank of Upper Canada, two hotels, a foundry, public school, grammar school, post office, court house and jail, fire hall, Masonic Lodge, Customs House, and five churches (St. Mark's Anglican, St. Andrew's Presbyterian, St. Vincent de Paul Catholic, Methodist and Baptist. Niagara was protected by two forts (Fort George and Fort Mississauga) and bounded by part of the Military Reserve. The lighthouse at Mississauga Point was destroyed during the War of 1812 and Fort Mississauga was built on that site. Niagara was connected to other communities on the lake by ship, and railway service was extended into the town at a later date. By the 1870s, the population numbered approximately 1,600 inhabitants (Crossby 1873:221). The name of the town was changed to Niagara-on-the-Lake in 1904, following the establishment of the City of Niagara Falls. The military reserve was actively used to train soldiers during the Great War (1914-18) and again during the Second World War (1939-45).

Queenston. This village is located at the base of the Niagara Escarpment on the west bank of the Niagara River, on part of Niagara Township Lots 4, 5 and 6. It is opposite to Lewiston, New York, and was connected by ferry to Lewiston until a suspension bridge was constructed here. This place marked the start of the Niagara Portage on the west bank of the Niagara River, and it was a place of considerable trade prior to the completion of the first Welland Canal in 1829. A visitor named John Maude noted that the village contained 20-30 houses in 1800, the layout of the which was determined by the course of the Niagara River. By 1807-08, Christian Schultz noted that Queenston contained "about a hundred houses and a small garrison of twenty-eight men" (Dow 1921:1186-1187, 1207). During the War of 1812, Queenston Heights was fortified and was the scene of one of the major battles in which Major General Isaac Brock and his Aide-de-Camp John McDonell were killed (Malcolmson 2003). Two monuments have been erected in their memory. The first one (1824) was blown up in 1841 and replaced by the present monument in 1853. William Lyon Mackenzie set up his printing press here in 1824 where the first issues of the *Colonial Advocate* newspaper were printed. By 1846, the population of the village had reached about 300 (Smith 1846:155) and it had increased to just 350 by the 1870s. Businesses included: stores, taverns, post office, telegraph office, lawyer, baker, shoemaker, tailor, lawyer, tannery, wagon maker and blacksmith (Crossby 1873:271-272). The village also contained a school, and four churches (Anglican, Baptist, Presbyterian, and Methodist. Surveys of the village were compiled as early as the 1820s, which showed a few houses, the "shop lot" and a school. Later maps for part of the Ordnance Reserve lands showed the location of the wharf, a steamboat landing, several houses, and "fishing stations" (Ball [n.d.]; Rykert 1823; Gossage 1859; Rykert 1864a).

St. David's. The core of this village is located on York Road at the base of the Niagara Escarpment, on parts of Township Lots 89, 90 and 91. The village later expanded to include parts of Lots 92-96. This place was settled at an early date and became a milling centre on the Four Mile Creek. It was named after Major David Secord. The village was the scene of action during the War of 1812, and several buildings including 30 or 40 homes were destroyed there in July 1814. Several businesses were established there that utilized the hydraulic power of the creek: three or four grist mills (one was steam powered), sawmill, distillery, tannery, brewery (St. David's Spring Mill Distillery and Brewery), ashery, cloth factory, shoemaker, soap and candle factory, cooperage, and carding machine. Other businesses included stores, tavern, the *Spectator* newspaper, and blacksmith. There was a Methodist Church and cemetery on York Road in the town. By the mid-1840s, the population had reached about 150 inhabitants, and it had increased to approximately 270 by the 1870s (Smith 1846:178; Crossby 1873:288). A canning factory was opened in 1886 once tender fruit growing became established in the area. This factory became part of Canadian Cannery Ltd. in 1903-04. Additional employment was provided for the men at the nearby Queenston Quarry, and at the cement plant. St. David's was officially incorporated as a police village in July 1923 and was amalgamated with the Town of Niagara-on-the-Lake in 1970 (Walker 2018).

Virgil. This village is located at the intersection of Highway 55 (Niagara Stone Road) and Four Mile Creek Road, on part of Township Lots 112-113. It was originally named "Crossroads" due to its location at the intersection of the Niagara Stone Road and Four Mile Creek Road. It was also known as Lawrenceville after George Lawrence who was a prominent, early settler (Rennie 1967b). This place saw some action during the War of 1812. It contained a few stores, post office, and churches. By the 1870s, the population numbered approximately 100 inhabitants (Crossby 1873:349).

8.2. Settlement Centres in Welland County

8.2.1. Bertie Township

Bertie (see Ridgeway).

Bridgeburg. This former village is now included within the boundaries of the Town of Fort Erie. It is shown on various registered plans (Plans 525-531).

Fort Erie. This town is located on the west bank of the Niagara River on land surveyed originally as a military reserve because of an early British fort that was constructed in 1763. Various registered plans (Plans 502-505, 990-993) pertain to Fort Erie. Historically, it was joined to Buffalo, then called Black Rock, by means of a ferry. It

contained a grist mill, two general stores, a grocery store, post office, customs house, hotels, taverns, Episcopal Church, tailor, shoemakers, cooper, blacksmiths, and a wagon maker. By 1846, the population was estimated to number 180 inhabitants (Smith 1846:60, 206). Fort Erie was captured by the Americans in October 1812 and occupied by them until August 1814. The fort was scene of a major battle in August 1814 when the British recaptured it. Unfortunately, some gunpowder stored there was accidentally ignited. The fort was partially destroyed with the loss of some Canadian and British troops. By the 1870s, Fort Erie contained an office for an American consulate. The population then numbered approximately 835 inhabitants (Crossby 1873:118, 352).

Little Africa. This village, which flourished circa 1840-1875, was an African North American settlement opposite to St. John's Anglican Church in Fort Erie (Davies 1996).

Point Abino (see Ridgeway).

Ridgemount. This post office was opened in August 1887 when Jacob Lee was appointed to serve as the first postmaster. The office was closed in February 1915 when William Willick held the appointment.

Ridgeway. This village, also known as Port Abino and Bertie, is located on part Lot 23 in Concessions 1 and 2 Fronting Lake Erie. This place was described as a "thriving" village during the 1870s as it contained a number of businesses: sawmill, iron foundry, cheese factory, telegraph office, stores, and a post office. The population then numbered approximately 600 inhabitants (Crossby 1873:252, 276). The Battle of Ridgeway, fought between the local militia and the Fenians, took place near here in 1866 (Macdonald 1910). Registered Plan 349 pertains to Ridgeway.

Snyder Depot. This post office was opened in October 1888 when Samuel Campbell was appointed to serve as the first postmaster. It was closed in June 1895 during the tenure of his appointment.

Stevensville. This village is located on part Lots 11 and 12, Concessions 11 and 12, Bertie Township. During the 1870s, this place contained two stores, a post office, two sawmills and a grist mill. The population numbered approximately 100 inhabitants (Crossby 1873:322). Registered Plan 415 pertains to Stevensville.

Victoria. This village is located north of Fort Erie on the Military Reserve.

Waterloo (see Fort Erie).

8.2.2. Crowland Township

Aqueduct (see Welland).

Brookfield Station. This post office was opened in June 1876 when Emmanuel W. Brookfield was appointed to serve as the first postmaster. The office was closed in November 1914 when Mrs. Matilda Topp held the appointment.

Crowland. Also known as Crowlandville or Cook's Mills, this village was located on part Lots 11-13 in Concession 4 and 5, Crowland Township. It was settled at an early date and was the site of a battle between British and American forces in 1814. By the 1870s it contained two stores, a post office, sawmill, grist mill, and tannery. The population was then estimated at approximately 250 inhabitants (Crossby 1873:97).

Cook's Mills (see Crowland).

Coyle. A residential neighbourhood in the southwest part of the City of Welland.

Crowlandville (see Crowland).

Helmsport (see Junction).

Junction. The Junction was located slightly to the east of the point where the Welland Canal feeder joined the 1833 extension to Port Colborne. It contained a tavern in 1837, as well as a wharf operated by John Hellems, hence its alternate names Port Hellems, Hellemsport, and Helmsport. It acquired a salacious reputation as a hive of bootleggers and lawlessness. The City of Welland made an unsuccessful bid in 1917 to amalgamate Helmsport within its municipal boundaries, which it eventually did in 1961.

Lyon's Creek. This village was first settled by Benjamin Lyon. Other early settlers included the Buchner and Lemon families. This place contained a blacksmith shop, livery, meeting house (built 1808), Wesleyan Methodist Church (built 1861) and cemetery, and an inn.

Merrittsville or Merrittville (see Welland).

Port Hellems. (see Junction).

Welland. This city is located on the Welland River (Chippawa Creek) on part Lots 23-27 in Concessions 4 and 5, Crowland Township. The first structures were worker's shanties erected during the construction of the Welland Canal and the community was known as Aqueduct due to the wooden structure that carried the feeder canal across the Welland River (Lewis 1997). It soon prospered due to its location on the Welland Canal. The first mills were built in the village during the construction of the second Welland Canal in the mid-1840s. The settlement was first named Merrittsville in honour of William Hamilton Merritt. It was incorporated as a village and re-named Welland in July 1858. It was elevated to the status of a city in 1917 (Koyama 2000; Lewis 2003).

When Welland County was separated from Lincoln County in 1856, Merrittsville (Welland) was selected as the capital town. By the 1870s, it contained several businesses: stores, post office, two telegraph offices, printing offices, a newspaper, three churches, dry dock, iron foundry, woollen factory, and a sawmill (Crossby 1873:353). Registered Plans 5490-570 pertain to Welland.

White Pigeon. The alternate name for Lyon's Creek. Local legend relates that the innkeeper's daughter always dressed in white and so the place was named White Pigeon after her. The name remained in use by local residents until at least the early 1930s.

8.2.3. Humberstone Township

Bethel. This settlement is located on Yager/Carl Road, near its intersection with Chippawa Road.

Gasline. This settlement was named after the early natural gas industry that developed in the township during the latter half of the nineteenth century.

Gravelly Bay. (see Port Colborne).

Humberstone. This village is located on part Lots 28 and 29 in Concession 2, Humberstone Township. It was originally named Stonebridge. It was first settled in the late 1780s, and the names of early settlers included Neff and Stoner. The name Stonebridge is said to have originated when early settlers sank rocks into the creek in order to facilitate the crossing. A wooden swing bridge was later constructed here in 1833 to span the first Welland Canal. The actual village plan was laid out by Jacob Augustine and Peter Neff in the early 1830s and named Petersburg in honour of Neff. This village contained a windmill, machine shop, foundry, blacksmiths, wagon makers, brewery, and distillery. Other businesses included: physician, stores, a druggist, taverns, butchers, shoemakers, saddlers, tailors, and tinsmith (Anger 2003a). Stonebridge was the site of a riot staged by disgruntled canal workers on Christmas Day in 1831. Some of the early buildings were demolished or moved to new locations during the construction of the first Welland Canal. Several fatalities occurred in the village due to an outbreak of cholera in 1832. By the mid-1840s, the population numbered approximately 200 inhabitants, many of whom were employed on the canal works (Smith 1846:176-177). A detachment of the Coloured Corps from Port Robinson was stationed here to maintain order on the canal. A post office, named Humberstone, was opened here in 1851. By the 1870s, the population had increased to approximately 400 inhabitants (Crossby 1873:147). The village of Humberstone was incorporated in June 1911, and the first village council was elected in January 1912 (Anger 2003b). It was amalgamated as part of Port Colborne in 1952.

Petersburg/Petersburgh. (see Humberstone).

Port Colborne. This city is located on Lake Erie at the mouth of the Welland Canal, on part Lots 25-29 in Concession 1, Humberstone Township. It was originally named Steeles' Bay after an early settler, and then Gravelly Bay. The settlement was renamed Port Colborne in the early 1830s in honour of Sir John Colborne who was the Lieutenant Governor of Upper Canada (Anger 2006). The village contained a general store, grocery store, bakery, three taverns, hotels, brewery, telegraph office, churches, shoemaker, blacksmith, post office and customs house. There was also a steam grist mill and a sawmill and a large grain elevator (Killaly 1837). By 1846, the population had reached about 150 inhabitants (Smith 1846:148). Port Colborne was also connected to other communities by the Grand Trunk and Welland railways. By the 1870s, the population numbered approximately 1,500 inhabitants (Crossby 1873:255-256). Port Colborne acquired village status in 1870 and was incorporated as a town in 1918 and finally became a city in 1967. Registered Plans 829-845, 987-989 pertain to Port Colborne.

Sherk's Crossing. This settlement was located on Highway 3 between Wilhelm and Empire Roads, on part Lots 3-5 in Concession 1, Humberstone Township. By the 1820s, the settlement contained a school, store, and a few houses. A church was built at a later time (Anger 2004b).

Sherk's Mills. This site was located on Black Creek, north of Sherk's Crossing, on part Lots 3 and 4 in Concessions 2 and 3, Humberstone Township. The bridge over the creek on present day Learn Road marks the approximate location of the mill dam. The operations at this site were established by Casper Sherk, and contained a sawmill, grist mill, mill pond and dam, and a few houses. The operation of the mills was later taken over by Jacob Sherk, the son of Casper Sherk (Anger 2004b).

Sherkston. This post office village was located near the Grand Trunk Railway. In the 1870s, it contained a population of approximately 100 inhabitants (Crossby 1873:313).

Shisler Point. This post office was opened in November 1904 when Ward A. Winger was appointed to serve as the first postmaster. The office was closed in March 1916 when Alfred Edward Beyer held the appointment.

Steeles' Bay (see Port Colborne).

Stonebridge (see Humberstone).

Sugarloaf Settlement. This early settlement was located within what is now Port Colborne, on Gravelly Bay, east of Sugarloaf Hill, on part Lots 26 to 33, Concession 1,

Humberstone Township. The settlement was situated in the vicinity of Killaly and Steele Streets. It once contained a log school (1835), log church used by the Mennonites, a tannery owned by Henry Hoover, the Zavitz grist mill (1788-circa 1885), a sawmill, and Steele's tavern (Anger 2006).

8.2.4. Pelham Township

Beckett Town (see Effingham).

Beckett's Bridge. This place is located approximately where Victoria Avenue (Regional Road 24) crosses the Welland River or Chippawa Creek at Regional Road 27. The river also marks the boundary between Pelham and Wainfleet Townships.

Chantler. This post office was opened in April 1898 when Elwood Chantler was appointed to serve as the first postmaster. It was closed in June 1940 when Mrs. Rose Alma Miller held the appointment. It is now a rural residential area on Chantler Road between Poth and Cream Streets.

Effingham. This village, also once known as "Beckett Town." is located on part Lots 4 and 5 in Concession 4. In the 1870s it contained a woollen factory, cheese factory, sawmill, two grist mills and a post office. The population then numbered approximately 50 inhabitants (Crossby 1873:109).

Fenwick. This village is located on part Lots 15 and 16 in Concessions 9 and 10 (Comfort n. d.). During the 1870s, the population numbered approximately 100 inhabitants (Crossby 1873:115). Registered Plan 703 pertains to Fenwick.

Fonthill. This village is located on part Lots 2 and 3 in Concession 8, Pelham Township. It was first laid as a village in quarter-acre (0.101 ha) building lots in 1843. Fonthill was called Osborne's Corners for a short time after Jacob Osborne built the Temperance House (Hotel) at the corner of Pelham Street and Highway 20. In 1841, the Pelham post office was moved down the hill to the village, which some called Temperanceville. The name Fonthill, however, had come into general use by 1848 (Fonthill Women's Institute 1963). Registered Plan of Subdivision 715 for the village was laid out in early 1852 by the surveyor C. K. Fell. It showed 23 building lots bounded by Pelham, West Canborough and Church Streets (Fell 1852). In the 1870s, Fonthill contained a number of businesses: stores, post office, telegraph office, insurance agencies, "a couple of factories and mills," an "extensive nursery," and two churches; the population then numbered approximately 500 inhabitants (Crossby 1873:117). The Fonthill Nursery, a major business in the community, was established by Samuel Taylor in 1837 and remained in business until 1968 (Fonthill Women's Institute 1963; Snow 1994).

North Pelham. This post office village is located on part Lots 12 and 13 in Concession 5, Pelham Township. In the early 1870s, it contained a population of about 150 inhabitants (Crossby 1873:223).

Osborne's Corners (see Fonthill).

Pelham Centre. This place was named due to its central location within the township, near the intersection of Canborough Road and Centre Street. The community is mainly residential and contains a school and some nearby churches. This place also contains the Victorian era, red brick and cut stone Pelham Townhall and cenotaph at 491 Canborough Road.

Pelham Corners. This settlement is located on part Lots 2 and 3 in Concessions 9 and 10, on South Pelham Road near the intersection of Quaker and Welland Roads. It is mainly a residential district now, a short distance from Welland.

Pelham Heights (see Riceville).

Pelham Union. This community is located near the intersection of Victoria Avenue and Twenty Road, near the point where the Townships of Pelham, Louth, Clinton, and Gainsborough meet. During the early 1870s, this post office village contained a population of approximately 50 inhabitants. It contained a schoolhouse that served the local School Section at the southwest corner of Lot 20, Concession 1 in Pelham (Crossby 1873:246).

Riceville. This community, also known as Pelham and Pelham Heights was located west of Fonthill. A post office was established here in 1836. The first Pelham Township Agricultural Society fair was held there in 1856. This fair, later known as the Fenwick Fair, was to be an annual event, held at various locations in the township, until 1933.

Ridgeville. This village is located on part Lots 5 and 6 in Concession 8, Pelham Township. In the 1870s, this village contained three stores, a post office, and a sawmill. The population numbered approximately 100 inhabitants (Crossby 1873:275).

Temperanceville (see Fonthill).

8.2.5. Stamford Township

Chippawa. The north part of this village is located in the south-west corner of the township, on part of Stamford Township Lots 192, 222-224. The south part is located on part Lots 21-23 in the Broken Front Concession of Willoughby Township. This place was referred to by early travellers such as Isaac Weld, John Milton Holley, and the Duke de la Rochefoucault Liancourt, all of whom stopped here in 1796. Weld in particular

noted the “remarkably well-built houses,” which were “sheathed with boards, painted white” and “kept in a state of great neatness.” Some engagements were fought here during the War of 1812, notably in July 1814. The north half of the village was laid out circa 1816, whereas the south part of the community was surveyed in the mid-1830s (Dow 1921:99, 110-111, 1183, 1195-1196). Chippawa was one of the largest villages in the region during the nineteenth century, which boasted of a population around 1,000 inhabitants in the mid-1840s (Smith 1846:32-33). One of the major employers in the community during that time was a branch of the Niagara Harbour and Dock Company. Businesses included: steam grist mill, steam sawmill, shipyard, three distilleries, two tanneries, iron and brass foundry, tin, and sheet iron foundry, seven stores, six groceries, six taverns, post office, druggist, two physicians, wagon makers, blacksmiths, saddler, hatter, tailors, shoemakers, bakers, cabinet makers, gunsmith, and a branch of the Bank of Upper Canada. It later had a sash and door factory, shingle mill, and telegraph office (Bond n. d.). Chippawa was the terminus of the first Welland Canal from 1829 until 1833 when the line was straightened and extended to Port Colborne. Chippawa contained three churches (Episcopal, Presbyterian and Methodist). A detachment of a militia Rifle Company was stationed there. In later years, the Canadian heroine of the War of 1812, Laura Ingersoll Secord, resided in Chippawa. By the 1870s, the population had reached 922 inhabitants (Crossby 1873:86).

City of the Falls. This formed part of a tract of land that was subdivided into building lots during the mid-nineteenth century. It now forms part of the City of Niagara Falls.

Clifton. This town (also known as Suspension Bridge) is located on part of Stamford Township Lots 91-94, 109-112 and 127-129. This community grew around the point where the Suspension Bridge was constructed that connected the Great Western Railway with various rail lines in New York State. The town was a port of entry, and contained several stores, hotels, churches, two telegraph offices, and a museum. By the 1870s, it had attained a population of approximately 1,610 inhabitants (Crossby 1873:88).

Drummondville. This village is located on part of Stamford Township Lots 130-131, 142-143, 146-147, and 159-160. The Battle of Lundy’s Lane was fought here in July 1814. The village contained two stores, two taverns, tailors, shoemakers, and a blacksmith. In the mid-1840s, the population numbered about 130 inhabitants (Smith 1846:48). By the 1870s, it contained “about a dozen stores,” a post office, telegraph office, two hotels, four churches, and two observatories overlooking the Lundy’s Lane battlefield. The population was estimated at approximately 1,000 inhabitants (Crossby 1873:104). The Stamford Townhall was built nearby in 1874. In 1881, the name was changed to Niagara Falls Village.

Elgin (sometimes referred to as Suspension Bridge; see Clifton).

Niagara Falls. This part of Stamford Township was settled by Loyalists and disbanded soldiers from Butler's Rangers in the 1780s. This area saw some of the heaviest fighting during the War of 1812. In 1904, the villages of Drummondville, Clifton, the City of the Falls, and Elgin were amalgamated with it to form the City of Niagara Falls. To avoid confusion with the new municipal entity, the name of the Town of Niagara was changed to Niagara-on-the-Lake at that time. The area of the city was increased in 1963 when the nearby rural portions of Stamford Township were amalgamated to become part of the city. In 1970, parts of Willoughby, Crowland and Humberstone were annexed to the city (Zavitz 1996a, 1996b, 2005, 2008). A number of Registered Plans in the Niagara South Land Registry Office show the development of the city from the 1850s to the present.

Niagara Falls Village (see Drummondville).

Stamford. This village is located on part of Stamford Township Lots 43, 44, 55 and 56. It was settled in the first quarter of the nineteenth century and now comprises part of the City of Niagara Falls.

8.2.6. Thorold Township

Allanburg. This village (sometimes spelled Allenburg or Allanburgh) is located on part of Thorold Township Lots 95-96 and 118-119. It was originally named Deep Cut (after a section on the first Welland Canal) and it was also known as Holland or New Holland. This village developed approximately where the first Welland Canal crossed Lundy's Lane and was laid out as a village sometime between 1827 and 1830 (Vanderburgh 1967). A landmark structure was the nearby Black Horse Tavern. Allanburg contained a grist mill, sawmill, carding machine, cloth factory, candle factory and pipe factory. Businesses included: stores, post office (established 1827), telegraph office, taverns, baker, wagon maker, cabinet maker, and blacksmith. The village contained a town hall for public meetings. The population had reached 500 by the mid-1840s but had declined to about 300 inhabitants by the 1870s (Smith 1846:4; Crosby 1873:17). Registered Plan 1003 pertains to Allanburg.

Allanburg Junction. This village is located on part of Thorold Township Lot 141.

Beaver Dams. This settlement (also spelled Beaverdam or Beverdams in documents) developed around the point where Beaverdams Creek crossed the intersection of DeCew/Marlatts Road and Beaverdams Road. The area was named in reference to a large beaver dam, the remains of which were still discernible in the late nineteenth century but subsequently submerged beneath the waters of Lake Gibson in 1904 (King

Head 2017). There was a cemetery established at Beaverdams during the late eighteenth century, and the first documentary record of the name was in 1804. The Battle of Beaverdams was fought between the British/Canadian, First Nations, and American forces a short distance away in June 1813. The first post office in Thorold Township was established at Beaverdams in 1826 but was relocated to Allanburg in 1827. The village also contained a tavern known as the McClellan Beaver Dams Tavern Stand. The first Welland Canal was constructed in close proximity to the settlement, which caused some damage (e. g. flooded meadows) to the neighbouring farms. Beaverdams dwindled in importance after the 1830s when it was eclipsed by other centres located directly on the canal such as the town of Thorold, Allanburg and Port Robinson.

Beverley (see Port Robinson).

Centreville. This village is located on part of Thorold Township Lots 106-107 and 129-130. It was shown on the *Page's Atlas* map of Thorold in 1876.

Deep Cut (see Allanburg).

Holland or New Holland (see Allanburg).

Port Robinson. This village is located on the line of the Welland Canal on part of Thorold Township Lots 202-203 and the Broken Fronts of Lots 202, 203 and 204. It was originally called Beverley in honour of John Beverley Robinson who was the Attorney General of Upper Canada and a director of the Welland Canal Company. The village contained a variety of businesses: grist mill, blacksmith, tinsmith, stores, post office, the *Welland Herald* newspaper (1852), taverns, baker, grocery stores, saddler, wagon makers, blacksmiths, tinsmith, tailors, shoemakers, and watchmaker. There were also two drydocks located there as well as two telegraph offices. The Coloured Corps, in charge of maintaining order on the Welland Canal, was stationed at Port Robinson. The village contained two churches (Episcopal and Presbyterian) and a cemetery. By the mid-1840s, the village population had reached 300 inhabitants (Smith 1846:151). By the 1870s, the population had increased to about 600 residents (Crossby 1873:258).

St. John's. This village is located on part of Thorold Township Lots 110-111 and 133-134. It was once a thriving community of about 400 inhabitants. The village was established at an early date and contained a store, post office, log school, Methodist Church, tavern, carriage factory, wagon maker, blacksmiths, tannery, four grist mills, sawmill, woollen mill, foundry, machine shop, and two cloth factories. By the 1870s, the population had declined to about 150 inhabitants (Smith 1846:181; Crossby 1873:299; Burtniak 1981).

Thorold. This city is located on top of the Niagara Escarpment at the north end of the township on part of Thorold Township Lots 1-10 and 14-19. The core of the village was laid out around 1826 in anticipation of the construction of the first Welland Canal. The village contained a number of industries and businesses: physicians, two grist mills, sawmills, planing mills, cement mill, cotton mill, paper mill, “iron castings” factory, agricultural implement factory, brewery, stores, post office, two telegraph offices, schools, taverns, tannery, saddler, druggist, printers, the *Thorold Post* newspaper, banks, wagon makers, blacksmiths, painters, cabinet makers, tinsmiths, shoemakers, baker, hatter, barbers, and tailors. There were four churches in the village (St. John’s Anglican, Catholic, and Methodist). By the mid-1840s, the population had reached 1,000 inhabitants, and by the 1870s this number had increased to 1,635 (Smith 1846:191; Crosby 1873:334). Each of the four Welland Canals have passed through Thorold. The first two canals passed through the downtown, whereas the third and fourth canals climbed the escarpment to the east at the Ten Mile Creek. Thorold was incorporated as a village in 1850, then it was elevated to the status of a town in 1870, and then became a city in 1975. Registered Plans 889-911 pertain to Thorold.

8.2.7. Wainfleet Township

Chamber’s Corners. This place is located at the intersection of Victoria Avenue (Regional Road 24) and Forks Road West (Regional Road 23).

Marshville. This village is located on part Lots 19 and 20 in Concession 3, Wainfleet Township. Its settlement commenced in 1827 when construction started on the Welland Canal feeder that carried additional water to the main canal from the Grand River. Construction commenced on a second feeder, which was to have extended between Big Forks Creek and the Welland River but was quickly abandoned. The abandoned feeder is known today as Mill Race Creek. The village contained a grist mill, blacksmith shop, two stores, post office, telegraph office and tavern. By the mid-1840s, the population numbered about 60 inhabitants, which had increased by the 1870s to about 200 residents (Smith 1846:112; Crosby 1873:189).

Marshville Station. This place is located on the old “Air Line” railway, on part Lots 21-23 in Concession 5, Wainfleet Township.

Montagne. This community is located south of Wellandport and west of the Marshville and Perry Stations, in the vicinity of Lots 38 and 39 in Concessions 5 and 6, Wainfleet Township.

Perry Station. This place is located on the old “Canada” railway on Lots 29 and 30 in Concession 6, Wainfleet Township.

Sugar Loaf Hill. This place is located in the southeast corner of the township on part Lot 1, Concession 1, Wainfleet Township.

Wainfleet Station. This village is located in the south part of the township on part Lots 19-21 in Concession 1, Wainfleet Township.

Winger. This post office village is located on part Lots 31 and 32 in Concession 5, Wainfleet Township (Crossby 1873:360).

8.2.8. Willoughby Township

Black Creek. This post office village contained a population of approximately 150 inhabitants by the early 1870s (Crossby 1873:36).

Chippawa. The south part of this village is located on part Lots 21-23 in the Broken Front. The north part of the village is located on the opposite bank of the Welland River in Stamford Township. It began to develop in the mid-1780s adjacent to Fort Chippawa, which served as a storehouse and blockhouse on the portage road between Queenston and Fort Erie. During the late 1820s and early 1830s, Chippawa served as the Niagara River terminus on the first Welland Canal. The route of the canal was later straightened and extended to Gravelly Bay (Port Colborne) in 1833.

Douglstown. This place is located directly south of Black Creek, east of Netherby Road and the QEW.

Netherby. This village contained a store, post office and sawmill. The post office was opened in June 1862 when Joshua Fares was appointed to serve as the first postmaster. The office was closed in October 1914 when Jacob Bauer held the appointment. By the 1870s, the population was estimated at approximately 100 inhabitants (Crossby 1873:208).

New Germany. This village is located at the south end of Willoughby Township on part Lots 5 and 6. By the 1870s, this place contained a population of approximately 75 inhabitants (Crossby 1873:218).

Snyder. This post office village is located at the intersection of Stevensville and Netherby Roads. The post office was opened in November 1886 with T. Snyder appointed to serve as the first postmaster. The office was closed in February 1915 when Nicholas F. Critz held the appointment.

9. References

Anonymous

- 1974 *The Evolution of St. Catharines Before the 1st Welland Canal 1790-1824*.
Lincoln County Board of Education.

Aitken, H.

- 1954 *The Welland Canal Company. A Study in Canadian Enterprise*. Harvard
University Press, Boston.

Aloian, C.

- 1978 *A History Outline of Port Dalhousie 1650-1960*. Port Dalhousie Quorum Inc.
Printed by Lincoln Graphics Ltd., St. Catharines, Ontario.

Andreae, C.

- 1997 *Lines of Country: An Atlas of Railway and Waterway History in Canada*.
Boston Mills Press, Erin, Ontario.

Anger, D.

- 2003a *The 'Golden Age' of Old Humberstone Village (1790-1912) and its 'Early Inns
and Taverns.'* Port Colborne Historical and Marine Museum, Port Colborne,
Ontario.

- 2003b *The 'A to Z' Documentary History of Old Humberstone Village (c. 1830-1912)
Research Guide*. Port Colborne Historical and Marine Museum, Port
Colborne, Ontario.

- 2004a David Sherk (1782-1828+) And Descendants. 'Lumber Merchants Since
1810.' And 'Sherk Family Cemetery Mystery.' Port Colborne Historical and
Marine Museum, Port Colborne, Ontario.

- 2004b *Casper Sherk (1750-1813) and the Story of 'Sherk's Mills.'* Port Colborne
Historical and Marine Museum, Port Colborne, Ontario.

- 2006 *Port Colborne. Tales from 'The Age of Sail.'* Port Colborne Historical and
Marine Museum, Port Colborne, Ontario.

- 2008 *'Scruples of Conscience.' The War of 1812 in the Sugarloaf Settlement,
Niagara District, Upper Canada*. Port Colborne Historical and Marine
Museum, Port Colborne.

Beadle, Delos W.

- 1872 *Canadian Fruit, Flower, and Kitchen Gardener*. James Campbell & Son,
Toronto.

Beatty, S.

- 1910 *Fenian Raid of 1866. With Lieut. Colonel J. Stoughton Dennis at Fort Erie,
June 2*. Printed by the *Star Journal*, St. Catharines, Ontario.

Bernat, C., and J. Ormsby

- 2003 *Looking Back: Niagara-on-the-Lake, Ontario*. Looking Back Press, St.
Catharines, Ontario.

Bond, R.

n. d. *Peninsula Village: The Story of Chippawa*. No publisher cited.

Bradshaw, R.

2019 *Historic Welland Canals*. Revised. No publisher cited.

Bromley, A., editor

1976 *Once Upon a Little Town...Grimsby 1876-1976*. Grimsby Historical Society.
Printed by Rannie Publishing, Grimsby, Ontario.

Burtniak, J., editor

1981 Thorold and Neighbouring Villages and Hamlets. Proceedings of the 3rd Annual Niagara Peninsula History Conference. Brock University, St. Catharines, Ontario.

1992 *Chronicles of Wainfleet Township. 200 Years of History*. Wainfleet Historical Society. Printed by Niagara Yearbook Services Ltd., Fonthill, Ontario.

Burtniak, J., and W. Turner

1980 *Villages in the Niagara Peninsula*. Proceedings of the 2nd Annual Niagara Peninsula History Conference. Brock University, St. Catharines, Ontario.

Burtniak, J., and P. Dirks, editors

1981 *Immigration and Settlement in the Niagara Peninsula*. Proceedings of the 3rd Annual Niagara Peninsula History Conference. Brock University, St. Catharines, Ontario.

Burtniak, J., and A. Hughes, editors

1990 *Port Colborne and Dunnville: An Introductory Appreciation*. Proceedings of the 12th Annual Niagara Peninsula History Conference. Brock University, St. Catharines.

2001 *A Glance Back at Niagara's History*. Proceedings of the 23rd Annual Niagara Peninsula History Conference. Brock University, St. Catharines, Ontario.

Burtniak, J., and R. Bradshaw

2019 *Postcards from Port Dalhousie*. No publisher cited.

Burton, P.

1992 *Niagara: A History of the Falls*. McClelland-Stewart, Toronto.

Caplan, F.

1999 *Footsteps Through Time: A History of Port Dalhousie, Ontario, Canada*. St. Catharines Heritage Committee, St. Catharines, Ontario.

Careless, J. M. S.

1970 *Canada: A Story of Challenge*. Third Edition. McMillan of Canada, Toronto.

Carnochan, J.

1912 Inscriptions and Graves in the Niagara Peninsula. *Niagara Historical Society Pamphlet 10*. Niagara Historical Society, Niagara-on-the-Lake, Ontario.

1914 *History of Niagara (In Part)*. William Briggs, Toronto.

Carruthers, I.

- 2009 *Memories of Smithville 1787 to 1950*. West Lincoln Historical Society. Printed by Carruthers Printing Inc., Smithville, Ontario.
- Chipp, J.
2016 *Duty and Honour. The Stand Against the Fenians in Fort Erie*. First Choice Books, Victoria, B. C.
- Coffman, B.
1979 Canadian German Folklore. Tales of the Twenty. *Canadian-German Folklore* 7. Pennsylvania German Folklore Society of Ontario.
1982 Samuel Fry the Weaver and Mennonites of the Twenty. *Canadian-German Folklore* 8. Pennsylvania German Folklore Society of Ontario.
- Collins, G.
2006 *Guide Book to the Historic Sites of the War of 1812*. Dundurn Press, Toronto.
- Comfort, M.
n.d. *Intertwined Through Time: Fenwick and North Pelham*. No date or publisher cited.
- Coombs, A.
1930 *History of the Niagara Peninsula and the New Welland Canal*. Historical Publisher's Association, Toronto.
- Crossby, P.
1873 *Lovell's Gazetteer of British North America; Containing the Latest and Most Authentic Descriptions of Over Six Thousand Cities, Towns and Villages*. John Lovell, Montreal.
- Cruikshank, E. A.
n.d. *The Documentary History of the Campaign Upon the Niagara Frontier*. Multiple volumes printed for the Lundy's Lane Historical Society by the *Welland Tribune* between 1896 and 1908.
1893a *The Battle of Lundy's Lane: An Historical Perspective*. Lundy's Lane Historical Society, Welland, Ontario.
1893b *The Story of Butler's Rangers and the Settlement of Niagara*. Lundy's Lane Historical Society, Welland, Ontario.
1895 *The Fight in the Beechwoods: A Study in Canadian History*. Lundy's Lane Historical Society, Welland, Ontario.
1904 The Battle of Fort George. *Niagara Historical Society Pamphlet No. 12*.
- Crysler, J.
1943 *A Short History of the Township of Niagara. Touching Upon Transportation, Education, and Municipal Affairs from 1793 to 1893*. Niagara Advance Press, Niagara-on-the-Lake, Ontario.
- Dale, R.
2011 *The Invasion of Canada. Battles of the War of 1812*. James Lorimer & Co. Ltd., Toronto.

Davies, J., editor

1996 *Many Voices: A Collective History of Greater Fort Erie*. Fort Erie Museum Board. Printed by Maracle Press, Oshawa, Ontario.

Davies, J., and J. Scott

2016 *First Hand Accounts of the 1866 Fenian Raid and the Battle of Ridgeway*. Fort Erie Museum Services, Fort Erie, Ontario.

Department of Indigenous and Northern Affairs

2010 A History of Treaty-Making in Canada.

<<https://www.aadnc-aandc.gc.ca/eng/1314977704533/1314977734895>>.

2016 Treaty Texts – Upper Canada Land Surrenders

<<https://www.aadnc-aandc.gc.ca/eng/1370372152585/1370372222012#ucls18>>.

Desloges, Y.

1980 Structural History of Fort George. *History & Archaeology* 3. National Historic Parks & Sites Branch, Environment Canada, Ottawa.

Dewar, K., and J. Taillefer

1991 *The Battle of Beaverdams. The Story of Events that Occurred in Thorold, Ontario, on June 24th 1813*. No publisher cited, Thorold, Ontario.

Didemus, F., editor

1970 *Stamford Township: Our Old Buildings. Mount Dorchester, Niagara Falls*. Lundy's Lane Historical Society, Niagara Falls, Ontario.

Dodds, P.

1967 *The Story of Ontario Agricultural Fairs and Exhibitions 1792-1967*. Picton Gazette, Picton, Ontario.

Dow, C.

1921 *Anthology and Bibliography of Niagara Falls*. State of New York. Printed by J. B. Lyon Co., Albany, NY.

Duff, L.

1928 *Crowland*. Baskerville Press, Welland, Ontario.

1930 *Welland Ship Canal Inauguration*. Commercial Press St. Catharines, Ontario.

Duncan, D.

1991 Victuals and Viands in the New Province of Upper Canada. In, *The Capital Years, Niagara-on-the-Lake 1792-1796*, edited by R. Merritt, N. Butler, and M. Powers, pp. 143-164. Dundurn Press, Toronto and Oxford.

Dunn, M., and M. Romanowich

1995 *Historic Niagara-on-the-Lake. A Pictorial Discovery*. Book Art Inc., Markham, Ontario.

Dunnigan, B.L.

-
- 1991 "Military Life at Niagara 1792-96," *The Capital Years: Niagara-on-the-Lake 1792-1796.*, edited by R. Merritt, N. Butler and M. Power, pp. 67-102. Dundurn Press, Toronto.
- 1996 *Siege—1759. The Campaign against Niagara.* Printed by Princeton Academic Press for the Old Fort Niagara Association, Youngstown, New York.
- Duquemin, C.
- n.d. *Sequent Occupation in the Lower Valley of the Twenty Mile Creek, Louth Township, 1800-1905.* Niagara Peninsula Conservation Authority.
- 1980 *A Short History of St. John's West. St. John's Outdoor Studies Centre Pamphlet 3.* Niagara South Board of Education, Thorold, Ontario.
- Filice, M.
- 2018 *Treaties with Indigenous Peoples in Canada.* In *The Canadian Encyclopedia.* <<https://www.thecanadianencyclopedia.ca/en/article/haldimand-proclamation>>.
- Feltoe, R.
- 2014 *A Crucible of Fire: The Battle of Lundy's Lane, July 25, 1814.* Toronto: Dundurn Press.
- Ferguson, M.
- 2015 *Homer: The Vanishing Village.* Bygones Publishing, Niagara-on-the-Lake, Ontario.
- Ferris, H., editor
- 1967 *Niagara Falls Through the Years.* No publisher cited.
- Finn, V., editor
- 1985 *West Lincoln. Our Links with the Past 1784-1984.* West Lincoln Historical Society. Printed by Niagara Yearbook Services Ltd., Pelham, Ontario.
- Flemming, D.
- 1971 *A History of the Town of Niagara-on-the-Lake, 1791-1970.* Niagara Historic Sites Service, NOTL, Ontario.
- 1976 *Navy Hall (Niagara-on-the-Lake). History & Archaeology 8.* Parks Canada/Department of Indian Affairs, National Historic Parks & Sites Branch, Ottawa.
- 1982 *Fort Mississauga, Ontario (1814-1972). History & Archaeology 37.* Parks Canada/Environment Canada, National Historic Parks & Sites Branch, Ottawa.
- Fonthill Women's Institute
- 1963 *History of the Village of Fonthill, Feb. 7, 1963. Prepared in Celebration of the 50th Anniversary of the Fonthill Women's Institute.* No publisher cited.
- Garret, J.

- 1892 *Centennial. St. Mark's Church, Niagara, 1792-1892*. John Bain & Son, Toronto.
- Gawlina, M., and D. Hanuska
1986 *Stories of Wainfleet's Early Settlers*. Wainfleet Township Public Library, Wainfleet, Ontario.
- Gentilcore, R.
1963 The Beginnings of Settlement in the Niagara Peninsula (1782-1792). *Canadian Geographer* 7(2):72-82.
- Goldring, F.
1972 *Balls Falls Conservation Area. Scenic and Historic Heritage*. Advance Press, St. Catharines.
- Grantham Women's Institute
1946 *Tweedsmuir History of Grantham*. Grantham Women's Institute, Lincoln County, Ontario.
- Graves, D.
1991 *The Human Remains of the Battle of Chippawa, 5 July 1814*. Directorate of History, Department of National Defence, Ottawa.
1993 *The Battle of Lundy's Lane: On the Niagara in 1814*. Nautical & Aviation Publishers, Baltimore.
1994 *Redcoats and Grey Jackets: The Battle of Chippawa, 5 July 1814*. Dundurn Press, Toronto.
1997 *Where Right and Glory Lead! The Battle of Lundy's Lane*. Robin Brass Studio, Toronto.
- Green, E.
1912 Some Graves on Lundy's Lane. *Niagara Historical Society Pamphlet* 22. No publisher cited.
- Greenhill, R., and T. Mahoney
1969 *Niagara*. University of Toronto Press, Toronto.
- Groh, I.
1977 *The Swiss-Palatine-German-Pennsylvania "Dutch" Pioneers of the Niagara Peninsula*. Self published, St. Catharines, Ontario.
- Grol, L.
1980 *Pelham As It Was and Is*. Trillium Books. Printed by Pelham Printing & Promotions Ltd., Fonthill, Ontario.
- Habermehl, F., and D. Combe
1995 *Saints, Stones and Sinners. Walking Tours of Niagara-on-the-Lakes' Large Historic Cemeteries*. The Niagara Historical Society. Printed by Paul Heron Publishing Ltd., Niagara-on-the-Lake, Ontario.
- Haldorson, W.

- 1991 *The Reconstruction of Fort George and Navy Hall, 1937-40*. Paul Heron Publishing Ltd., Niagara-on-the-Lake, Ontario.
- Hansler, A.
1993 *A History of the Town of Pelham, 1786-1993*. No publisher cited.
- Harris, R., and J. Warkentin
1974 *Canada Before Confederation: A Study in Historical Geography*. Oxford University Press, London.
- Harvie, F.
1950 *Town of Thorold Centennial 1850-1950*. No publisher cited.
- Hemmings, D.
2010 *Disappearing History of Niagara. The Graveyards of a Frontier Township*. Bygones Publishing, Niagara-on-the-Lake, Ontario.
2011 *The House of McFarland: A Master Shipwright's Legacy*. Bygones Publishing, Niagara-on-the-Lake, Ontario.
2013 *Country Air: A Portrait of McNab*. Bygones Publishing, Niagara-on-the-Lake, Ontario.
- Heritage Thorold LACAC
2007 *Thorold: A Walk Through History. A Selection of Heritage Buildings & Sites*. Brochure published by Thorold LACAC, Thorold, Ontario.
2020 Heritage Thorold List of Properties Designated Under Part IV of the *Ontario Heritage Act*. Accessed September 4, 2020.
<http://www.heritagethorold.com/designatedproperties.html>.
- Hughes, A.
1994 The Early Surveys of Township No. 1 and the Niagara Peninsula. In *Niagara's Changing Landscapes*, edited by H. Gaylor, pp. 209-239. Carlton University Press, Ottawa.
2019 *History Made in Niagara*. Elbow Island Publishers, St. Catharines, Ontario.
- Jackson, J.
1976 *St. Catharines, Ontario. Its Early Years*. Mika Publishing Co., Belleville, Ontario.
- Jackson, J., J. Burtniak, and G. Stein
2003 *The Mighty Niagara: One River, Two Frontiers*. Prometheus Books, Amherst, NY.
- Jackson, J., and S. Wilson
1992 *St. Catharines: Canada's Canal City*. St. Catharines Standard, St. Catharines, Ontario.
- Jansen, B., and L. Rittenhouse
2007 Early Life and Times in the Twenty including the Life and Legacy of Samuel Fry. *Canadian-German Folklore* 18. Pennsylvania German Folklore Society of Ontario. Printed by Stewart Publishing & Printing, Markham.

Jones, V., and H. Meighan

1967 *St. Catharines Centennial History*. Advance Print, St. Catharines, Ontario.

Jouppien, J.

2008 The Location of the North Entrance Channel of the 1st Welland Canal 1824-29 (AhGt-20). Stage 1-3 Archaeological Excavation Report on file with the City of St. Catharines.

King, N. F.

1981 *Niagara-on-the-Lake 1781-1981*. Acton Press Publications, Niagara-on-the-Lake, Ontario.

King Head, S.

2017 *Where the Beavers Built Their Dams. The Evolution of a Unique Cultural Heritage Landscape in Thorold, Ontario*. Heritage Thorold LACAC, Thorold, Ontario.

Kirby, W.

1896 *Annals of Niagara*. Lundy's Lane Historical Society. Printed by the *Welland Tribune*, Welland, Ontario.

Koyama, K., editor

2000 *Welland at 150. Welland Tribune*, Welland, Ontario.

Krueger, P., editor

2002 *A Journey Through History: A Guide to the Niagara Parkway from Chippawa to Black Creek*. Willoughby Historical Museum. Printed by DESUB, Allanburg, Ontario.

Last, J.

2105 What We Have Learned: A Retrospective on Parks Canada War of 1812 Military Sites Archaeology. *Northeast Historical Archaeology* 44:5-34.

Leeson, M.

1974 *Merritton Centennial 1874-1974. St. Catharines Standard*, St. Catharines, Ontario.

Lewis, W.

1997 *Aqueduct, Merrittsville and Welland, A History of the City of Welland: Volume 1*. AMW Publications, Welland, Ontario.

2003 *Aqueduct, Merrittsville and Welland, A History of the City of Welland: Volume 3 The 20th Century*. AMW Publications, Welland, Ontario.

Litt, P.

1991 *Death at Snake Hill: Secrets from a War of 1812 Cemetery*. Dundurn Press, Toronto.

Long, J., and E. B. Jay

1981 *Historic Buildings of Niagara Falls*. Johnson Press Ltd., Niagara Falls, Ontario.

Lorriman, F.

- 1968 *Thorold, Its Past and Present*. Lincoln Graphics. St. Catharines, Ontario.
- Lossing, B.
1869 *The Pictorial Field-Book of the War of 1812*. Harper & Brothers Publishers, New York.
- MacDonald, E., and B. Narhi
2015 Occupied by the Enemy: The Skirmishes at the Butler Farm During the War of 1812. *Northeast Historical Archaeology* 44:85-102.
- Macdonald, J.
1910 *Troublous Times in Canada: A History of the Fenian Raids of 1866 and 1870*. W. S. Johnston & Co., Toronto.
- Malcolmson, R.
1994 *The Battle of Queenston Heights*. Friends of Fort George, Niagara-on-the-Lake, Ontario.
2003 *A Very Brilliant Affair: The Battle of Queenston Heights*. Robin Brass Studio, Toronto.
- Martin, C.
2000 *A History of Canadian Gardening*. McArthur & Company, Toronto.
- Marlatt, V.
n. d. *The Gainsborough Story*. Self published, Kitchener, Ontario.
- McConnell, D.
1976 The Indian Council House. *Parks Canada Research Bulletin* 40. Parks Canada/Department of Indian Affairs, National Historic Parks & Sites Branch, Ottawa.
- McKendry, J.
2003 *Into the Silent Land. Historic Cemeteries & Graveyards in Ontario*. Self-published, Kingston, Ontario.
- Merritt, R.
2005 *Old Town Niagara: A History*. Friends of Fort George, Niagara-on-the-Lake, Ontario.
2012 *On Common Ground. The Ongoing Story of the Commons in Niagara-on-the-Lake*. Dundurn Press, Toronto.
2015 *Training for Armageddon: Niagara Camp in the Great War. 1914-1919*. Niagara Historical Society. Printed by Friesen Press, Victoria, B. C.
- Merritt, R., N. Butler, and M. Powers, editors
1991 *The Capital Years, Niagara-on-the-Lake 1792-1796*. Dundurn Press, Toronto and Oxford.
- Michael, B.
1967 *Township of Thorold 1793-1867*. The Reeve and Council of the Township of Thorold. Printed by Armath Associates Ltd., Toronto.

1979 *Port Robinson: Welland Canal 150th Anniversary, Aug. 24th, 25th, 26th, 1979*. No publisher cited.

Michener, D.

1967 *Wainfleet: Story of a Township*. Township of Wainfleet. Printed by Rewbury Printing Co.

Mills, J.

1967 *History of the Niagara, St. Catharines & Toronto Railway*. Upper Canada Railway Society and the Ontario Electric Railway Historical Association, Toronto.

2007 *Niagara, St. Catharines & Toronto Railway. A Canadian National Electric Railways Subsidiary*. Railfare DC Books, Toronto.

Moore, O.

1967 *Wainfleet Township 1867-1967*. No publisher cited.

Morris, J.

1967 *Centennial Yearbook: History of Crowland Township 1867-1967*. Port Colborne Citizen Press Ltd., Port Colborne, Ontario.

Mulcaster, P.

2019 *Off to Paradise Grove. A Railway History of Niagara-on-the-Lake 1854-1959*. Peninsula Press Ltd., St. Catharines, Ontario.

NFHAC (Niagara Falls Heritage Advisory Committee)

2020 Register of Municipal Heritage Properties. Accessed September 4, 2020. <https://niagarafalls.ca/living/heritage/listing.aspx>.

NOTL (Town of Niagara-on-the-Lake)

2019 Town of Niagara-on-the-Lake Municipal Register of Properties of Cultural Heritage Value or Interest. Accessed September 4, 2020. <https://notl.civicweb.net/document/17657>.

OGS (Ontario Genealogical Society)

n. d. Cemetery transcripts. The Ontario Genealogical Society, Niagara Branch, has published transcripts for most of the known cemeteries in the Niagara Region.

Ormsby, J.

1991 Building a Town: Plans, Surveys, and the Early Years of Niagara-on-the Lake. In, *The Capital Years, Niagara-on-the-Lake 1792-1796*, edited by R. Merritt, N. Butler, and M. Powers, pp. 15-43. Dundurn Press, Toronto and Oxford.

Orr, P.

1978 *"The New City of Thorold." A Study of Its Past and Its Buildings*. Brock University, St. Catharines, Ontario.

Ort, C.

1967 *Historical Writings of Willoughby Township in Commemoration of Canada's Centennial*. Evening Review Printers, Niagara Falls, Ontario.

Ott, E.

- 1967 *A Condensed History of the Township of Humberstone in the County of Welland to Commemorate Canada's Centennial*. No publisher cited.
- Owen, D.
1986 *Fort Erie (1764-1823): An Historic Guide*. No publisher cited.
- Page, H. R.
1876 *Illustrated Historical Atlas of the Counties of Lincoln & Welland, Ont. Compiled, Drawn, and Published from Personal Examinations and Surveys*. H. R. Page, Toronto.
- Page, F.
1923 *The Story of Smithville*. Welland Tribune-Telegraph Press, Welland, Ontario.
- Paterson, C.
2013 *The Heritage of Life and Death in Historical Family Cemeteries of Niagara, Ontario*. PhD thesis, School of Graduate Studies, McMaster University, Hamilton, Ontario.
- Percy, J.
2007 *Buffalo-Niagara Connections. A New Regional History of the Niagara Link. Geography's Impact on the History of Western New York and Ontario's Niagara Peninsula*. WNY Heritage Press Inc., Buffalo, NY.
- Pfeiffer, S., and R. Williamson, editors
1991 *Snake Hill: An Investigation of a Military Cemetery from the War of 1812*. Dundurn Press, Toronto.
- Pihl, R., and R. Shipley
1990 *A Survey of Historic Structures: The Welland Canal Industrial Corridor*. Welland Canal Society. Welland, Ontario.
- Plato, E.
1991 *Terror at Snake Hill: the Fenian Raid at Ridgeway*. Vanwell Publishing, St. Catharines, Ontario.
- Powell, R. J. editor
n.d. *Annals of the Forty. Loyalist and Pioneer Families of West Lincoln 1783-1833*. Grimsby Historical Society. Nine volumes printed 1950-58 by the *Grimsby Independent*, Grimsby, Ontario.
- Powell, R. J., and B. Coffman
1956 *Lincoln County 1856-1956*. Lincoln County Council. Printed by the *Beamsville Express* and *Grimsby Independent*.
- Quealey, F.
1961 The Fenian Invasion of Canada West June 1st and 2nd 1866. *Ontario Historical Society Papers and Records* 1961(1):37-66.
- Rannie, W.
1974 *Lincoln: The Story of an Ontario Town*. Rannie Publishing Ltd., Beamsville, Ontario.

- 1975 *Names in Lincoln*. Rannie Publishing Ltd., Beamsville, Ontario.
- 1986 *The Lady and the Manor: Stories About the Town of Lincoln*. Rannie Publishing Ltd., Beamsville, Ontario.
- Reive, W.
- 1991 *Cemeteries and Graves in the Niagara District, Ontario*. Archives of Ontario, fonds F281, accession 6498. Manuscript transcribed and published by Douglas A. Robbins, St. Catharines, Ontario.
- Rennie, A. J.
- 1967a *Louth Township: Its People and Past*. Advance Print, St. Catharines, Ontario.
- 1967b *Niagara Township: Centennial History*. Advance Print, St. Catharines, Ontario.
- Rescher, N.
- 2003 *Niagara-on-the-Lake as a Confederate Refuge (1866-1869)*. Niagara Historical Society. Printed by NAP Publications Inc., Fox Chapel, PA.
- Riley, J.
- 2011 *A Matter of Honour: The Life, Campaigns and Generalship of Isaac Brock*. Frontline Books, Barnsley UK.
- Ridgway, I.
- 1989 *Sailing Out of Niagara...Since 1833*. Niagara-on-the-Lake Sailing Club, Niagara-on-the-Lake, Ontario.
- Rittenhouse, W.
- 1922 *Vineland Cemetery. Historic Sketch Trust Deed and Rules and Regulations. Vineland, Ontario, 1791-1922*. No publisher cited.
- Robbins, D.
- 1991 *Burial Records and Notations of William Dalton 1845 to 1916*. Self published, St. Catharines, Ontario.
- Robertson, C., and D. Serafino
- 1999 *A Nickel a Ride. A Folk History of Port Dalhousie During the Past Century*. Dalpeer Productions. Printed by Skyway Reprographics, St. Catharines, Ontario.
- Robinson, P.J.
- 1933 *Toronto During the French Regime: A History of the Toronto Region from Brûlé to Simcoe, 1615-1793*. The Ryerson Press, Toronto.
- Ronnow, V.
- 1987 *Inventory of Cemeteries in Ontario. A Genealogical Research Guide*. Ontario Genealogical Society. Printed by Dye & Durham Co. Ltd., Toronto.
- Seibel, G., editor
- 1967 *Niagara Falls, Canada. A History of the City and the World Famous Beauty Spot: An Anthology*. Kiwanis Club of Stamford, Ontario Inc. Printed by Ryerson Press Ltd., Toronto.

- 1990 *The Niagara Portage Road. 200 Years 1790-1990*. City of Niagara Falls. Printed by the John Deyell Co., Lindsay, Ontario.
- Shibley, R.
1987 *St. Catharines: Garden on the Canal. An Illustrated History*. Windsor Publishing (Canada) Ltd., Burlington, Ontario.
- Skrzeszewski, S.
2015 *The Daily Life of Polish Soldiers, Niagara Camp, 1917-1919*. No publisher cited.
- Smith, W.
1846 *Smith's Canadian Gazetteer*. H. & W. Rowsell, Toronto
- Smy, W.
n.d. *Looking Back*. No publisher cited.
1996 *Pioneering in Humberstone Township. The First Fifty Years: 1784-1834*. Port Colborne Historical and Marine Museum, Port Colborne, Ontario.
- Snow, A.
1994 *Fonthill 1920-30. A Glimpse of the Glory Years*. No publisher cited.
- Stokes, P., and R. Montgomery
1971 *Old Niagara-on-the-Lake*. University of Toronto Press, Toronto.
- Stokes, P., and J. Smith
2012 *Early Architecture of the Town and Township of Niagara: Commemorative Edition*. The Niagara Foundation. Printed by Transcontinental, Quebec.
- Stryan, R., and R. Taylor
2001 *The "Great Swivel Link": Canada's Welland Canal*. Champlain Society Volume LXIV. University of Toronto Press, Toronto.
2012 *This Great National Object: Building the 19th Century Welland Canals*. McGill-Queen's University Press, Montreal and Kingston.
2016 *This Colossal Project: Building the Welland Ship Canal, 1913-1932*. McGill-Queen's University Press, Montreal and Kingston.
- Surtees, R.
1984 *Indian Land Surrenders in Ontario 1763-1867*. Research Branch, Corporate Policy: Indian and Northern Affairs Canada.
1994 Land Cessions 1763-1830. In, *Aboriginal Ontario: Historical Perspectives on the First Nations*, edited by E. Rogers and D. Smith, pp. 92-121. Dundurn Press, Toronto.
- Taylor, G.
1866 *The Fenian Raid on Fort Erie: With an Account of the Battle of Ridgeway, June 1866*. Rollo & Adam, Toronto.
- Thompson, J. H.

- 1897 *Jubilee History of Thorold Township and Town from the Time of the Red Man to the Present*. Thorold and Beaverdams Historical Society. Printed by the *Thorold Post*, Thorold, Ontario.
- Timlock, B.
n.d. Thorold and Thorold Township. Old Historic Homes and Architecture Including Allenburg and Port Robinson. St. Catharines Downtown Library, Special Collections Department, two binders, 971.338 Tim.
- Town of Fort Erie
2017 Municipal Register of Properties of Cultural Heritage Value and Interest, September 2017. Accessed September 8, 2020.
<https://www.forterrie.ca/resource/files/6B58D1148ACC408A8525830800630F68/%24File/Municipal%20Heritage%20Register%20%20September%202017.pdf>
- Town of Grimsby
2020 Designated Heritage Properties, Buildings, Landmarks and Structures. Accessed September 8, 2020. <https://www.grimsby.ca/en/parks-recreation-culture/heritage-properties.aspx>.
- Town of Lincoln
2020 Designated Heritage Properties in Lincoln. Accessed September 9, 2020. <https://lincoln.ca/heritage-culture/heritage-properties>.
- Tremaine, G.R., and G.M. Tremaine.
1862 *Tremaine's Map of the Counties of Lincoln and Welland, Canada West. Compiled and Drawn from Actual Surveys*. Toronto: Tremaine.
- Turcotte, D.
1985 *Greetings from Grimsby Park: The Chautauqua of Canada*. Grimsby Historical Society. Printed by Boston Mills Press, Erin, Ontario.
1986 *Port Dalhousie: Shoes, Ships & Sealing Wax*. Boston Mills Press, Erin, Ontario.
1995 *People and Places from Grimsby's Past*. Ampersand Printing. Guelph, Ontario.
2007 *Gleanings from Grimsby*. Grimsby Historical Society. Printed by Premier Impressions, Grimsby, Ontario.
- Turner, W., editor
1990 *The Military in the Niagara Peninsula*. Proceedings of the 8th Annual Niagara Peninsula History Conference. Brock University and the Niagara Peninsula History Conference Board. Printed by Vanwell Publishing Ltd., St. Catharines, Ontario.
1994 The Early Settlement of Niagara. In *Niagara's Changing Landscapes*, edited by H. Gaylor, pp. 179-207. Carlton University Press, Ottawa.
- VanAsten, P.

- 1983 *The Peopling of the Niagara Peninsula*. Welland Historical Museum, Welland, Ontario.
- Vanderburgh, H.
1967 *A History of Allanburg and Area*. Allanburg Women's Institute. No printer cited.
- Vronsky, P.
2011 *Ridgeway: The American Fenian Invasion and the 1866 Battle that Made Canada*. Penguin Group, Toronto.
- Walker, D.
2018 *A Village in the Shadows: The Remarkable Story of St. David's, Ontario*. Friesen Press, Victoria, BC.
- Way, R.
1946 *Ontario's Niagara Parks: A History*. Niagara Parks Commission. Printed by the *Fort Erie Review*, Fort Erie, Ontario.
- Weaver, W.
1968 *Crown Surveys in Ontario. Revised*. Ontario Department of Lands and Forests, Toronto.
- WCHS (Welland County Historical Society)
1926 *Welland County Historical Society Papers and Records* II:94-123.
- Williamson, E.
1972 *A Light on the Seaway*. Advance Printing Ltd., St. Catharines, Ontario.
- Wilson, B.
1981 *As She Began: An Illustrated Introduction to Loyalist Ontario*. Dundurn Press, Toronto.
1991 Patronage and Power: The Early Political Culture of the Niagara Peninsula. In, *The Capital Years, Niagara-on-the-Lake 1792-1796*, edited by R. Merritt, N. Butler, and M. Powers, pp. 45-66. Dundurn Press, Toronto and Oxford.
- Wood, D.
1988 Population Change on an Agricultural Frontier: Upper Canada 1796 to 1841. In, *Patterns of the Past: Interpreting Ontario's History*, edited by R. Hall, W. Westfall, and L. MacDowell, pp. 55-77. Dundurn Press, Toronto.
2000 *Making Ontario: Agricultural Colonization and Landscape Re-creation Before the Railway*. McGill-Queen's University Press, Montreal and Kingston.
- Wood, W.
n. d. *Select British Documents of the Canadian War of 1812*. The Champlain Society, Toronto. Four volumes published between 1920-26.
- Wright, L., and P. Wright
2006 *Great Lakes Lighthouses Encyclopedia*. Boston Mills Press, Erin, Ontario.
- Zavitz, S.

- 1996a *It Happened at Niagara: 1st Series*. Lundy's Lane Historical Society and Kiwanis Club Stamford Inc., Niagara Falls, Ontario.
- 1996b *Niagara Then and Now. Niagara at the Turn of the Century and How It Has Changed*. Avenue Park Publishing, Niagara-on-the-Lake, Ontario.
- 2005 *Then and Now. Niagara Falls, Ontario*. Looking Back Press, St. Catharines, Ontario.
- 2008 *Looking Back. Niagara Falls Historic Notes*. Looking Back Press, St. Catharines, Ontario.

9.1. Map Sources

Anonymous

- n. d. *Plan of the Village of Meritton in the County of Lincoln, Province of Ontario*. Plan filed in the Niagara North Land Registry Office as RP56A. Detailed map showing railways, Welland Canal locks, waste weirs, bridges, GWR station, shed and freight house, and cotton mill.
- 1851 *Plan of the Town of Port Dalhousie in the County of Lincoln (1851.)* Plan filed in the Niagara North Land Registry Office as RP13.

Ball, G.

- n. d. *Copy of North End of the Village of Queenston as Taken from the Map of George A. Ball*. Undated plan, filed in the Niagara North Land Registry Office as RP37.
- 1833 *A Map of Village Lots Laid Out on the Stony Flat 40 Mile Creek. (Grimsby.)* Plan dated Dec. 20, 1833, and filed in the Niagara North Land Registry Office as RP36.

Brownjohn, T.

- 1873 *Plan of Town Lots Forming an Addition to the Village of Grimsby, Being part of Lots No. 9 in the Broken Front and 1st Concession, Township of Grimsby, County of Lincoln*. Plan dated May 4, 1873 and filed in the Niagara North Land Registry Office as RP27 on July 28, 1877.
- 1875 *Plan of the Village of Campden in the Township of Clinton in the County of Lincoln in the Province of Ontario*. Plan dated Nov. 16, 1875 and filed in the Niagara North Land Registry Office as RP58 on May 10, 1880.
- 1877 *Map of the Incorporated Village of Grimsby in the County of Lincoln, Ontario*. Plan dated December 1877, and filed in the Niagara North Land Registry Office as RP52 on Mar. 18, 1878.

- 1881 *Map of DeWitt Fleming's Survey of Lots in the Village of Beamsville, Comprising part of Lot 16 in the 3rd Concession of the Township of Clinton, County of Lincoln, Province of Ontario.* Plan dated Nov. 2, 1881 and filed in the Niagara North Land Registry Office as RP60 in November 1881.

DeCew, E.

- 1855 *Plan of the Village of Caistorville, Situated upon Lots Numbers 20 in the 1st and 2nd Concessions of the Township of Caistor. Surveyed July 6, 1852 and Sept. 21, 1854.* Plan filed in the Niagara North Land Registry Office as RP26 on Sept. 25, 1855.
- 1856 *Plan of that Part of the Village of Caistorville, Situated upon the East half of Lot No. XX in the 1st Concession of the Township of Caistor. W.J. Stevenson, proprietor.* Plan dated April 28, 1856 and filed in the Niagara North Land Registry Office as RP25 on Jan. 29, 1857.
- 1875 *Plan of the Ontario Methodist Camp Ground, Situate Upon Lots No. 3 in the Broken Front and 1st Concession of the Township of Grimsby.* Plan dated May 25, 1875 and filed in the Niagara North Land Registry Office as RP45 on July 12, 1875.

Fell, C.

- 1852 *Plan of Temperanceville (Font Hill.)* Plan dated Mar. 11, 1852, plan filed in the Niagara South Land Registry Office as RP715 on Mar. 13, 1852.

Gardiner, E.

- 1871 *Plan of the Additions to Doan's Ridge Cemetery. Composed of Part Lot No. 12 in the 7th Concession of the Township of Crowland.* Plan dated Mar. 16, 1871 and filed in the Niagara South Land Registry Office as RP927 on Mar. 27, 1871.
- 1872 *Plan of the Clifford Property, Part Lots 12 & 13 in the 8th Concession of Grantham as Subdivided and Laid Out into Building Lots by S.D. Woodruff, Esq., March 1872.* Plan filed in the Niagara North Land Registry Office as RP51 on Jan. 26, 1878. Plan shows Haigh, Disher and Smyth Streets, a house, store, part of the Welland Canal and bridge.
- 1874 *Map of the Village of Bridgeport as Subdivided and Sold by Solomon Secord, Esq., Part of Lots 17 & 18 in the 2nd Concession of Louth.* Plan filed in the Niagara North Land Registry Office as RP41A on Feb. 14, 1874.
- 1880 *Plan Showing the Subdivision into Lots of Blocks B & C with parts of Blocks A, D, F and a portion of the Park as Laid Down on a Map of the Lands of the Ontario Methodist Camp Ground made by Edmund DeCew, Esq., PLS. and*

Registered in the Registry Office for the County of Lincoln 12 July 1875. Plan filed in the Niagara North Land Registry Office as RP45A on Feb. 16, 1880.

- 1885 *Grimsby Park New Survey 1885. Part of Lots 3 & 4 in the Broken Front and 1st Concession of Grimsby. Plan dated Nov. 30, 1885 and filed in the Niagara North Land Registry Office as RP64 on Dec. 10, 1885.*
- 1896 *Plan Shewing the Addition to Jordan Cemetery, Part of Lot No. 18, Concession No. 3, Township of Louth, County of Lincoln. Plan dated Dec. 1, 1896 and filed in the Niagara North Land Registry Office as RP75 on Jan. 30, 1897. Survey of the Methodist Church Cemetery on Main Street.*

Gibson, G.

- 1870 *Plan of Part of the Village of Port Dalhousie North of Lock Street and the Welland Canal. Plan dated December 1870 and filed in the Niagara North Land Registry Office as RP31 on Mar. 24, 1871.*
- 1875a *Plan of Part of Park Lot No. 1 of the Shenstone Farm, Being Part of Lot No. 16 in the 4th Concession of Grantham. Property of James McCourt and Annie Potter. Plan dated June 19, 1875 and filed in the Niagara North Land Registry Office as RP50 on Jan. 17, 1878. Plan shows Carlton and Munro Streets, the line of the “new” canal, Lock 7 at Carlton Street.*
- 1875b *Plan of Building Lots in the Village of Merritton, Being parts of Lots No. 8 & 9 in the 10th Concession of the Township of Grantham, the Property of John Brown. Plan filed in the Niagara North Land Registry Office as RP46 on Aug. 4, 1875.*
- 1875c *Plan of Parts of Park Lots No. 1 & 2, Subdivision of Lot No. 16 in the 4th Concession of the Township of Grantham. Property of J.M. Potter. Plan dated October 1875 and filed in the Niagara North Land Registry Office as RP49 on Aug. 31, 1876. Plan shows Geneva, Carlton, Grote and Munro Streets, the line of the “New” Welland Canal, and Lock 7 at Carlton Street.*
- 1876 *Plan of Building Lots Being Part of Lot No. 10 in the 7th Concession of Grantham. The Property of W.H. Emmett. Plan dated Oct. 24, 1876 and filed in the Niagara North Land Registry Office as RP53 on Feb. 6, 1877. Plan shows streets, building lots, the line of the “new” Welland Canal, Lock 9, a swing bridge and abutments at the Queenston and Spring Street crossing.*
- 1886 *Plan of Subdivision of Part of Lot 19 in the 3rd Concession of Grantham on Lake Avenue. Plan filed in the Niagara North Land Registry Office as RP65A on July 10, 1886. Plan shows the intersection of present-day Lake and Carlton Streets, as well as Wood Street and Patrick Street. The corner of Lake and Carlton is shown as the “Roman Catholic Church Lot,” and the “Welland Canal enlargement” is shown at the top of the map.*

Gossage, B.

- 1859 *Plan of Part of the Ordnance Reserve Fronting on the Niagara River at Queenston 1859.* Plan dated Sept. 23, 1859 and filed in the Niagara North Land Registry Office as RP6 on April 15, 1871.

Killaly, H.

- 1837 *Map of the Village of Port Colborne.*

Lawe, H.

- 1884 *Plan of Beamsville in the Township of Clinton, County of Lincoln.* Plan dated April 14, 1884 and filed in the Niagara North Land Registry Office as RP62 on Oct. 4, 1884.

McFall, J.

- 1857 *Plan of Wellandport. Part of Lots Nos. 15 & 16 in the 1st Concession of Gainsborough, County of Lincoln, Canada West. William Fitch, proprietor, Oct. 1857.* Plan filed in the Niagara North Land Registry Office as RP4 on Oct. 15, 1859.

Page, H. R.

- 1876 *Illustrated Historical Atlas of the Counties of Lincoln & Welland, Ont. Compiled, Drawn, and Published from Personal Examinations and Surveys.* H. R. Page, Toronto.

Rauberford, F.

- 1913 *The Port Weller Original Townsite. Plan No. 1, Being a Subdivision of part of Lots 12 & 13 Concession 1, and part Lots 12 & 13 Broken Front in front of Concession 1, Township of Grantham.* Plan dated July 18, 1913 and filed in the Niagara North Land Registry Office as RP111 on Dec. 20, 1913.

Ross & McCaw

- 1910 *Plan of an Addition to Oak Lawn Cemetery (Jordan Station Methodist Church), Part Lot 18 Concession 3, Louth.* Plan dated Apr. 14, 1910 and filed in the Niagara North Land Registry Office as RP83 on Nov. 30, 1910.

Ross, G.

- 1886 *Plan of Addition to Doan's Ridge Cemetery. Composed of Part of Lot 12 Con. VII in the Township of Crowland.* Plan dated Feb. 2, 1886 and filed in the Niagara South Land Registry Office as RP929 on Feb. 2, 1886.
- 1893 *Plan of Oakwood Cemetery, Being of Part of Lots Nos. 6 & 7 in the 1st Concession of the Township of Wainfleet.* Plan dated Feb. 14, 1893 and filed in the Niagara South Land Registry Office as RP729 on June 10, 1893.

- 1898 *Plan of Fonthill Cemetery, Being of Part of Lot No. 1, 8th Concession in the Township of Pelham.* Plan dated Mar. 7, 1898 and filed in the Niagara South Land Registry Office as RP697 on Mar. 7, 1898.
- 1900 *Plan of Part of Oakwood Cemetery, Being of Part of Lot No. 6 in the 1st Concession of the Township of Wainfleet.* Plan dated Jan. 26, 1900 and filed in the Niagara South Land Registry Office as RP731 on Feb. 7, 1900.
- 1902 *Plan of Mrs. Boardman's Addition to Doan's Ridge Cemetery, Being Part of Lot No. 12 in the 7th Concession of the Township of Crowland.* Plan dated June 19, 1902 and filed in the Niagara South Land Registry Office as RP930 on June 24, 1902.
- 1906a *Young's Plan of Part of Ridgeway Cemetery, Being Subdivision of Part of Lots Nos. 23 & 24 in 1st Concession from Lake Erie, Township of Bertie.* Plan dated May 22, 1906 and filed in the Niagara South Land Registry Office as RP390 on Sept. 25, 1906.
- 1906b *Shisler's Plan of Addition to Ridgeway Cemetery, Being Subdivision of Part of Lot 24 in 1st Concession from Lake Erie, Township of Bertie.* Plan dated Aug. 8, 1906 and filed in the Niagara South Land Registry Office as RP389 on Aug. 27, 1906.
- 1913a *Plan of Woodlawn Cemetery, Being Subdivision of Part of Lot 239 Township of Thorold.* Plan dated June 30, 1913 and filed in the Niagara South Land Registry Office as RP651 on Aug. 1, 1913.
- 1913b *Plan of Armitage's Addition to Fonthill Cemetery, Being of Part of Lot No. 2, 8th Concession in the Township of Pelham.* Plan dated June 30, 1913 and filed in the Niagara South Land Registry Office as RP700 on Aug. 1, 1913.
- 1919 *Plan of Emmanuel Lutheran Cemetery, part Lots 3 & 4 Concession 1.* Plan dated May 8, 1919 and filed in the Niagara South Land Registry Office as RP794 on Mar. 31, 1920.
- 1920 *Plan of Hansler's Addition to Fonthill Cemetery, Being of Part of Lot No. 2, 8th Concession in the Township of Pelham.* Plan dated Aug. 18, 1920 and filed in the Niagara South Land Registry Office as RP701 on Feb. 22, 1921.

Ross, R.

- 1888 *Erie & Niagara Railway Extension to Niagara Assembly Grounds, Right-of-Way in the Town of Niagara, County of Lincoln.* Plan dated at St. Thomas June 4, 1888 and filed in the Niagara North Land Registry Office as Railway Plan #1, ---- 1888.

Ross & Scott

- 1922 *Plan of Part of Dawdy's Burying Ground, Being of Part of Lot No. 8, Concession 8, in the Township of Pelham.* Plan dated May 2, 1922 and filed in the Niagara South Land Registry Office as RP702 on May 26, 1922.

Rykert, G.

- 1823 *Copy of a Plan of Land Belonging to the Estate of the late Robert Hamilton, Esq., in Queenston.* Plan dated July 12, 1823 and filed in the Niagara North Land Registry Office as Registered Plan 35.
- 1858 *Plan of Part of the Village of Grimsby, Property of the Messrs. Nelles.* Plan filed in the Niagara North Land Registry Office as RP20 on May 18, 1858.
- 1864a *Plan of the Estate of the late Robert Hamilton at Queenston. Being Composed of Lots Nos. 5, 6, 31, 52, Township of Niagara.* Surveyed after October 1858, plan filed in the Niagara North Land Registry Office as RP1 on Jan. 27, 1864.
- 1864b *Plan of the Village of Port Dalhousie in the County of Lincoln.* Plan dated Aug. 1, 1864 and filed in the Niagara North Land Registry Office as RP7 on May 25, 1872.
- 1867 *Plan of Merritton, formerly Welland City, North and East of the Welland Canal. The Property of the Welland Canal Loan Co. in the Township of Grantham, County of Lincoln, 1867.* Plan filed in the Niagara North Land Registry Office as RPXX on Jan. 1, 1868.

Scott, J.

- 1924 *Plan of Part of Morgan's Point Cemetery, Being Part of Township Lot No. 14 Con. 1, of the Township of Wainfleet.* Plan dated Sept. 29, 1923 and filed in the Niagara South Land Registry Office as Registered Plan 742 on Aug. 15, 1924.

Steele, E.

- 1891 *Plan of St. Mark's Church Cemetery, Niagara, Ontario. Being Designated as Block C, Capt. Vavasour's Plan, Town of Niagara, County of Lincoln.* Plan dated Sept. 30, 1891 and filed in the Niagara North Land Registry Office as RP72 on Oct. 3, 1891. Detailed plan showing the location of the Church, adjacent schoolhouse, layout of the cemetery to the east of the Church. Several early 19th century burials and family plots were included as reference points within the "old section," e.g. The tombstones for Forsyth and Morrison described as "marble slabs hacked by soldiers during war."

Stotherd, R.H.

1865 Niagara Frontier, Plan 2. Topographical Department of the War Office, Southampton. <http://dr.library.brocku.ca/handle/10464/10532>.

Tremaine, G.R., and G.M. Tremaine.

1862 *Tremaine's Map of the Counties of Lincoln and Welland, Canada West. Compiled and Drawn from Actual Surveys.* Toronto: Tremaine.

Appendix B1: Cemeteries

Table B1: Cemeteries in Bertie Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
All Saints Memorial Gardens (OGS 8473)	149 South Mill Street (west side), between Highland Drive and Farr Ave., Ridgeway	Part Lot 23 & 24, Concession 1 Lake Erie	Unknown	Anglican	Unknown	Not transcribed by OGS
Barnhart (Carver) Cemetery (OGS 4603)	North side of Fox Road near Point Abino Road	Part Lot 13 Concession 14; plot approximately 25 x 30 feet in size (7.62 x 9.144 m)	Ca. 1849-1892; Eliza Barnhart (1780-Jan. 30, 1849); Catherine Carver (1804-Sept. 15, 1892)	n/a	6 marked burials, indeterminate number of unmarked burials	Names include Barnhart, Carver and House
Battle of Fort Erie, American Soldiers Burial Site 1812-1814 (OGS 7152)	Lakeshore Road near Bardol Avenue	Part of the Military Reserve	1812-14	n/a	28; indeterminate number of unmarked graves	Snake Hill site; all bones believed to have been removed from site, repatriated to the United States for burial in June 1988
Benner Cemetery (OGS 4605)	3803 Nigh Road; South side of Nigh Road between Gorham Road (Regional Road 116) and Ridge Road North, Ridgeway; Town of Fort Erie lists address as 3777 Nigh Road, in a field behind 3803 Nigh Road	Part Lot 24 Concession 2	Ca. 1817-1881; Jacob Benner (ca. 1750-June 3, 1817); Susannah Benner (ca. 1723-Mar. 15, 1822); William Teal (1866-Oct. 4, 1881)	n/a	10 marked graves, indeterminate number of unmarked burials	Names include Benner, Foster and Teal

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Black Creek Pioneer Cemetery (Bolden Cemetery, Brillinger Cemetery, Tunker Church Cemetery, Winger Cemetery, Winger Tunkard Black Creek Pioneer Cemetery) OGS 4622	South side of College Road between Winger and Sider Roads near Stevensville; east side of Black Creek "where the [College Road] bridge crosses the creek, the cemetery is to the left or south side on a further bend of the creek"	Part Lot 14 Concession 10	Ca. 1805-1945; Johan Heinrich Climenhage (1758-1805) is said to be buried in a now unmarked grave beside his son; grave of Maria Catherine (Wenger) Seider (1755-1808) and her husband are marked by a recently carved tombstone; John Nigh (1827-Nov. 11, 1834); Bethia P. Beam (1839-May 11, 1923); Melissa Zimmerman Nigh (1861-June 4, 1945) appears to be the last marked burial	Tunker	59 marked burials, indeterminate number of unmarked graves	Site enclosed with a fence, identified by name in a sign on site, as well as by the name in an arch over the main entrance; this cemetery appears to have been transcribed as the "Bolden Cemetery" with reference to 80 tombstones, referred to as being located on the "Bolden property"
Brethren in Christ Cemetery (OGS 4607)	North side of Church Road, between Burger Road and Point Abino Road North; beside 4942 Church Road	Part Lot 11 Concession 15; 2 acres deeded to the church by Samuel Sherk in May 1828; sold to the Tunkers in October 1931, then to the Brethren in Christ in July 1990 (Bertie deeds #7466, 31904)	Ca. 1805-present; Fanny S. [Sherk?] (d. Dec. 1805), Eliza Sherk (1785-Oct. 21, 1827), Chrystena Sherk (Jan. 5, 1829); Roscoe "Rockie" House (1925-1996), William Lynch (d. 1998), Daisy M. Riseing (1909-1998)	Originally Mennonite; now Brethren in Christ	271 marked burials, indeterminate number of unmarked graves	Site identified by a sign; stone cairn and two other monuments across the road at 4943 Church Road
Foreman Burial Ground (OGS 6068)	2530 Bowen Road (north side of Bowen, or Regional Road 21), between Ridgemount and Shisler Roads, nearly opposite to Ridge Road, Fort Erie	Part Lot 9 Concession 8 NR	Ca. 1816?-1845; Christina Foreman (d. July 18, 1816? Aged 2 years); Jacob Foreman (1796-Oct. 11, 1845)	n/a	2+; indeterminate number of unmarked graves	Date for Christina may have been transcribed in error, possibly it should read "1846"?
Fort Erie Aboriginal Cemetery (Aboriginal People's Burying Ground) OGS 7153	123-125 Niagara Boulevard		Unknown	n/a	Indeterminate number of unmarked graves	Not transcribed by the OGS

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Fretz Cemetery (OGS 4611)	North side of Bertie Road, between Burger and Point Abino Roads, Fort Erie	Part Lot 3 Concession 15	Ca. 1815-1962; John Fretz (1749-Aug. 30, 1815); Charles Henry Ford (1896-Sept. 18, 1962)	n/a	57 marked graves plus a pile of broken stones; indeterminate number of unmarked graves	Plot measures 66 x 230 feet in size (20.11 x 70.10 m)
Friends Cemetery (Friends Burying Ground) OGS 4621	South side of Dominion Road, near Prospect Road; between numbers 3633 and 3653 Dominion Road, Fort Erie (east of Ridgeway Memorial United Church)	Part Lot 23 Concession 1; cemetery shown on Registered Plan 349 (dated July 1869)	Ca. 1833-1897; William Tuttle (March 11, 1833? Aged 21 days); Jeremiah Tuttle (1764-Oct. 24, 1835); Charlotte Cutler (1846-Jan. 29, 1897)	Friends, Quaker	22 marked burials, indeterminate number of marked burials; may contain pre-1833 burials	Land donated to the Society of Friends by Daniel Pound in April 1805; originally 3- acre (1.21 ha) site included a Meeting House; cemetery site approximately 85 x 100 feet (25.9 x 30.48 m) but the Registered Plan 349 showed 3.30 by 4 chains (217.8 x 264 feet, or 66.38 x 80.46 m); names include Cutler, Learn, Pound, Schooley, Zavitz and others; Wesleyan Methodist Church parsonage located immediately beside the cemetery at the corner of Ridge Road and Dominion Street
Graham Cemetery (Graham Family Burying Ground) OGS 4604	West side of Rosehill Road, north of Nigh Road	Part Lot 9 Concession 3, near Rosehill Estates subdivision	Ca. 1812-1929; Richard Graham (1759-Dec. 15, 1812); Sarah Hobson Graham (1844-June 11, 1929)	n/a	47 marked burials, indeterminate number of unmarked graves; Reive noted 78 individuals buried here	Visited by Reive in Nov. 1928 who noted the deplorable condition of the site; had a "handsome stone wall" surrounding it that was broken down, tombstones broken or fallen over, site overgrown; Cemetery willed by Richard Graham (d. 1899) to his children and descendants; cemetery 95 x 185 feet in size (28.95 x 56.33 m)
Greenwood Cemetery (Greenwood Municipal Cemetery) OGS 4612	1900 Thompson Road (east side, between CNR line and Bowen Road intersection and Industrial Drive)	Part Lot 7 Concession 2; land purchased by the village of Bridgeburg from Robert George Barrett of Toronto in May 1897	1897-present; Remains of Richard Clark transferred here from Fonthill on Sept. 20, 1897; Mrs. Hunter (Nov. 3, 1897) the first regular burial; the first five burials in 1897 were transferred from other sites	Non-denominational	5,000+ burials by 1997	In the "Bridgeburg" section of Fort Erie; site fenced in, approximately 435 feet (132.5 m) along the front of the cemetery
Hanna Burial Site (OGS 2246)	529 Ridge Road	Part Lot 23 Concession 2 Lake Erie	unknown	n/a	1; indeterminate number of unmarked graves	Single burial site? On private property, not transcribed
Haun Cemetery (OGS 4602)	South of Fox Road, west of Ott Road (Fort Erie)	Part Lot 12 Concession 13 NR	Ca. 1825-1956; Matthias Haun (1767-Feb. 4, 1825); Charles Haun (1887-Sept. 17, 1956)	n/a	51 marked burials, indeterminate number of unmarked graves	Site said to contain burial of Wilson Haun (d. 1820 aged 69), but this appears to be an error in transcription, the actual date is probably 1879

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Hershey Cemetery (Centralia Cemetery) OGS 4613	East side of Centralia Avenue south of Garrison Road (between Garrison and Nigh Roads, Fort Erie)	Part Lot 16 Concession 3; one acre (0.404 ha) site deeded by Abraham C. Hershey to "that Society called Mennonists" in March 1857; another deed in March 1862 reserved the church and burial ground site (Bertie Memorial deeds #5777, 12295)	Ca. 1831-1967; Benjamin Hershey (1776-Nov. 26, 1831); Florence A. (Ogden) Embleton (1895-1967)	n/a	19 marked burials, indeterminate number of unmarked graves	Site possibly started as a private family burial plot?
Indian Ossuary	Not known	?	Not known	n/a	Indeterminate number of burials	Referred to by Boyle in 1901 as a "low lying site"
Little Cemetery Around the Corner (Coloured Cemetery, Curtis Road Cemetery, Dennahower Cemetery, Dennahower Coloured Cemetery) OGS 5463	North side of Curtis Road, east of Ridgemount Road	Part Lot 10 Concession 7	Ca. 1830-1912; Eliza Foreman (1798-Sept. 12, 1830); Slema A. Bright (1895-Feb. 20, 1912)	n/a	46 marked burials, indeterminate number of unmarked graves	Cemetery named due to the location "around the corner" from St. John's Anglican Church; the only African North Americans believed to be interred at this site are Eliza, the wife of Benjamin Russell (1814-Sept. 30, 1866) and their five children who died between 1861 and 1864
McAfee Cemetery (OGS 4614)	2600 and 2601 Thompson Road (both sides of Thompson Road, between Mackenzie and Lemcke Streets), Fort Erie	Part Lots 4 and 5 Concessions 2 and 3	1819-present; John Palmer (1772-1819); Lewis Maybee (1740-1825); A. Gertrude (Kelly) Spencer (1889-1976)	Methodist	1,280+ marked graves	Names include Root, Young, House, Stockdale and others

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Memorial Ridge Mausoleum (OGS 4615)	3320 Garrison Road (north side) between Burleigh Road and Ridgewood Ave.	Part Lot 1 Concession 10 FNR; Canada Mausoleums Ltd. purchased this property from George Bentley Teal in Oct. 1925 (Bertie deed #24048)	Ca. 1925-present; Laura Lee Johnston (1875-1925), Hugh Sherk (1842-1926) and Emily Hershey (July 14, 1926) among the early burials; three burials pre-date the land purchase and were moved to this site? (Halley P. Reavley, 1878-May 21, 1914; Theresa Eckler Haun, 1876-1924; and Anna Hershey Wecter, d. July 8, 1924)	Non-denominational	Space for approximately 240 burials	Located east of the Ridgeway Battlefield site, and west of Zion United Church Cemetery
Old Fort Erie Mass Grave (OGS 6062)	Outside the entrance to old Fort Erie on the Niagara Parkway	Military Reserve	1814	n/a	153 burials; 150 British-Canadian casualties, 3 Americans	Casualties at Fort Erie, Aug. 26, 1814
Old Ridgeway Cemetery (Old Memorial Ridgeway Cemetery) OGS 4616	Farr Avenue	Part Lot 24 Concession 1		Non-denominational		
Old Roman Catholic Cemetery (Windmill Point Catholic Cemetery, Old Roman Catholic Baxter Cemetery, St. Michael's Cemetery) OGS 4600	West of Stonemill Road, north of Dominion Road (between Dominion and Nigh Roads, Fort Erie)	Part Lot 13 Concession 2	Ca. 1874-1883; R. Streicher (Oct. 3, 1874 aged 2 months); Fridolin Streicher (1878-Aug. 31, 1883)	Roman Catholic	6 marked burials, one stray tombstone base, indeterminate number of unmarked graves	Some tombstone inscriptions in German
Reformed Mennonite Cemetery (OGS 4619)	East side of Ott Road, north of West Main Street, just before the Penn Central Railway crossing, Stevensville	Part Lot 12 Concession 12	Ca. 1838-1987; Benjamin Buck (1833-May 28, 1838); Ruth O. Beam (1923-1987)	Mennonite	345 marked burials, indeterminate number of unmarked graves	Site said to contain the burial of Martin Beam (died Sept. 8, 1815? Aged 69 years.)

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Ridgeway Anglican Cemetery	Ridgeway		Ca. 1903-1954; Emmanuel Near (1841- June 18, 1903); Harvey J. Beam (1825-Mar. 2, 1915); Wellington Davidson (1867-1954)	Anglican	15 marked burials have been recorded, indeterminate number of unmarked graves; partial transcript available titled "Ridgeway Anglican Cemetery," which does not provide an address or reference to a Lot and Concession	Names include Beam, Buck, Davidson, James, Near and Noyes; is this the same cemetery as St. John's?
Ridgeway Memorial Cemetery	Bounded by Farr Avenue, Ridgeway Road, Derby Road and Michener Road, Fort Erie	Part Lot 25 Concession 1 (Registered Plan 360, originally Plan 6622)	Ca. 1940-present; early burial Edward Bambridge (1894-1941)	Non- denominational	Unknown	Bounded by Farr Avenue, and Derby, Ridgeway and Michener Roads; contains grave and marker for 10 early settlers, interred on part Lot 32 BF Concession LE, ca. 1790s-1800s, exhumed in August 2010 and reinterred here in May 2012
Ridgeway Old Memorial Cemetery (Ridgeway Old Cemetery, Old Ridgeway Cemetery, Old Memorial Ridgeway Cemetery) OGS 4616	125 Mill Street South (north side of Farr Avenue, west side of Mill Street)	Part Lot 23 Concession 1 (OGS states part Lot 24, other genealogical websites state part Lot 25); 3- acre site deeded by Daniel Pound to the Society of Friends in April 1805 (Bertie Memorial deed #871); Registered Plans 389 and 389 show the cemetery was enlarged in 1906	Ca. 1816?-present; Asa Schooley (1739-1816) a prominent Quaker said to be buried here; Thomas Disher (1791-June 1848); Phillip B. Harkins (1949- 2011); Janet B. Truckenbrodt (1926-2012)	Quaker/Society of Friends	203+ marked burials; indeterminate number of unmarked graves	1876 Page's Atlas showed a cemetery on the south- west corner of the Ralph Disher farm, part Lot 23 Concession 1

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. John's Anglican Church Cemetery (OGS 4620)	2231 Ridgemount Road between Curtis and Bowen Roads, Fort Erie	Part Lot 9 Concession 8; ½ acre (0.202 ha) purchased for the church and cemetery from Charles Hibbard in July 1836; additional land purchased in 1874 and 1926	1841-present; Eliza Miller (d. 1841) is the first recorded burial	Anglican	44 marked burials, indeterminate number of unmarked graves	Some genealogical website transcripts include the names from the "Little Cemetery Around the Corner" under St. John's; cemetery enclosed with wrought iron fence with stone gate posts on Ridgemount Road; frame church on site built in 1840
St. Joseph's Cemetery (OGS 4633)	South side of Garrison Road, between King Street and Legion Way (opposite Douglas Street), Fort Erie	Roman Catholic School and Church Lot, Registered Plan 992; plan showed that the lot was approximately 2 chains by 5 chains in size (132 x 330 feet, 40.23 x 100.58 m)	Ca. 1919-present; Carmine Passero (1915-Mar. 21, 1919); Jeanne Marie Dawson (1928-Nov. 15, 2017)	Roman Catholic	Unknown number of burials	Plan 992 was dated June 23, 1862, but did not indicate the presence of a cemetery on the lot; newspaper article reported that the cemetery was closed in 1960; later re-opened? Located beside 172 Garrison Road; cemetery fenced, well maintained
St. Paul's Anglican Cemetery (OGS 4634)	West side of Niagara Boulevard south of Gilmore Road, Fort Erie	Lot 212; original land for church deeded by William Smith, churchyard later enlarged by additional land acquisitions latest in 1987	Ca. 1814?-1955; oldest graves include Philip Wintermute (1790-1814); Christian Riselay (ca. 1755-Jan. 12, 1828); C. May Jackson (1884-1955)	Anglican	Around 900 marked burials, indeterminate number of unmarked graves; additional 14+ remains in columbarium	Church established ca. 1821; older burials possibly transferred here from private family plots, or the site was used for burials prior to the establishment of the church? Visited by Dr. Reive in May-June 1929 who found it "a very interesting cemetery" with grave sites for many retired military and naval officers; cemetery in good condition, but "many stones chipped and could not be deciphered"
Sherk Cemetery (OGS 4617)	North side of Sherk Road, between Burger and Point Abino Roads, Fort Erie	Part Lot 7 Concession 15	Ca. 1828-1964; Sarah Sherk (1791-Jan. 19, 1828); Frank Sherk (1890-June 1964)	n/a	41 marked burials, indeterminate number of unmarked graves	Joseph Sherk sold the farm in 1895 but reserved the ½ acre burial plot for the use of the family; names include Burger, Carver, Hill, Hexemer, Neff, Nigh, Parton and Saylor; burial plot measures approximately 90 x 200 feet (27.43 x 60.96 m)

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Sherkston Brethren in Christ Cemetery (Brethren in Christ Mennonite Cemetery, Old Mennonite Cemetery) OGS 4608	5384 Sherkston Road, Fort Erie	Part Lot 25 Concession 1; land deeded by Samuel Sherk to trustees "for a burying ground for the Mennonist Society (forever)" in May 1828 (Bertie Memorial deeds #7466)	Ca. 1805-?; "Fanny S." (d. Dec. 1805); Chrystina Sherk (Jan. 5, 1829)	Mennonite	2+; indeterminate number of unmarked graves	Older burials suggest that this site may have either started as a private family burial plot, or remains were transferred here from another site?
Spear Cemetery (Plato Cemetery) OGS 4618	South side of Bertie Road west of Osgoode Road	Part Lot 2 Concession 4	Ca. 1841-1932? Christianna Benner (ca. 1825-Apr. 17, 1841); Edward Harris (1854-1932)	n/a	83+ marked burials, indeterminate number of unmarked graves	Visited by Dr. Reive around 1932 who also referred to it as the "Benner Cemetery near Fort Erie" who recorded the names of 83 individuals; active burial site when Reive visited
Stevensville Mennonite Cemetery (Stevensville Reformed Mennonite Cemetery) OGS 4619	Stevensville and Hayslip Streets; 2584 Ott Road (east side) north of West Main Street	Part Lot 12 Concession 12	Ca. 1848?-1958; Martin Bell (d. Sept. 8, 1818? Aged 69 years); Margaret Beam (1801-Oct. 9, 1838); Elsie Beam (1884-Apr. 19, 1958)	Mennonite	51+ marked burials in old section; indeterminate number of unmarked graves	Names include Beam, Bell, Morningstar and others; Bell tombstone date was transcribed as 1818, but is probably 1848; north half of the cemetery is the oldest; brick church on site; cemetery well kept, identified by a sign as the "Reformed Mennonite Cemetery"
United Brethren Church Cemetery (Beam United Brethren Cemetery, Beam Cemetery) OGS 4601	2612 Stevensville Road (Regional Road 116, east side), at Hayslip Street, Fort Erie	Part Lot 12 Concession 2; irregularly shaped cemetery, shown as Lot 50 on Registered Plan 415 for the "unincorporated village of Stevensville" (1919)	Ca. 1864-1926; Mary Clark (1849-Nov. 3, 1864); John Clark (Nov. 10, 1864 aged 10 months); Sarah G. (House) Hendershot (1843-1926)	United Brethren	40 marked burials, indeterminate number of unmarked graves	Entrance to site off Hayslip Street, at the rear of what was Lichtenberger Electric; once contained a church constructed in 1862; parsonage shown on 1876 map of village but not the cemetery; Stevensville Road formerly Victoria Street; site fenced in, identified by a sign, well kept.
Unnamed Burial Plot	Point Abino Road South	Part Lot 32 Broken Front Concession LE	Ca. 1790s-1820s?	n/a	10+; indeterminate number of unmarked graves	Ten early settlers uncovered August 2010, reinterred at Ridgeway Memorial Cemetery in May 2012; land originally belonged to Timothy Skinner (1797), then part sold to Isaac and Abraham Laing (1802), Michael Sherk (1803) and Thomas Otway Page (1806); family burial plot, or a community cemetery? All remains removed from site?

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Unnamed Methodist Burial Plot	South-east corner of Dominion and Ridge Roads, Ridgeway	Part Lot 23 Concession 1; Charles Hill and Enos Disher conveyed $\frac{3}{4}$ acres (0.303 ha) to the trustees of the Wesleyan Methodist Church in April 1848 (Bertie Memorial deed #641)	Not known	Wesleyan Methodist	Not known; indeterminate number of unmarked graves	Site now occupied by the People's Memorial United Church; Page's Atlas map of 1876 shows a "+" symbol at this site suggesting it was used as a cemetery; not transcribed by OGS
Windmill Point Church of Christ (Disciples) Cemetery (Windmill Point Cemetery, Church of Christ Cemetery) OGS 4609	100 feet (30.48 m) east of Stonemill Road opposite to Johnston Road	Part Lot 12 Concession 2	Ca. 1830-1980; Emaline Edsall (1821-Sept. 26, 1830); Mary Edsall (1821-Apr. 19, 1844); Myrtle Baxter (1894-1980)	Church of Christ (Disciples)	36 marked burials, indeterminate number of unmarked graves	Cemetery measures approximately 90 x 136½ feet (27.43 x 41.60 m)
Zion United Cemetery (Teal Cemetery) OGS 5745	North side of Garrison Road east of Ridge Road, Fort Erie	Part Lot 1 Concession 10; land deeded by Zechariah Teal to church trustees for use as burial ground in April 1865	Ca. 1827-1979; Charles Anger (ca. 1825-June 2, 1827); Lloyd Glenford Sherk (1907-Nov. 1, 1979)	Originally Methodist Episcopal, now United	279 marked burials, indeterminate number of unmarked graves	Located immediately east of the Memorial Ridge Mausoleum; Zion Chapel was located across the street; older stones suggest that this site was either used for burials prior to 1865, or that remains were transferred here from other burial plots after the land was deeded to the trustees

Table B2: Cemeteries in Caistor Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Abingdon Presbyterian (OGS 3364)	South side Niagara Road 65, west of Abingdon Road, in Abingdon; 9222 Silver Street	Part Lot 16 Concession 4	Ca. 1864-present; John Clough (1862-1864); Annie Jean (McQueen) Senn (1923-Nov. 23, 2018); one stone transcribed, possibly in error, Andrew Jackson (d. May 21, 1860?)	Presbyterian	151 marked burials, 175 names transcribed	Site marked by a large stone with the name of the cemetery and its establishment date
Bethel Cemetery (Bridgeman Cemetery) OGS 3365	South side of Twenty Road West, east of Regional Road 6 (Caistor Centre Road)	Part Lot 10 Concession 7	Ca. 1841-present; Sarah C. Merritt (ca. 1834-Apr. 24, 1841); Joseph M. Bridgeman (ca. 1815-Dec. 12, 1842); Norman Browning (1928-June 10, 1980)	Not known	102 marked burials, indeterminate number of unmarked graves	Site partly fenced in, identified by a name sign; still presently in use
Caistor Baptist Cemetery (Abingdon Baptist Churchyard, Jackson Cemetery) OGS 3367	9178 Concession 5 Road (south-east corner Abingdon Road and 5 th Concession Road)	Part Lot 15 Concession 5	Ca. 1861-present; Robert Henry Miller (1858-Dec. 27, 1861); Samuel Arthur Miller (1859-Sept. 16, 1862); Lilli Hardt (1928-1998), Albert W. Griffin (1911-1998)	Baptist	64 marked burials; indeterminate number of unmarked graves, recent transcripts list 150 names	Chapel built 1864; stone identifies name of cemetery with establishment date 1864; white frame church
Caistorville United Church and Cemetery (OGS 3374)	South side of York Road (Regional Road 9) between Canborough Street and Broman Court; across the street from the Caistorville Public Library	Part Lot 20 Concession 1; part Lots 1, 8 and 9 (York Street) in the village of Caistorville	Ca. 1839-present; Edward Jennings (ca. 1818-Sept. 11, 1839); twins Dudrice and Dudley Johnson, died Nov. 22, 1846 aged 11 days; Viola Susan Fearn (1923-Jan. 2, 2017)	Wesleyan Methodist, United	OGS transcripts record 629 names, recent transcripts list 681 names; indeterminate number of unmarked graves	Land deeded to the congregation by David Tice in September 1857; Methodist services held in township as early as 1822, school at Caistor Corners used for services in 1830s; frame church built 1855, replaced by brick church 1895; entered Church Union 1925; church located on site
Cosby Family Cemetery (OGS 3366)	South side of Regional Road 65 (Bismark Road) west of Attercliffe Road	Part Lot 2 Concession 4	Ca. 1866-1896; earliest stone transcribed Minnie B. Cosby (Oct. 6 1856 aged 1 month); Melinda Jane Cosby (1838-July 6, 1896); transcriptions listed Minnie's death date in error as 1826	n/a	5-6 marked burials; indeterminate number of unmarked burials	Other names found here include Canby; this appears to be the site visited by Dr. Reive in May 1932 who referred to it as "Cosby Family Graves" located "on a farm between Bismark and Binbrook"

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Dockstader/ Dochstader Cemetery (Bristol Cemetery; Chadborne Cemetery) OGS 3368	North side of South Chippawa Road between Church and Attercliffe Roads	Part Lot 3 Concession 2; 1 acre (0.404 ha)	Ca. 1830-1922; Henry Lymburner (1826-Feb. 16, 1830) and Susanna Miller (ca. 1797-Apr. 28, 1830) earliest marked burials; Lafferty Lymburner (ca. 1842-June 26, 1922)	Non denominational?	101 marked burials (118 names recorded); indeterminate number of unmarked graves	Land donated by Henry Dockstader for use as a public burial ground; former name in honour of Rev. Bristol
Hallet Burial Plot (OGS 6069)	East side of Regional Road 6, north-east of Caistor Centre	North-west corner of Lot 9 Concession 5	Ca. 1833-?; John C. Hallet (ca. 1783-1833); Frederick Hallet (ca. 1831-1833)	n/a	Unknown; 2+ burials	
Ker United Church Cemetery (OGS 3370)	North side of Regional Road 20, west of Abingdon Road	Part Lot 18 Concession 7	Ca. 1851 to present	Methodist, United	111 marked burials including vault	Congregation established ca. 1845, church built 1862 and replaced in 1900
Lymburner Cemetery (OGS 3369)	North side of South Chippawa Road between Church and Attercliffe Roads	Part Lot 4 Concession 2	Ca. 1832-1979; Matt Lymburner (ca. 1765-Dec. 1832); Merle Arthur Ross Lymburner (1909-Sept. 26, 1979)	n/a	75 marked burials, indeterminate number of unmarked burials	Family plot
Merritt's United Church Cemetery (OGS 3371)	North-east corner of Church Road and South Chippawa Road	Part Lot 5 concession 2; land deeded by David Merritt in 1855	Ca. 1850-present	Wesleyan Methodist, United	116 marked graves	Church built 1855, renovated 1901; entered Church Union in 1925
Roy Cemetery (OGS 3372)	Located on the Binbrook-Haldimand County Line	South-west corner of Lot 25 Concession 1	Ca. 1838-1854	Methodist Episcopal	10 marked burials, indeterminate number of unmarked burials	Site may have contained a small ME Chapel
Waite Cemetery (Waite Burial Ground) OGS 3376	South side of Regional Road 65 (Bismark Road) west of Abingdon Road, 1 mile west of Abingdon	Part Lot 16 Concession 4	Ca. 1863-present; Jacob Packham (July 14, 1863 aged 9 months); John Waite (Mar. 22, 1864 aged 2 months); Fern Mary (Packham) Bird (1918-Mar. 14, 2019)	Methodist Episcopal	113 marked burials, indeterminate number of unmarked graves; 130 names were transcribed from all tombstones prior to 1973	Land purchased from John Waite in 1863; Sunday School established 1860; new church built on Lot 15 in 1882; entered church union in 1925, church closed 1981
Zion Cemetery (Springsted or Burkholder Cemetery) OGS 3373	2298 Abingdon Road (south-west corner of Abingdon and Bismark Roads)	Part Lot 16 Concession 6	Ca. 1864-2010; William M. Nelson (1863-Dec. 24, 1864); Daniel Burkholder (1805-May 1868); Mairi Paterson Birr (1966-208), John A. Boyko (1930-2010)	Not known	31 marked burials; indeterminate number of unmarked graves	Site identified by a sign

Table B3: Cemeteries in Clinton Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Abandoned Cemetery (OGS 6017)	unknown	Part Lot 7 Concession 5	Not known	n/a	Indeterminate number of burials	Cemetery located north-west of Mountainview Cemetery "in a grove of locust trees," the stones were later taken up
Abandoned Cemetery (OGS 6018)	unknown	South-west corner of Lot 7 Concession 6	Not known	n/a	Indeterminate number of burials	Site found by Mr. P. Neufeld, directly opposite to Mountainview Cemetery; location now occupied by housing
Abandoned Cemetery	Unknown	Part Lot 7 Concession 8; 200 feet (60.96 m) west of Tintern Road, south side of a ditch, on the old Hipple farm	Not known	n/a	Indeterminate number of burials	Cemetery located near a tree in the field, believed to contain the graves of several infants, one tombstone existed for an infant child of the Moote family; not listed in the OGS database?
Beamsville Baptist Church Cemetery (First Baptist Church Cemetery, Baptist Cemetery, Beamsville Baptist Churchyard) OGS 3379	4264 Mountain Street, Beamsville	Lot 268, Corporation Plan 3 (CP3)	Ca. 1806-1896; Lemuel Covell (1764-1806); Patrick McGaw (1745-June 8, 1806); Christopher Boughner (1744-1810); David Adair (1734-1811); Jacob Beam (1723-1812); Mahala Boughner (1814-1896); Leah (Snyder) Rott (1804-1896)	Baptist	234 marked graves; 713 burials by 1857	Congregation established 1788; stones gathered to a central location; a few others mounted into a low cairn, while some remain <i>in situ</i> ; some stones are believed to have been broken for use in a sidewalk; several unmarked graves; Jacob Beam (Boehm) the founder of Beamsville interred here. He donated the land for the church and school in 1808.
Bucknall Farm Cemetery (Bucknall Farm Burial Plot) OGS 6025	Not known	Part Lot 9 Concession 5; plot measures 10 x 10 feet (3.048 x 3.048 m)	Ca. 1836-?; Anna Smith (1800-Aug. 15, 1836); Delby Bucknall thought to be buried here	n/a	1 marked grave, indeterminate number of unmarked graves	Three graves? One stone in a cherry tree grove, another stone said to be in the barn but of unknown origin, possibly another burial for a woman who also died in the 1830s

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Campden Mennonite Burying Ground (Mennonite Mountain Burial Ground, Mennonite Cemetery Campden, Mount Hope Cemetery) OGS 3380	South-west corner of Fly Road (Regional Road 73) and Tintern Road	Part Lot 7 Concession 7	Ca. 1840-2005; C.H. Bushey's daughter buried here Feb. 2, 1843; Magdalena Moyer (1801-June 10, 1845); Catherine Houser (1780-1849); Jeremiah Putman (1890-1960); Margaret Reed (1918-2002)	Mennonite	240+ marked burials, indeterminate number of unmarked graves	Once called Mount Hope; congregation established 1840, disbanded 1909 and church sold 1915; site is fenced (iron fence with stone gate posts), identified by a sign and well maintained; heritage plaque
Christopher Culp Cemetery (OGS 6019)	Not known	Part Lot 6 Broken Front Concession	Ca. 1833-1878; Christopher Culp (1747-Dec. 19, 1833); Mary Culp (1800-Aug. 6, 1878)	n/a	9 burials, indeterminate number of unmarked burials	Site presently contains 4 tombstones; located near the creek
Jacob Culp Jr. Family Burial Ground (Jacob Culp II) OGS 6020	Not known	Part Lot 13 Broken Front Concession	Ca. 1832-1885; Jacob Culp Jr. (d. Aug. 23, 1832); Solomon Culp (1805-1885)	n/a	10 marked burials, indeterminate number of unmarked graves	Located on the west side of Red Creek; plot surrounded by a wooden fence, has "brick shaped stones"
John Culp (John Culp III) OGS 6021	Maplegrove Road	Part Lot 7 Broken Front Concession	Ca. 1825-1866; Timothy Culp (1824-July 10, 1825); Eliza Culp (ca. 1815-1866)	n/a	12 marked burials, indeterminate number of unmarked graves	Cemetery located 500 feet (152 m) west of the road under some trees near the creek
Dean Burial Ground (OGS 3387)	North-west side of Yonge Street, just past Cherry Ave., Vineland	Part Lot 5 Concession 8	Unknown	n/a	Indeterminate number of graves	On the north side of a knoll overlooking the Twenty Valley Golf Course; stones believed to have been used to seal off a well located in the golf course parking lot
Dean's Cemetery (Quarry Road Cemetery) OGS 3385	East side of Quarry Road, immediately beside (south of) Littlefoot Farm ("miniature horses & petting farm") at 4107 Quarry Road	Part Lot 12 Concession 4	Ca. 1845-1891; Francis H. Huff (Dec. 18, 1845 aged 2 months); Charles Dean (Nov. 29, 1891 aged 4 months)	n/a	Site contained 14 tombstones and some footstones, as well as a few broken stones; possibly 20+ burials in total; indeterminate number of unmarked graves	Site is partly enclosed on three sides within a farm fence, open access from the road; main row of tombstones faces towards the road, a few stones in a back row; site is maintained, grass cut &c.
Ecker Plot (aka Miller plot) OGS 6023?	Cherry Ave., Vineland	Part Lot 5 Concession 8 (?); OGS places this cemetery on part Lot 8 Concession 8	Ca. 1850; Philip (Clarence) Ecker, died sometime prior to 1852	n/a	1 known burial, indeterminate number of unmarked graves	Plot is in a ploughed field, 300 feet (91.44 m) north of the Miller plot, and 150 feet (45.72 m) west of Cherry Ave. (see Miller plot below); treated as one cemetery by the OGS?

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Eden (Zimmerman) Cemetery (OGS 3381)	North side of Spring Creek Road	Part Lot 15 or 16 Concession 4	Ca. 1816-1823; Adam Zimmerman or "Simmerman" (d. 1816? Aged 36); another grave dated 1823	n/a	2 known burials, indeterminate number of unmarked graves	Total number of interments not known
Henry Cemetery (Henry Farm Burial Ground, Henry Family Burying Ground) OGS 5380	Not known	Part Lot 5 or Lot 6 Concession 4	Ca. 1792?-1870; Robert Henry (1791-May 25, 1792); Catherine Henry (1813-Aug. 2, 1815); James R. Henry (1795-Mar. 1, 1870)	n/a	Site may have contained as many as 55 burials; presently contains 7 tombstones mounted into a central slab	Grave of James R. Henry later moved to Mt. Osborne Cemetery; other surnames include Forther, House and Walker
House Family Cemetery (OGS 6022)	South side of Highway 8, "a few hundred feet east of Cave Springs on the Pleken farm"	Part Lot 11 Concession 4	Ca. 1823-1849; Harmon Fisher (d. Aug. 1823); Byron House (1848-Sept. 8, 1849); Lewis House "buried on the next hilltop so he could overlook his farm"	n/a	5 marked burials, indeterminate number of unmarked graves	Plot measures approximately 30 x 50 feet in size (9.144 x 15.24 m); two tombstones still standing, three are mounted in a central slab
Indian Communal Burial Site (Dean, Dean's Mills) OGS 3305	Unknown	Part Lot 5 Concession 8, "in a low, level field" approximately 300 yards (900 feet/274 m) north of Mud Creek and 500 yards (1,500 feet/457 m) west of the Twenty Mile Creek; OGS incorrectly places this site on part Lot 8 Concession 8	Unknown, believe to be pre-contact	n/a	Possibly 250 individuals?	Site was discovered on the Andrew Dean farm; heavily plundered in 1900 or 1901 by local inhabitants when news was made public of its discovery; some artifacts and specimens (skulls, femurs) were collected by Boyle, others were donated by collectors to the ROM. A number of nearby surface finds were believed by Boyle to have been "camping sites" from which artifacts were collected.

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Johnson-Spiece Cemetery (Johnson Methodist Cemetery; Dawdy, Lampman & Spiece Cemetery) OGS 3378	West side of 20 Mile Creek, south of Spring Creek Road, north of 20 Mile Road, between Campden and Tintern Roads ("formerly known as Haberley Road"?); south of 4042 Spring Creek Road	Part Lots 7-8 Concession 10	Ca. 1820-1886; Susannah Johnson (Aug. 14, 1820 aged 1 day); Ida Melick (1878-Nov. 11, 1886)	Wesleyan Methodist	42 marked burials, indeterminate number of unmarked graves	Stones moved to a central location; church was on the site; other surnames include Bartron, Dawdy, Johnson, Melick, Reece
Konkle II Cemetery (OGS 5935)	Lincoln Avenue	Part Lot 17 or 18 Broken Front Concession	Ca. 1813-1883; Adam Konkle (1747-Sept. 17, 1813); Henry Konkle (1795-Mar. 23, 1883)	n/a	4 or more marked burials, several fragments; indeterminate number of unmarked graves	Located 175 feet (53.34 m) east of the pumphouse at the end of Lincoln Ave., on the top of the east bank of the creek, surrounded by walnut trees; Adam Konkle directed in his will that he be buried in the orchard on his farm
Mennonite Burying Ground (Moyer Cemetery, Vineland Mennonite, Vineland I Old Mennonite) OGS 3386	4025 Martin Road, Vineland (corner of King Street or Regional Road 81/Old Highway 8, at Martin Road)	Part Lot 2 Concession 4	1798-1976; oldest marked grave appears to be Diana (Fretz) Rittenhouse (1768-Sept. 7, 1801); other early burials include Mary Claus (1759-1803), D. High (1808), Mary (Kolb) Fretz (1730-Mar. 7, 1810), Daniel High (1773-1812), Barbara Albright (1812) and Peter Couse (1767-1812); last burials Josiah P. Albright (1857-1940); Rev. C. Raymond Albright (1888-1969), Jenny L. Albright (1887-1976) last burials	Mennonite	Reive recorded the names of 537 individuals interred in this cemetery prior to 1929; indeterminate number of unmarked graves	Visited by Dr. Reive in October 1929; plot surrounded by a stone wall built in 1833; well maintained cemetery; site designated by the Town of Lincoln LACAC (plaque); wall contains a metal plaque which identifies the site as the "Mennonite Burying Ground 1798." Some early markers are field stones with initials and the date, a few are inscribed in German.

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Mountain Presbyterian Cemetery (Konkle I Cemetery, Marlatt Cemetery, Konkle Marlatt Presbyterian Cemetery) OGS 3382	Corner of Konkle and Philip Roads	Part Lot 22 Concession 5	Ca. 1812-1968; John Adair (d. 1812); Mary Terryberry (1796-Nov. 16, 1820); Adam Konkle (1810-1885); Thomas W. Chadwick (1857-1931); Asahel Davis (1878-1968)	Presbyterian	172+ marked burials, indeterminate number of unmarked graves	First church occupied this site ca. 1802; site well maintained, enclosed within a chain link fence, but not identified by name
Mountview United Cemetery (OGS 3383)	4015 Moyer Road, Campden (north-west corner of Moyer and Tintern Roads)	Part Lot 7 Concession 5	Ca. 1853-present; Agatha Haist (ca. 1830-Feb. 6, 1853); Dorothy Orth Parr (1912-2002)	Evangelical United Brethren, now United	230+ marked burials, indeterminate number of unmarked graves	now part of Trinity United Church in Campden
Miller Family Cemetery (aka, Ecker plot?) OGS 6023	Cherry Ave., Vineland	Part Lot 5 Concession 8 (?); OGS places this cemetery on part Lot 8 Concession 8	Ca. 1812; Adam Miller and his daughter (both died "around 1812")	n/a	2 burials, indeterminate number of unmarked graves	Miller and his daughter reputed to have died "after drinking swamp water." Funeral held in the new family barn. Graves are said to be under the hickory tree near the bridge on Cherry Ave., at the side of the road, and marked by field stones surrounded by hawthorn bushes; sometimes referred to as the nearby "Ecker plot" (see above)
Moote Family Cemetery (Moote Cemetery) OGS 6044	Opposite to 3265 Tintern Road	Part Lot 7 Concession 8	Unknown	n/a	Indeterminate number of graves	

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Mount Osborne Municipal Cemetery (OGS 3384)	4230 William Street, Beamsville (west side William Street, between Robbie Burns Road and King Street)	Part Lots 17 and 18 Concession 3; Lots 341 and 349 CP 3. Original 7-acre (2.83 ha) parcel granted by James Bennett to the Beamsville Cemetery Co. in September 1873 for \$775, enlarged in Aug. 1889 when John B. Osbourne sold additional land to the village of Beamsville for cemetery purposes (Clinton deeds #918, 3018)	Ca. 1873-present; Christopher Culp (1747-Dec. 19, 1833), son Jonas Culp (1797-Feb. 5, 1845), wife Frances Culp (1755-Apr. 12, 1852); other pre-1873 burials include Sarah Amiss (1813-1867); Eliza A. Bayley (1854-1861); Margaret Bennett (1819-1852); Robert Bennett (1850-1853); Joseph S. Bradt (1807-1861); Burwell Culp (1853-1856)	Non-denominational	1,223+ marked burials	Beamsville Cemetery Co. was established in 1870 but the first burials not made until 1873; many earlier burials moved here from family plots
Tilman Culp Family Cemetery (Tilman Culp Family Burial Ground, Abandoned UEL Cemetery; Tufford Road Cemetery) OGS 3388	West side of Tufford Road, behind the old school	Part Lot 10 Broken Front Concession	Ca. 1810?-1911; wife of Tilman Culp believed to be the first burial, she died "in the early 1800s;" Tilman Culp (1744-1824); other Culp family members interred here in the mid-1820s; two last burials Jesse House (1832-May 16, 1904) and Catherine House (1818-1911)	n/a	Estimated number of burials varies between 30 and 120; indeterminate number of unmarked graves; two tombstones remained <i>in situ</i> in 1977; two tombstones were extant in 1977, those of William Herrington (1772-Oct. 12, 1855) and William Tufford (1829-Jan. 8, 1862)	Deed given for land for School Section 5 in 1857, description starts at the "north west angle of the burying ground;" site marked by an identifying sign; control of this cemetery was assumed by the Town of Lincoln in August 1974 (by-law 74-33)
Tufford Family Cemetery (OGS 6024)	4506 Lakeside Dr.	Part Lot 11 Broken Front Concession	Ca. 1798-?; Conrad Tufford believed to be interred here, died sometime after 1798, possibly died 1833	n/a	Indeterminate number of unmarked graves	Located on a hill on the south-east side of the creek

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Vineland II Mennonite Cemetery (OGS 6271)	North side of King Street or Regional Road 81 (old Highway 8) west of Rittenhouse Road		1914-present; Lavinia Church (1883-June 8, 1914) was the first burial; Nancy Church (ca. 1839-Aug. 14, 1914) another early burial	Mennonite	Approximately 2,100+ marked graves?	Contains that portion of the Vineland cemetery located <i>outside</i> of the stone walls of the Old Mennonite Cemetery
Vineland III Municipal Cemetery (OGS 6272)	East side of Martin Road, opposite to 4024 Martin Road		1965-present	Non denominational		The newest part, located directly adjacent to (north side) of Vineland II
Wesleyan Methodist Cemetery (Zion Wesleyan Methodist Church Cemetery) OGS 5381	South side of Fly Road (Regional Road 73), mid-way between Cherry Avenue and Tintern Road	Part Lot 5 Concession 7	Ca. 1852-1862; Philip Ecker (1811-Jan. 24, 1852); John Hedden (1861-Mar. 22, 1862)	Wesleyan Methodist	4 marked burials, indeterminate number of unmarked graves	Stones mounted in a central pad

Table B4: Cemeteries in Crowland Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Denistoun Street Cemetery (Methodist Episcopal Church Cemetery; Former Methodist Episcopal Church Site; Gonder farm plot; Stoner farm plot) OGS 5895	East Side of Denistoun Street at Mill Street, south of the Welland River, north of Main Street, City of Welland	Part Lot 26 Concession 5; 1 acre (0.404 ha), 210 feet (64 m) on Denistoun Street; shown on Registered Plan 556 (dated August 1857)	Ca. 1813-1876; Michael Gonder buried there 1813; David Price, died Feb. 26, 1841 aged 91 years.	Methodist Episcopal	5 known, indeterminate number of unmarked graves	Cemetery began as a Gonder family burial plot, then used by the Price family; land deeded to trustees of the ME Church by John Price in July 1863 (Crowland deed #11046); land sold by church to Joseph Thorne in June 1876; no bodies known to have been moved, now occupied by houses; other names associated with this cemetery are thought to include Stoner and Ellsworth
Doan's Ridge Cemetery (OGS 4627)	South of Ridge Road, east of Doan's Ridge Road	Part Lot 11 or 12 Concession 7; Registered Plans 7, 220, and 1676 (now known as Plans 927, 929 and 930)	Ca. 1894; Agnes F. Carl interred here September 1894; Hiram Doan (1819-1819); Christianna Yokom (1790-1828); Wilson Doan (1762-1837);	n/a	159 marked burials, indeterminate number of unmarked burials; Reive recorded the burials of 591 individuals by 1928	Sections A.B and D transcribed by OGS; Dr. Reive visited Doan's Ridge several times in 1928 and noted that it had a full-time caretaker and was "being carefully preserved." He noted that it was "the largest cemetery in Crowland Township" with many early names
Islamic Cemetery of Niagara	9553 Yokom Road (north side, between Crowland Avenue and McKenney Road), Welland	Part Lot 7 Concession 4	Ca. 1993-present; Hassan Karachi (1924-1993) appears to have been the first burial at this location	Muslim, Islamic	41 marked burials, indeterminate number of unmarked burials	Site enclosed within a fence and clearly marked by a sign, an austere but well-maintained cemetery

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Japanese Martyrs Cemetery (Welland Roman Catholic Churchyard) OGS 4690	Aqueduct Street, bounded by Church and Elizabeth Streets, Welland; bounded on the west side by numbers 46-48 Church Street and 49-51 Elizabeth Street	Lot 76, Registered Plan 549 & 550; part of Lock Street (closed) RP 549 & 550; land sold by John Dunigan to the Roman Catholic Diocese of Toronto for \$620 in September 1861; Lock Street (west side of the cemetery) was stopped up and closed, and sold by the Town of Welland to the RC Diocese in November 1915 (Welland deeds #9644/1861 and 3971/1915)	Ca. 1863-1922; Ann Freel (1801-1863); John Brown (1797-1865); John Shanahan (August 1865); "Baby Hucic" possibly the last interment, Feb. 1922	Roman Catholic	127 marked graves, records suggest 550 unmarked graves?	Japanese Martyrs was the first permanent Catholic Church in Welland, built in 1871; some burials pre-date the church, possibly moved here from another site? Church burned in 1913, some church records destroyed; Holy Cross used later; some tombstones in Italian, Hungarian, Cyrillic; site enclosed by a wrought iron fence, well maintained
Lyon's Creek Cemetery (OGS 4628)	Near 7906 Lyon's Creek Road; south side of Old Lyon's Creek Road at Schisler Road (Regional Road 27), Niagara Falls (west of Montrose, east of Misener)	Part Lot 1 Concession 4 (some sources state that the cemetery is on part Lot 2), approximately 0.23 acres (0.093 ha)	Ca. 1820-1952; early burials include Joanna Buchner (1765-Apr. 5, 1820), Jane Yokum (1801-Jan. 15, 1832); later burials include Judson Matthews (1864-1933) and George Oliver (1860-Aug. 21, 1952); Hannah Willson (d. May 14, 1817 aged 52 years) may be transcribed in error, date is possibly 1847	Methodist/United	102 marked burials, indeterminate number of unmarked graves	Area known as "White Pigeon." Settled by Benjamin Lyon. Meeting house built 1808, replaced by brick church in 1861; land for cemetery donated by Capt. Henry Buchner; cemetery shown on Lot 1 Con. 4 in <i>Page's Atlas</i> (1876); church still stands beside the plot, cemetery fenced in, marked by sign and a heritage plaque, site is well maintained; this appears to be the cemetery visited by Dr. Reive in 1926 -27, who referred to it as "Cook's Mills Presbyterian Church Cemetery" He described it as a "very neglected cemetery with leaning, fallen, and broken stones." He added "sheep are turned in occasionally to trim down the grass." Reive recorded the names of 68 individuals

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Miller II Cemetery (Miller Family Burial Place, W.J. Miller farm burial place) OGS 6527	South of Ridge Road, west of Montrose Road (part of the City of Niagara Falls)	Part Lot 1 Concession 7, approximately .005 acres (0.002 ha)	Ca. 1841-1874; Jacob Miller (1772-Aug. 3, 1841); Benjamin Miller (1845-Apr. 10, 1846); Christian Miller (1840-1874)	n/a	7 known burials, possibly other unmarked burials; known burials include David Miller, his wife Eva (Shoup) and five of their children; Jacob Miller (d. 1841) believed to be buried here in an unmarked grave	Visited by Dr. Reive in May 1928 who noted "seven stones in all," the cemetery was located in "a quiet spot in a corner of the woods"
Roman Catholic Cemetery	Corner of Woodlawn Road and Niagara Street	20 acres (8.094 ha)	1975	Catholic	n/a	Site was acquired for use as a cemetery, but sold by the Diocese in July 1975 for a housing development; no burials are known to have been made at this site
Welland Jewish Congregation Cemetery (OGS 7008)	North side of Lyon's Creek Road, east of Regional Road 84	Part Lot 11 Concession 4	Ca. 1926-?; Jacob Lovinger (1876-June 11, 1926), as well as his wife and son	Jewish/Hebrew	Three known burials, possibly other unmarked graves	Site appears to contain a single tombstone; cemetery closed to further burials in September 1989
Young-Misener Cemetery (Chippawa Creek Cemetery, Misener Burying Ground, Misener Cemetery, Misener Burial Place, Meisner Burial Place) OGS 4629	South side of Grassy Brook Road between McKenny and Moyer Roads; on south side of Creek Road west of QEW, opposite to the Cyanamid Plant	Part Lot 10 Broken Front; approximately 100 x 100 feet (30.48 x 30.48 m) or 0.080 acres (0.032 ha)	Ca. 1822-1883; Samuel Young (1811-1822); Charles Young (1812-Aug. 17, 1826); Susan Young (1816-1883); Nicholas Misener (1760-1849) was interred here with members of his family	n/a	28 or 29 marked burials; Reive recorded the names of 27 individuals interred at this location	Visited by Dr. Reive in November 1930, "near Fraser," "close to Montrose," "about two miles from Fraser;" other surnames include Hilton, McCracken, Shafer and Young

Table B5: Cemeteries in Gainsborough Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Bethel Evangelical Cemetery (Winslow-Bethel Cemetery, Bethel United Church Cemetery Winslow) OGS 3328	7025 Silver Street (south side of Bismark or Road Regional Road 65, just east of Attercliffe Road)	Part Lot 1 Concession 3; land purchased for cemetery in 1889	Ca. 1865-present; George Black (ca. 1793-Jan. 21, 1865); Priscilla Black (1878-Jan. 8, 1879); Lorna M. Beamer (1918-2009)	Evangelical United Brethren, United	89 tombstones, 178 names recorded; indeterminate number of unmarked graves	Bethel Sunday School established ca. 1843?; church erected in 1875, dedicated the following year; became EUB in 1946, joined the United Church in 1968; some graves pre-date the cemetery land purchase, may have been moved here from other sites? Site fenced, identified by a sign
Elcho United Brethren (OGS 3321)	South side of Elcho Road (east of Regional Road 16)	Part Lot 5 Concession 1	Ca. 1829-present; Catherine Krick (1787-Jan. 20, 1829) said to be the first marked burial; Jacob Vaughan (d. 1864), Cynthia Vaughan Krick (1837-July 1875); latest burials include Nora E. (Payne) Zumstein (1917-2010), Isobel (McIntee) Vaughan (1919-Nov. 29, 2011) and Laurie Eldon Davis (1948-Oct. 5, 2012)	United	87 marked burials, 143 recorded names; indeterminate number of unmarked graves	Land deeded to United Brethren in 1864, joined Congregational Union of Canada in 1907 and became United in 1925; frame church given brick veneer in 1893
Heaslip Family Burial Plot (OGS 3323)	5696 Canborough Road ("south side of Canborough Road at the end of Heaslip Sideroad"), Wellandport	Part Lots 16-17 Concession 1 (OGS located this cemetery on part Lot 10?)	Ca. 1800-1945; James Humphrey Sr. (d. 1800); Samuel F. Cramer (1772-May 13, 1802); Susanna Robins (1776-Jan. 29, 1804) and Abigail Vaughan (1770-June 17, 1810) are among the oldest graves; Solomon B. McPherson (1852-1904 or 1914?), Alberta (Heaslip) Baldwin (1857-Apr. 23, 1920) and Henry J. Baldwin (1857-Dec. 26, 1945) are the last known burials	n/a	112 marked burials (142 recorded name), indeterminate number of unmarked graves	Very old cemetery; some stones remain in situ, others moved to central rows; cemetery enclosed by a fence and clearly marked by a sign; one genealogist recently noted the cemetery was "abandoned, in complete disrepair, stones fallen over, broken, and others lost;" cemetery is fenced in and identified by a sign

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Lane Cemetery (Lane Methodist Burial Ground) OGS 3324	4528 Twenty Mile Road (Regional Road 69, north side) between Silverdale and Hodgkins Roads, Silverdale	Part Lot 12 Concession 6	1797-present; Hannah Lane (d. 1797); Alex McLean (1960-Aug. 11, 2018) is one of the more recent interments	Methodist	485+ marked burials, 1,140+ names recorded; indeterminate number of unmarked graves	Started as a private family plot; Hannah Lane was said to have been buried in a hollowed-out tree trunk; cemetery enlarged, occupies three small hillsides; contained a log church, succeeded by a frame church and then a brick church; Sections A, B and C, plus the 1908 crypt for the Disher, McPherson and Simmerman families; Memorial Gate
McCaffrey Cemetery (OGS 3325)	1664 Port Davidson Road (west side) between Concession 4 Road and Silver Street	Part Lot 4 Concession 4	Ca. 1864-present; Mary Ann McPherson (1821-Apr. 8, 1864); William B. McCaffrey (1870-1942); Annie A. Fisher (1851-1949); Jacob H. Fisher (1903-1972), Ivy S. Fisher (1911-2008)	n/a	28 marked burials (46 individuals), indeterminate number of unmarked graves, three broken tombstone fragments	Cemetery partly enclosed by farm fence, clearly identified by a sign; neat, well-maintained site
Mingle Hill Presbyterian Cemetery (OGS 3326)	East side of Mountain Road, north of Regional Road 69 (Twenty Mile Road), between numbers 2625 and 2649 Mountain Road	Part Lot 19 Concession 6	Ca. 1832-1893; Jane Tallman (1769-1832); Eliza Brewer (1818-1893); Cornelia Teeter (1816-1893)	Presbyterian	23 tombstones plus 6 footstones or stones with just initials	Most of the stones were moved to a central concrete pad, a few are still in situ within the site; names include Barron, Brewer, McCleary, Lindaberry, Neal, Putman, Simmerman, Tallman, Teeter and Tufford
St. Ann's United Church Cemetery (St. Ann's Presbyterian Cemetery, St. Ann's Church Cemetery) OGS 3327	3278 Twenty Road (south side, Regional Road 69)	Part Lot 21 Concession 6 (church on part Lot 22?)	Ca. 1820s?-present; the oldest marked burials include George Hansel (ca. 1789-1824)	Presbyterian, United, Mennonite Brethren	444+ marked burials, indeterminate number of unmarked graves	Log church built on Lot 19 in 1799, congregation formally organized under Rev. Eastman in 1809; new church built in 1863, destroyed by fire after being struck by lightning in 1941; entered into Church Union in 1925

Table B6: Cemeteries in Grantham Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
British Methodist Episcopal Church (Salem Chapel) Church	92 Geneva Street (east side, corner of North Street)	Lot 3753, Corporation Plan 2 (CP2)	1820s-1856; burials not permitted in downtown core after 1856	British Methodist Episcopal	Unknown, indeterminate number of burials	A few unconfirmed burials may have taken place at this location or at a previous site; church remains standing; heritage plaques
B'Nai Israel Memorial Park (Congregation B'Nai Israel Memorial Park) OGS 3420	100 Bunting Road (east side) just north of Chloe Street	Lots 3 and 4, Emmett Estate Plan 39 (part Lot 10 Concession 7)	1950-present; R.J. Hoffman (d. Apr. 20, 1950) was the first burial; Margaret Burnstein (1918-Dec. 11, 1951) was another early burial; oldest marked grave is that of Steven Bloch (1922-Mar. 22, 1941) which was moved here from another site in August 1993	Jewish	384 burials in total	Memorial Park is located north-west of Victoria Lawn Cemetery, on land that was part of the 3 rd Welland Canal, land acquired by the congregation in 1950
Darby Family Burial Plot (Port Weller West Cemetery) OGS 7151	Cindy Drive Park; between Lakeshore Road and Cindy Drive, just east of Willcher Drive	Part of Lot 14 Concession 1	Ca. 1805-1860s (John Darby, d. ca. 1805?), John Darby (d. 1862)	n/a	Possibly 10?, indeterminate number of unmarked graves	Cemetery located on west side of Walker's Creek now fenced and marked with a heritage plaque, no visible stones remain; at least one 1860s tombstone is known to have existed; only used by the Darby and related families; site possibly disturbed for creek realignment in the 1970s
Foster Baptist Cemetery (OGS 8776)	Unknown; south side of the Queenston-Grimsby Road?	Part Lot 5 Concession 8 (north-west corner of south half?)	Unknown	Baptist?	indeterminate number of unmarked graves	This cemetery is listed in the OGS database, source of information not known ; church and cemetery not shown on Tremaine (1862) or Page's Atlas (1876) maps of Grantham; Tremaine map shows "P.M." (Primitive Methodist?) on this lot. Surrounding land owned by Orson Secord in the 1860s and '70s; no reference in the land registry records for this lot to a church deed
Haynes Family plot (OGS 3423)	St. Paul Street West at the intersection of Louth Street (Regional Roads 72 and 81)	Lot 21 Concession 7	Ca. 1814-1861; Adam Haynes (1747-1814), Nancy (Price) Haynes (1804-1861)	n/a	8+, indeterminate number of unmarked graves	Stones mounted into a central cairn, surrounded by a picket fence; near the Four Pad. Heritage plaque

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Hodgkinson Cemetery (“King’s Grant plot”) OGS 3272	East side of Bunting Road, between Parnell and Linwell Roads (approximately opposite to Maltese Blvd.)	1 acre (0.404 ha) South-west corner of the north half of Lot 10 Concession 2	Ca. 1794-1911 (James Jones, ca. 1736-1794; George Hodgkinson 1871-1911.)	Anglican	84 known graves moved, indeterminate number of unmarked graves	Land deeded to trustees in May 1842; most burials removed in November 1913 to allow for construction of the Welland Canal, graves and tombstones moved to Victoria Lawn and buried in a mass grave; some burials may remain in situ? Site marked by large granite boulder beside the Welland Canal walking trail
Homer Burial Ground (OGS 3352)	South side of Queenston Road (east side of Welland Canal)	1 acre (0.404 ha), part Lot 7 Concession 7	Ca. 1790-1951 (Solomon Secord 1755-1799; William Havens 1738-1800; Roseann Doris Haroutunian 1950-1951.) Oldest burial may be that of Tryphe Nawalt (pre-1799?)	Anglican; some early burial records for Homer found at various local churches (St. Mark’s, St. George’s) also see McIntyre’s “Coffin Register” at St. Catharines	307+ marked burials, indeterminate number of unmarked graves	Visited by Dr. Reive in August 1926; he noted that authorities set fire to the overgrowth in an attempt to clear the site, and as a result “cracked and scaled a number of old stones leaving them without inscription;” Site contained a log or frame church built 1795; land deeded to the congregation by William Read in May 1799 (Grantham Memorial deed #135, 8680); many old burials including 1812 casualties; many unmarked graves; cairn; heritage plaque on site
Honsinger Family Burial Ground (OGS 3287)	Located “to the rear of a house near the corner of First Street Louth and the Old No. 8 Highway” House was numbered as 357 St. Paul Street West (Kala residence) Plot is slightly north of the hydro ROW.	Part Lot 23 Concession 7; located at south-west corner of a 10-acre (4.047 ha) parcel. South-west corner approximately 349 feet (106 m) east of First Street Louth, and 1,260 feet (384 m) south of St. Paul Street West (Highway 8)	Ca. 1837-1850; John Honsinger (d. btn. 1837 and 1841); Catherine Honsinger (d. 1850?)	n/a	4+, indeterminate number of unmarked graves	Cemetery referred to in the will of John Honsinger; plot reserved to the family when the farm was sold in October 1854; recitals note “save and except the burial ground” when the land was mortgaged in May 1864 (Grantham Memorial deeds #531, 2423, 5917, 14530) Tombstones were visible in the 1930s
Hostetter-Cooke Burial Ground (OGS 3289)	Jarrow Road (west of number 57 Jarrow)	Broken Front Lot 13; Lots 601-604 Registered Plan 111	1812-1873; Herman Hostetter (1753-1812); Thomas Miller (1834-1873); Johnny Miller (1870-1873); possibly an earlier pre-1812 burial, Joel Austin, a Butler’s Ranger?	n/a	12-15, indeterminate number of unmarked graves	Seven marked graves, several unmarked; tombstone fragments in situ; heritage plaque; names include Ball, Cooke, possibly Westover; veteran of the Battle of Waterloo interred here; cemetery “reserved” out of later sale in 1862 for the use of the family (Grantham Memorial deed #12411)
“Indian Burial”	Unknown	Part Lot 21 Concession 9	Unknown	n/a	1 unconfirmed burial	“An Indian burial was seen by Elsie Moore around 1901” in or near the Turney Cemetery

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Lincoln County Industrial Home Burials (Linhaven Cemetery, Linwell Industrial Home), OGS 3290	375 Ontario Street (west side) at the rear (west end) of the Ed Learn Ford dealership lot beside a garage (OGS database lists address in error as 315 Ontario)	Part Lot 22 Concession 3; plot measures 94 x 210 feet (28.65 x 64 m)	1887-1916?; Edward Brock (d. August 1887); Alfred Lewis (July 31, 1910); Louis House (1841-Jan. 28, 1916) one of the last deaths at the Industrial Home was possibly interred at this site.	n/a	79 known burials, possibly as many as 95 graves; burial records exist	Site marked by low iron fence; no tombstones; grave identification number tags removed about 40 years ago; indigents formerly buried at Homer; less expensive to bury inmates on the Industrial Home property; bodies with no known relations "claimed" by County Council so they would be buried here, rather than being sent to the medical school for dissection
May Family Burial Ground (OGS 3291)	Ziraldo Road (north side), nearly opposite to Deanna Crescent	Part Lot 21 Concession 2 "parcel 4," land and right-of-way reserved out of Grantham deed to Ziraldo #19353 (1942)	Ca. 1805-1845; Eve (Clendenning) May (ca. 1768-bef. 1805); William May (ca. 1737-1827); Peter May (1765-1827); Agnes May (d. 1840s); John Pawling (d. 1834)	n/a	10+, indeterminate number of unmarked graves	Fenced enclosure, surrounded by honey locust trees, access via cedar hedge lined path; one tombstone remains in the middle of the plot, not on its original site; heritage plaque
McCoomb (McCoombs, McCombs) Family Burying Ground (OGS 3292)	Woodgate Park, behind (east of) Denis Morris High School, between Glen Morris Drive and Radcliffe Road	East half Lot 16 Concession 9 (Farm lot bought by John McCombs in Jan. 1830, deed #7893; parcel 2, inherited by son Timothy McCoombs in September 1865)	Ca. 1851-1868; possibly used to 1903; Isabella McCoomb(s) d. 1856; Robert Parrey (1811-1863); Eliza Parrey (1806-1868); Timothy McCoombs died in May 1903 and was probably interred in the plot with his wife	n/a	6+; indeterminate number of unmarked graves	Site is on a knoll of a tree covered hill, enclosed by a wrought iron fence. Contained 22 tombstone fragments (11 were inscribed) in 1961; three tombstone fragments and footstones found on site in the 1970s, which the city's parks department workers are reported to have buried beneath the sod within the enclosure; two intact tombstones (with the surname Parrey) found in the basement of a house in Vineland, then donated to the Niagara Historical Museum in 1975, and possibly returned to St. Catharines in 1978
Methodist Church Cemetery	366 St. Paul Street (at the rear of the Silver Spire Church property) bounded on the east side by Geneva Street	Lot 133, Corporation Plan 2 ("CP2")	Ca. 1822?-1856; no burials permitted in the downtown core after 1856	Methodist	Unknown, indeterminate number of unmarked burials	Site used for burials by the congregation; no visible tombstones; most burials believed to have been removed to Victoria Lawn; congregation established 1816, land purchased ca. 1822, earlier burials made at the St. Catharines Cemetery site on St. Paul Street
Christ Church (McNab Anglican) Cemetery (OGS 3422)	1294 McNab Road (north-west corner of Lakeshore and McNab Roads), RR5	Part Lot 5, Concession 1; land donated by William B. Servos	Ca. 1850-present	Anglican	291+ marked burials (538+ names), indeterminate number of unmarked graves	Located on the east side of the Eight Mile Creek; contains 1853 polychrome brick church; burial register exists; visited by Dr. Reive in April 1930 who remarked "not so old but many old names;" believed to contain a small plot for early African North American settlers at the rear (west side) of the churchyard

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Negro Point Burial plot	West side of McNab Road (Firelane 14), and approximately 100 feet (30.48 m) south of the west end of Firelane 14A; directly behind 1406 McNab Road	Part Lot 5, Concession 1	Unknown, ca. 1800-1830?	n/a	4+; indeterminate number of unmarked graves	Located approximately 650 feet (200 metres) south of Lake Ontario, on promontory overlooking the lake and the Eight Mile Creek pond, at the mid-point where the creek/pond makes a "C" curve; depressions in ground are believed to mark the burial places of slaves who were owned by Colin McNabb. ("Cuff William" and his wife Ann, married 1797; this may be "Old Cuff" or "Cuffee," a black pauper, alive during the War of 1812.) Site may also have been used for burial by some of the free African North Americans from the "Grantham settlement"
Benjamin Pawling Burial plot	Unknown; possibly near the intersection of Lake Street and Lakeshore Road, in or near Orchard Creek Park	Part Lot 18 Concession 1?	Ca. 1802-1827; Susan Pawling (1802-1802); Capt. Benjamin Pawling (d. 1818); wives Susan (d. before 1814) and Sarah (d. 1827)	n/a	Possibly four; indeterminate number of unmarked graves	Burial plot was mentioned in the will of Benjamin Pawling; located between Lakeshore Road and the lake?
First Presbyterian Churchyard, St. Catharines	95-97 Church Street (corner of Church and Clarke Streets)	Lot 538 Corporation Plan 2 (CP2); Town of St. Catharines "Church Street" abstracts; previously part Lot 17 Concession 6 Grantham; land deeded from the Phelps family to the congregation in Oct. 1856 (Grantham Memorial deeds #7680 and 8010)	1834-1856; no burials permitted in the downtown core after 1856	Presbyterian	Unknown, indeterminate number of unmarked graves	This church may have had a burial ground and remains would have been moved to Victoria Lawn in 1856; a second smaller Presbyterian Church was located nearby at the corner of Academy and Centre Streets. It is not known if it had a burial ground

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. Andrew's (Presbyterian) Cemetery, Port Dalhousie (OGS 3293)	East end of Johnson Street, Port Dalhousie, on bank overlooking Twelve Mile Creek (Martindale Pond)	Lot 30 on RCP701; formerly described as Port Dalhousie "New Lot" 514; appears to have been an assemblage of various properties, such as part Lot 23 Concession 1 (Grantham), part of Block "B" Springwater Section (Port Dalhousie), and possibly part of Johnson (formerly Church) Street (stopped up and closed)	1849-present; earliest marked grave appears to be that of John Davidson (1780-Aug. 16, 1850); other early burials Mary Powell Abbey (1790-Apr. 25, 1851), John Lawrie Craise (1841-June 23, 1852) and Rebecca A. Wells (1828-Dec. 8, 1853.) One notable burial is that of James Sampson Smiley (1884-1948) a famous theatrical sharpshooter and policeman who died in a house fire.	Presbyterian	541+ marked burials, indeterminate number of unmarked graves	Original church built 1850 stood in the middle of the road allowance, surrounded by the cemetery; replaced by brick church in Main Street in 1884; heritage plaque; site still used for burials for plot holders only; some burial records exist; NOTE: the church and cemetery grounds were incorrectly shown on Welland Street (now Christie Street) on the <i>Page's Atlas</i> map of 1876. Land donated to the congregation by Nathan Pawling in 1849, deed dated Mar. 25, 1859 (<i>Grantham Memorial deed #9935</i>) Cemetery contains 1.5 acres (0.607 ha), metes and bounds 158.5 x 200 x 396 x 187 x 172.5 feet (48.3 x 60.96 x 120.7 x 56.99 x 52.57 m); ownership transferred by the trustees to the City of St. Catharines in Feb. 1974 (<i>Registry deed #302763</i>)
St. Barnabas Anglican Church Columbarium (OGS 3286)	31 Queenston Street, St. Catharines	Part Lot 16 Concession 6; Lot 3656 CP 2	Ca. 1985-present; Charles Alfred Hill (1902-1985); Phyllis Emma (Carr) Hirons (1917-2000)	Anglican	7 inurnments made by 2001	Located inside the church
St. Catharines Cemetery (Church at the Twelve)	St. Paul Street West (bounded by St. Paul Crescent, Ontario, St. Paul, and McGuire Streets)	Two-acre site (0.8094 ha), part Lot 18 Concession 6; now part of Lots 1197-1199, 1207-1209 on CP2 (site may have also included Lots 1201-1206, 1210-1217, 1224 and 1224A on CP2)	Ca. 1796-1856; no burials permitted in downtown core after 1856	Anglican, Methodist and others	Indeterminate number of unmarked burials; at least 25 tombstones from this cemetery are now found behind St. George's (Anglican) Church; some early burial records found at St. Mark's	The "first" cemetery in downtown St. Catharines, on either side of St. Paul Street; used by various denominations; church burned 1836; most burials (but not all) moved to other locations between 1837 and 1856; burial of a female that was uncovered was moved to Pelham in the early 1900s; a few remains found on the garage property beside the cenotaph in the 1960s; site subdivided and built upon by 1852; heritage plaque
St. Catharine of Alexandria (Roman Catholic) Cemetery (OGS 10245)	3 Lyman Street, corner of Church and James Street (bounded by Raymond Street at rear and Lyman Street at the side)	Part Lots 515-523, Corporation Plan 2 (CP2)	Ca. 1832-1856; no burials permitted in downtown core after 1856	Roman Catholic	Unknown; indeterminate number of unmarked graves; no burial register kept until 1922.	Cemetery closed to burials in 1856; most graves moved to Victoria Lawn; some graves remain in situ under the parking lot area; some tombstones that were removed are in private possession

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. George's (Anglican) Churchyard + Columbarium (OGS 3294)	83 Church Street (between Lyman and Clark Streets)	One-acre lot (0.4047 ha), part Lots 536, 540-541 Corporation Plan 2 (CP2)	Ca. 1835-1856; no burials permitted in downtown after 1856; columbarium used from 1984 to the present	Anglican	Unknown; many burials from the first "Church at the Twelve" moved here in 1837; 67 tombstones remain <i>in situ</i> at the church, several have been moved inside the church (e.g., Paul Shipman died 1825.) Two iron fenced enclosures contain known burials. Burial register commences 1840; some earlier records at St. Mark's	The cemetery extended from the rear of the church to Raymond Street in the rear; some graves (but not all) were moved to Victoria Lawn Cemetery; other graves moved to allow for construction of the church hall; some burials remain in situ; columbarium contains 27 inurnments made between 1984 and 2000, others made since that time
St. Thomas' Anglican Church Columbarium (OGS 4734)	99 Ontario Street	Part Lot 1025, CP2	1961-present; Rev. Canon Christopher John Loat (1915-1961); Ross Charles Junke (1919-1997)	Anglican	37 inurnments made between 1961 and 1997	
Servos Grave, Servos Burial Plot (OGS 3300)	North side of Northrop Crescent (near Happy Rolph CA, between Peacock Bay and Read Road); located directly beside Norwood Stairs & Railings Inc., 10 Northrop Cr.	Part Lot 31 Corporation Plan 5 (CP5), formerly part Lot 9 Concession 1	1862; William S. Servos (ca. 1810-Jan. 21, 1862)	n/a	1	Single grave for enclosed by a Victorian era fence; heritage plaque. Land bought by Servos in April 1858 (Grantham Memorial deed #9570)
Silver Spire United Church Columbarium (OGS 6651)	366 St. Paul Street	Lot 133 CP 2	1966-present; Rev. George Forsey (1909-1966); Claude Ray McCumber (1926-2001)	United	72 inurnments made by 2001; space for an additional 304 urns	Formerly St. Paul Street Methodist Church
TenBroeck Cemetery (OGS 3296)	East side of the Twelve Mile Creek (Martindale Pond), north of Linhaven Court, at the rear of the Linhaven Senior Citizen's Home property	Part Lot 22 Concession 3	1804-1851; Capt. Peter TenBroeck (1730-1804); Jacob Wessell TenBroeck (1832-1851)	n/a	4+, indeterminate number of unmarked graves	Site is accessed through a gate in the fence from the Linhaven property; site is heavily overgrown; no extant tombstones; heritage plaque

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Turney Cemetery (Turney-Christie-Boyd, Boyd Cemetery, Turney Cemetery) OGS 3421	Located directly behind (south of) 16 Addison Drive	Part Lot 21 Concession 9	1796?-1882; John Turney (ca. 1744- 1796); John Turney (1809-1882)	n/a	12+; indeterminate number of unmarked graves	Cemetery on the knoll of a hill behind 16 Addison and above the old "power road" now known as Trail Race Road; access along right-of-way between 16 and 18 Addison; 8 inscribed tombstones as well as uninscribed field stones remain in situ; heritage plaque
Victoria Lawn Cemetery (St. Catharines Cemetery) OGS 3424)	480 Queenston Street	Part Lot 9 Concessions 7 and 8 and part Lot 10 (170 acres or 68.79 ha) bounded by Spring Street to the west and Emmett Road to the east, and located on either side of Queenston Street	1856-present	Non-denominational, public cemetery although sections were allotted to the various downtown churches	79,000+	Cemetery contains many pre-1856 burials that were moved to the site; Burial register exists commenced 1855; original plans held by the Lock 3 Museum; site contains mausoleums and a Columbarium; carillon tower; early landscaped "garden" or "lawn" Cemetery; contains 1856 gate lodge; heritage plaques
Zion Baptist Church cemetery	East side of Geneva Street between Church and North Streets	Corporation Plan 2 (CP 2)	Ca. 1840-1856; burials no longer permitted in town limits in 1856	Baptist	Unknown, indeterminate number of unmarked graves	Church served the Black community; unconfirmed burials may have taken place at this site

Table B7: Cemeteries in Grimsby Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Black cemetery (unnamed) OGS 10187	South side of Highway 20	Part Lot 21 Concession 8 (OGS lists this site as part Lot 21 Con. 9)	19 th century	n/a	Unknown, indeterminate number of burials	Site known to area residents in the early 1900s, located across the road from Kimbo Free Methodist Cemetery: “across the highway, on the south side, in a farmer’s field, is an old cemetery where some early negro settlers were buried”
Fulton Stone (United) Church Cemetery (Grove United, Stone Church Burying Grounds) OGS 3336	2906 Highway 20 (north side), west side of South Grimsby Road 20	East half of Lot 38 Concession 8	Ca. 1842-present; Abraham Griffin (ca. 1799-Oct. 29, 1842); Joseph Halsted (ca. 1801-Oct. 6, 1843); Ken Marsh (1926-Oct. 3, 2013), Gerald Raymond Young (1928-Apr. 30, 2014)	Methodist	280+; indeterminate number of unmarked graves	Referred to as the Stone Church Burying Ground, Buckbee Settlement, Fulton’s Corners; church built 1866; Isaac Nelson sold land to Methodist Episcopal Church of Canada in April 1860 for \$10. Deed described plot as 60 perches in extent at the south-east corner of the lot (0.375 acres or 0.151 ha) Grimsby deeds #11697
Kimbo Free Methodist Church Cemetery (OGS 3337)	North side of Highway 20, just east of the intersection of Kimbo Road and Highway 20; directly opposite to numbers 7574-7596 Highway 20, and beside 7585 Kimbo Road, Smithville	Part Lot 21 Concession 8	Ca. 1896-present; Frances Goward (ca. 1810-1896); Henrietta Fevez (1910-2008); Phyllis Georgina Knoll (1922-2008)	Methodist	63+, indeterminate number of unmarked graves	1 acre (0.404 ha) site for church and cemetery bought by Daniel W. Eastman from Eli White in March 1856 for £25 (Grimsby deeds #7888); church on site demolished; cemetery enclosed by frost fence, stones located in rear or north-west corner of the plot
Merritt Settlement Burying Ground (Merritt Settlement Cemetery; Basingstoke Cemetery) OGS 3338	Address listed as 7900 Range Road 2, Basingstoke; cemetery is on the north side of the road, east of the Twenty Road, between houses numbered 7782 (south side, west of cemetery) and 7627 (north side, east of cemetery) on Range Road 2.	Part Lot 4, West Gore, 2 nd Range (South of the 20 Mile Creek) “1 acre and 16 rods” in extent	Ca. 1797-present; William Merritt (d. 1797?); Joseph Merritt (1742-1813); Isaac Shaw (1780-1822)	Methodist	433+, indeterminate number of unmarked graves	Church stood on one acre on Lot 5, the property deeded to congregation in March 1864 for \$100 (Grimsby deeds #15340); church closed ca. 1910 and demolished in the 1920s; cemetery property deeded by Robert C. Merritt to trustees in Feb. 1848 for £10 (Grimsby deeds #12561); described as “one of the oldest cemeteries” in the Niagara Region; enclosed along front by a frost fence and wrought iron gate, identified by a large name sign

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Neutral Indian Burying Ground (The “Grimsby Site”) OGS 6205	Centennial Park, 108 Main Street East (south side, Old Highway 8); site was to comprise part of a road in a subdivision to be known as Peachwood Crescent, east of Anderson Dr.)	Part Lot 7 Concession 2	Ca. 1640-1650	n/a	374+	Remains plus grave goods found in 63 graves; site cleared by Walter A. Kenyon (ROM) in 1976-77; Provincial Heritage plaque
Queen’s Lawn Municipal Cemetery (OGS 3334)	109 Main Street East (north side, old Highway 8)	Part Lot 7 Concession 1	1897-present	Non-denominational	6,750+ (7,372?)	Cemetery enclosed by a fence; Memorial gates for those who fell during the Great War were unveiled in 1921; access via Cemetery Road, grounds located south of the CNR tracks
St. Andrew’s (Anglican) Churchyard (OGS 3330)	158 Main Street West (north side, Old Highway 8)	West part Lot 11 and east part Lot 12 Concession 1; no deed for land found. Lot 11 patented by Robert Nelles in Dec. 1798, Lot 12 patented by John Pettit in May 1802	1789-present; burial marked for Ashman Carpenter (1725-1786); oldest marked burials include Deborah Pettit (1796-1800), Adam Green Muir (1792-1800) and Rachel Pettit Biggar (1777-1802)	Anglican	594+ marked burials, indeterminate number of unmarked graves	Parish founded in 1794; cemetery contains a significant number of tombstones from the first quarter of the 19 th century as well as altar tombs; stone church built 1819; site enclosed by iron fence, lychgate; historical plaque; visited by Dr. Reive in September 1930 who referred to it as the “Grimsby Anglican” cemetery
St. Joseph’s (Roman Catholic) Cemetery (OGS 3331)	16 Patton Street (east side)	Lot 391 Corporation Plan 4 (CP4); formerly part of Lot 10 Concession 1	1861-1923; Sylvester Doran (ca. 1790-1861); Bridget P. Monaghan (1861-1923)	Roman Catholic	Indeterminate number of unmarked graves	Site contains 13 or 14 tombstones as well as some unmarked graves; 1866 stone church now used as a private residence; directly south of the CNR tracks; church had a burial register from 1851?
St. Luke’s (Anglican) Smithville (OGS 3341)	216 Station Street (east side), Smithville	Part Lot 7 Concession 9; now Parcel 8-1 Section M91	Ca. 1883-present; Agnes Walker (1882-May 27, 1883); Alice E. Jones (1912-2000)	Anglican	223+, indeterminate number of unmarked graves	Land for church and cemetery donated by William Nelson in 1885; church on site
St. Martin de Tours Cemetery (St. Martin of Tours Roman Catholic Cemetery) OGS 3342	166 West Street, Smithville; east of Wade Street and south side of Highway 20	Part Lot 8 Concession 9; “10 rods and 16 perches” in extent	1854-present; first burial Henrietta Lally (1853-1854)	Roman Catholic	420+, indeterminate number of unmarked graves	Land donated in April 1855 by local businessman Martin Lally, after whom the church was named (Grimsby deed #8919); church and cemetery shown on 1876 Page’s Atlas map of Smithville

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Smithville Union Cemetery (Smithville Methodist Cemetery) OGS 3339	North side of Highway 20, west of the railway line, Smithville	Part Lots 6 and 7 Concession 9	Ca. 1836-present; Rev. Jeremiah Cutler (ca. 1758-Feb. 26, 1836) and Eliza Catherine Waddell (ca. 1821-Sept. 5, 1838) among the early marked burials; John Bartels (d. June 20, 2017) and Rose Bandurka Kazienko (1930-June 1, 2018) among the more recent	Wesleyan Methodist	720+ burials, indeterminate number of unmarked graves	Church and cemetery shown on Page's Atlas map of Smithville (1876); congregation established by the Episcopal Methodist congregation in 1813, church property sold to the Presbyterians in 1880s
Smithville United Church Cemetery (OGS 3340)	116 West Street; South side of Highway 20, Smithville	Part Lot 8 Concession 9	Ca. 1821-present; Deby Cornelia Morse (1822-Apr. 23, 1823) appears to be the oldest marked burial; Margaret Adams (1777-May 4, 1824); Kathleen May (Copeland) Cheeseman (1920-Jan. 15, 2018); Euphemie Georgakakos (1927-Jan. 24, 2019)	Methodist Episcopal, United	Possibly 1,400+ burials, indeterminate number of unmarked burials	First BME Church on site constructed 1821, second church built on St. Catharines Street and sold to the Presbyterians in 1880s, present church built 1882; cemetery contains stone burial vault for the Buckbee family built in 1873
Thirty Mountain Methodist (Old Trinity Methodist Cemetery, Upper Thirty Cemetery) OGS 3333	West side of Thirty Road, just south of Elm Tree Road East (some listings inexplicitly state "Canboro' Street (Regional Road 14) south of Konkle Rd" which makes no sense whatsoever)	Grimsby Township Gore part Lot "D"	Ca. 1817-1892; Mary Ann Smith (1816-Feb. 26, 1817); Margaret Bell (ca. 1819-July 16, 1892)	Methodist, United	54 tombstones including footstones; indeterminate number of unmarked graves	Site enclosed in a frost fence enclosure, several tombstones and indeterminate number of unmarked graves; site believed to have contained a church, now demolished; located beside former North Grimsby school (SS6), located at 498 Elm Tree Road East; school shown on 1862 Tremaine map; school and cemetery shown on 1876 Page's Atlas map; ½ acre school lot sold to trustees in Feb. 1859 for \$40 (Grimsby deeds #11012, 13328); no deed located for the cemetery, possibly the land was transferred by means of an unregistered deed

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Trinity Presbyterian Cemetery (Trinity United Church Cemetery, Trinity Church Cemetery, Trinity Churchyard) OGS 3332	Cemetery on 25 Murray Street; Church and office located on the same property to the east of the cemetery at 100 Main Street West	Part Lot 10 Concession 1	Ca. 1833-1948; Adolphus Skelly (1834-1834); James Douglas (ca. 1745-July 6, 1834); Fanny Shrigley Fitch (1870-1942); Helena Woodruff (1877=1942); Mrs. George Stuart (d. 1948)	Presbyterian; United	176+; indeterminate number of unmarked graves, possibly as many as 185 graves in total	The cemetery is located at the rear (west side) of the church between numbers 12 and 16 Murray Street; some stones appear to remain <i>in situ</i> , approximately 40 stones have been gathered into two rows; bronze memorial plaque "In Loving Memory of All Buried Here" lists the names of 176 known burials; land sold to the trustees of the Presbyterian Church by Henry Griffin in April 1833 for £75 (Grimsby deeds #9402); Plan of cemetery exists; original church may have been established as early as 1801; entered Church Union in 1925

Table B8: Cemeteries in Humberstone Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Beaches Cemetery (OGS 4636?)	Lane way on the north side of Beach Road, between Pleasant Beach and Empire Roads (beside 5196 Beach Road)	Part Lot 4 Concession 1; land bought from Conrad Shisler in October 1860 for \$7	Ca. 1821-1956; Joseph Near (1801-Nov. 12, 1821); Estella T. (Near) Hamm (1891-1956)	n/a	35+	Beaches Cemetery "abandoned," shares site with Emmanuel Lutheran Cemetery
Emmanuel Lutheran Cemetery & Beaches (Beach's) Burying Ground (OGS 4637)	Lane way on the north side of Beach Road, between Pleasant Beach and Empire Roads (beside 5196 Beach Road)	Part Lots 3 and 4 Concession 1; land for cemetery purchased 1919, enlarged 1980; Registered Plan 35 (now known as Plan 794); original land deed for Beaches Burying Ground dated Oct. 24, 1860 (<i>Humberstone Memorial deeds #9474</i>)	Ca. 1820-present; one old stone contains the name Nathaen Beach 1791 which may be the birth year.	Lutheran	485+	Site fenced, clearly marked by a sign at the entrance to the lane
Knisely Family Cemetery (Knisley Family Burying Ground) OGS 5746	East side of Elm Street, opposite and between Meadowlark and Stonebridge Drives (opposite to number 1032 Elm Street) Port Colborne	South-west corner part Lot 28 Concession 3, the property of Elaine Knisley in 1963	19 th century; two known burials for Christian Knisely and his wife Anna (Steiner)	n/a	2+	Located in a field, no markers remain on site; difficult to identify as a burial site
Kramer Cemetery (OGS 10299)	Unknown	Part Lot 18 Concession 3	Unknown	Unknown	indeterminate number of unmarked graves, not transcribed	See Overholt below; OGS now lists Kramer as a separate cemetery; documentary sources for separate listing not provided on OGS website

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Mount St. Joseph's Roman Catholic Cemetery (St. Joseph's Cemetery) OGS 4644	North side of Lakeshore Road East, between Snider and Lorraine Roads, Port Colborne; east of 688 Lakeshore Road, and opposite to numbers 709-773 Lakeshore Road	Part Lot 22 Concession 1	Ca. 1915-present; Louis Everett Shickluna (1914-1915); Christopher T. Neelon (1868-1954)	Roman Catholic	489+ marked burials	Large, well-maintained cemetery at Nickel Beach
Northland Garden Columbarium (OGS 3298)	480 Northland Ave.	Part Lot 30 Concession 2	Ca. 2005-2010	Anglican	7 inurnments	Used by St. Brendan the Navigator Anglican Church; contained 32 niches; church closed, land sold; columbarium no longer active, application to close dated November 2009, remains moved to Overholt Cemetery in 2010
Old Gravelly Bay Cemetery	South side of Sugarloaf Street, between Elm and David Streets; across the street from H.H. Knoll Lakeview Park	South of Lots 11, 12 and 13, above the high-water mark	Ca. 1830s-?	Non-denominational?	Unknown, indeterminate number of burials	Cemetery established on the land of William Hamilton Merritt; shown on 1876 Page's Atlas map of Port Colborne; was in a "neglected state" by the early 1900s; heirs of the Merritt estate donated the land for use as a park if the graves were removed; most graves believed to be moved to Oakwood Cemetery, some graves may remain <i>in situ</i> (see Anger 2006:69-71)
Overholt Cemetery (Overholts and St. Pauls Lutheran; Bethel Cemetery, Kramer Cemetery) OGS 4637	1675 3 rd Concession Road, south side, between Yager and Miller Roads, Port Colborne (between numbers 1661 and 1795 3 rd Concession Road)	Part Lots 17 and 18 Concession 3	Ca. 1823(?)-present; Joseph Dennis (infant, died 1823); Jacob Weaver (1801-1828); John Bradner (infant, died 1840)	Originally Lutheran	Possibly 4008+ (number includes St. Paul's) Overholt has 1,500+ burials	Two cemeteries side by side; divided into Sections A to E (inclusive); opposite to Bethel United (M.E.) Church (1883-1925); visited by Dr. Reive in May 1927-May 1928, many older stones broken and illegible, some small cemeteries moved to this site during Welland Canal construction; he noted the cemetery was "very large" and was being restored; a mixture of "well kept plots amid sections grown wild" with "a large settlement of grass snakes." Some stones broken and illegible, others inscribed in German; also see "Kramer" above
Peter Neff Family Cemetery (OGS 6228)	No address given; Port Colborne	South-east corner part Lot 28 Concession 3	Ca. 1866-1897; Peter Neff (1806-1866); Clarence Neff (Nov. 24, 1897 aged 8 days)	n/a	8+	Names found in this cemetery also inscribed on memorial obelisk in the Stoner Cemetery

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. John's Lutheran Cemetery (Gasline) OGS 4642	East side of Pinecrest Road "near the lake"; between Firelane 3 and number 457 Pinecrest Road, and directly opposite to 426 Pinecrest	Part Lot 14 Concession 1 BF	Ca. 1798-1953; one stone transcribed as "Noghsel 1798 aged 29"; John L. Near (1828-1830); Rebecca K. Near (1861-Apr. 4, 1953)	Lutheran	82+	Indeterminate number of unmarked burials; site clearly identified named on sign
St. Paul's Lutheran Cemetery (Overholt's & St. Paul's Lutheran; Bethel Cemetery; Port Colborne Cemetery) OGS 4647	1675 3 rd Concession Road, south side, between Miller and Yager Roads (between 1661 and 1795 3 rd Concession Rd)	Part Lots 17 and 18 Concession 3	Ca. 1870-present; Louis F. North (1859-Sept. 21, 1870)	Lutheran	4008+ (number includes the Overholt Cemetery)	Across the street from Bethel United (M.E.) Church (1883-1925); two cemeteries side by side
Sherk Family Cemetery (OGS 4638)	North side of Highway 3, between Sherk and Brookfield Roads (between numbers 3164 and 3222 Highway 3)	Part Lot 12 Concession 2; plot is approximately 50 x 50 feet (15.24 m x 15.24 m)	Ca. 1828-1907; David Sherk (b. 1782, d. btn. 1828-34); Lydia Geady (1818-1849); Christian Sherk (1819-1907); Eliza (Springer) Sherk (d. 1907)	n/a	8+; some area residents think this cemetery contains as many as 24 burials	Site contains one tombstone, other unmarked burials; easement granted in 1907 for access to site (<i>Humberstone</i> deed #7564)
Sherk Family Plot	Unknown	South part Lot 4 Concession 3	Ca. 1813-1847; Casper Sherk (1750-1813); Feronica "Fanny" (Groff) Sherk (1753-1827); Jacob Sherk (1785-1847)	n/a	Three suspected burials, indeterminate number of burials	Unmarked plot (see Anger 2004a)
Sherkston Cemetery (Sherk Cemetery, Strauth Cemetery, United Brethren Cemetery) OGS 4639	South side of Highway 3, between Empire and Pleasant Beach Roads; between numbers 5091 and 5187 Highway 3 (other databases incorrectly list the address as 5348 Sherkston Road which is in the front yard of private family homes)	Part Lot 4 Concession 2	1904-2002; Nancy Snider (1846-1904); Dorothy Esther Jansen (1928-2002)	n/a	73+	Active burial site? Many local names including Bearss, Benner, Burger, Sherk, Shisler, Strauth &c.

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Shisler Cemetery (Forest Valley Burying Ground) OGS 4640	At the intersection of Turtle Pond Road and Quarry Ridge Premiums EWS, Port Colborne	Part Lot 5 Concession 1	Ca. 1824-1955; earliest burial was a child of Amos Sherk died April 23, 1824; Arthur Climeni (1902-1955)	n/a	27+	In Sherkston Beaches Park, just south of the old quarry (north of Shisler Point); site fenced in, contains 35 tombstones or fragments of stones; plot measures 140 x 140 feet (42.67 m)
Steele's Cemetery (Doan Cemetery, Steele Cemetery near Bethel) OGS 4641	2146 Second Concession Road (north side), east of Miller Road	Part Lot 16 Concession 3	Ca. 1802-1974? Silvia Doan (1825-Apr. 26, 1827); Brenda Eileen Bernard (1904-1974); one marker was transcribed for Caleb Doan (d. Jan. 1815, aged 7 years) but the date according to Reive was 1845; Dr. Reive recorded one stone for Martha Bearss (1803-1803)	n/a	95+ (may possibly contain 200 interments); Reive recorded the names of 88 individuals in 1929	Names include Doan, Douthit, Perlet and others; quarter acre plot reserved by Aaron Doan for use as a family cemetery for the burial plot; Doan's infant children were the first burials in 1802-03; Aaron Doan buried there in 1844; name changed to Doan Cemetery, site clearly identified by a name sign; visited by Dr. Reive in October 1929 who noted that many graves had been moved from this site to the Bethel Cemetery
Stoner Family Cemetery (Stoner Family Burying Ground) OGS 4645	East side of Highway 58 (East Side Road), south side Windsor Terrace	Part Lot 30 Concession 3; situated on the south side of the first house on Windsor Terrace, Hawthorne Heights subdivision	Ca. 1782-1835; David Stoner (1782-1782); Jacob Stoner (1794-1794); Peter Neff (1780-1832); Christian Stoner (1753-1835)	n/a	36+	No tombstones visible; site contains an obelisk with the names of those buried there inscribed on it; commemorates David Stoner (1782) who probably died in Pennsylvania; site fenced in, but can be accessed from Highway 58
Sugarloaf Graveyard	North side of Sugarloaf Street near Isabel Street; across the street from the Port Colborne General Hospital	Unknown; L.G. Carter's plan of subdivision	Ca. 1830s-1863?	Non-denominational	Unknown, indeterminate number of burials	Graves remained <i>in situ</i> until this area was subdivided in 1863; shown on 1876 Page's <i>Atlas</i> map of Port Colborne immediately beside the "school lot" (east of Steele Street); most remains believed to have been moved to Oakwood Cemetery (see Anger 2006:60-61)

Table B9: Cemeteries in Louth Township

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Beebee (Beebe, Bebee, Bebie, Beby) Burial plot (OGS 6016)	East side of 13 th Street Louth (Troup Road), between the QEW and Honsberger Road, west side of the 18 Mile Creek	Part Lot 12 Concession 1	Not known; ca. 1840-1850?; Sergeant Adin (Aden, Edin, Edwin) Beebee (1764-Nov. 7, 1843) and his wife Dorothy (Margaret) Chrysler Beebee (1764-1840?) and son Solomon (1798-Jan. 27, 1847) may have been interred at this site	n/a	3+	Farm lot of Adin Beebee (1764-1843); "disappeared in the 1900s." Possibly used by members of the Campbell family (Solomon Beebe's widow married a Campbell)
Bethel Congregation (Smith Farm, Smith-Bethel; Queenston Road Cemetery) OGS 3302	Across the street (south of) 1415 St. Paul Street West (Old Highway 8), between 3 rd and 5 th Streets, St. Catharines	Part Lot 4 Concession 5	Ca. 1815-1887; Samuel Smith (1800-1815); Joseph Smith (1763-1835); W.D. Smith, Sr. (1814-1887)	Congregational	36+; indeterminate number of unmarked graves	Site located in the middle of a horse paddock, approximately 50 m east of a large horse barn; once contained a church; 35 tombstones gathered and mounted into a central wall in July 1977, work performed by men sponsored by the John Howard Society; stones laid horizontally on the ground sometime between 2016 and 2018; visited by Dr. Reive in October 1929, who noted that it was on a knoll in a farm and "livestock roams over it"
Bradt Family Burying Ground (Arent Bradt Burial Ground) OGS 3317	South side of King Street (Old Highway 8, or Regional Road 81), on the east side of the Sixteen Mile Creek (or south side once the creek bends westward after crossing Highway 8)	Part Lot 12 Concession 6 (some transcriptions place this cemetery on part Lot 13.)	Ca. 1813-1821; Aaron Bradt (1794-1813); Peter Bradt (1764-1821)	n/a	Unknown; 2 tombstones presently exist	Site contained 25-30 tombstones around 1950; site leveled and ploughed for farm land; two tombstones extant

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Collver/Colver Cemetery (Cartmer Cemetery) OGS 3304	South side of St. Paul Street West (old Highway 8 or Regional Road 81), west side of 15 Mile Creek, on the west side of 9 th Street Louth ("the road to Rockway Presbyterian Church, in front of the Orlando residence") Across the street or west of 3513 9 th Street	Part Lot 9 or 10 Concession 7; surrounding land sold by Augustus P.M. Collver to John C. Rykert in October 1861 (Louth deeds #12100.) No reference to the burial plot which continued to be used by the family for a few years	Ca. 1804-1868; Ebenezer Collver (1756-1837); Albert Collver (d. 1863); Herbert A. Collver (d. 1863 or 1868 aged 7 years); other early burials believed to be those of Capt. Benjamin Fralick (1747-Dec. 1804) and his wife Rosina Catrina (Schafer) Fralick	n/a	8 or 9 stones, possibly 11 or 12 burials; indeterminate number of unmarked graves	West side of the Fifteen Mile Creek; site originally contained 12 or more tombstones and footstones; formerly surrounded by a low stone wall; site was being leveled and ploughed for farm land

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Gregory (OGS 3308)	West side of 7 th Street Louth, north of the CNR line on east side of 15 Mile Creek (turn west off 7 th Street at HEPC pole #4013-13-3A52) at the Workman Farm driveway, follow the track past the house and orchard until the track turns away from the creek, the cemetery is about 100 feet (30.48 m) beyond this point; other descriptions locate the cemetery between 3 rd and 4 th Avenues Louth, north of CNR tracks, on east side of 15 Mile Creek; another access is from the driveway of #1923 Seventh St. at Henk Sikking farm to the house. Then follow the tractor path along the top of the ravine onto Backus Farm. Just beyond the gate leading down the hill to Fifteen Mile Creek, the cemetery is to the right (north)	Part Lot 8 Concession 3 (Doug Backus farm, 3925 9 th Street)	Ca. 1802-1878; Jane Foster (ca. 1788-1802); Philip Gregory (1782-1803); Nancy Jane Gregory McMillan (ca. 1833-1852); one stone fragment has death date July 15, 1875 aged 84 years; George W. Haynes (d. 1878) was the last burial	n/a	10+	Site contains 10 tombstones and fragments, several footstones; stones gathered into a central location, some free standing, others mounted into cement slab in 1967 by William L. Backus and Clarke S. Haynes. Some graves and markers were transferred to the "White Churchyard just down the road" after ground hogs "started bringing up the skulls"
High Family Burial plot	Unknown	Unknown	Unknown	n/a	Unknown	Cemetery unconfirmed, rumored to exist; some area residents suspect it may have been a family plot later incorporated within a larger cemetery

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Jones Cemetery (OGS 3314)	Unknown	Part Lot 8 Concession 5	Unknown	n/a	Two or more burials, possibly William Jones and his wife; indeterminate number of unmarked burials; other Jones family members interred at Rockway	Located on a hillside north of Highway 8 and west of the 15 Mile Creek; no tombstones, exact location of the site cannot be determined
Jordan Mennonite (aka, Haines Cemetery) OGS 3306	West side of Main Street, Jordan Village	Part Lot 19 Concession 4	Ca. 1845-1878; Samuel Grob (1845-1845); Agnes Wismer (1809-1878); some stones badly weathered, dates deciphered as 1815, 1818 but probably 1845, 1848	Mennonite	Unknown; 38 stones	Site located beside the Fry House at the rear of the Jordan Historical Museum, overlooking the Twenty Mile Creek; some stones remain standing and in situ? Names include Eve Clendennan, Lewis Haines, Hare, High, Overholt, Price, Secord, Wismer and others
Maple Lawn (Louth United; White Church Cemetery; Louth Methodist Church Cemetery) OGS 3307	1429 3rd Avenue (north side) west of 3 rd Street, Louth	Part Lot 3 Concession 2	1878-present; Mary Haynes (Apr. 20, 1878); Mary Grass (July 7, 1878)	Methodist, United; this cemetery also contains burials for members of other Protestant denominations as well as a few Roman Catholics	329 marked graves in 1988; indeterminate number of unmarked graves	A "bee" was organized for levelling the cemetery grounds in October 1877; older graves were moved here from private family plots (i.e., Daniel Gregory and Adam Haynes plots); Margaret Haynes (1829-Sept. 30, 1831) was one of the graves moved here in 1878, also Ann Haynes Gregory (1833-Apr. 8, 1854); some tombstones recently recovered from the side of the hill and replaced within the cemetery
Oaklawn (Jordan Station United, Jordan Station Cemetery) OGS 3309	4100 Bridgeport Drive (near Main Street and Third Avenue Louth) Jordan Station; across the street from Jordan Station United Church at 4105 Bridgeport Dr.	Part Lot 18 Concession 3	Ca. 1848 to present; James O'Connelly (1745-1848); Wilhelmina Shunn (1825-1848); Clarissa Harris (1824-1848)	Methodist, United	346 tombstones, 600+ burials	Church built 1859, later moved to opposite side of street and area then used for burials; cemetery re-named as Oaklawn in March 1907; cemetery was enlarged in 1910, plan of the addition filed in the Land Registry office as Registered Plan 83 (shows new lots 84-194); burial register extant from 1882 to the present; visited by Dr. Reive in June 1929 who noted that it was well kept except for an area near the rear where the grass was not cut and "some fallen stones are lying"
Nicholas Smith (OGS 5889)	Corner of Fifth Street Louth and Pelham Road, (Regional Road 25), north of the Henry of Pelham parking lot	Part Lot 6 Concession 8	Ca. 1814-1864; Catherine Smith (d. 1814?); Catherine Smith (ca. 1820-1864)	n/a	Unknown; 12 inscribed stones and fragments (total of 34 stones and fragments)	Site also contains several uninscribed field stones thought to be grave markers

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Old Price Farm Plot (Price Family Burying Ground, William Price Burying Ground) OGS 5890	Lakeshore Road (Jordan Harbour)	Part Lot 15 Broken Front	Ca. 1797-1832; Wilhelm Pries or Price (ca. 1730-1797); Mary (Tousack) Price, died sometime between 1798 and 1803; Barbara Overholt Price (ca. 1775-1822); Christian Price (1757-1832)	n/a	4+	Two tombstones survived from this cemetery in 1972, but located on the edge of the creek bluff which was eroding into Jordan Harbour; the other stones and burials may have been washed into the harbour
Purdy Family Burying Ground (Purdy-Foster-Geisbrecht Cemetery) OGS 3310	West side of 13 th Street Louth (Troup Road), on west bank of 16 Mile Creek, between the railway line and 4 th Avenue, Jordan Station; access at 4019 13 th Street east of Bokestyn's Greenhouses	Part Lot 12 Concession 3	Ca. 1830-1882; Eliza Purdy (ca. 1808-1830); William Purdy (ca. 1802-1882)	Used by Baptist Church	14+; area residents remember more than 30 tombstones, only 14 of which remain today	Stones gathered together and mounted horizontally into a cement base; names include Dean, Foster, Purdy and Tufford
Rockway Cemetery (Rockway Presbyterian Churchyard; Union Church Burial Grounds) OGS 3311	2050 Pelham Road, south side (Regional Road 69) at the intersection of 9 th Street Louth, just west of Rockway Falls	Part Lot 11 Concession 8	Ca. 1805-present; oldest tombstone said to have been dated 1805; Charity Disher (d. Dec. 26, 1816 aged 3 months); Abigail Hyatt (1825-Sept. 5, 1827); several stones date from the 1830s	Originally used by the Presbyterian and Episcopal Churches; United	130+ marked burials; site may contain 500-700+ burials	Land sold to congregation by John Clarke in 1830 for £100; became known as Rockway Cemetery in 1905; modern granite marker commemorates "Rockway Union Church 1824-1892, Presbyterian Episcopal Congregation established 1809 by Rev. Daniel Ward Eastman"

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
St. John's (Anglican) Churchyard (Jordan) OGS 3315	2878 St. John's Drive, Jordan	Part Lot 18 Concession 5	1841-present; "poor unknown woman from Jordan" died Aug. 1, 1842 and an "unbaptized male child" surname Perry, the church stone mason's son, d. Aug. 17, 1842 aged 8 years, were among the first burials on site; John Atkinson Armstrong (July 31, 1846 aged 7 months) was the first marked burial? Lawrence E. McClelland (1941-2016) and Kathleen Edna Zubriski (1927-Apr. 16, 2016) among the more recent burials	Anglican	160+ marked graves, 517+ burials? OGS transcript records 306 names	Parish established 1836; burial register exists from 1842-1899
St. John's (Anglican) Cemetery (Port Dalhousie) OGS 3295	320 Main Street, St. Catharines (at Cole Farm Blvd.)	Part Lots 1 and 2, Broken Front	1834-present; oldest marked burial appears to be that of Delilah Read (1836-1841)	Anglican	458+ marked burials; indeterminate number of unmarked burials; parish burial register exists from 1841	Site once contained a frame church (St. James' Louth) that was shipped on the old Welland Canal to Merritton. Site enclosed by iron fencing, and the name clearly identified in an overhead arch at the main gate; Heritage plaque
Schram-Tinlin Cemetery (OGS 3312)	South side of Lakeshore Road West, St. Catharines, east of Fifteen Mile Creek, between Gregory Road and 7 th Street Louth; nearly directly opposite the original Schram homestead at 1258 Lakeshore Road West	Part Lot 7 Concession 1; cemetery reserved in a deed	1834-1875; Frederick Schram (1746-1834); Frederick Augustus Schram (1790-1872)	n/a	17 marked burials, stones gathered into a central area	Located on the knoll of a hill; several tombstones are broken lying flat, collected into a central area; heritage plaque; names include Chisholm, Ryckman, Patterson, Caskey, Dell, Crumb, Tinlin, Schram, and a child from the May family; unmarked graves may include adult daughters of Richard Hainer
Schram Burial Plot	North side of Lakeshore Road West, north of the Schram homestead at 1258 Lakeshore Road West	Part Lot 7 Broken Front Concession	Ca. 1795	n/a	1 unconfirmed	Burial plot of Angelica Schram, died ca. 1795, located on a bluff near the lake, north of the Schram house; plot may have been washed away, exact location not known. Was the grave moved to the Schram-Tinlin plot on the south side of the street?

Cemetery name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Snure Cemetery (Disciples of Christ Cemetery, Disciples Church Graveyard, Jordan Friends Cemetery) OGS 3303	West side of 19 th Street, just south of Old Highway 8 (Regional Road 81); address given as 3700-3714 Nineteenth Street, Jordan	Part Lot 19 Concession 4	Ca. 1816-present; oldest marked grave appears to be that of Solomon Hare (1816-1816)	Originally Quaker; Disciples of Christ	167 marked burials, indeterminate number of unmarked graves	Cemetery on top of the hill overlooking the village of Jordan; partly enclosed by hedging and an iron fence, name clearly identified in the overhead arch; visited by Dr. Reive in June 1929 who noted that it was "well kept"
Yellow Point Burial Mounds	East side of 20 Mile Creek, near the south end of the creek pond	Lot 19 Concession 3? Possibly on one of the High family farms	Indeterminate, probably pre-contact	n/a	7+	Three burial mounds, the most northerly of which was slightly disturbed and so excavated by Boyle in August 1901; bones from one body were believed to have been deliberately burned: skull, arm, leg and rib bones "all thoroughly burnt" and found surrounding a charred central stake and quantities of charcoal; mound also contained various artifacts including a net sinker, lithics (arrow heads, "knife or chisel," gorget, stone axe) and mussel shells

Table B10: Cemeteries in Niagara Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Ball Family Burial Ground (Locust Grove Cemetery, Old Ball Farm plot) OGS 3344	Hunter Road (1,100 feet/335 m north of Hunter, 1,400 feet/426 m east of Concession Road 4)	Lot 53A, Military Reserve Plan M-11	1810-1917?; Capt. Jacob Ball (1733-1810); John William Ball (1813-1890); Reive noted Margaret Ball (1827-1917) as a burial at this site?	n/a	10 + burials; Reive recorded the names of 21 individuals who appear to have been interred at this site	“Locust Grove” property. Most burials believed to have been removed to St. Mark’s (Anglican) Cemetery in 1980s; visited by Dr. Reive in April 1930; he noted that the cemetery was located “in a grove on a high bank of a small creek.” The gated enclosure was broken down, and many of the tombstones were broken and “lie flat.” Other graves were found “beneath the trees surrounding the plot.” Reive noted that “cattle have the run of this once sacred area.” Other surnames included Ambridge, Bissell, Brookman, Mackie, Mallin, Peyette, and Ward
Bellinger Family Graveyard (Bellinger-Corus graveyard) OGS 5894	100 meters south of the East-West Line	Lots 68, 69 or 70? Exact location not known, described as being “on the Cox farm;” Possibly the same as the Corus cemetery referred to below?	1799-? Philip Bellinger (1725-1799); Susannah Pawling (d. 1802)	n/a	Possibly 20+	Broken tombstones remain in situ, some pieces thrown into the Two Mile Creek. Michael Bellinger patented Lots 68 and 69 in Jan. 1794 and Sept. 1803, lands later sold to Samuel Cox in 1835 (deed #10564.) Lot 70 patented by Casper Corus and part sold to Cox.
Brock’s Monument (OGS 5891)	Queenston Heights	Part Lots 3-4 Niagara Township	1812, 1856; Major General Sir Isaac Brock (1769-1812); Lieutenant Colonel John McDonnell (1785-1812)	n/a	2	Remains interred here beneath monument in 1824 which was destroyed in 1840; remains reburied within new monument completed in 1856
Butler’s Burying Ground (Butler’s Burial Ground Historic Site) OGS 3345	End of Butler Street (or Butler’s Lane) west side of Two Mile Creek	Part of Butler Tract, Military Reserve? Now described as Lot 214 on Registered Plan M11	1784?-1873; Catherine Butler (1735-1793); John Johnson Claus (1800-1873); John Freel (1743-1784) thought to be interred here.	n/a	Possibly 30	Some burials in single graves and others within a vault. Thirteen visible tombstones mounted into a concrete pad dated between 1812 and 1854. Other names include Claus, Clench, Cox, Freel, Muirhead, Richardson, Rist and Stevenson. Heritage plaque.

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Clement Family Burying Ground #1; Col. Joseph Clement; (OGS 3347)	Located on the north side of York Road, on the west side of a gravel lane, between the Presbyterian Church (1436 York Rd) and the St. David's Lion's Club Park grounds (1462 York Rd.)	South east corner of Lot 88	1867-1880; Joseph Clement (1790-1867); Anne Caughell Clement (1800-1880)	n/a	Possibly 5	Two stones and a small obelisk in a walled enclosure; the will of Joseph Clement (deed #124, 1867) provided for the establishment of this plot: "I hereby retain thirty feet square for a family burying ground on the points of the hill in front of my son George Clement's house in the most convenient place and my body to lie at the centre of the west side and a monument of marble to be raised to my memory, the shaft to be ten feet high and a stone wall to be built around the burying ground except the gateway at the centre of east side the wall to be two feet high. A large stone placed in the ground to support the said gate with holes drilled for the gate posts and an iron railing two feet high to cover the top and surround the said burying ground, which is to be paid by the Executors of my Estate by money coming into their hands. Should any persons apply for the privilege of Burying their dead it shall not be complied with other than my own family."
Clement Family Burying Ground #2; Sterling Cemetery; Sixth Line Cemetery (OGS 5724)	South side Line 6 on Sterling Farm, directly beside the driveway at 773 Line 6; about 1,500 feet west (457 m) west of Four Mile Creek Road (east side of Four Mile Creek)	Part Lot 103	1813-1828; James Clement (1764-1813); Catherine Clement (1770-1813); Martha Pettit Clement (1769-1828)	n/a	6+	Six tombstones and fragments of others remain in situ; plot is directly beside the road, surrounded by a cedar hedge on three sides; visited by Dr. Reive but he did not record the date when he transcribed the tombstones
Corus Family Graveyard	Accessed via laneway west of 969 East-West Line, 10 meters west of Two Mile Creek; same as Bellinger-Corus?	Part Lot 70	1835-1847; Casper Corus (1739-1835); William Casselman (1793-1847)	n/a	3+	Some tombstones were stored in a shed in the 1940s; site was covered with additional fill to create additional orchard space; visited by Dr. Reive but he did not record the date when he transcribed the tombstones

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Crysler Family Graveyard (OGS 3348)	300 yards (274 m) from the north side of Line 8, west side of Four Mile Creek	Part Lot 85	1793-1839; Adam Crysler (1732-1793); Ann Mary Crysler (1728-1793); John J.F. Crysler (1765-1839)	n/a	Possibly 10	Within a fenced enclosure; six tombstones remain in situ
Field-Brown-Vrooman Graveyard; "River Road Cemetery at Brown's Point" (OGS 3349)	West side Niagara River Road (Niagara Parkway), on the north side of a driveway at 15242-15248 Niagara Parkway	Part Lot 15	1808-1942? Rebecca Brown (1763-1808); Gilbert Field (1765-1815); Nancy Vrooman (1807-1808); Ida H. Weir (1861-1942)	n/a	38+	Just south of the Field house on a knoll, site readily visible from the road; names include Field, Brown, Vrooman, Forsythe, Gabriel, Hopkins, Matthews, Raney, Scott, Weir; visited by Dr. Reive in June 1928; he noted that it was on the Rumsby farm, and was "more or less a private cemetery," part kept in order and part "grown wild" and thus "disgraceful" condition for an historic cemetery
Grace United (Methodist) Church (OGS 3350)	Gate Street (between Centre and Gage Street)	Niagara Town Lot 154	1823-1997; Sarah Lawrence (1760-1823); Martha Theodora (Currie) Arnold (1900-1997)	Methodist, United	170+	Fenced enclosure, with commemorative plaque; 49 marked graves; lot deeded to Methodist Episcopal Church in January 1830 (deed #7840); plan of cemetery held by the church on Victoria Street
Hamilton Family Graveyard (Hamilton Burial Place, Queenston) OGS 3351	Access through a gate in a frost fence, beside a yellow hydrant, on the east side of the Niagara River Road (Niagara Parkway), nearly opposite to, and slightly south of, Huebel Farms Estates at 14510 Niagara Parkway	Niagara Township Lot 4; Lot 138 on Registered Plan CP1 (Queenston)	1796-2006; Catharine (Askin) Hamilton (1763-1796); A. Nathalie Newry (1911-2006); General Brock and his Aide-de-Camp, John McDonell, were temporarily buried here during the 1840s	n/a	82+	North-west of Willowbank, on a ravine, within a fenced enclosure. Private family plot still in use. Names include Butler, Dee, Dickson, Duff, Durand, Hamilton, Jarvis, Mewburn, Tench, Townsend, Wainwright and others. Visited by Dr. Reive in June 1928

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Hostetter farm plot	1755 Highway 55 (Niagara Stone Road)	Part Lot 170-171	Ca. 1850s	n/a	1	Family tradition maintained that an African North American farm hand (a freedom seeker) was interred along the fence towards the rear of the farm, once marked by a pile of stones
Lawrence Family Graveyard (“unnamed plot at the end of Pine Street”) OGS 7150	Pine Street, Virgil; between the end of the north side of Pine Street and the west side of the Four Mile Creek	Part Lot 5, Registered Plan 438; formerly part of Township Lot 118	1820s-1850s?; <i>possible</i> burial site of the family of George B.[Ball?] Lawrence (ca. 1790-1823) and his daughter (?) Elizabeth	n/a	2+	Some broken tombstone fragments remain <i>in situ.</i> ; the plan of subdivision (dated September 1955) does <i>NOT</i> indicate the presence of a burial plot on Pine Street; the Lawrence family were early members of the Methodist church; therefore, these tombstone pieces may have been removed from the Virgil United (Methodist) Cemetery to the south on Creek Road
Negro Burial Ground (Niagara Baptist Chapel Cemetery; Negro Baptist Burial Ground) OGS 3353	East side of Highway 55 (Niagara Stone Road), 75 meters south of the intersection of Mississauga and Mary Streets	½ acre (0.202 ha), north-east part of Lot 315	1830-1893; Susan Augusta Oakley (1830-1832); George Wesley (1817-1893)	Baptist	3 marked burials; indeterminate number of unmarked graves	Site once contained a chapel now moved to a new site; Provincial heritage plaque; “Slave riot” victims of 1837, and a few white congregants are buried here; land sold for £2 by George Ball to the trustees of the Baptist Church in Dec. 1830 (deed #9356); “Burying Ground” shown on Land Registry office “Railway Plan #1” (dated June 4, 1888)
Niagara Lakeshore Cemetery (Niagara Lakeshore Municipal Cemetery) OGS 5893	1483 Lakeshore Road (south side) between Four Mile Creek and Niven Roads	Part Lot 193 (Military Reserve, north of the East-West Line)	1966-present	Non-denominational	2,800+ marked burials	Cemetery contains sufficient space for 6,000 burials

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Pickard Family Burial Plot (Pickard Cemetery) OGS 10259	Located off the west side of Four Mile Creek Road, on the Four Mile Creek	Part Lot 193 (Military Reserve) immediately north of the East-West Line	Ca. 1809-?; William Pickard (ca. 1727, d. 1804 or 1809) and wife Eliza (Wintemute) Pickard (ca. 1735-died after 1799) probably the first burials at this site; also, James Cobus Pickard (ca. 1761-1804) and wife Hannah (ca. 1762-?)	n/a	Probably 4 burials; indeterminate number of unmarked burials	Name also spelled as "Picard" and "Pickhard"
St. Andrew's Presbyterian Churchyard (OGS 3355)	323 Simcoe Street	Town Lots 157, 158, 183, 184 (bounded by Mississauga, Gage, Simcoe and Centre Streets)	1833-present; John Crooks (1797-1833) was the first interment	Presbyterian	1,020+	Congregation established in 1794 when the first church was built; destroyed in 1813, rebuilt 1831. Land patented by church in July 1824. Cemetery not used until 1831, prior burials took place at St. Mark's or in private plots. Prominent inhabitants of the town interred here; visited by Dr. Reive in 1929
St. David's United Church Cemetery (OGS 3356)	South side of York Road, east of Four Mile Creek Road and Paxton Lane	Part Lot 90	Pre 1823-present; Solomon Quick (1755-Oct. 17, 1823) was the first marked burial; Major David Secord (1759-1844) after whom the village was named is interred at this site	Methodist, United	1,100+	Site was probably used for burials before the War of 1812; Reive noted many wooden markers now rotted; prominent Queenston and St. David's residents interred here (Secord, Woodruff, Wynn and others); burial register extant from 1918; visited by Dr. Reive in April 1927 who noted that the churchyard was being restored, ground levelled with sand where needed, stones being reset and some inscriptions being re-cut

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
St. Mark's Anglican Church Cemetery (OGS 3357)	41 Byron Street	Block "C," Captain Vavasour's Plan, St. Mark's Church and Cemetery, "Protestant E. Church and Burying Ground" block, 4½ acres, patented May 20, 1823. Originally bounded by Byron, King, Ricardo and Wellington Streets. (A strip of land along the north-west side of Wellington Street was severed from the block and subdivided for housing.) Now known as Registered Plan 72.	1782?-present; oldest known tombstone in the Niagara Region found here for "Lenerd Blanck, deceased 5 Aug. 1782."	Anglican	2,400+ marked burials; indeterminate number of unmarked graves	Site may have been used as early as 1782; church built 1805, occupied by Americans in 1813 and destroyed; American trenches run through churchyard, and some stones hacked by the Americans; church rebuilt using standing walls. Some burials covered over beneath the church when enlarged in 1843. Family plots and vaults for prominent parishioners. Some old burials moved here from smaller graveyards. Cemetery enlarged 1891. Site contains former school and 1850s Italianate Rectory; cemetery plan and abstract index for cemetery found in Land Registry office
St. Vincent De Paul Roman Catholic Churchyard (OGS 3358)	73 Picton Street	Roman Catholic Church Block, Lot 3 (New Survey), bounded by Byron, Davy, Picton and Wellington Streets	Ca. 1834-present	Roman Catholic	1,069+ marked burials; indeterminate number of unmarked burials	Site includes a "Polish Soldiers Plot" at the north-west corner of the site where 25 soldiers were buried 1917-1919. Some Catholic burials prior to 1834 made at St. Mark's
Servos Family Burial Ground (OGS 3354)	West side of Four Mile Creek Road, south of Lakeshore Road; approximately 1,124 feet west of Four Mile Creek Road, and 2,369 feet (722.30 m) south of Lakeshore Road, at the corners of the former Bernard Falk and George Schmidt farms	Part Lot 194; lot containing the cemetery measures 71.7 x 181.29 feet (21.85 x 55.25 m)	1803-1923; Capt. Daniel Servos (1738-1803); Rosa Hahn (1842-1923)	n/a	36 burials, indeterminate number of unmarked graves	Surrounded by a 4 foot high (1.21 m) stone wall. Names include Fuller, Johnson, Kirby, Lowe, McNabb, Servos, Tannahill, Whitmore and others; site is rumored to include black servants and some First Nations burials; Visited by Dr. Reive in October 1928. He noted that the Servos family members were buried within the stone wall enclosure, and non-family members were interred outside of it

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Stevens Family Graveyard (OGS 3359)	North side of Line 6, west of Four Mile Creek Road, St. David's	South-east corner Lot 108 on bank of Four Mile Creek	1814-1822; George Caughill buried here who was killed at the Battle of Lundy's Lane in July 1814; Maria Stevens (d. 1822) the widow of Aaron Stevens who was tried for treason at Ancaster in 1814	n/a	Possibly 35	Site was raised by more than a meter with additional fill? Visited by Dr. Reive at an unspecified date
Steele Village Burial site (OGS 8441)	Glockner Lane (east side of Four Mile Creek Road), St. David's	Part Lot 91; shown on Reference Plan 30R-11841	Indeterminate	n/a	Unknown	Contains a raised mound thought to be a First Nations burial site
Virgil Baptist Churchyard (OGS 3360)	Directly behind 1630 Four Mile Creek Road (west side of the road)	Part Lot 113	1814?-1922; Barnabas Cain (1771-1814) possibly buried here, blacksmith at Fort George and Indian interpreter; James Anderson (1833-Oct. 26, 1836) appears to be the first marked burial; Frederick A. Brooker (1880-1922)	Baptist	47 marked burials, indeterminate number of unmarked graves	Chapel established here in 1831, earlier burials may have been moved to the site. May contain some African North American burials? Cemetery partly concealed by a tall cedar hedge; visited by Dr. Reive in April 1927 who found it "in wretched condition" and "much neglected." Reive noted that many stones known to be at the site had disappeared. He found what he took to be the remains of the Barney Cain tombstone "used as a prop to a rotten upright of the dilapidated church shed"
Virgil United (Methodist) Cemetery (OGS 3361)	East side of Four Mile Creek Road, directly beside Gateway Community Church at 1665 Four Mile Creek Road, and opposite 1642 Four Mile Creek Road	Part Lot 113; 0.724 acres in extent (0.293 ha)	1818?-1934; William Cain (d. 1818 aged 3 months) first transcribed tombstone, date may be in error?; Eliza Caughill (1754-1831); Frederick Clement (1841-1842), Edwy Wesley Corus (1850-1929); Verdun Casick (1916-1934) last burial	Methodist, United	53 marked burials, indeterminate number of unmarked graves	George Lawrence (1757-1848), Methodist class leader, may be buried here (moved from Lawrence plot?) Many old area families buried here. Church demolished. Heritage plaque on site; Dr. Reive visited the "Framed Church" cemetery at Virgil in April 1927, he described it as being "wretchedly kept" and "much neglected"

Cemetery Name	Address	Lot/Concession	Date Range	Religious affiliation	Number of burials	Remarks
Warner (Methodist) Cemetery (Warner Burying Ground) OGS 3362	South side of Warner Road, on the east side of the QEW	South half of Lot 139	1808?-present; Stephen Secord (1757-1808); McKinley infants buried here 1811, 1813; Obadiah Hopkins (1767-June 19, 1816); Christian Warner (1754-1833), Methodist class leader and land donor; J. Lloyd Oliver (1922-2009.)	Methodist Episcopal	200+ burials, indeterminate number of unmarked graves	Visited by Dr. Reive in September 1926, who noted "the cemetery is in very poor repair and a reproach to the descendants of the early pioneers who lie here." Log meeting house stood on site, replaced by frame Meeting House in 1801, its foundations may be discerned beside the cemetery; this was the first Methodist church in the peninsula, and the first west of the Bay of Quinte; replaced by new meeting house in 1870; cemetery grounds partly enclosed by stone wall. Many prominent early settlers buried here.
Weir grave (OGS 5892)	116 Queenston Street, Queenston	Part Lot 6, CP1	1981; Samuel Edward Weir (1898-1981)	n/a	1	Burial in the front yard at Riverbrink Art Gallery
William VanEvery Graveyard	n/a	Lot 183	1786-1862; McGregor VanEvery (1723-1786); John VanEvery (1794-1862)	n/a	Unknown; possibly 14 burials	Several graves were moved from this site to the nearby Warner Cemetery in 1930s during construction of the QEW; some VanEvery tombstones mounted into a wall at the Warner Cemetery

Table B11: Cemeteries in Pelham Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Beckett Plot (OGS 6257)	West side of Centre Street south of Kilman Road	Part Lot 10 Concession 5	1860; Stephen Beckett, drowned at St. Catharines Sept. 12, 1860 aged 63	n/a	1	Single burial site?
Brown Burial Plot (Old Brown Farm Plot) OGS 6259	West side of South Pelham Road, north of River Road	Part Lot 1 Concession 14	Ca. 1800-1852; Lieut. John Brown (ca. 1739-18??); Celesta McCormick (1819-Dec. 1852); John McCormick (1850-1852)	n/a	Possibly 10-11; Reive recorded five remaining tombstone inscriptions in 1928	Located beside Crane's Creek; three stones visible with no writing; plot believed to contain the burials of Abraham and Lydia Lee (freedom seekers?) and two of their children; other names McCormick, Wilford; visited by Dr. Reive in June 1928, who noted there was one standing stone in this wooded location, several broken pieces and some "in the creek"
Crow Plot (Named as "Farm Near Pelham" by Reive) OGS 6256	East side of Centre Street south of Kilman Road	Part Lot 9 Concession 5	1816-? John Crow, died Jan. 11, 1816	n/a	1 known burial; indeterminate number of unmarked graves	Single burial site? Site visited by Dr. Reive in May 1931, he recorded the burial as Feb. 11, 1816; he noted that there were probably many unmarked burials including members of the Beckett and Cross families

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Fonthill Municipal Cemetery (Brown's Burying Ground) OGS 4631	Highland Avenue, Fonthill; alternate entrance on Brock Street	Part Lots 1 and 2 Concession 8; original part of the cemetery deeded to the trustees by John Brown in December 1873 (Pelham deed #969); Registered Plans 7, 13 and 14 (now known as Plans 697, 700, 701) show that the cemetery was enlarged in 1898, 1913 and 1921; the "old cemetery" measured 112 x 144 feet in size (34.13 x 43.89 m); some family plots identified by name on RP697: Griffith, Clark, Damude, Marr, Thomson, Silverthorn; also a large plot owned by the Vanalsten family (21 x 72.5 feet in size (6.4 x 22.09 m)	Ca. 1800-present; oldest marked burial George Misener, died Aug. 17, 1802 aged 18 months (burial moved here); oldest graves in Brown's North section: Wilson Johnston (1818-Aug. 21, 1819); Margaret Southworth (1787-Mar. 6, 1820); Peter Young (1788-1824); Cyrenus Misener (1823-1824); Job Strowbridge (1770-1836)	Non-denominational	6,270+ burials? Records have only been automated at the cemetery "for about 10 years" therefore staff were unable (and unwilling) to provide an estimated number of interments	Cemetery divided into sections: Brown's North, Brown's South, Brown's South Extension, Old Hansler, Armitage, and Dickson; some early family burial plots moved here (e.g. Misener); Fonthill took over management in 1923; Mausoleum added 1924; affidavit of Andrew Cohoe, a Quaker, dated Oct. 16, 1839, stated that he lived on Lot 1 between 1794 and 1804 and helped clear the north part of the lot, part fenced in, and the boundary lines established "when I left the place [in 1804] the graves were all west of said line." Visited by Dr. Reive who copied names from the Secord tombstones
Hansler Cemetery (OGS 4653)	North side of Highway 20; "Metler Road below Lookout Point Golf Course"	Part Lot 4 Concession 5	Ca. 1813-present; John Hansler (1813-1815); infant child of Robert Kellman (d. 1816)	Non-denominational	140 tombstones transcribed in 1981-82; Reive recorded the names of 156 burials in 1927	Site visited by Dr. Reive in 1926-7, his transcriptions provide an important corrective to the 1980s OGS transcript (e.g., OGS recorded Peter W. Ginter, died 1800 aged 7, Reive recorded the same burial as 1880 aged 7); he noted that the older part of the cemetery was "overgrown with rank grass and shrubs gone wild," and the older stones were weathered and "almost worn smooth"

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Hillside Cemetery (Dawdy Burial Ground, Dawdy's Burying Ground, Dawdy Hillside Cemetery, Beckett's Graveyard) OGS 4654	Canboro' Road, Ridgeville	Part Lot 8 Concession 8; surrounding land sold to William and Hannah Beckett in August 1835 "less the burying ground;" Pelham deeds #3795 and 4314; Registered Plan 15 (now known as Plan 702) show that the cemetery was enlarged in May 1922	Ca. 1816-present; cemetery noted in property deed to Isaac Nunn who purchased two acres "due south of the burying ground" in 1816; first recorded burial that of Jeremiah Dawdy in 1829	Non-denominational	Dr. Reive recorded the names of more than 970 individuals in 1929; indeterminate number of unmarked graves	Site visited by Dr. Reive in 1928-29; he noted that three small family farm burial plots were moved here that were in the way of the 4 th Welland Canal construction; Reive described Jeremiah Dawdy tombstone as "very old" but did not record or could not read the date; grave and tombstone for Cynthia Armstrong (1775-1859) and for as many as 27 others (Bradt, Burgar, Durham, Shotwell, Shrigley, Sweet, and Southworth) were "removed from old Burgar plot near Welland;" the cemetery was enlarged in 1891, 1895, 1921; named "Hillside" in 1934
Misener Family Plot	Unknown	Unknown	Ca. 1802-?; George Misener (ca. 1801-1802)	n/a	1+; indeterminate number of burials	Burial moved to Fonthill Municipal Cemetery; other burials may remain in situ?
Solomon Moore Family Burial Plot	Unknown	Exact location unknown; Moore owned various farm properties in Pelham, possibly around Lots 7 and 8 in Concessions 7 and 8	Ca. 1820s-1883?; Martha Moore (1809-1850); Solomon Moore Jr. (1804-1883); earlier burials may have been made in this family plot (Solomon Moore Sr., and his wife Eleanor Stephenson Moore, UEL, formerly of Louth)	n/a	Indeterminate number of unmarked graves, possibly 7 burials in total	Members of this Quaker family were interred on the family farm "near Ridgeville" in unmarked graves; part of the land was later purchased by the TH&B for use as a gravel pit and ran a siding to it. "When their employees got into action with a steam shovel, and raised several caskets, a halt was called...the family moved the remains to the Quaker Cemetery." Were all remains moved?

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
North Pelham First Presbyterian Church Cemetery (North Pelham Burying Ground) OGS 4655	South-east corner of Metler Road and Cream Street	Part Lot 11 Concession 6; surrounding land sold in September 1829 to Oliver Hodgins “except the burial ground” which was not to be cultivated; cemetery was 1 acre (0.404 ha) in size. Part of the lot was used for burials at an early date and deeded to trustees by Christian Brown in Jan. 1845, site enlarged in Oct. 1905 and Mar. 1970	Ca. 1813-present; earliest marked burials as noted by Reive: E.M. Waite (1812-1813); Whitson M. Disher (1756-1823); early Killman family burials date from 1832-1847; oldest burial thought to date from 1800, possibly moved from an earlier family plot; Christian Brown plot contained 7 burials, now part of the North Pelham Cemetery?	Presbyterian	631 marked burials	Daniel Ward Eastman first preached in Pelham in 1823; congregation organized 1828, church built 1832. Visited by Reive in July 1926, who noted “many bodies and memorials have been removed from burial places on the farms to this place”
Pelham Evangelical Friends Church Cemetery (Pelham Quaker Cemetery, Quaker Brick Church Cemetery, Friends Brick Church Grounds,) OGS 4656	940 Haist Road South (west side, south of Quaker Road), Pelham Corners (Fonthill)	Part Lot 4 Concession 10	Ca. 1824-present; oldest marked burial Charles H. Russell (1823-Jan. 3, 1824); Eliza Carl (1770-1826); Martha Giles (1794-1828); John Carl (1755-1836)	Quaker	102+ marked burials, indeterminate number of unmarked graves; Reive recorded the names of 287 individuals buried at this site; total number of known burials appears to be 348	Visited by Dr. Reive in July 1926; he noted it was “kept like a garden in even rows” with small, plain stones; several burials were moved here from the Solomon Moore farm near Ridgeville; cemetery name clearly identified by a sign; UEL Association marker notes that it is a Loyalist burial site; brick church still stands on the grounds

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Pelham Hicksite Quaker Cemetery (Friends Frame Church Cemetery, Friends Cemetery) OGS 5896	East side of Effingham Street south side of Welland Road	Part Lot 5 Concession 10	Ca. 1836-present; oldest marked grave Phebe Willson (1804-Apr. 9, 1836); stone marked "S.B., Apr. 7, 1779-June 18, 1844;" Thomas Page (1784-1849); Reive did not record any of these earliest burials, the earliest graves that he noted were those of Thomas Priestman (1840-1862), Jeremiah Cohoe (1845-1863), and Hannah C. Willson (1844-1864)	Quaker; monthly meetings held between the Pelham and Black Creek Quakers as early as October 1799	176 marked burials; Reive recorded the names of 104 individuals interred here prior to 1926	Meeting House constructed during the 1790s, plaque notes that this was the site of the first Monthly Meeting of the Society of Friends in Canada in 1799; by 1800 the Meeting House was "small and crowded." New frame meeting house was built in 1807, at 591 Canboro' Road; meeting house later moved to Fenwick, used by the "Railroading hobbyists" in 1986; visited by Dr. Reive in July 1926, he noted that the grounds "had the appearance of having had several bodies removed" while sunken graves made the ground "very irregular." Reive noted that "little or no care" was provided at the site
Schram Family Cemetery (OGS 5751)	South-west corner of Centre Street and Sawmill Road	Part Lot 9 Concession 2	Ca. 1834-1851; William Schram (ca. 1789-1834); John Schram Sr. (ca. 1755-1851)	n/a	2+	
Swayze Family Cemetery (OGS 5752)	South side of Effingham Street (Regional Road 28)	North-east corner part Lot 4 Concession 2 at "Hangman's Corners"	Ca. 1798?-1863; oldest burial marked by broken stone, death date Apr. 4, 1798; Freeman Swayze (d. Oct. 7, 1818); Mary Johnson Swayze (1788-1863)	n/a	10 tombstones, 2 footstones	Some stones broken and difficult to decipher

Table B12: Cemeteries in Stamford Township

Cemetery Name	Address	Lot and Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
All Saint's Anglican Church Cemetery (All Saints Drummondville) OGS4649	5680 Robinson Street (south side of Robinson, between Stanley Ave. and Portage Road)	Land deeded to the congregation by Mrs. Murray	Ca. 1848?-present; Eliza McGarvey (1781-Nov. 15, 1848) is the first entry noted in the burial register, but possibly buried at Chippawa; cemetery laid out in 1854, earlier burials may have been moved to this site? Ellener Robinson (ca. 1786-Jan. 8, 1862) one of the earliest burials at this site	Anglican	300+ marked burials	Parish established 1820; Burial register exists 1848-present; cemetery "laid out in 1854." Church once connected to Trinity Church (Chippawa) and St. John's (Stamford); church designed by William Hay, constructed by William Russell in 1856-7, dedicated on Nov. 1, 1857; visited by Dr. Reive in March 1929 who noted that it was an "interesting" cemetery containing the names of the "old aristocracy" of Niagara
Drummond Hill Cemetery (Drummond Hill Burying Grounds, Lundy's Lane Burial Ground) OGS 6008	6110 Lundy's Lane (South side of Lundy's Lane, between Drummond Road and Main Street or Portage Road), access off Buchner Place	Part Lot 143; ½ acre (0.202 ha) deeded to the congregation by Christopher Buchner in 1799, later enlarged to 4 acres (1.61 ha)	Ca. 1799-present; John Burch (1742-Mar. 7, 1797) was the first burial at this site, but moved here from his farm burial plot; James and Laura (Ingersoll) Secord interred here, also Karel Soucek (1947-1985) who survived a dare-devil plunge over the Horseshoe Falls in a barrel in 1984	Originally Presbyterian, now non-denominational	2,523+ marked burials; Indeterminate number of unmarked burials	Visited by Dr. Reive in August-September 1929 who noted that the Niagara Parks Commission was in charge of the site and as a result it was "of course well kept" Location of an early church built 1785 and replaced in 1836; site of part of the Battle of Lundy's Lane in 1814, remains of 255 British and American soldiers interred here; site contains heritage plaques; name of the cemetery in an arch over the main entrance gate; 1814 cremation areas still said to be visible where grass refuses to grow
Fairview Mausoleum (OGS 8474)	4764 Portage Road (near Morrison Street)	Located near the south-west corner of Fairview Municipal Cemetery	Ca. 1992-present; Girardo Guzzo (1918-May 23, 1992); Rita DiGeremia Madia (1922-May 9, 2019)	Non-denominational	At least 62 burials	

Cemetery Name	Address	Lot and Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Fairview Municipal Cemetery (OGS 4658)	4501 Stanley Avenue, Niagara Falls	Lots 90-95; 77 acres (31.16 ha); original cemetery established on the Adam Shugg farm; bounded by Stanley Avenue, Morrison Street and the Queenston-Chippawa Hydro Canal	1883-present; Thomas Whittaker (1827-July 20, 1883) believed to be the first burial	Non-denominational	Approximately 37,000 interments	Some burials recorded in All Saint's burial register; cemetery has burial register and burial permits transcribed 1897-1907 by the OGS; cemetery contains the first "green burial" section ("Willow's Rest") in the region
Holy Trinity Cemetery Chippawa (Chippawa Anglican Cemetery) OGS 4659	7820 Portage Road (east side), Chippawa	Lot 192	Ca. 1821-present; Alexander Conklin (ca. 1826-Oct. 7, 1828); Helen Kirkpatrick (1828-Dec. 29, 1834); Thomas Clark (1772-Oct. 6, 1835)	Anglican	Reive recorded the names of at least 335 individuals interred here before 1929; Indeterminate number of unmarked burials	Congregation established in 1820 when Rev. William Leeming sent out by the SPGFP; white frame Gothic style church built 1821 but burned in 1837; present brick and stone church designed by John George Howard and built in 1841. Some burials recorded in All Saint's burial register; some soldiers who died at Chippawa in 1814 later interred here; site contains heritage plaques, and a family vault or crypt on the north side of the church; visited by Dr. Reive in April 1929 who noted it was "in good order" but many older stones had been worn and were hard to decipher
Hutt-Brown Burial Place (Hutt Family Burial Ground, Hutt Burial Place) OGS 5621	East side of Beechwood Road near Warner Road (east side of the creek, south of the CNR line and Bruce Trail)	Part Lot 12 "just below the brow of the mountain in Stamford" and near the Warner Cemetery; site still owned by the Brown family	Ca. 1790s-1844; Jacob Hutt (d. Jan. 5, 179*), Adam Hutt (1762-Apr. 1, 1842); Mary McGlashan Robertson (1797-1844.) Another burial is that of Margaret Muirhead (1800-1825)	n/a	7 known burials, possibly other unmarked burials	Site visited by Dr. Reive in October 1931, he noted marked burials within and without an enclosure (low stone wall) which had been partly wrecked by the fall of a large tree

Cemetery Name	Address	Lot and Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. David's Indian Ossuary (aka, Lowery Farm Ossuary, Samuel Berriman Farm Ossuary, Berryman Farm Ossuary) OGS 6255	West side of St. Paul Avenue ("St. David's Ravine Road" or Four Mile Creek Road) Niagara Road 100, and 1,000 feet (304.8 m) north of Mountain Road or Regional Road 101	Part Lot 16; the name Berriman is found on title to Lot 16 but not that of Lowery; Lowery also owned property in the nearby village of St. David's on part Lots 89-90 in Niagara Township	Indeterminate, grave goods suggest that this was a pre- and post-contact era site	n/a	Indeterminate number of burials due to heavy disturbance of the site	Largest ossuary in Ontario first discovered in 1828 when artifacts were found entangled in the roots of a toppled tree. Site investigated by Boyle in April 1908, referred to as the E.D. Lowery farm, above Queenston Heights near St. Davids, "known as the Dorchester Farm." Site discovered when the surface was being stripped to expose the layer of coarse building sand. Sand from adjoining properties had been excavated since the mid-1800s to a depth of 175 feet (53 m.) Site was badly disturbed by "men and boys," some of whom were "relic hunters" from New York State, who "made havoc of the graves" and put the ground into a state whereby no one could interpret it. Some prime specimens taken to the USA and ended up in private collections. Grave goods included clay pots, brass and copper kettles, shell gorgets, beads, and clay and stone pipes. Boyle estimated the site to have encompassed approximately 5 or 6 acres (2.02-2.42 ha); 12 foot (3.65 m) high cairn with plaque erected by the Lundy's Lane Historical Society in October 1934; all remains believed to have been cleared from the site, now part of the 300 home "Calaguero Estates" subdivision; plaque also commemorates "Stamford Park," the 425 acre (171 ha) estate at this location occupied by the Lieutenant-Governor Sir Peregrine Maitland
Lampman Burial Plot (OGS 5959)	4491 Garner Road at Shriners' Creek (east side of Garner Road, south of Thorold Stone Road, between Beaver Dams Road and the railway)	Lot 100; approximately 0.020 acres (0.008 ha)	Ca. 1789-1811; Frederick Lampman (d. 1789), wife Catherine (d. 1811) and infant child	n/a	3 marked burials, possibly other unmarked graves	

Cemetery Name	Address	Lot and Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Lundy's Lane Municipal Cemetery (Garner Cemetery, Garner Burying Ground, Green's Corners Cemetery, Lundy's Lane Methodist Cemetery, Methodist Burying Ground, Stamford Township Cemetery) OGS 4660	7467 Lundy's Lane (Lundy's Lane and Montrose Road)	Lot 132, approximately 23 acres (9.30 ha)	Ca. 1816-present; Jacob Lemon (1740-1816) and Thomas Lemon (1810-1820) the oldest burials	Originally Methodist, now non-denominational; section A-2 used by the B'Nai Tikvah Congregation		Some burials recorded in All Saint's burial register; cemetery enlarged 1934; visited by Dr. Reive in August 1928 who recorded the names of 20 individuals between 1816 and 1887
Lundy's Lane Cemetery "Old Red Meeting House" (OGS 3299)	North side of Lundy's Lane, east side of Montrose Road	Lot 132; 1½ acres conveyed by Charles Green to the Methodist Episcopal Church in 1832, and another 2 acres deeded to the church by Catherine Lundy in the same year (Stamford deed #8826); maps show the "Methodist Church Burial Area" at the south end of the cemetery, on the north side of Lundy's Lane	Ca. 1817?-1889; Joseph Corwin (d. April 19, 1820 aged 19 years) is the first marked burial; Isaac Williams (1808-May 4, 1821); Jonah Howey (1752-Jan. 1822); Alexander Spencer (1813-Nov. 28, 1889); Reive transcribed the Corwin inscription as 1826, and the Howey inscription as 1827	Methodist Episcopal	74+; indeterminate number of unmarked burials	Visited by Reive in February 1927 who noted that it was neglected with many broken stones; later "restored" and Reive wrote that many old stones had disappeared, covered over by a new lawn. Reive recorded about 74 marked burials, including one wooden marker; Old Red Meeting House built ca. 1817, closed in 1857; School Section 5 established 1832 at the corner of Lundy's Lane and Montrose; new church built 1845, and in 1871 the School trustees bought the Old Red Meeting House, but not the cemetery; grounds "restored" by the Lundy's Lane Historical Society in 1923; Township of Stamford enlarged the cemetery in 1934, and the site taken over by the City of Niagara Falls in 1963; section A2 is used by the Congregation B'Nai Tikvah

Cemetery Name	Address	Lot and Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Lundy's Lane United Church Cemetery (Lemon Family Burial Grounds, Wesleyan Methodist Cemetery) OGS 4650	Lundy's Lane (north side) at the end of Lowell Avenue near Latshaw Street; church address 5825 Lowell Ave.	0.255 acres (0.103 ha)	Ca. 1802-1887; John Lemon (ca. 1798-Feb. 24, 1802); Jacob Lemon (1743-Feb. 13, 1816); architect John Latshaw (1806-1883) and James Latshaw (1832-1887)	Methodist; later United	25 tombstones or fragments of stones remain; indeterminate number of unmarked graves	Drummondville Methodist Church built in 1845-46 on the site of the present church; site visited by Dr. Reive in August 1928 who transcribed 20 stones; other names include the family of Haggai Cook; Dell, Durham, Everingham, Willson; OGS has transcribed the Lemon graves as if it was a separate cemetery within the Lundy's Lane United Church Cemetery grounds
Mount Carmel Cemetery (OGS 4750)	6944 Stanley Ave.	Part Lot 174 or 175	Ca. 1867-present; Sister Mary of the Sacred Heart O'Neill (d. July 23, 1867); Rev. Father Jordan John Joseph Rooney (1927-Nov. 20, 2015)	Roman Catholic	124?	Forms part of Our Lady of Peace, separate burial site for the Sisters and clergymen of the congregation
Old Thompson Family Burying Ground (OGS 5753)	4891 Portage Road, Niagara Falls (between Scott Street and Morden Drive)	Part Lot 108	Ca. 1830-1849; infant daughter of John Thompson (1828-June 30, 1830); Margaret (White) Law (ca. 1810-Sept. 27, 1849)	n/a	3 tombstones, possibly 5 burials	
Our Lady of Peace Church Cemetery (OGS 4661)	6944 Stanley Avenue (east side, between Stanley and Portage, and between Livingstone Street and Roger Crescent), Niagara Falls	Part Lot 174 or 175	Ca. 1839-present; oldest marked burial appears to be that of Mary Anne McGuane (1842-June 19, 1845)	Roman Catholic	321+ marked burials, indeterminate number of unmarked graves	Corner stone for the church, named after St. Edward the Confessor, laid in June 1837, and opened for mass in October 1839; name changed to Our Lady of Peace in August 1861 in reaction to the American Civil War; some burials here were noted in Dalton's Burial Register; different section reserved for the interment of the clergymen and Sisters (see Mount Carmel above)

Cemetery Name	Address	Lot and Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Redmond Cemetery (OGS 8439)	West side of Hanan Ave., between Summer Street and Lundy's Lane, nearly opposite to Latshaw Street (formerly Misener), near Drummond Hill	Lot 88 Plan 330; subdivision plan shows that the lot measures 82.5 x 105.58 feet (25.14 x 32.18 m); originally part of Township Lot 130, later described as part of an "unnumbered block" on Registered Plan 32, and adjacent to "Block A" near Coronation Park	Unknown; 1814?	Unknown	Unknown	Site is slightly north-west of the Lundy's Lane battlefield site; this location may have possibly contained the remains of soldiers from the battle July 25, 1814? OGS database offers no explanation as to why this site was listed as a cemetery; registered plan does not indicate the presence of a burial plot
St. John the Evangelist Anglican Cemetery (Stamford Anglican Cemetery) OGS 4663	3428 Portage Road (east side), near Stamford Green, Niagara Falls	Land donated by Capt. Robert Henry Dee in 1820	Ca. 1820-1970s; Sophia Thomas (ca. 1757-Jan. 7, 1832), John Thomas (ca. 1753-Oct. 11, 1833) and Robert Henry Dee (ca. 1788-Nov. 14, 1833) are among the earliest marked graves	Anglican	291 marked burials, indeterminate number of unmarked graves; contains Stamford Green Heritage Columbarium	Some burials recorded in All Saint's burial register; church dedicated and opened for services in September 1825; old church deconsecrated 1962; burial register also extant for St. John the Evangelist; visited by Dr. Reive in May 1928, who noted that it was "fairly well kept" and of "historic interest"
Stamford Presbyterian Cemetery (OGS 4662)	Bounded by St. Paul Ave., McMicking St., St. Patrick Ave. and Brock St.	Site measures approximately 100 x 190 feet (30.48 x 57.91 m)	Ca. 1784?-present; 1 st burial thought to be Janet Mulwain McMicking; oldest marked burial Eliza Bowman (d. Jan. 1800)	Originally Presbyterian but used by other denominations	Possibly 1,500+ burials	Site originally enclosed by a stone wall, which has since been removed; visited by Dr. Reive in June 1929 who noted that it was a "well kept" cemetery but several of the stones were hard to decipher

Table B13: Cemeteries in Thorold Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
“Old” Allanburg Cemetery (OGS 4667)	Centre Street in Allanburg (east side of the Welland Ship Canal, directly beside number 2392 Centre Street); at the bend of Centre Street directly opposite to an unnamed section of Seaway haulage road (site is west of Highway 20 or Lundy’s Lane)	Lot 118; ¼ acre (0.101 ha) donated for use as a cemetery by Harmonius Vanderburgh in March 1844	Ca. 1813-1876; Noah Davis (1792-Dec. 29, 1813); Mary Crysler (1763-Dec. 14, 1815); Clarissa Hall (1783-Feb. 2, 1821); Isaac Radcliffe (1828-Oct. 14, 1874); Mary Radcliffe (d. Dec. 1876)	Non-denominational	50+; indeterminate number of unmarked graves; site presently contains 31 stones and five tombstone fragments	Shown on 1876 map of Thorold; Jubilee History of Thorold, p. 33; Carnochan; visited by Dr. Reive in July 1926 who noted that it was in “deplorable condition” with many stones that were difficult to decipher; some graves and monuments had been moved to the “new cemetery a short distance away.” Site fenced in, contains a heritage plaque
Beaverdams Cemetery (United Methodist Beaver Dams Church and Cemetery) OGS 4668	South side of Marlatts Road east of Beaverdams Road (1,000 feet or 304.8 m from Beaverdams Road)	Part Lots 51 and 52, 1 acre (0.404 ha); map of cemetery showing plots and owners names compiled by Keefer in 1860	Ca. 1828-1929; Nancy Swayze (1800-Dec. 7, 1828) appears to be the oldest marked burial; Hannibel Swayze (1830-Jan. 26, 1831); Margaret More (1832-Apr. 24, 1833); Adelaide Dexter (d. 1929)	Methodist, United	72 marked burials as well as a few footstones; indeterminate number of unmarked graves	Land conveyed to the congregation by Hiram Swayze in June 1832, laid out into 100 family burial plots; site contains two story frame chapel built 1832; regular services discontinued in 1890; entered Church Union in 1925, still used for special services; church undergoing restoration; heritage plaque on site; Jubilee History of Thorold, p. 32
Bouk Farm Cemetery	Unknown	Part Lot 102? Part of this lot (½ acre) was “reserved” for a schoolhouse in a deed dated May 1849, and later deeded to the trustees of School Section 7 in February 1882 (<i>Thorold deeds #1712/1849, 2245/1882</i>)	Unknown	n/a	1 unconfirmed burial	Referred to in a funeral invitation, on the Bouk farm “near Bouk School;” location probably in Thorold, possibly on the Simon Bouk farm where there was a schoolhouse; Invitation in the collection at the Mayholme Foundation; cemetery not in the OGS database

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Carl Misener Burying Ground (Muisenor Burial Place “near Port Robinson on the Welland Canal”, Carl Misener/Bald Cemetery) OGS 6558	North-west side of Carl Street and the Towpath Road in Port Robinson (“400 yards south of Port Robinson”)	Part Lot 213	Ca. 1798-1840; Leonard Muisenor Sr. (1744-Sept. 3, 1806); Thomas Bald (ca. 1817-July 6, 1832); Hannah Misener (ca. 1788-Sept. 13, 1840); presently one stone remains <i>in situ</i> , Barbara Misener (ca. 1741-Apr. 23, 1821)	n/a	5 marked burials; indeterminate number of unmarked burials; Reive noted “the depressed surfaces of the ground would indicate many unmarked graves”	Site located on a knoll overlooking the Welland Canal; one stone standing, the rest laid flat on the ground and may have been covered over; see <i>Jubilee History of Thorold</i> , p. 32; site visited by Dr. Reive in May 1930, he referred to it as being “near Port Robinson on Welland Canal,” and that it may have been part of a larger cemetery destroyed “during the building of the canal.”
Clark Family Burial Ground (OGS 6258)	East side of Cataract Road between Hurricane and Port Robinson Roads	Part Lot 212	Ca. 1861-1862; John Clark (ca. 1792-June 20, 1861); Wellington Clark (ca. 1843-June 27, 1862)	n/a	3 marked graves; indeterminate number of unmarked graves	Dates illegible on the stone of Rhoda Clark
Colbeck Drive Cemetery (Price Family Burial Ground, Huston Cemetery) OGS 5750	5750 Colbeck Drive (south-east corner of the intersection of Colbeck Drive and Lincoln Street West or Regional Road 29), now part of the City of Welland	Part Lot 256	Ca. 1842-1890; Joseph Price (ca. 1783-1842); Peter Buckbee Price (ca. 1816-1890)	n/a	9 marked burials, indeterminate number of unmarked graves	On the west side (or north bank) of the Welland River; visited by Dr. Reive in July 1926, who described the “Price Cemetery near Welland” as a “small, well kept cemetery.” Presently contains one tombstone for Sarah Hutson (1830-1886)
Holy Rosary Church Cemetery (Our Lady of the Holy Rosary) OGS 4669	21 Queen Street South, north-west corner of Queen and Sullivan (formerly Mill) Streets, Thorold	Lot 57B Registered Plan 898; land deeded to the congregation by George Keefer in July 1846 (Thorold Memorial deed #3027)	Ca. 1842-1887; Martin Naile or O’Naile (1839-1848) was the oldest marked grave; Annie McLellan (1886-1887); notes for Lakeview referred to the grave of Nancy [Moroy?] who died Oct. 23, [1830?] aged 76 which was transferred from Holy Rosary. The date may be in error since the site was not used as a cemetery until after 1842, unless this was a grave that was moved to the Holy Rosary Cemetery	Roman Catholic	33 marked graves; 453 unmarked graves were moved from this location to Lakeview between Sept. and November 1962	Site may still contain unmarked burials; 33 marked burials transferred to Lakeview Cemetery in 1949; one known grave remains at Holy Rosary, that of Father Timothy J. Sullivan; certificate registered on title with regard to the Burying Ground in December 1962 (closing site? See <i>Thorold deed #82624A</i>); brick church on site built 1882, replaced earlier building from 1852

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Immaculate Conception Roman Catholic Church Cemetery (OGS 4670)	93-107 South Street North (west side of South Street N. at the corner of Brick Street), Port Robinson	Part Lot 36 as shown on the Board of Works plan for Port Robinson; previously part of Thorold Township Lot 203; now Parcel 17-1, Section M5, Thorold; land purchased in June 1877 by the Roman Catholic Episcopal Corporation of the Diocese of Toronto from the heirs of William B. Hendershot for \$100 (<i>Thorold deeds #1527</i>)	Ca. 1880-present; William O'Leary (ca. 1805-July 1, 1880); John E. McCombs (1933-2008)	Roman Catholic	42 marked graves, indeterminate number of unmarked burials; at least 85 individuals are known to be interred here	Church was constructed by Joseph Stark at Allanburgh in 1870 to serve the canal workers, and moved along the Welland Canal to Port Robinson in ca. 1877-78, enlarged in 1912; church renovated in 1959 but closed in 1998; cemetery fenced in, well maintained
John Brown Family Burial Plot ("Brown graveyard at the Gore," aka "Smith Cemetery")	Short Hills Provincial Park, near the intersection of Scout Camp Road and the Black Walnut Trail, west of the creek	Part of Thorold Gore Lot 64 or 65	Ca. 1804-1855; contains burials of John Brown (d. Apr. 20, 1804), wife Magdalena (Zeh) Brown (1750-Apr. 18, 1804); son Adam Brown (1784-Mar. 19, 1855), and possibly David Brown (d. 1812)	n/a	4+; the cemetery appears to have contained multiple burials since an area resident recalled in 1960 that several tombstones were removed unbroken and placed face down to form a sidewalk in front of a house near the road opposite to Jackson's Flats west of Power Glen	Family burial plot, on the knoll of a low hill, near the creek, on the south side of the old "Brown-DeCew Road." In Short Hills Park, near Scout Camp Road and Black Walnut trail. (before reaching Camp Wetaskiwin.) The Jubilee History of Thorold (1897) mentions this cemetery. It contained at least two tombstones, one is still extant and removed by a neighbour for safekeeping; Jubilee History of Thorold, p. 32; also described in 1960 as being in the vicinity of the "Hog's Back," a short distance from the Jackson's Hill Road and the road from Power Glen

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Lakeview Cemetery (OGS 4665)	East side of Welland Canal, north of Highway 58, just south of the brow of the escarpment	Part of Thorold Township Lot 12; land transferred to the Town of Thorold in April 1887, but "Old" Lakeview property was expropriated by the Seaway for canal expansion in 1966; City of Thorold given a 99-year lease on the site in 1999	1886-present; older burials found here which were moved from other sites (e.g., St. Peter's Cemetery) and from private family plots (e.g., George Keefer and his four wives, dating from 1813-1871)	Non-denominational	7,000+	"Old" Lakeview divided into lettered sections A-H (inclusive) and L.M and N; section "A" only used for burials since 1966; Lakeview contains 246 burials moved here in 1923-26 from the Old German Church (St. Peter's), located in Section "N." Dr. Reive visited the "Thorold Old Cemetery" and transcribed the various tombstones which appear to have been found in Section "N." He referred to the removal of these graves from the "old cemetery on the banks of the Welland Canal" and that this section was "not as carefully kept as the cemetery proper"
Overholt Cemetery (Goldspink Farm Plot) OGS 5897	"on the road to St. John's," or north side of Hollow Road just east of the Thorold-Pelham townline; "Anger Hill Road north of Hollow Road"	South-west corner township Lot 157; land referred to in the will of Abraham Overholt (1746-1840), will dated Sept. 1839, as a place reserved to his family "for the repose of the dead" (Thorold Memorial deed #379); cemetery mentioned in subsequent deeds; land bought by Charles A. Goldspink in May 1916 (Thorold deed #7531)	Ca. 1813-1878; Rebecca (Disher) Overholt (1786-1813); Eliza Wells (1780-1877); Charity Acker (1814-Oct. 13, 1878); Abraham Overholt, the Crown patentee in Dec. 1796, was buried here. He established an early saw mill in the Short Hills area	n/a	18+	Site visited by Dr. Reive in May 1928 who erroneously located this cemetery on the Pelham side of the townline; located "in a grove near the farm house" and noted as well maintained, but some stones were then old, broken and undecipherable; thought to have originated as a private burial plot for the Overholt family; names include Disher, Gilmore, Overholt, Wills and Winger; plot shown on Thorold map in Page's Atlas 1876 ; fenced in plot measures approximately 15 x 15 feet (4.572 m x 4.572 m) located in the property owner's front yard beside the house and garage

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Pleasantview Memorial Gardens (OGS 4671)	2250 Highway 20 (west of Highway 406) between Merrittville Highway (Regional Road 50) and Hansler Road, in Fonthill	Part Lots 149-150; 50 acres (20.23 ha); lands purchased by Pleasantview Memorial Gardens Ltd. in Jan. 1953 from Frank Hardy, May 1959 (Kenneth J. Jenter) and April 1959 (Bruce M. Brent; Thorold Township deeds #21021, 25745A, 53354A)	Ca. 1952-present; William H. Hammell (1904-1955)	Non-denominational	Approximately 21,500 burials	
Port Robinson Presbyterian Cemetery (OGS 5742)	North-east corner of Allanport and Canby Roads, Port Robinson	Part Lot 201	Ca. 1822-1981; Reive noted the oldest burial was that of Jane Elliott (1786-Nov. 8, 1819); latest burials Annie Rose (1894-1973) and Ethyle Munroe Stark (Dec. 5, 1981)	Presbyterian	133 marked burials; indeterminate number of unmarked graves	Church dates from 1822; site visited by Dr. Reive in Nov. 1930
St. John's West Cemetery (St. John's Old Cemetery) OGS 4674	South side of Holland Road, east of the Pelham-Thorold Townline	Part Lot 111	Ca. 1826-1885; Harriett Weaver (1796-Jan. 8, 1826) and Adam Uline (ca. 1770-Aug. 6, 1827) appear to be the oldest marked burials; Reive and others recorded John Leonard Street (June 27, 1813 aged 3) as the oldest gravestone but that of his sister, Anna M. Street (May 18, 1848 aged 2 months) throws the 1813 date into question; Lydia Davis (1800-Dec. 20, 1884) and Philip Reilly (ca. 1817-Dec. 5, 1885) are the last marked burials	n/a	20 marked (decipherable) graves recorded by Reive; OGS recorded the existence of 27 tombstones and/or fragments; indeterminate number of unmarked graves	Site visited by Dr. Reive in July 1926. He noted "many stones are broken and the inscriptions hard to decipher" and that the grass was "scythed occasionally"

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. Paul's Anglican Churchyard (OGS 4675)	South Street North, opposite Margaret Street, Port Robinson (between Canby and Island Streets)	Part Lot 202	Ca. 1846-1975; John Beatty (1844-Apr. 29, 1846) and Hannah Beatty (Aug. 3, 1846 aged 14 days) appear to be the oldest marked graves; Eva Leaney (1884-1975)	Anglican	173 known burials, indeterminate number of unmarked graves	
St. Peter's Churchyard (Old German Church)	North side of Seaway Haulage Road, west of Regent Street East, north of Old Lakeview Cemetery; site is between, and east of, Locks 6 and 7 of the present Welland Canal; also, near Lock 20 or 21 of the 3 rd Welland Canal (now a pondage area) and east of the pumphouse; originally located slightly south of the intersection of the Ten Mile Creek Road ("Road to Homer") and St. David's Road	Part of Thorold Township Lot 6; land deeded by Jacob Ball in March 1802 to the trustees of the Presbyterian and Lutheran Church for the use of a chapel, cemetery, school house and parsonage (Thorold Memorial deeds #365, 11149); land expropriated for the use of the 3 rd Welland Canal	Ca. 1802-1886; oldest marked graves moved to Lakeview were those of Sarah Hoover (1811), William Hoover (1813) and James Baker (1813.) Dates transcribed by Hugh Jack prior to 1962 from those tombstones moved to Lakeview Cemetery; his notes contain references to dates from the early 20 th century, suggesting that St. Peter's was used for burials for a longer period of time; tombstone of Hannah Lampman (d. 1793) said to have been located at St. Peter's, possibly moved here from a family plot, then moved to Lakeview?	Lutheran, Anglican	913 estimated burials, 667 probably remain in situ	Cemetery shown on 1876 map of Thorold on the east side of the "road to Homer"; was "abandoned" after the opening of Lakeview in 1886; approximately 246 graves were removed to Lakeview Cemetery in 1923-26, an estimated 667 remain in situ; cemetery is flooded by a pondage area of the present Welland Canal; during the navigation season, site with some tombstones visible when canal is drained for the winter; site contained a frame church built in the ca. 1790s, replaced by a stone church in 1832; stone church was only used for funerals or special services following the opening of St. John's (Anglican) in Thorold in 1856; St. Peter's was demolished during construction of the 3 rd Welland Canal; some foundation traces visible from the stone church; Jubilee History of Thorold, p. 30 ff.

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Smith Cemetery (DeCew Cemetery, Smith-DeCew Cemetery, Old Beaver Dams Cemetery) OGS 4673	Beaverdams Road (north side) at the intersection of Marlatts and DeCew Roads	Part Lot 52	Ca. 1787-1980s; earliest marked grave Peter Weaver (Mar. 7, 1801 aged 55); other gravestones transcribed in 1960s for Abigail Wilson (Feb. 7, 1797?) and Hannabel (d. 1787?); most recent burials Norman Putman (1895-1975) and Frances E. Putman (1896- 1981)	Presbyterian, Lutheran and others	133 marked burials, 15 other tombstones that were once known to be located here have disappeared; indeterminate number of unmarked graves; Reive recorded the names of 129 individuals buried here prior to 1926	Land purchased for £5 from Hiram Swayze by the Presbyterian and Lutheran Church Societies in May 1822 for use as a public burial ground; used as a cemetery prior to the land purchase; visited by Dr. Reive in July 1926, he noted some early stones were missing, others were hard to decipher; "very little care is given to it beyond occasional perfunctory cutting of the grass;" lost tombstones unearthed at the far edge of the site in 2019, as well as the intact tombstone of Catharine McClellan, died Mar. 17, 1817 aged 29 years, found beside (outside) of the present boundaries of the site; raises the question whether neighbouring houses have encroached on the burial site?
Smith Street Cemetery (Anglican) Cemetery (Holy Trinity Anglican Cemetery) OGS 4692	North side of Smith Street between Aqueduct and Chippawa Streets (Welland)	Part Lot 247 (Thorold Township); "English Church" Lot, Registered Plan 564; one acre (0.404 ha) purchased for \$170 in January 1859 by the Church Society, Diocese of Toronto, from Freeman Raymond (deed #6877)	Ca. 1838-1975; Phoebe C. Vanderlip (1834-June 27, 1838); Margaret Hodgson (1880-1973); H. Victoria Forster (1887-Sept. 23, 1975)	Anglican	282 marked burials, possibly 450 interments; indeterminate number of unmarked graves	Churchyard measures 2.65 x 3.76 chains (174.9 x 248.16 feet or 53.3 x 75.63 m), located approximately 300 feet (91.44 m) east of Aqueduct Street, between 28 Smith Street and Notre Dame College School (Holy Cross Fathers); site enclosed within an iron fence, well kept; church shown on 1876 Page's Atlas map but not the cemetery
Summer's house burial site	1922 Beaverdams Road	Part Lot 54	Unknown; infant female said to have been interred in the apple orchard east of the house; either a member of the Swayze family or a Summers family child	n/a	1 unconfirmed burial	Personal recollection of the late Esther Summers; grave site located between the house and the power canal referred to as "The Klondyke."

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Unnamed burial plot (near DeCew House)	De Cew Road (north side) between Faywell Road and Merrittville Highway (Regional Road 50)	Part Lot 41 or 42? Probably south of the original road allowance between Grantham and Thorold Townships, near the creek that flowed through the township lot; part of the George Griffith farm (1876); no reference in the abstract index to land reserved for use as a cemetery; site now part of Lake Moodie?	Ca. 1830s-1869; possible burial site of Frederick J. DeCew, an infant who died in 1847; tombstones for two children of Moses and Caroline Theal (an unnamed infant, d. Oct. 19, 1834, and James, 1837-May 23, 1849); James Robertson (Nov. 24, 1803-Jan. 21, 1869); Robertson was a Scottish born stone mason who worked on the Welland Canal; his stone house, named "Pleasant View," still stands on DeCew Road	n/a	3 known burials, possibly a fourth, as well as an indeterminate number of unmarked burials	Burials were located to the north-east of the ruins of DeCew house; part of the cemetery was probably flooded when Lakes Gibson and Moodie were created by hydro; some tombstones and burials may still exist <i>in situ</i> ? No tombstones presently visible, two were removed from the site and stored in the basement of a nearby house on DeCew Road; cemetery is not listed in the OGS database
Upper Family Burial Ground (OGS 4676)	West side of Thorold Townline Road (Regional Road 70) between Beaverdams Road (Regional Road 53) and Upper's Lane	Part Lot 43	Ca. 1841-1974; James Upper (ca. 1809-Sept. 21, 1841); Lloyd Johannes Upper (1953-Oct. 1, 1974); tombstone exists for Jacob Upper (died Sept. 20, 1846, aged 75) which some transcriptions have recorded as "1816"	n/a	24 marked burials; indeterminate number of unmarked graves	

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Upper Family Cemetery (private), ("New" Allanburg Cemetery) OGS 4677	East side of Seaway haulage road on the east side of the present Welland Canal, directly north of Centre Street and the "Old Allanburgh" Cemetery	Part Lot 95	Ca. 1875-2013; oldest marked burials are those of Anna Upper (ca. 1735-Mar. 10, 1809) and George Upper (died 1817) moved here from Beaver Dams; Catherine, wife of Major Anthony Upper (1777-1835), moved here from the "Old Allanburg" Cemetery; Carole Ann Mitchell Upper Gilligan (1963-2013); difficult to determine which was the first actual interment made <i>in situ</i> following the establishment of the cemetery	n/a	54 tombstones for 72 burials as well as footstones; some transcriptions list 87 burials; indeterminate number of unmarked burials; some graves moved here from the "Old Allanburg" Cemetery, as well as from a burial plot on the "old Upper Farm" on Lundy's Lane and from the Smith-DeCew Cemetery at Beaver Dams	Visited by Dr. Reive in July 1926 who simply referred to it as the "New Allanburg Cemetery" which was located "behind a knoll across the road from the old one." He noted that it was "established about forty or fifty years ago" when some burials were moved there from older graveyards; shown on the 1876 Page's Atlas map of Thorold on the J.W. Upper farm; access from the haulage road off Centre Street
Woodlawn Municipal Cemetery (OGS 4693)	South-east corner of Niagara Street (Highway 58) and Woodlawn Road, across from Holy Cross	Part Lot 239; land sold by George Davidson to the Woodlawn Cemetery Co. Ltd. in 1913; Registered Plan 17, now known as Plan 651, show that the cemetery was enlarged in June 1913	1913-present; Emma Warrington Ross (ca. 1846-Sept. 5, 1891); Margaret Johnstone Maccomb (1874-1912); Rev. Gabriel Johnstone (1842-Jan. 5, 1913); George Herbert Johnstone (1889-Nov. 24, 1913); Rebecca A. Brown (1829-1914); Phoebe Jane Pitman (1851-1914)	Non-denominational	4,000+ burials?	Now part of the City of Welland but located in the former Township of Thorold; Cemetery lands sold to the Woodlawn Cemetery Co. Ltd. by George Davidson in 1913; cemetery sold to the City of Welland for \$1 in 1970; laid out in lettered sections "A" to "U" inclusive; many Serbian, Ukrainian and Hungarian burials, as well as a few Chinese; by the cemetery; some burials pre-date the land purchase date, possibly moved here from other locations?

Table B14: Cemeteries in Wainfleet Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Wilson Chambers Farm Cemetery	Unknown, near Riverside Drive?	West half of Lot 21 in Concession 6 or in Con. 7? These 200 acres purchased by Robert Chambers in March 1825 (<i>Wainfleet Memorial deed #6589</i>); west half of his farm bequeathed to his son Wilson under the terms of his will dated June 21, 1872 (registered Sept. 13, 1876; <i>Wainfleet deed #1467</i>) The burial plot is not referred to in the will	Ca. 1852-1890; Henry Chambers (1851-1852); Robert Chambers (1801-1876); Jessie Chambers (d. 1890)	n/a	5 marked burials, indeterminate number of unmarked burials	“On the Welland River about seven miles from Welland;” visited by Dr. Reive in October 1928, who noted the cemetery was “in good order.” During the 18 th and 19 th centuries cemeteries and burial plots were often located close to water; it is reasonable to tentatively place this burial site on the west part of Lot 21 Con. 7., possibly near Little Forks Creek which runs through the property
Farr Cemetery (Brown Cemetery; Farr or Brown Cemetery) OGS 5761	60177 River Road (south side Regional Road 27)	Part Lot 1 Concession 6 (some transcriptions place this cemetery on part Lot 2)	Ca. 1843-present; Alexander Brown (1769-1843); Norvall Francis Farr (1917-1919); Elaine Melissa Farr (1968-2007); some transcripts list stones dated 1818, which is probably an error for 1848	n/a	30+ marked burials, indeterminate number of unmarked graves	Site visited by Dr. Reive in July 1926, who noted it was fenced in and “an attempt made to keep it in order;” other surnames include Clarkson, Haun, Lamb and Williams
Grabell’s (Graybiel’s) Cemetery (OGS 4680)	12036 Station Road (west side), north of Lakeshore Road	Part Lot 20 Concession 1; square plot, one-half chain and 22 links square (approximately 47.5 feet square)	Ca. 1850-1887; Margaret Kinnard (1808-1850); Chester Kinnard (1801-1887)	n/a	12 graves were once marked, 4 stones found on site today; indeterminate number of unmarked graves	Visited by Dr. Reive in October 1931; “graves on a farm near Long Beach, terribly neglected;” other surnames include Berrars, Grabell, Miller and Sherk; site partly fenced and identified by a sign

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
McEown Family Burial Ground (McEwan Family Cemetery) OGS 6279	North side of Riverside Drive (Regional Road 27) west of Deeks Road extension; in the vicinity of 60990 Riverside?	Part Lot 10 Concession 6	Ca. 1839-1865; Patrick McEown (1752-Nov. 22, 1839); Eliza McEown (1769-Oct. 22, 1848); John J. McEown (1794-Aug. 10, 1865)	n/a	3 marked burials, indeterminate number of unmarked graves	Cemetery shown on 1876 <i>Page's Atlas</i> map of Wainfleet
Maple Lawn Cemetery (OGS 4681)	Between Zion and Smith Roads north of Forks Road (Highway 3); access from Zion Road, or off Smith Road along "Cemetery Drive"	Part Lots 36-37 Concession 5; additional lands acquired 1880, 1911, 1946; site now approximately 6½ acres (2.63 ha)	Ca. 1810-present; Jane Austin (ca. 1810- Apr. 8, 1841) is one of the oldest marked graves; John Killman (1824-Apr. 27, 1851); Joseph Mar (ca. 1770-Sept. 1, 1851); Rhoda C. Winger (1926-2018); Donald J. Bossert (1933-2018) are among the many recent burials	Non-denominational?	1,280+ burials, indeterminate number of unmarked graves	Land donated for use as a cemetery by Christian and Moses Sider in 1810; site identified by signs and an inscribed stone; main entrance flanked by gates; site "thought" to have been used by the natives as a burial place, then used as a family burial plot during the early 1800s
Morgan's Point Cemetery (OGS 4682)	11430 Lakeshore Road West	Part Lot 14 Concession 1; Registered Plan 15 (now known as Plan 742)	Ca. 1839-present; Delos B. Schooley (1823-1839) and Eliza Davis (1819-Aug. 18, 1840) among the earliest marked graves	Originally Methodist Episcopal; now non-denominational?	1,200+ marked burials, indeterminate number of unmarked graves	Original cemetery lands donated by David Morgan; two additional parcels donated by Norman Morgan; visited by Dr. Reive in July 1931; site clearly identified by a gate with the name in an overhead arch; Registered Plan 742 shows a Methodist Church lot at the south-west corner of the cemetery
Oakwood Cemetery (City of Port Colborne Municipal Cemetery) OGS 4683	10672 Lakeshore Road West	Part Lots 6 and 7 Concession 1, "near Reeb's Bay on Lake Erie" Registered Plans 2 and 4 (now known as Plans 729 and 731) shows that the cemetery was enlarged in 1893 and 1900	Ca. 1815?-present; Catherine Hershey (ca. 1748-Mar. 6, 1815); Eliza Morgan (1752-1819)	Non-denominational	1,589+ marked burials, indeterminate number of unmarked graves	Twenty-four graves moved here from an earlier cemetery at Port Colborne (Gravelly Bay) which was destroyed by the construction of the Welland Canal, and which dated between 1839 and 1883; site visited by Dr. Reive in June 1929 who described it as a "large, well-kept cemetery;" plans for this cemetery filed in the Land Registry Office; cemetery originally named "Eidelweis Cemetery"

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
O'Reilly's Cemetery (Park Family Cemetery, Park Graves on farm near O'Reilly's Bridge on King's Highway) OGS 4679	60707 River Road (O'Reilly's Road and Regional Road 27?)	Part Lot 7 or 8 Concession 6	Ca. 1825-1865; Jane Park (1824-May 24, 1825); Capt. Sheubal Park (ca. 1777-Feb. 15, 1826); John J. McCown (ca. 1794-Aug. 10, 1865); two tombstones incorrectly transcribed as 1815 rather than 1845?	n/a	7 marked burials, indeterminate number of unmarked graves	Site visited by Dr. Reive in July 1930 who believed the cemetery contained "many other unmarked graves"
Riverside Cemetery (Christian Reform Calvinistic Church, Wellandport Cemetery) OGS 4685	West side of Wellandport Road (Regional Road 4) south of the intersection of Regional Roads 4 and 27, on the south side of the Chippawa Creek or Welland River; across the road from 84011 and 84013 Wellandport Road, and directly beside or north of Gethsemene Ministries at 84008 Wellandport Road	Part Lot 40 Concession 7	Ca. 1833?-present; Nancy E. Fulsom (1820-1833); infant Misener daughter, d. July 15, 1844 aged 2 days; Abraham Angle (d. June 1846); Francis Robertson (1781-Aug. 16, 1846); several burials from the 1850s; Henry DeJong (d. July 2017); Ruth Viola Seeber (d. Feb. 2019); David William Souter (d. May 2019)	Originally Presbyterian; now non denominational?	Reive recorded 186 individuals interred at this site prior to 1931; indeterminate number of unmarked burials	Site is partly enclosed by a fence, and well maintained; visited by Dr. Reive in September 1931; Reive mistakenly placed this cemetery in Gainsborough Township
Sensabaugh Cemetery (OGS 4684)	South side of Canboro' Road, between Robinson Road and Regional Road 45, near the Chippawa Creek	Part Lot 58 Concession 7; ½ acre (0.202 ha) donated by Christian Sensabaugh for use as a cemetery in 1842	Ca. 1838-present; Christian Sensabaugh (1752-May 13, 1838) and wife Jane (Hammond) Sensabaugh (1762-Mar. 8, 1849) among the early graves; Edna Joyce Harrington (d. Dec. 3, 2008) and Beverly Harrington Dougher (1944-2010) among the more recent burials	n/a	Possibly 265 burials; indeterminate number of unmarked graves	One transcription referred to Eli Bristol (1767-1816?) as being interred here; site clearly marked by a sign

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Wills' Cemetery (OGS 4686)	East side of Winger Road north of Highway 3 (to the east or rear of 53217 Winger Road)	Part Lot 31 Concession 5; land donated by George Wills	Ca. 1849-1948; Gordon Wilson (1846-Mar. 23, 18[4]9); Eliza Beachim (1822-Sept. 4, 1862); William Arthur House (1875-1948)	Non-denominational	39 marked burials, possibly 46 burials in total; indeterminate number of unmarked graves	OGS database places this cemetery in Concession 7
Willson (Willson's or Wilson's) Cemetery (OGS 4687)	42346 King Street East (Highway 3) near the intersection of Highways 3 and 24	Part Lots 22-23 Concession 5; original land grant made in June 1837 by Hiram Willson "as a free burying ground without prejudice of class or creed;" cemetery enlarged 1937	Ca. 1841-present; Eliza Marsh Bradshaw (ca. 1794-Feb. 12, 1841); Eliza Muir Gilmore (1813-Dec. 28, 1844); Gerrit Jan 'Gerry' Evers (1935-May 8, 2016); Olga Annie Lovell (1924-May 9, 2017)	Society of Friends (Quaker); now non-denominational?	59+ marked burials, indeterminate number of unmarked graves	One transcription listed Sarah Brown Bradshaw who died in "1815" aged 36 years, the year is clearly 1845
Zion Cemetery (Marrs' Cemetery, Marr's Hill Cemetery, Zion United Cemetery) OGS 4688	53819 Zion Road (Highway 3) north of Forks Road and east of Winger Road	Part Lot 37 Concession 5; Enos Marr reserved a ½ acre of land around the Dunn burial plot in 1892; Peter Barrick sold additional land to the trustees (north side of the cemetery) in 1897; cemetery enlarged again in 1934 and 1936	1831-present; Ellen Dunn (died 1831 aged 5 months)	United	2,208 marked burials, indeterminate number of unmarked graves	Site began as a private family burial plot for the Dunn family; partly enclosed by a fence, well maintained grounds

Table B15: Cemeteries in Willoughby Township

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Battle of Chippawa National Historic Site	West side of Niagara Parkway, between Service Road 30 and Edgworth Road, just north of Ussher's Creek	Part Lots 21 and 22 Broken Front	1814	n/a	168+; estimated casualties 108 British (includes 16 First Nations warriors), 60 Americans	British and American casualties likely remain in situ from the Battle of Chippawa, July 5, 1814; site contains National Historic Site monument
Bossert Road Cemetery (Byer Burial Ground) OGS 5756	South side of Bossert Road, west side of the Niagara Parkway	Part Lot 8 Concession 1; approximately 20 x 60 feet (6.096 x 18.28 m) or 0.30 acres (0.121 ha)	Ca. 1839-1895; John Byer (1839), Mary Byer (1855) and Jacob Byer (1895)	n/a	3 known burials, possibly other unmarked graves	Site located in a pine grove
Chippawa Presbyterian Church Cemetery (OGS 4625)	8280 Willoughby Dr. (Chippawa)	Part Lot 22 Concession 2; "Presbyterian Church Lot," east side Church Street, Plan 251; land deeded to the church trustees by James Cummings in November 1845 (<i>Willoughby Memorial deeds #246.</i>)	Ca. 1841-1953; Isabella Orr (ca. 1839-Aug. 13, 1841); Ellen M. (Sloggett) Kister (1869-1953)	Presbyterian	68 marked burials, indeterminate number of unmarked burials; Reive recorded the names of 117 individuals interred at this site prior to 1929	Congregation organized 1821, church erected between Dec. 1842 and May 1843 at cost of \$700; replaced by brick edifice in 1891, enlarged 1933 and 1950, closed in Jan. 1961; visited by Dr. Reive in June 1929, who noted that the front portion was well kept "but that at the rear of the church is disgraceful and entirely uncared for--- graves sunken, stones fallen, and generally grown wild, in bad shape, many stones broken and unreadable;" cemetery is at the rear of the church, access from Niagara Street, opposite Bond Street
Dell Cemetery (Dell Methodist Burial Ground) OGS 4696	Rexinger and Dell Roads (between Welland River and QEW)	Part Lots 7 and 8; 1 acre (0.404 ha) donated by Henry Dell in 1851 and known as the "Dell Chapel and Cemetery" property	Ca. 1826-1964; Mary Jane (Dell) Burns (d. June 16, 1826? aged 36); Ellis Burns (1834-Apr. 13, 1835); Thomas D. Dell (1873-Mar. 17, 1964); Reive recorded the oldest stone that he found as that of Mary Dell (1805-1840)	Methodist Episcopal/United	98 marked burials, site thought to contain at least 110 burials; indeterminate number of unmarked graves; Reive recorded the names of 73 individuals interred at this location prior to 1929	Site once contained a chapel "Dell Church near Lyon's Creek"; visited by Dr. Reive in August 1929 who noted the condition of the stones, and the "veritable wilderness" of weeds and thickets which made some stones inaccessible.

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Gonder Cemetery (Gonder Graveyard, Gonder Burial Ground) OGS 4698	South of Sherk Road, east side of Gonder Creek (east of Willoughby Drive, south of Sherk Road)	Part Lot 6 Concession 1; 0.4 acres (0.16 ha)	Ca. 1813-1895; Michael Gonder (1742-1813) believed to be the first burial; Thomas Gonder (1833-1895)	n/a	Site thought to contain 18 or 20 burials, indeterminate number of unmarked graves; site contained 14 tombstones and 8 footstones when transcribed in 1957, presently has five visible broken tombstones	Site originally enclosed with a brick wall, now contained within a metal, farm fence with a gate; difficult access, site heavily wooded; referred to by Janet Carnochan as the "burial place on the old Gonder farm;" also noted in the <i>History of Welland County</i> (1887) p. 545; surnames include Gonder, Price, Thompson and Fares.
Lapp Cemetery (OGS 4699)	2703 Detenbeck Road (north side of Detenbeck Road near River Road/Niagara Parkway)	Part Lot 15 Broken Front, 0.05 acres (0.020 ha)	Ca. 1812-1895; Eliza Lapp (d. 1812); Eliza Lapp (ca. 1766-Sept. 26, 1828); Anna Lapp (ca. 1843-Mar. 16, 1895)	n/a	15 marked burials, indeterminate number of unmarked graves	Burial ground for the Abraham Lapp family, also used by members of the Hershey family
Lee Plot (Herbert Lee's Family Burial Plot; "Abandoned Plot") OGS 5741	3810 Detenbeck Road (south side) at Sodom Road (or west side of Willoughby Road), now part of the City of Niagara Falls	Part Lot 10 Concession 11; approximately 20 x 20 feet (6.09 x 6.09 m) or 0.06 acres (0.024 ha)	Ca. 1862-?; Mariah wife of Herbert Lee (1810-May 21, 1862)	n/a	1 known burial, possibly other unmarked graves	Abandoned plot
Lutes Farm Plot (Hershey Family Burial Ground) OGS 4695	2581 Miller Road (north side) between an abandoned railway line and the Niagara Parkway (now part of the City of Niagara Falls)	Part Lot 15 Concession 1; 0.20 acres (0.080 ha), plot measures 20 x 20 feet (6.096 x 6.096 m)	Ca. 1845-?; Christian Hershey (1768-1845) and wives Mary (Acre) and Eliza (Snyder) Hershey	n/a	3 known burials, possibly other unmarked graves	Original farm lot of Christian Hershey, later bought by the Lutes family; plot enclosed with a fence, no tombstones visible

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
Miller Cemetery I and Miller Cemetery II (Miller Family Burial Ground, Jacob Miller Family Cemetery) OGS 5755	9819 Niagara Parkway and Weaver Road; 7710 Ridge Road; OGS describes the plot as being on the north side of Miller Road, west side of the Niagara Parkway; other local residents place it on the north side of Weaver Road, west side of the Niagara Parkway (between the Parkway and Willoughby Dr.), and to the rear of the Willick house	Part Lot 17 Broken Front; 0.60 acres (0.242 ha)	Ca. 1834-1912; Mary Miller (d. June 1, 1834 aged 60+ years); John Miller (Dec. 2, 1839 aged 75); Sarah Miller (1831-1912)	n/a	20 tombstones; indeterminate number of unmarked graves	Other surnames include Fares, Hershey, Holcomb, Weaver and Emerick
Misener (Misoner) Burial Plot (McCredie Farm Cemetery, McCredie Hill Cemetery, McCredie Road Cemetery) OGS 5739	East side of McCredie or Lyon's Creek Road near Willodell Road, west of Lyon's Creek	Part Lot 13 Concession 7; 0.002 acres (0.00080 ha) or 5 x 5 feet (1.52 m x 1.52 m) on McCredie farm	Ca. 1801-?; Mary (VanSickle) Misoner (1779-Oct. 17, 1801)	n/a	1 marked burial within an enclosure, indeterminate number of unmarked graves; Basnett Dell Jr. and his wife Ann (DeFields) Dell believed to be buried here	Believed to be a single grave, visited by Dr. Reive in the 1920s; he noted that it was on a roadside knoll on the "White Pigeon Road" with no care provided; site now thought to be larger, other graves covered over when Lyons Creek Road was constructed
Morningstar Cemetery (OGS 5622)	East side of Switch Road between Netherby Rd and the Niagara Parkway	Part Lot 17 Broken Front	Ca. 1848-1873; John Morningstar (ca. 1771-Feb. 28, 1848); Anna Morningstar (ca. 1835-Mar. 23, 1873)	n/a	8 tombstones and footstones; indeterminate number of unmarked graves	Access via 3999 Niagara Parkway

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. John's Lutheran Church (Snyder) OGS 4700	East side of Sodom Road, north of Netherby Road (Fort Erie), across the road from St. John's United Church (14789 Sodom Road) but directly beside (north) of 3354 Sodom Road	Appears to form part Lot 5 in the Cross Concession of Willoughby; deed for the use of a "school and meeting house" was dated August 1837, with a subsequent trust deed in May 1845 (<i>Willoughby Memorial deeds #201, 2661</i>); the Page's Atlas map of Willoughby (1876) placed the cemetery in error on part Lot 25 adjoining the Cross Concession, some cemetery transcripts therefore place the cemetery on Lot 25; the Tremaine map (1862) correctly placed the church on Lot 5 in the Cross Concession but did not indicate the location of the cemetery across the road	1846-present; Michael Kronmueller (1825-Apr. 18, 1846); at least one Fenian Raid casualty buried here in 1866; June Bernice Detenbeck (1933-July 31, 2017) one of the latest burials	Lutheran	indeterminate number of unmarked graves	St. Johannes Evangelische Kirche congregation established 1834; land purchased from the Kronmueller family for use as a cemetery in May 1845, cemetery enlarged 1894; forms the south part of the cemetery; log church replaced by present building in 1861; name changed to St. John's Evangelical Church in 1928, and then to St. John's United in 1956; some tombstones in German, eg, Magdalena Lentz (1828-July 26, 1848); site clearly marked by sign, enclosed by fence and stone pillars on Sodom Road; separated by a strip of land from the newer United Church cemetery; well maintained cemetery

Cemetery Name	Address	Lot/Concession	Date Range	Religious Affiliation	Number of Burials	Remarks
St. John's United Church Cemetery, Snyder (St. John's Stevensville United Church Cemetery) OGS 4701	East side of Sodom Road, north of Netherby Road (Fort Erie); across the road from St. John's United Church (14789 Sodom Road)	Appears to form part Lot 5, Cross Concession in Willoughby	Ca. 1846-present;	United	356 marked burials, indeterminate number of unmarked graves	Cemetery located across the road from the original 1861 brick church; forms the north half of the site; divided into four sections A, B, C and D; cemetery partly enclosed by a fence and stone pillars on Sodom Road; separated by a strip from the older Lutheran cemetery; well maintained cemetery
St. Joseph's (Snyder) Roman Catholic Cemetery (OGS 4702)	3691 Netherby Road (north side, Regional Road 25), east of Sodom Road (opposite to Snyder Street)	Part Lot 12 Concession 13 (some websites list it as part Lots 24 and 25?)	Ca. 1848-present; Mary A. Curren (ca. 1763-Apr. 8, 1848); Theobold Köbel (ca. 1772-June 11, 1848); Jane E. (Skinner) Willick (1949-2015); Eliza Nepp (1929-2015)	Roman Catholic	Indeterminate number of unmarked graves	Church and cemetery "established 1849;" cemetery re-dedicated 1999; church on site; small heritage plaque for re-dedication; church stands on site; some tombstones in German, carved in Germanic script; cemetery well maintained
Weaver Cemetery (OGS 4703)	North side of Willick Road west of Sodom Road	Part Lot 18 Concession 3; 3 acres (1.21 ha)	Ca. 1860-1983; Johann Rausow (1825-Aug. 25, 1860); George P. and Matilda Weaver (infants, d. 1873); Mabel E. (Ort) Weaver (1896-1983)	n/a	55 marked burials, Indeterminate number of unmarked burials	German Evangelist Protestant United St. Paul's Church of Chippawa established 1863; the first burial (Rausow) was a German Evangelist; part of the cemetery property deeded to George Weaver in 1872, and used for burial of his family members
Willick Burial Ground (OGS 5754)	West side of Sodom Road, north side of Detenbeck Road, Niagara Falls	Part Lot 11 Concession 3; approximately 10 x 10 feet (3.048 x 3.048 m); 0.009 acres (0.0036 ha)	Ca. 1831-1893; Nicholas Willick (d. 1831); Benjamin Willick (Nov. 5, 1834 aged 10 months); Esther Willick (died June 29, 1893)	n/a	8 marked burials, possibly other unmarked graves	Stones laid horizontally in a central area; site enclosed within a fenced area
Willoughby United Church Cemetery (Evangelical United Brethren, Willoughby Church Cemetery) OGS 4697	13173 Ort Road (north-west corner of Sauer and Ort Roads), Niagara Falls	Part Lot 5 Concession 4; 0.44 acres (0.178 ha)	Ca. 1823-present; Christian Shoup (1823); Howard A. Plyley (1905-1983)	United, Evangelical United Brethren	115+ marked burials, indeterminate number of unmarked graves	Site possibly started as family burial plot; Willoughby Evangelical Church established 1839; other names include Heximer, Miller, Morningstar, Sauer, Winger and others; some tombstone inscriptions are in German; site enclosed within a metal fence, identified by a sign; the original Victorian era brick church still stands at the corner



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NIAGARA
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APPENDIX C: CONTINGENCY PLAN FOR ACCIDENTAL DISCOVERIES

VIBRANT REGION



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1. Introduction

The archaeological sites that are the physical remains of the Niagara Region's 13,000-year settlement history represent a fragile and non-renewable cultural heritage resource that must be conserved and protected.

An archaeological management plan (AMP) for the Niagara Region has now been completed and represents a comprehensive approach to the conservation of its archaeological resources.

While the AMP reduces the risk of unexpected discovery of archaeological remains during construction (such as disturbing a burial site or nineteenth century building foundation), the Niagara Region's Official Plan calls for the preparation of a contingency plan to be adopted by by-law. This document therefore addresses a process for dealing with such discoveries:

- A notification process involving the Niagara Region, local area municipalities, relevant Indigenous communities, and Province;
- An investigation and reporting process undertaken by a consultant archaeologist;
- Recommendations for financial responsibility, structured according to the ability to pay of public sector, private sector, and individual landowners. In support of individual landowners, it may be advisable for the Niagara Region to establish a contingency fund; and,
- Recommendations for the consideration of greater latitude and flexibility in assisting individual landowners by extending inducements of various types to the private owner/developer in the community interest (e.g., rebates, temporary assessment freezes).

One of the underlying premises of this contingency plan is that upon discovery of an archaeological resource in an urgent situation, it is illegal for any person or agency to alter that archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario. This offers automatic protection to all archaeological sites and the Niagara Region must exercise due diligence in all contexts, including emergency situations, such as broken water mains, to ensure that archaeological features are protected from disturbance of any nature.

While the nature of the emergency must obviously be balanced with the needs of archaeological resource conservation, the identification of human remains in such situations requires an immediate cessation of work in the area of the remains.

This contingency plan is divided into two main parts, the first of which presents a process for dealing with urgent situations concerning non-burial archaeological resources. The second part includes a best practice approach to situations involving the unanticipated discovery of human remains. These parts are followed by recommendations and references.

2. Discovery of Archaeological Resources (Non-Human Remains)

2.1 Defining Archaeological Resources

The 2020 [Provincial Policy Statement](https://www.ontario.ca/page/provincial-policy-statement-2020) (https://www.ontario.ca/page/provincial-policy-statement-2020) defines archaeological resources (Section 6.0, Definitions) as including “artifacts, archaeological sites, and marine archaeological sites.” Individual archaeological sites are distributed in a variety of locational settings across the landscape, being locations or places that are associated with past human activities, endeavours, or events. These sites may occur on or below the modern land surface or may be submerged under water. The physical forms that these archaeological sites may take includes the following: surface scatters of artifacts; subsurface strata which are of human origin or incorporate cultural deposits; the remains of structural features; or a combination of these attributes.

As such, archaeological sites are both highly fragile and non-renewable. The Ontario Heritage Act (Ontario Regulation 170/04) defines “archaeological site” as “any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest;” “artifact” as “any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest;” and “marine archaeological site” as “an archeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water.” Archaeological fieldwork is defined as “any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring, surveying, recovering, and excavating.”

2.2 Contingency Plan Policies & Protocols in Other Jurisdictions

Relevant planning policies do exist within infrastructure agreements between environmental monitoring agencies in association with, or separately from, Indigenous communities in Canada and large infrastructure construction corporations (e.g.,

TransCanada Pipelines, Enbridge). The policies in such agreements follow a similar direction to those presented here, although they are also consistent with the corporate consultation and contingency planning policies of those corporations and those of the planning jurisdiction(s) within which the project is located.

Thus, there are numerous models upon which to base the creation of *specific* emergency procedures in terms of the course of actions to take upon the discovery of archaeological resources. Such protocols are found applied to specific projects, such as state- or sometimes city-level infrastructure works in the United States (i.e., New York City, Minnesota, Wyoming and Washington State). These are all situations in which the funding and legislative context has triggered archaeological requirements. Some American state departments of transportation, such as California, also maintain a roster of contractors qualified to carry out the cultural resource management components of their development projects.

For major projects undertaken by the Niagara Region, special clauses might be inserted in agreements with the contractors to allow for emergency discoveries of archaeological resources. In New Zealand, for example, the Heritage Places Trust may require that an “Accidental Discovery Protocol” be applied to private development projects, and the protocol may form part of the original archaeological assessment report(s) completed for the initiative. Such documents are generally comparable with Ontario’s “Discovery of Human Remains – Best Practices Protocol” (see Section 3.0) in terms of the manner in which they outline the steps to be followed (e.g., stop work → secure area of concern → notify authorities → consult with relevant stakeholders and experts to evaluate significance → develop suitable mitigation plan, etc.). Such plans may also identify specific individuals who will serve as project management and supervisory personnel, agency and stakeholder contacts and archaeological consultants who are responsible for implementing the procedures, should they be required during the execution of the project.

2.3 Dealing with Accidental Discovery of Archaeological Resources - Roles and Responsibilities

2.3.1 Role of Province

The Ministry of Citizenship and Multiculturalism is charged under Section 2 of the [Ontario Heritage Act](http://www.mtc.gov.on.ca/en/heritage/heritage_act.shtml) (http://www.mtc.gov.on.ca/en/heritage/heritage_act.shtml) with the responsibility to “determine policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario” and so fills the lead provincial government role in terms of direct conservation and protection of cultural resources.

The Minister is responsible for determining policies, priorities, and programs for the conservation, protection, and preservation of the heritage of Ontario. These goals are generally accomplished through other legislated processes, such as those required by the [Planning Act](https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act) (https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act) and [Environmental Assessment Act](https://www.ontario.ca/laws/statute/90e18) (https://www.ontario.ca/laws/statute/90e18), rather than directly through the *Ontario Heritage Act* itself.

The Culture Division of the Ministry of Citizenship and Multiculturalism has the primary administrative responsibility under the *Planning Act* and *Ontario Heritage Act* for matters relating to cultural heritage resource conservation including archaeological resource identification and mitigation in advance of land development, specifically the Archaeology Programs Unit with respect to the latter.

The *Ontario Heritage Act* governs the general practice of archaeology in the province in order to maintain a professional standard of archaeological research and consultation. The Minister is responsible for issuing licenses to qualified individuals. All consultant archaeologists who undertake Stage 1 to 4 archaeological assessments must be licensed by Ministry of Citizenship and Multiculturalism. All work conducted by the consultant archaeologist must conform to the standards set forth in the most current [Standards and Guidelines for Consulting Archaeologists](http://www.mtc.gov.on.ca/en/archaeology/archaeology_s_g.shtml) (http://www.mtc.gov.on.ca/en/archaeology/archaeology_s_g.shtml) (2011) authorized by the Ministry of Citizenship and Multiculturalism and the accompanying bulletins, such as [Engaging Aboriginal Communities in Archaeology](http://www.mtc.gov.on.ca/en/publications/AbEngageBulletin.pdf) (http://www.mtc.gov.on.ca/en/publications/AbEngageBulletin.pdf). All archaeological fieldwork in urgent situations must be carried out by consultant archaeologists.

In the case of the discovery of unanticipated archaeological remains, under Subsection 48(1) of the *Ontario Heritage Act*, it is illegal for any person or agency to knowingly alter an archaeological site without a license. Alteration of an archaeological site is deemed to include any form of unsanctioned disturbance or destruction of an archaeological resource brought about by any means (e.g., construction, archaeological excavation, or soil disturbance of any nature on the site). This in effect offers automatic protection to all archaeological sites and the Niagara Region should help in all accidental discovery contexts to ensure that archaeological features are protected from further disturbance of any nature.

Accordingly, contractors should stop work in the vicinity of a find pending its assessment by a consultant archaeologist. It is likely that most discoveries will be found by a contractor, a pedestrian observer, a private citizen on their own property, or a Niagara Region official. In any of these cases, authorities should be alerted and any

further disturbance to the archaeological resource should stop. Once the Niagara Region has adopted this plan with a by-law, the Niagara Region's by-law enforcement staff can issue a stop work order in such situations, if necessary.

All reports on archaeological investigations concerning accidental discoveries will be submitted to the Ministry of Citizenship and Multiculturalism by the consulting archaeologist, as a condition of an archaeological license. These will be reviewed by Ministry of Citizenship and Multiculturalism staff to ensure that the activities conducted under a license meet current technical guidelines, resource conservation standards, and the regulations of the *Ontario Heritage Act*. The reports must also be provided to the Niagara Region's Planning Department. Figure 1 outlines the basic process to be followed in a development context.

2.3.2 Role of Niagara Region and the Local Area Municipalities

Figure 1 charts the steps in the process of dealing with an accidental discovery of archaeological remains and Appendix A of this contingency plan includes one page instruction sheets for handling the accidental discovery of archaeological resources or human remains. In the event that a municipal employee (regional or local area) observes archaeological deposits during a property inspection, he or she should consult the one-page instruction sheet and make the necessary calls to alert officials to the discovery. The person discovering or reporting the deposit can seek assistance from the appropriate municipal planning department should they require help in identifying whether a feature is archaeological in nature and/or determining next steps. A roster of pre-qualified consultants can also be used to secure professional help immediately in the case of either private property projects or public sector projects (see Recommendation 4 in Section 4).

2.3.3 Role of Consultant Archaeologist

Once a consultant archaeologist has attended to the scene, retained by either the relevant municipality or a private proponent/landowner, the consultant archaeologist will define the nature and extent of the deposit and direct arrangements for the protection of the precise area of concern. Should a stop work order have been placed by the municipality, arrangements can be made to have it rescinded to allow a development proponent or property owner to carry on without impact to the archaeological resource. The consultant archaeologist will then investigate the archaeological resource and assess the potential impact to the archaeological resource posed by the soil disturbance, development, and/or site alteration.

The development proponent or property owner, the consultant archaeologist, the Ministry of Citizenship and Multiculturalism, and the municipal approval authority must then arrive at appropriate decisions regarding integration of that resource into the development plan or the implementation of mitigative options. In the case of the discovery of Indigenous archaeological resources, the consultant archaeologist is required to engage with the appropriate First Nations to seek their input into this process in accordance with the Standards and Guidelines and Niagara Official Plan policies.

2.3.4 Role of Property Owner

Should the resource be further threatened on a construction site, the two options available are to immediately avoid and protect the resource in the development plan, such as through the allocation of the area as non-parkland open space or undertake procedures to mitigate the resource through excavation. In the case of a private property owner, the decision will generally be to either abandon the project or undertake mitigative removal of the feature. These decisions will most likely be subject to a cost-benefit analysis where the mitigative option involves input from all of the stakeholders (i.e., the municipal approval authority, Ministry of Citizenship and Multiculturalism, First Nations, and the property owner). In the case of a private property owner, the financial implications of an unexpected find may be onerous (see Recommendation 3 in Section 4. All participants in any consultation process undertaken in the event of an unexpected discovery must enter into it with the understanding that it will take some time to complete.

Emergency Response Process for Accidental Discovery of Archaeological Resources

Appendix D of the Niagara Region AMP sets out the criteria for determining the cultural heritage value of archaeological resources, including information value, value to a community and value as a public resource. There is also a set of indicators based on these criteria, which helps to determine which archaeological resources are significant and therefore must be preserved or conserved. Appendix D of the AMP describes a number of mitigative options, including avoidance, modifications to construction techniques, long-term protection, and various degrees of documentation and/or excavation.

It should be noted that detailed information regarding a site is frequently required in order to make a more accurate assessment of significance and to determine the potential for adverse effects. This may involve different levels of intensity and phases of on-site investigations.

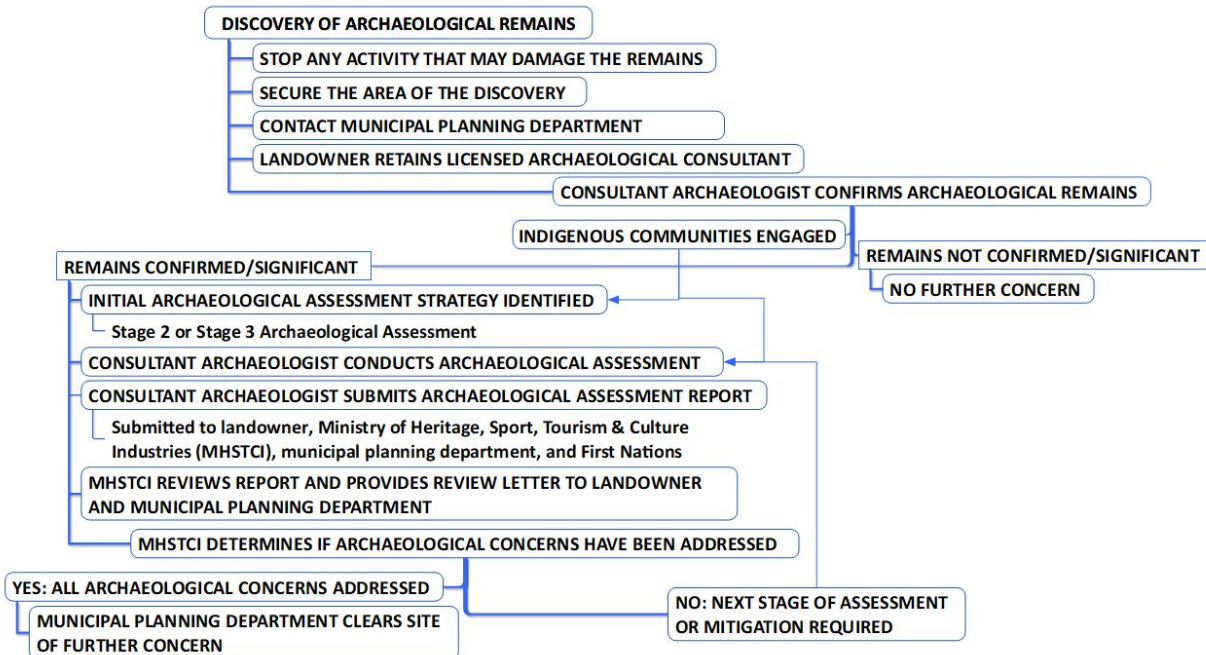


Figure 1: Emergency response process in the event of the accidental discovery of an archaeological site.

3. Discovery of Human Remains

Best Practices Protocol

The following is designed to assist all those involved in responding to and addressing unanticipated discoveries of human skeletal remains outside of a licensed cemetery. This is presented as a series of best practices among the many overlapping interests and jurisdictions of several ministries, agencies, police services and other government bodies that are triggered when human skeletal remains are uncovered. This approach was developed originally for the Toronto region with the support and approval of many Indigenous representatives from across Ontario and is equally applicable to discoveries of human remains elsewhere in the province.

These best practices support the existing regulatory and statutory mechanisms in Ontario. Responsibility for previously unknown human remains passes through a number of jurisdictions (i.e., Police, Coroner, and the Registrar of Burials in the Ministry of Public and Business Service Delivery), and the intent of this section is to ensure this flow is effective and as seamless as possible.

Media Notification

Getting through the entire discovery and disposition process when human remains are found will see the authority for the issue shift among several agencies. As such, until all investigations have been carried out and the disposition resolved, formal press releases or contacting the media should only occur if all affected authorities have concurred (i.e., Police, Coroner, First Nations and Registrar of Burials). In addition, after all investigations have been completed, the concerns of the landowner and group acting as representative for the deceased should be considered before media contact. Premature media notification, particularly prior to having accurate identification of the deceased, will lead to misinformation, misplaced concerns being raised, and potentially a hardening of attitudes. This can make a final disposition agreement more difficult to reach.

Any media interest should be directed to the agency that has authority over the burial site at the time of the media contact (i.e., Police, Coroner's Office or Registrar of Burials). Media photography of the remains, particularly if they are of Indigenous peoples, should be avoided. A publicly displayed photograph of skeletal remains may be offensive to representatives of the deceased.

Role of Consultant Archaeologist

It is important to note that the discovery of human remains will occur in two basic contexts: either through accidental discovery by an individual in unexpected circumstances such as construction or through discovery as part of an archaeological examination/excavation of a locale by a consultant archaeologist. In any case, a Burial Site Investigation ordered by the Registrar of Burials, Ontario Ministry of Public and Business Service Delivery, under the provisions of *the Funeral, Burials and Cremation Services Act* must be conducted by the holder of a Professional-class archaeological license issued by the Ministry of Citizenship and Multiculturalism under the *Ontario Heritage Act*. The work must also be done under a Project Information Form (PIF) issued by MCM with all the attendant license reporting obligations. The consulting archaeologist must have the necessary skills, knowledge and expertise to assist both the Police and Coroner in determining the age of the interment, as well as to assist the property owner in generating the information required by the Registrar to determine the nature, extent and cultural affiliation of the person(s) buried. His or her presence at the front end of the discovery process is required by law and will greatly aid all authorities in making quick and accurate determinations and should be relied on as much as possible in such circumstances.

Emergency Response Process for Discovery of Human Remains

A person finding any skeletal material that may be human is required to immediately report the find to the local police or coroner. An appropriate contact list (e.g., police, regional coroner's offices, Registrar of Burials, Ministry of Citizenship and Multiculturalism) should be maintained by all municipal divisions involved in or managing land disturbing activities, including municipal law enforcement officers, property and building inspectors, and contractors working on behalf of the Niagara Region who may be the first contact with such a discovery. Figure 2 outlines the process that will be followed from the time of discovery onward.

When the police are first contacted, they will attend the scene, protect the site and contact the local coroner. The coroner, or the police on behalf of the coroner, will investigate to determine if the remains are human and if foul play is involved. The investigator will need to obtain all the information required to make a determination. Efforts should be made at this stage to minimize site disturbance. All bone and associated grave goods still embedded in the ground should not be disturbed. Poking, pulling, and digging up the bone in an uncontrolled manner can quickly destroy critical data essential to making accurate identifications.

The police and coroner will typically rely on their forensic anthropologists in conducting the investigation. Burials are archaeological deposits in their own right and are often found as part of more extensive archaeological deposits. The consultant archaeologist can help ensure that the larger cultural heritage resource is not destroyed or damaged during investigation of the skeletal material as well as determine whether or not the human remains are part of a crime scene.

If the burial is found in the course of an archaeological site investigation, or if other archaeological evidence is immediately available without further disturbing the burial, consultant archaeologists may be able to assist with the coroner's initial determination. Such evidence may include the following: the condition and discoloration of the bone; presence of artifacts around the discovery site, such as the presence/absence of a coffin, grave goods, etc.; knowledge of known archaeological sites at or in the vicinity of the burial; intact archaeological features, such as a grave shaft; depth of and position of remains. Such evidence will also be collected in the course of a subsequent Burial Site Investigation (see Section 3.5).

When skeletal material is found and it is not readily obvious that this material is either a burial or crime scene, coroners will often employ the services of a forensic anthropologist to examine the bone in detail. While the coroner requires only a basic

determination of age (i.e., recent vs. historic/ancient) and nature of the interment, the forensic anthropologist's examination can also determine cultural affiliation (based on the presence/absence of specific skeletal traits), age of the individual at death, sex and even funerary practices. This information will be essential for both the investigations for the Registrar of Burials, as well as for the deceased's representative in determining the appropriate re-interment requirements. Allowing the forensic anthropologist to complete a descriptive analysis of the skeletal material as part of the coroner's investigation will greatly aid in addressing remaining issues associated with this process.

When the coroner decides that no foul play is involved, they will contact the Registrar of Burials who may choose to order a Burial Site Investigation. It is essential that the Registrar of Burials and the Niagara Region are notified of the discovery, and given any relevant information (e.g., contacts, results of any analyses). The property owner is legally required to preserve and protect the site when the police are no longer involved until a disposition is made under Regulation O. Reg. 30/11 of the *Funeral, Burial and Cremation Services Act*.

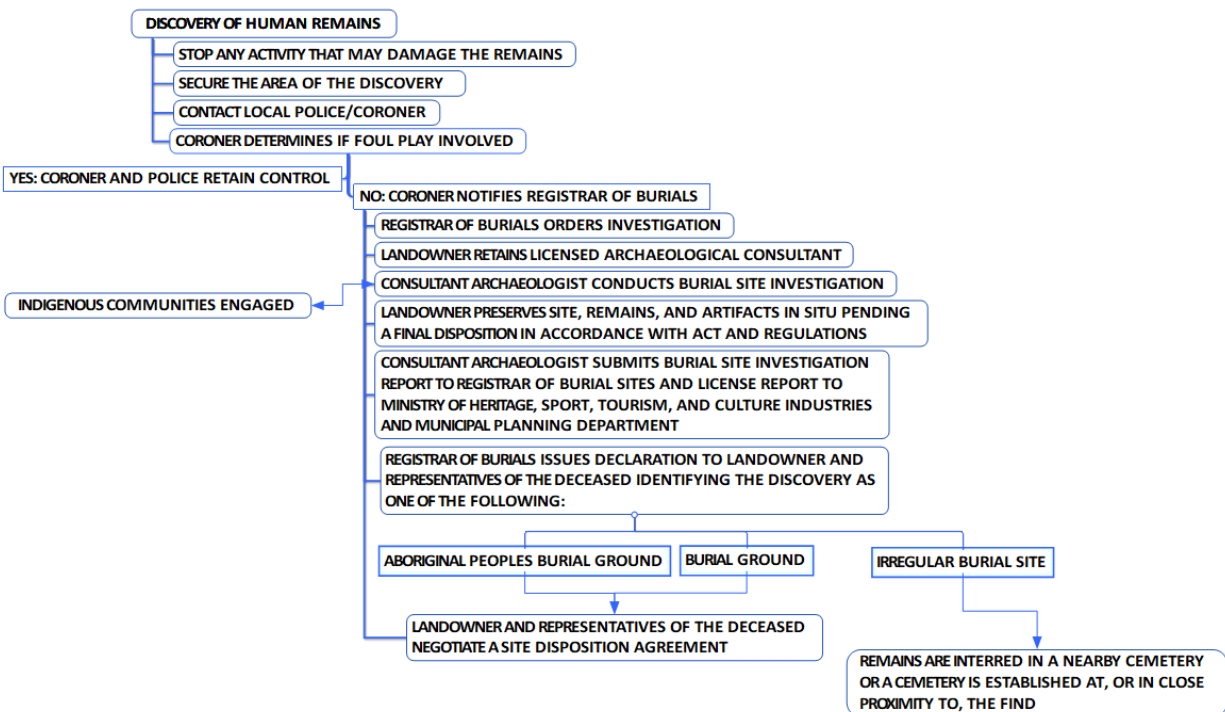


Figure 2: Emergency response process in the event of the discovery of human remains.

Funeral, Burial and Cremation Services Act Requirements

As detailed in Section C of O. Reg. 30/11, issued in accordance with the *Funeral, Burial and Cremation Services Act*, the Registrar of Burials will be required to determine and formally declare whether the discovery constitutes an Aboriginal Peoples Burial Ground, a Burial Ground, or an Irregular Burial Site, as defined in the Act. To support this determination, the Registrar of Burials will issue an order to the property owner requiring the submission of a Burial Site Investigation report prepared by a licensed professional archaeologist.

The objectives of the Burial Site Investigation include the following: whether or not the interment(s) were intentional, and the basis on which this conclusion is made; the cultural affiliation of the deceased; the defined limits of the area containing burials; the style and manner in which the remains are interred; a description of the artifacts determined to form part of the burial site; and any other information relevant to the preparation of a site disposition agreement as determined by the Registrar (O. Reg. 30/11 s174(2)6.). It may also be necessary to determine the exact number of discrete burials present in the area. Excavation methods should maximize recovery of these data, while minimizing disturbances to the remains. At the conclusion of the investigation, a report must be submitted to the Registrar of Burials, the Ministry of Citizenship and Multiculturalism and to the Niagara Region's Planning Department.

During the investigation, the remains must be treated with respect and care. All artifacts found in the burial are to be considered grave goods and should be treated as part of the burial and kept with the skeletal remains. Burials must not be unnecessarily exposed to the elements or to casual viewing and must be covered over as soon as possible following identification. The property owner continues to be responsible for preserving and protecting the site during this investigation and until a disposition is made under the *Funeral, Burial and Cremation Services Act*.

Once the Registrar of Burials makes a declaration, attempts will be made to locate a representative for the deceased. If the locale is deemed to be an Aboriginal Peoples Burial Ground, the Registrar of Burials will contact the appropriate First Nation(s).

The following First Nations have self-identified as having an interest in land use planning and development process in Niagara Region given that the Region is situated within their traditional territories:

- The Mississaugas of the Credit First Nation
- The Haudenosaunee Confederacy Chiefs Council

- The Métis Nation of Ontario
- The Six Nations of the Grand River

If the burial is non-Indigenous, the Registrar of Burials will attempt to find a representative. Where no descendant is identified, a representative of the same religious denomination as the person buried can act for the deceased. If religious affiliation cannot be determined, the Registrar of Burials will determine the appropriate representative.

For Aboriginal Peoples Burial Grounds and Burial Grounds, the property owner and the representative for the deceased will reach a disposition agreement outlining what is to be done with the burials. Where there is no agreement, binding arbitration is provided under the *Funeral, Burial and Cremation Services Act*. Typically, there are three options:

1. leave the remains intact and establish the site as a cemetery;
2. establish a cemetery nearby, remove the remains and re-inter them there;
3. remove the remains and re-inter them in an existing cemetery in the same or adjacent municipality.

If the discovery is declared to be an irregular burial site, there are three options:

1. leave the remains intact and establish the site as a cemetery;
2. establish a cemetery nearby, remove the remains and re-inter them there;
3. remove the remains and re-inter them into an existing cemetery.

The property owner is responsible for all costs, although claims of financial hardship will be evaluated by the Registrar in cases where the landowner cannot pay.

The option selected with respect to an Aboriginal Peoples Burial Ground will be negotiated between the property owner and representative for the deceased.

With respect to an Aboriginal Peoples Burial Ground, if a disinterment/reburial option is ordered by the Registrar, the Registrar will direct this process. Costs associated with a disposition agreement will be negotiated by the property owner and representative of the deceased. While the time it takes to complete this work will be subject to the terms laid out in the site disposition agreement, factors such as the number and nature of interments and level of observations prescribed in the site disposition agreement will affect the length of time needed to complete the removal and re-interment.

4. Recommendations for Implementation of Contingency Plan

The major recommendations arising from this *Contingency Plan for the Protection of Archaeological Resources in Urgent Situations* are the following:

1. It is recommended that Niagara Region offer training opportunities to all municipal inspection officers concerning the archaeology of southern Ontario with a focus on material culture, so that these personnel might better be able to recognize deposits of potential concern or significance.
2. In the case of private property projects, it is recommended that municipal staff provide the landowner with a list of those consultant archaeologists capable of responding immediately. In the case of public sector projects, the roster of pre-qualified consultants can be used to secure professional help immediately.
3. It is recommended that Niagara Region establish an urgent archaeological conservation grants program in order that private property owners might apply for financial aid in these situations. This will have the added benefit of enhancing the conservation of cultural heritage resources within the Niagara Region. A fund of \$15,000 should be established (and replenished when used). The intent of the urgent archaeological conservation grants program is to assist individual property owners with financial difficulty in urgent situations of unintended discovery of archaeological resources. The grant program could be managed by the Planning and Development department as they would also be aware of the emergency context. It would be essential that allocations from the fund be approved promptly (within one week) so as to allow timely resolution of conservation of fragile archaeological remains.
4. The Niagara Region and should develop, and share with local area municipalities, a roster of pre-qualified consulting archaeologists capable of responding immediately to contingent situations. The key criteria for the roster are the ability of the consultant archaeologist to attend a site within 24 hours or less and demonstration that the consultant archaeologist has an appropriate Health and Safety Plan in place for use under all circumstances. The roster of archaeologists could be accessed through the Region's Development Planning department.

5. References

Ontario Funeral, Burial and Cremation Services Act. (2002). Retrieved from [Burial and Cremation Services Act](https://www.ontario.ca/laws/statute/02f33) (https://www.ontario.ca/laws/statute/02f33). Accessed 06 April 2017.

Ontario Heritage Act. (1990). Retrieved from [Ontario Heritage Act](https://www.ontario.ca/laws/statute/90o18) (https://www.ontario.ca/laws/statute/90o18). Accessed 06, April 2017.

Ontario Ministry of Municipal Affairs and Housing. (2011). Ontario Planning Act. Retrieved from [Ontario Planning Act](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90p13_e.htm) (http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90p13_e.htm). Accessed 06 April 2017.

Ontario Ministry of Municipal Affairs and Housing. (2013). Growth Plan for the Greater Golden Horseshoe, 2006. Office Consolidation June 2013. Retrieved from [Growth Plan for the Greater Golden Horseshoe, 2006](https://www.placestogrow.ca/index.php?option=com_content&task=view&id=9%20) (https://www.placestogrow.ca/index.php?option=com_content&task=view&id=9%20). Accessed 06 June 2017.

Ontario Ministry of Municipal Affairs and Housing. (2014). Provincial Policy Statement (PPS), Queens Park, Ontario. Retrieved from [Provincial Policy Statement](http://www.mah.gov.on.ca/AssetFactory.aspx?did=10463) (http://www.mah.gov.on.ca/AssetFactory.aspx?did=10463). Accessed 06 April 2017.

Ontario Ministry of Citizenship and Multiculturalism. (2011). *Standards and Guidelines for Consultant Archaeologists*. Retrieved from [Standards and Guidelines for Consultant Archaeologists](http://www.mtc.gov.on.ca/en/publications/SG_2010.pdf) (http://www.mtc.gov.on.ca/en/publications/SG_2010.pdf). Accessed 06 April 2017.

Ontario Ministry of Citizenship and Multiculturalism. (2011). *Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario*. Retrieved from [Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario](http://www.mtc.gov.on.ca/en/publications/AbEngageBulletin.pdf) (http://www.mtc.gov.on.ca/en/publications/AbEngageBulletin.pdf). Accessed 06 April 2017.

6. Appendices

Appendix C1: Instruction Sheet – Accidental Discoveries of Archaeological Sites

Appendix C2: Accidental Discoveries of Archaeological Sites – Examples

Appendix C3: Instruction Sheet – Accidental Discoveries of Human Remains

Appendix C1: Instruction Sheet – Accidental Discoveries of Archaeological Sites

The [Ontario Heritage Act](http://www.mtc.gov.on.ca/en/heritage/heritage_act.shtml) (http://www.mtc.gov.on.ca/en/heritage/heritage_act.shtml) is intended to ensure the protection of heritage buildings and archaeological sites. Under Subsection 48(1) of the Act, it is illegal for any person or agency to knowingly disturb an archaeological site without a license. The Niagara Region must exercise due diligence in all contexts, including emergency situations, to ensure that this requirement is enforced.

Evidence of an Indigenous archaeological site may include stone (flint or chert) tools or flakes, burnt and unburnt animal bone, reddish-brown unglazed earthenware-like pottery, burnt stones and spreads of charcoal. Evidence of later Euro-Canadian archaeological sites may include bottle glass, crockery, iron/metal items, old foundations, wells, drains or similar structures. Examples of some of these types of remains are provided in the photographs overleaf.

In the event that the property owner/proponent believes that such remains have been uncovered and are being destroyed by actions not being carried out by licensed archaeologists, the property owner/proponent should:

1. Request work stop on the property.
2. Ensure that the area is secured.
3. Notify the appropriate authorities: the **Ministry of Citizenship and Multiculturalism and the appropriate municipal planning department** (see contact information below).

Arrangements will then be made with the development proponent or property owner to have qualified archaeological personnel investigate the remains. If in doubt about potential archaeological remains, take a photograph of the site/finds and send it to the Region of Niagara Development Planning division.

Contact Information

Development Planning

Niagara Region

T: 905-980-6000 ext. 3313 or 3256

Email:

devtplanningapplications@niagararegion.ca

Include “Urgent” in subject line.

Archaeology Program Unit

Ministry of Citizenship and Multiculturalism

Email: archaeology@ontario.ca

Include “Urgent” in subject line.

Appendix C2: Accidental Discoveries of Archaeological Sites – Examples



Examples of Indigenous stone tools.



An example of a well.



An example of a stone and brick foundation



An example of a charcoal and dark soil stain that is an archaeological feature.



An example of a stone foundation



An example of a wood drain



An example of a field stone foundation.



Examples of nineteenth-century ceramics

Appendix C3: Instruction Sheet – Accidental Discoveries of Human Remains

The process to be followed regarding unanticipated discoveries of human skeletal remains outside of a licensed cemetery is laid out in [O. Reg. 30/11](https://www.ontario.ca/laws/regulation/110030) (<https://www.ontario.ca/laws/regulation/110030>) of the [Funeral, Burial and Cremation Services Act](https://thebao.ca/legislation/) (<https://thebao.ca/legislation/>). If human remains should be encountered during construction, the following steps must be followed by those individuals who discover the remains:

1. Work must cease immediately.
2. The area must be secured.
3. The discovery must be reported to the **Niagara Regional Police Service** and the **Coroner** (note that the police may do this themselves). The police/coroner may call in specialists in forensic or biological anthropology to determine whether or not the bones are human.
4. In the event that the police/coroner determine that the remains do not constitute a crime scene, the **Niagara Regional Police Service** or the **Coroner** will notify the **Registrar of Burials, Ministry of Public and Business Service Delivery**. The **appropriate municipal planning department** and the **Ministry of Citizenship and Multiculturalism** (see contact information below) should be contacted by the property owner or their delegate (e.g., licensed consultant archaeologist).
5. The **Registrar of Burials, Ministry of Public and Business Service Delivery**, which is the senior agency in this process, may order a formal burial investigation to be carried out by a licensed archaeologist.

If in doubt about potential human remains, contact the police.

Contact Information

Niagara Regional Police Service

For St. Catharines, Niagara-on-the-Lake, Niagara Falls, and Thorold, call (905) 688-4111

For Fort Erie, call (905) 871-2300

For Pelham, call (905) 735-7811

For Grimsby, Lincoln and West Lincoln, call (905) 945-2211

For Welland, Wainfleet and Port Colborne, call (905) 735-7811

Office of the Chief Coroner

Regional Supervising Coroner's Office,
Central West Region

Forensic Services and Coroners
Complex

25 Morton Shulman Avenue, 2nd Floor
Toronto, ON M3M 0B1
647-329-1825

To contact the Coroner on Call -
Coroners Dispatch -- 1-855-299-4100

OCC.centralwest@ontario.ca

Dr. Crystal Forrest**Registrar of Burials, MP&BSD**

T: 647-233-4033

Email: crystal.forrest@ontario.ca

Archaeology Program Unit**Ministry of Citizenship and
Multiculturalism**

email: archaeology@ontario.ca

Include "Urgent" in subject line

Development Planning,**Niagara Region**

T: 905-980-6000 ext. 3313 or 3256

Email:

devtplanningapplications@niagararegion.ca

Include "Urgent" in subject line



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NIAGARA
OFFICIAL PLAN

APPENDIX D: BACKGROUND REPORT (PLANNING CONTEXT AND RECOMMENDED POLICIES)

VIBRANT REGION



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1. Introduction

Niagara Region's Archaeological Management Plan (AMP) is a planning tool intended to be used by the Region, Local Area Municipalities, development proponents, and the public that brings a consistent approach to the conservation of archaeological resources across the Region.

The following section will include analysis and discussion of the legislative and policy context for archaeology in Ontario and best practices in archaeological planning. This discussion is intended to improve the reader's understanding of archaeological requirements and planning in Ontario. This report and its recommendation are meant to be used in conjunction with the Niagara Region Archaeological Potential Mapping.

To ensure the consistent use of this tool across the region, recommendations for Regional and Local Area Official Plan policies, recommendations for archaeological procedures for development approvals, and standard language of archaeological conditions for planning applications have been provided within this document. Recommended Regional and Local Area Official Plan policies can be found in Section 5 and may be referenced during municipalities' five-year official plan review as required by Section 26(1.1) (b), Part III of the *Planning Act*.

These recommendations were developed through analysis of existing archaeological policies in the region, through consultation surveys with the Region's Local Area Municipal planners and Ontario Upper and Single tier municipalities with existing AMPs, and the beforementioned policy and best practice review.

Policies and processes relating to Indigenous engagement are currently under review by the Region and local area Indigenous communities as part of the Corporate Indigenous Engagement Protocol. The consultant recognizes that this process is ongoing and that changes may be required as a result.

The Niagara Official Plan (NOP), adopted by Niagara Regional Council in June 2022 and approved with modifications by the Minister of Municipal Affairs and Housing in November 2022, includes archaeological policies to support the identification and conservation of archaeological resources. In addition, Schedule K of the NOP provides mapped areas of archaeological potential.

2. Methodology

2.1. Scope

The scope of this planning report includes:

- a. A discussion of relevant legislation governing archaeology and planning in Ontario.
- b. The results of informal consultation with planners at Niagara Region Local Area Municipalities and other Upper and Single Tier municipalities with AMPs.
- c. Recommendations for Niagara Official Plan policies and Local Area Official Plan policies for archaeological resource management aligned with current practice, applicable legislation, and the feedback received to date.
- d. Recommended standard wording of archaeological warning clauses for planning applications; and,
- e. Summaries of the archaeology/planning process to assist municipal staff and project proponents understand the process.

2.2. Legislation and Policy Context

The consultant reviewed the legislative and planning context for archaeology across Ontario, including the current frameworks within Niagara Region. This review examined provincial and municipal legislation and policy. The municipal policy review included archaeological policy in Niagara Region's Official Plan and archaeology and cultural heritage policies from each Local Area Municipality including from Official Plans, Secondary Plans and—where available—archaeological management plans and heritage plans.

2.3. Consultation

The consultant conducted surveys of heritage and land-use planners from each of the Local Area Municipalities in the Region. Surveys were distributed to planners at each of the Local Area Municipalities in the Region with questions about their current practices and processes related to archaeology. A second survey was sent to planners at several Upper and Single Tier municipalities in Ontario with AMPs. These surveys were intended to assist with understanding the processes, challenges and successes employed to manage archaeological resources in the planning process. The survey results were then compared against the municipalities' existing archaeological policies and were used to inform recommended policies and processes (see Section 5 and 6). Detailed consultation results have been provided to the Region.

2.4. Recommended Policy and Standard Clause Development

Based on the findings of the legislation and policy and consultation with planners, the consultant wrote recommended foundational Niagara Official Plan and Local Area Official Plan policies related to archaeological management. The consultant also composed four suggested standard clauses for archaeology in support of planning processes within Niagara Region and the Local Area Municipalities.

2.5. Information Handouts

Based on requests from consultation, the consultant developed a draft flow chart and summary information sheets on the consulting archaeology process. These documents are intended to assist municipal staff, project proponents and community members understand the general process of archaeological assessments and roles of various parties. In more complex situations, consultation with professional archaeologists is recommended.

2.6. Implementation and Recommendations

Steps for implementation, recommendations for specific archaeological planning matters and considerations have been developed. These recommendations and considerations are intended to assist municipal staff as they encounter archaeological planning matters.

3. Legislative and Planning Context

In Canada, the conservation of cultural heritage resources –including archaeological resources—is a matter of provincial interest. The federal government addresses and manages cultural heritage and archaeology on federal property according to its own policy and management plans and processes which derive from responsibilities under international treaties and federal law. Canada’s federal and provincial governments are bound by international conventions which address archaeological matters including the 1970 *UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property* and 1972 *Convention Concerning the Protection of the World Cultural and Natural Heritage* (World Heritage Convention) which Canada signed in 1976. Canada’s federal government addresses relevant articles of these conventions through the *Canadian Environmental Assessment*

Act, the *Cultural Property Export and Import Act* and through federal policy.¹ The Parks Canada Agency is the federal government expert on archaeology and provides advice to other federal departments on archaeological matters. The federal government owns and administers large parcels of land in Niagara Region including lands along the Welland Canal and Parks Canada sites. Archaeology on federal lands in the Region is governed by the policies of each owner agency with support and guidance from Parks Canada.

The *United Nations Declaration on the Rights of Indigenous Peoples* (the Declaration) is increasingly informing or serving as the basis for discussions between Indigenous peoples and governments in Canada, with many Indigenous communities already referencing the document.^{2, 3} The Declaration will likely affect the practice of archaeology in Ontario in the near future and is supported by the Government of Canada.⁴ The Federal government has adopted the Declaration into federal legislation. The Ontario government has not yet—at the time of writing—adopted articles of the Declaration into any legislation but this does appear possible.⁵ Municipal government and planning activities that touch on Indigenous peoples' treaty rights, culture, traditional knowledge and heritage, including archaeology, are advised to consider the Declaration in processes, consultation and decision making.

In Ontario cultural heritage resources—including archaeological resources—are managed under Provincial legislation, policy, regulations, standards and guidelines. Cultural heritage (in general) and archaeology (specifically) are established as a key provincial interest in the *Provincial Policy Statement* (Section 2.6) and the *Planning Act* (Section 2). Archaeology is also addressed through several other pieces of legislation, most directly—but not entirely—through provisions in the *Ontario Heritage Act*, the

¹ Denez, Marc. 2002. *Unearthing the Law Archaeological Legislation on Lands in Canada*. [online] Accessed at: [Unearthing the Law Archaeological Legislation on Lands in Canada](https://www.pc.gc.ca/en/docs/r/pfa-fap/index) (https://www.pc.gc.ca/en/docs/r/pfa-fap/index)

² United Nations. 2007. *United Nations Declaration on the Rights of Indigenous Peoples*. Accessed from: [United Nations Declaration on the Rights of Indigenous Peoples](https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf) (https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf)

³ Government of British Columbia. [UNDRIP](https://www2.gov.bc.ca/gov/content/governments/indigenous-people/new-relationship/united-nations-declaration-on-the-rights-of-indigenous-peoples) (https://www2.gov.bc.ca/gov/content/governments/indigenous-people/new-relationship/united-nations-declaration-on-the-rights-of-indigenous-peoples)

⁴ Government of Canada. 2017. [Indigenous and Northern Affairs Canada](https://www.aadnc-aandc.gc.ca/eng/1309374407406/13093744589583An) (https://www.aadnc-aandc.gc.ca/eng/1309374407406/13093744589583An)

⁵ An NDP private members bill to adopt the Declaration into legislation passed two readings in the Ontario provincial legislature but has not passed the third reading at the time of writing.

Planning Act; Environmental Assessment Act; Funeral, Burial and Cremation Services Act; Aggregate Resources Act; Places to Grow Act; and the Greenbelt Act. A glossary of archaeological and planning vocabulary derived from these acts, regulations under these acts and provincial guidance documents is in Appendix D1.

Municipalities are enabled by the Province to govern local matters and responsibility to ensure archaeology is completed in planning and environmental assessment contexts generally falls to municipalities. However, the Niagara Peninsula Conservation Authority (NPCA)⁶, the Niagara Parks Commission and Niagara Escarpment Commission also have authority for planning decisions over certain lands in Niagara Region.

3.1. Historical Legislative Context

The earliest legislation dealing with archaeology in Ontario was the 1953 *Archaeological and Historic Sites Protection Act*.⁷ It gave the province powers to designate and protect important archaeological sites, to require permits to excavate or alter archaeological sites, and to seize ill-gotten artifacts. The Archaeological and Historic Sites Board was created to identify these important sites. However, the act only protected archaeological sites designated by the minister; it did not protect undiscovered sites which were the most vulnerable to destruction.

In the 1970s, requirements to address archaeological resources during the development process were first incorporated in the *Planning Act* and the *Environmental Assessment Act*.⁸ At this time government recognized that land development posed the most serious threat to the archaeological record. The pace of development increased during the 1980s and several municipalities began to develop archaeological “master plans” and similar inventories of archaeological resources within their boundaries (e.g., Region of Waterloo, Town of Markham, Town of Richmond Hill, and Town of Vaughan).

Until the 1990s, the Province acted as the approval authority in terms of archaeological resource management decisions. In the 1990s the Province re-allocated roles with

⁶ Two small –approximately 1.7 km² combined—areas in the northeastern corner of the Town of Grimsby are within land administered by the Hamilton Conservation Authority.

⁷ Government of Ontario. 1960. Archaeological and Historic Sites Protection Act. [online] Accessed at: Archaeological and Historic Sites Protection Act (<https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?article=2857&context=rso>)

⁸ Williamson, R. F. 2010. Planning for Ontario's Archaeological Past: Accomplishments and Continuing Challenges. *Revista de Arqueología Americana* (28). p. 7-45.

municipal governments for *Planning Act* applications.⁹ The Provincial government shifted into a more advisory role and municipal governments assumed responsibility for reviewing planning applications for Provincial interests.

The change in approach during the 1990s reflected the role of local planning departments in decision making that affected natural and cultural resources. Locally approved developments did and continue to constitute most of the activities that disturb land where archaeological resources are found in the Province. It was thought that with adequate screening at the municipal level, protection of archaeological resources would be ensured. The Province's view was, and continues to be, that Archaeological Management Plans are the most effective means by which municipalities can carry out this screening. The Niagara Escarpment Commission as an agency of the Government of Ontario still has the responsibility for Provincial Plan review in the Niagara Escarpment Plan Area.

In 1996, as part of the re-allocation of development review responsibilities (i.e., transfer of Municipal Plan Review), the role of identifying requirements for archaeological assessments as conditions of approval was transferred to the Niagara Region, as it was for all other Upper and Single Tier municipalities in the province. In some jurisdictions, this role has been delegated to Local Area Municipalities.

The *Planning Act* and *Environmental Assessment Act* are the principal pieces of legislation that require archaeological resource management. They are complemented by the *Ontario Heritage Act*, which regulates archaeological practice to maintain a professional standard of archaeological research and consultation. Archaeology can also be requested as part of *Ontario Heritage Act* applications under Part IV and V of the *Ontario Heritage Act*. Several other acts contain provisions, requirements, or direction for archaeological resource management under various circumstances that are relevant to the municipal development approval process.

3.2. Planning Act & Provincial Policy Statement

3.2.1. Planning Act

The *Planning Act*, R.S.O. 1990, c.P13, was consolidated on 14 April 2020. The Minister—Ministry—of Municipal Affairs and Housing (MMAH) administers this act. Its purpose is to:

⁹ Williamson, R. F. 2010. Planning for Ontario's Archaeological Past.

- (a) to promote sustainable economic development in a healthy natural environment within the policy and by the means provided under this Act.
- (b) to provide for a land use planning system led by provincial policy.
- (c) to integrate matters of provincial interest in provincial and municipal planning decisions.
- (d) to provide for planning processes that are fair by making them open, accessible, timely and efficient.
- (e) to encourage co-operation and co-ordination among various interests.
- (f) to recognize the decision-making authority and accountability of municipal councils in planning (Section 1.1).

As per Part I, 2(d), the conservation of significant archaeological, cultural and historical resources are matters of provincial interest under the *Planning Act*. To meet the purposes of the *Planning Act*, it enables the province to issue policy statements –the *Provincial Policy Statement (PPS)*, see section 3.2.2 below)—on matters relating to municipal planning that are of provincial interest including archaeological conservation.

Part V of the *Planning Act* addresses Land Use Controls and Related Administration, and allows municipalities to prohibit “any use of land and the erecting, locating or using of any class or classes of buildings or structures on land that is the site of a significant archaeological resource”¹⁰

3.2.2. Provincial Policy Statement (2020)

The *Provincial Policy Statement* is issued under the authority of Section 3 of the *Planning Act* and was updated on 1 May 2020. The *Provincial Policy Statement* sets the policy foundation for regulating the development and use of land in Ontario. Land use planning decisions made by municipalities, planning boards, the Province, or a commission or agency of the government must be consistent with the *Provincial Policy Statement*. The document asserts that cultural heritage and archaeological resources provide important environmental, economic and social benefits, and directly addresses cultural heritage in Section 1.7.1e and Section 2.6.

Section 1.7 of the *Provincial Policy Statement* regards long-term economic prosperity and promotes cultural heritage as a tool for economic prosperity. The relevant subsection states that long-term economic prosperity should be supported by:

¹⁰ *Planning Act*, R.S.O. 1990, c.P13, Part V S. 3.3.

- 1.7.1e encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes.

Archaeological management planning and archaeological sites may fall under cultural planning. Archaeological sites can be part of cultural heritage landscapes.

Section 2.6 of the *Provincial Policy Statement* articulates provincial policy regarding cultural heritage and archaeology. Regarding archaeology the *Provincial Policy Statement* states that:

- 2.6.2 Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.
- 2.6.3 Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.
- 2.6.4 Planning authorities should consider and promote archaeological management plans and cultural plans in conserving cultural heritage and archaeological resources.
- 2.6.5 Planning authorities shall engage with Indigenous communities and consider their interests when identifying, protecting and managing cultural heritage and archaeological resources.

The *Provincial Policy Statement* recognizes that there are complex interrelationships among environmental, economic and social factors in land use planning. It is intended to be read in its entirety and relevant policies applied in each situation.

The *Provincial Policy Statement* also includes archaeological definitions, defining archaeological resources and areas of archaeological potential as:

Archaeological resources: includes artifacts, archaeological sites, marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*.

Areas of archaeological potential: means areas with the likelihood to contain archaeological resources. Criteria to identify archaeological potential are established by the Province. The *Ontario Heritage Act* requires archaeological potential to be confirmed by a licensed archaeologist.¹¹

The *Provincial Policy Statement* defines significance regarding archaeological resources as “resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.”¹² For an archaeological site an archaeologist can use criteria and indicators outlined in the *Standards and Guidelines*.

3.3. Environmental Assessment Act

The *Environmental Assessment Act*, R.S.O. 1990, c. E.18 (*Environmental Assessment Act*) was consolidated on 1 July 2019. The *Act*'s purpose is the “betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment. It applies to public sector projects and specific types of private sector projects in the province. The Minister –Ministry—of the Environment, Conservation and Parks (MECP) administers this *Act*.

Under the *Environmental Assessment Act* the meaning of environment is broad and includes –among other things—the social, economic and cultural conditions that influence the life of humans or a community, and any building, structure, machine or other device or thing made by humans [Part I1(1, c and d)]. Archaeological sites, artifacts and remains or ruins are included in ‘cultural conditions’ and ‘building, structure... or thing made by humans.

The *Environmental Assessment Act* requires an Environmental Assessment (EA) to include a description of,

- (i) The environment that will be affected or that might reasonably be expected to be affected, directly or indirectly,
- (ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and

¹¹ The Government of Ontario. 1 May 2020. *Provincial Policy Statement*. p. 40.

¹² The Government of Ontario. 1 May 2020. *Provincial Policy Statement*. p. 51.

- (iii) the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment (Section 6.1 (2, c).

Archaeological assessments are therefore required as part of environmental assessments, to assess which archaeological resources, sites, artifacts or remains will be affected by a project subject to the *Environmental Assessment Act*.

Routine projects may follow a streamlined EA process such as a class environmental assessment, addressed in Part II.1 of the *Environmental Assessment Act*. Class environmental assessments must be approved by the Minister—Ministry of the Environment, Conservation and Parks— (Part II.1). One type of class is a Municipal Class Environmental Assessment, which is used for municipal infrastructure projects such as projects to plan, design, construct, maintain, rehabilitate and/or retire municipal road, water, wastewater and transit project.¹³ The Municipal Class Environmental Assessment is divided into four schedules; A, A+, B and C. Section 15.3 (3) exempts Schedule A and schedule A+ municipal class EAs carried out by a person authorized to proceed in accordance with that class are exempt from the *Environmental Assessment Act*.

3.4. Ontario Heritage Act

The *Ontario Heritage Act, R.S.O. 1990, c O.18 (Ontario Heritage Act)* enables the provincial government and municipalities powers to conserve, protect, and preserve the heritage of Ontario. The Act is administered by a member of the Executive Council (provincial government cabinet) assigned to it by the Lieutenant Governor in Council. At the time of writing the *Ontario Heritage Act* is administered by the Minister—Ministry—of Citizenship and Multiculturalism (MCM).¹⁴

¹³ Ministry of the Environment, Conservation and Parks. 2020. *Class EA for Municipal Infrastructure Projects*. [online] Accessed at: [Class EA for Municipal Infrastructure Projects](https://www.ontario.ca/page/class-ea-municipal-infrastructure-projects) (https://www.ontario.ca/page/class-ea-municipal-infrastructure-projects)

¹⁴ Since 1975 the Ontario ministry responsible for culture and heritage has included several different portfolios and had several different names and may be referred to by any of these names or acronyms based on them:

- Ministry of Culture and Recreation (1975-1982),
- Ministry of Citizenship and Culture (1982-1987),

Part I (2) of the *Ontario Heritage Act* enables the Minister to determine policies, priorities and programs for the conservation, protection, and preservation of the heritage of Ontario.

Part II of the *Ontario Heritage Act* addresses the Ontario Heritage Trust and its object to preserve, maintain, reconstruct, restore, and manage properties of archaeological interest. Through Part II, the Trust has the power to advise and make recommendations, acquire, and conduct and arrange interpretative events for properties of archaeological interest.

Part III of the *Ontario Heritage Act* addresses the Conservation Review Board which is an adjunctive tribunal that considers matters under the *Ontario Heritage Act* including archaeological matters. Part III (1) of the *Ontario Heritage Act* addresses Standards and Guidelines for Provincial Heritage Properties including archaeological properties.

Parts IV and V of the *Ontario Heritage Act* address conservation of individual properties of cultural heritage value or interest and Heritage Conservation Districts. These sections of the act enable municipal councils to list properties in the municipality on the municipal heritage register [Part IV Section 27(1.2)], to designate individual properties [Part IV Section 29(1)] and districts (Part V) and require owners to apply to the Council and receive consent in writing to alter the property. Sections 27 (5), 33 (2) and 42 (2.2) enable a Council to set out what information they require to approve an application, and in some jurisdictions, this includes requirements for archaeological assessments.

Part VI of the *Ontario Heritage Act* addresses the Conservation of Resources of Archaeological Value. Part VI, Section 48 (1) 1 requires a person to have a license issued by the ministry to carry out archaeological fieldwork. Section 48 (1) 2 prohibits anyone who knows that a site is a registered archaeological site (marine or terrestrial) from altering it or removing artifacts or other physical evidence of past human use or activity from the site. However, section 48 (2)(b) clarifies that where there is a known archaeological site but activity on the site is normal agricultural work or routine maintenance of the property no archaeological license is required. Section 48 (4) of the

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- Ministry of Culture and Communications (1987-1993),
 - Ministry of Culture, Tourism and Recreation (1993-1995),
 - Ministry of Citizenship, Culture and Recreation (1995-2001),
 - Ministry of Tourism, Culture and Recreation (2001-2002),
 - Ministry of Culture (2002-2010),
 - Ministry of Tourism, Culture and Sport (2011-2019).

Ontario Heritage Act outlines limits of the archaeological license. Section 48 (4)(d) enables the Minister to direct terms and conditions for archaeological licenses which the MCM has developed.¹⁵

Part VI Section 48 of the *Ontario Heritage Act* makes it illegal to carry out archaeological fieldwork, alter an archaeological site or remove an artifact or other physical evidence of past human use or activity from the site without a licence issued by the Minister. This part of the Act outlines rules for archaeological licenses and inspections. It enables the minister to designate a property of archaeological significance and lays out the process and rules for designation and revocation of designation. Under the *Ontario Heritage Act* the minister has the power to stop work on a property that is of archaeological or historical significance. Section 65 of the *Ontario Heritage Act* requires reporting of archaeological sites and establishes the Provincial register of archaeological reports. Licensed archaeologists are required to submit reports to the MCM for review as a condition of their license. *Ontario Heritage Act* Section 66 enables artifacts from archaeological sites to be deposited in a public institution and held in trust for the people of Ontario.

Part VII of the *Ontario Heritage Act* is for general provisions including Section 69 which outlines fines and imprisonment terms for contravention of the *Ontario Heritage Act* and its regulations. Any person who contravenes the *Ontario Heritage Act* is liable to a fine of not more than \$50,000 or to imprisonment for a term of not more than one year, or to both. A corporation convicted of an offence under the *Ontario Heritage Act* can be fined up to \$250,000. Additionally, Section 96 of the *Ontario Heritage Act* states that:

(3) Despite subsections (1) and (2), if a person is convicted of the offence of contravening section 34 or 34.5, demolishing or removing a building or structure in contravention of section 42 or contravening subsection 48 (1) or if a director or officer of a corporation is convicted of knowingly concurring in such an act by the corporation, the maximum fine that may be imposed is \$1,000,000. 2005, c. 6, s. 44 (2).

Marine archaeology is also addressed in the *Ontario Heritage Act*. A marine archaeological site is “an archaeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water” (*Ontario Regulation 170/04 s.1*). Only a person licensed by the Minister may alter a marine

¹⁵ Ministry of Citizenship and Multiculturalism. n.d. Terms and Conditions for Archaeological Licenses. [online pdf] Accessed at: [Terms and Conditions for Archaeological Licenses](http://www.mtc.gov.on.ca/en/archaeology/archaeology_licensing.shtml) (http://www.mtc.gov.on.ca/en/archaeology/archaeology_licensing.shtml)

archaeological site or remove an artifact or any other physical evidence of past human use or activity from the site (Section 48 (1)2. The marine licensing program is different from the terrestrial system, but both are administered by the MCM. Some marine archaeological sites have special protection under the *Ontario Heritage Act* and *Ontario Regulation 11/06*; they are prescribed marine archaeological sites. Two sites in Ontario—neither of which are in Niagara Region—are prescribed marine archaeological sites. These sites are the War of 1812 shipwrecks *Hamilton* and *Scourge* in Lake Ontario and the site of the shipwreck *Edmund Fitzgerald* in Lake Superior.

3.5. Ministry of Citizenship and Multiculturalism Standards for Consultant Archaeologists

3.5.1. Terms and Conditions for Archaeological Licences

The MCM *Terms and Conditions for Archaeological Licences* are issued under clause 48 (4)(d) of the *Ontario Heritage Act*. Archaeological license holders are required to meet these terms and conditions which require—among other things—licence holders to comply with standards and guidelines for carrying out archaeological fieldwork and to “hold in safekeeping all artifacts and records or archaeological fieldwork” carried out under their license.¹⁶

3.5.2. Land-based (Terrestrial) Archaeology – Ontario Standards and Guidelines for Consultant Archaeologists (2011)

Land-based consulting archaeology in Ontario is outlined by the MCM *Standards and Guidelines for Consultant Archaeologists* (2011). The *Standards and Guidelines* apply to licensed consultant archaeologists conducting terrestrial archaeology as part of the land use planning process. They ensure that archaeological work is carried out in Ontario in a consistent and correct manner. Consultant archaeologists are required to follow the *Standards and Guidelines* as a condition of their license issued under the *Ontario Heritage Act*.¹⁷

¹⁶ Ministry of Citizenship and Multiculturalism. n.d. *Terms and Conditions for Archaeological Licences*. [online pdf] Accessed at: [Terms and Conditions for Archaeological Licences](http://www.mtc.gov.on.ca/en/archaeology/archaeology_licensing.shtml) (http://www.mtc.gov.on.ca/en/archaeology/archaeology_licensing.shtml)

¹⁷ Ibid.

The *Standards and Guidelines* includes a discussion of archaeology's role in the land use planning process, use of GPS, artifact, and documentation analysis, and what to include in an archaeological report. The *Standards and Guidelines* also include detailed requirements for the stages of an archaeological assessment.

The stages of archaeological assessment include:

Stage 1: Background Study and Optional Property Inspection

Consultant archaeologist visits the property and reviews previous archaeological assessments in the area, MCM site data base along with geographic, land use, and historical information. If areas of archaeological potential are found, a Stage 2 assessment is required.¹⁸

Stage 2: Property Assessment

Consultant archaeologist will survey the land for archaeological resources using either and or pedestrian and test pits and other archaeological strategies. If archaeological sites of sufficient cultural heritage value or interest are found a Stage 3 assessment is required.¹⁹

Stage 3: Site Specific Assessment

Consultant archaeologist conducts further property research, excavations, determines size of site, and degree of cultural heritage value or interest. This information informs Stage 4 recommendations.²⁰

Stage 4: Mitigation of Development Impacts

Conservation strategies recommended by the consultant archaeologist are implemented. Long-term protection and avoidance at the location is always preferred but if not possible the site can be documented and removed through excavation.²¹

¹⁸ Ministry of Tourism and Culture. 2011. *Standards and Guidelines for Consultant Archaeologists*. p. 13.

¹⁹ *Ibid.* p. 27.

²⁰ *Ibid.* p. 45.

²¹ *Ibid.* p. 67.

Reviews of archaeological assessment reports are based on these standards and guidelines. The MCM also produces bulletins that clarify and expand on the requirements in the *Standards and Guidelines*, including:

- *Archaeological Site Forms* (2015).
- *The Archaeology of Rural Historical Farmsteads* (2014).
- *Winter Archaeology* (2013).
- *Engaging Aboriginal Communities in Archaeology* (2011).
- *Forestry Operations on Crown Land* (2011).
- *Project Information Forms* (2017).
- *Archaeological Reports* (2017); and,
- *Uploading Files to Ontario's Past Portal*

The *Standards and Guidelines* outline criteria and indicators to help a consultant archaeologist determine or identify an archaeological site's cultural heritage value or interest.²²

3.5.3. Marine Archaeology

Much of the marine archaeology carried out in Ontario is conducted by avocational divers on shipwreck sites across the Province. However, development projects or environmental assessments for work below the high-water mark in Ontario's waterways may have archaeological potential. Processes under the *Planning Act*, *Environmental Assessment Act*, *Aggregate Resources Act*, *Ontario Heritage Act*, *Canadian Environmental Assessment Act* and *Canada Shipping Act* may require marine archaeological assessment. All marine archaeological work including work completed by avocational divers for research or site recording purposes or work by consultant marine archaeologists requires a license. However, recreational divers may dive on most underwater sites—except for those prescribed under *O. Reg. 11/06*—if they are not carrying out archaeological research.

The marine archaeology licensing program in Ontario is different from the land-based (terrestrial) system. An archaeologist investigating a marine archaeological site applies for a license/ permit to investigate that site. Only a licensed marine archaeologist may alter or assess a marine archaeological site. Sites may include shipwrecks or abandoned vessel sites, remains of marine infrastructure such as wharves, piers, quays, canals, dams, inundated communities or inundated Indigenous sites.

²² Ibid. p. 60-61.

A project proponent can use the *MCM Criteria for Evaluating Marine Archaeological Potential A Checklist for Non-Marine Archaeologists* (2016) as a tool to determine if marine archaeological assessment is required for a project. MCM personnel review marine archaeological reports.

3.6. Aggregate Resources Act

The *Aggregate Resources Act*, R.S.O. 1990, c. A.8 (*Aggregate Resources Act*) was consolidated on 10 December 2019. Its purpose is to provide for the management of aggregate resources in Ontario, control and regulate aggregate operations on Crown and private lands, require the rehabilitation of aggregate lands which have been excavated, and minimize adverse impact on the environment in respect to aggregate operations (R.S.O. 1990, c. A.8, s. 2). The Minister—Ministry—of Natural Resources and Forestry (MNRF) administers this act.

Part I 3 (2 h) of the act enables the Minister to initiate studies on environmental and social matters related to pits and quarries, which may include archaeological assessment. Before exercising the power of the *Aggregate Resources Act* to grant licenses or permits the Minister will consider if adequate consultation with Aboriginal (Indigenous) communities has been carried out where the license or permit has the potential to adversely affect established or credibly asserted Aboriginal or treaty rights (Section 3.1). This may include considering archaeological assessment.

Ontario Regulation 244/97 section 7 requires applications for licences, aggregate permits or wayside permits and the operation of pits and quarries to be in accordance with *Aggregate Resources Ontario: Provincial Standards, Version 1.0*. The provincial standards require technical reports as part of license applications including relevant archaeological assessments.²³ The provincial standards use definitions for archaeological resources defined in the *PPS*.

²³ Ministry of Natural Resources and Forestry. *Provincial Standards of Ontario*. [online] Accessed at: [Application Standards for Proposed Pits and Quarries](https://www.ontario.ca/page/application-standards-proposed-pits-and-quarries) (https://www.ontario.ca/page/application-standards-proposed-pits-and-quarries)

3.7. Environmental Protection Act & Ontario Regulation 359/09

3.7.1. Environmental Protection Act, R.S.O. 1990, c. E.19

Environmental Protection Act, R.S.O. 1990, c. E.19 (*Environmental Protection Act*) was consolidated on 31 December 2019. Its purpose is “to provide for the protection and conservation of the natural environment” (R.S.O. 1990, c. E.19, s. 3.). The Minister – Ministry— of the Environment, Conservation and Parks administers this act.

Part V.0.1 of the *Environmental Protection Act* addresses renewable energy and section 47.1 defines ‘environment’ using the same definition as in the *Environmental Assessment Act* including “the social, economic, and cultural conditions that influence the life of humans or a community, and any building, structure, machine or other device or thing made by humans [*Environmental Assessment Act* Part I1(1, c and d)]. Most renewable energy projects in Ontario require approval from the Government of Ontario. Section 47.3(1) outlines the requirements for renewable energy approval. Applications for renewable energy approval are regulated by *Ontario Regulation 359/09 Renewable Energy Approvals Under Part V.0.1 of the Act*.

3.7.2. Ontario Regulation 359/09

Ontario Regulation 359/09: Renewable Energy Approvals was approved under Part V.0.1 of the *Environmental Protection Act* and was consolidated on 1 June 2019. Sections 19-23 of *Ontario Regulation 359/09* addresses Protected Properties, Archaeological and Heritage Resources. The regulation requires renewable energy projects in proximity to a designated heritage property to receive written authorization to continue from the designating municipality, the Ontario Heritage Trust, or the MCM (Section 19). The regulation requires a renewable energy project proponent to determine if a project location is within 250m of an archaeological site in MCM records or on a property designated as an archaeological site. It requires a project proponent to check if the project location is identified on an archaeological management plan [section 20. (3)].

The MCM has developed a checklist under *Ontario Regulation 359/09* –the *REA Checklist: Consideration of Potential for Archaeological Resources*—to assist project proponents determine when archaeological assessments are required (Sections 20 and 21). A consultant archaeologist must conduct an archaeological assessment and subsequent reports and written comments from the MCM must be included in the application (Sections 21 and 22).

3.8. Funeral, Burial and Cremation Services Act

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c. 33 - Bill 209 S.O. 2002, Chapter 33 (*Funeral, Burial and Cremation Services Act*) was assented on 13 December 2002 and consolidated on 10 December 2019. The Minister—Ministry—of Public and Business Service Delivery (MP&BSD) is responsible for the *Funeral, Burial and Cremation Services Act*.

The *Funeral, Burial and Cremation Services Act* prevails over Part VI of the *Ontario Heritage Act* (Section 105). The *Funeral, Burial and Cremation Services Act* states that disturbing a burial site is prohibited except on instruction by the coroner, pursuant to a site disposition agreement or is the disturbance is carried out in accordance with regulations (Section 94). If an unmarked burial site is found or if someone knows of an unmarked burial site, they must immediately notify the police or coroner (Section 95) who will report the burial site to the Registrar. When an unmarked burial site is found and reported the Registrar may order the owner of the land to have an investigation into the origin of the site completed (Section 96). An investigation under section 96 of the *Funeral, Burial and Cremation Services Act* is guided by *Ontario Regulation 30/11* [section 174. (1)] which requires an archaeologist who holds a professional license issued under Part VI of the *Ontario Heritage Act* to conduct the investigation. When an archaeologist is investigating a burial, they are required to do so with minimal disturbance to the site that is reasonable in the circumstances [section 96 (3)]. The *Funeral, Burial and Cremation Services Act* enables the Registrar to undertake the investigation if in their opinion an investigation would impose and undue financial burden on the landowner [section 96 (4)].

Ontario Regulation 30/11 Part III Division C (sections 174-184) under the *Funeral, Burial and Cremation Services Act* includes regulations for burial sites. Section 174 requires that an archaeologist investigate of a burial site and outlines what must be included in a report to the Registrar. At a burial site where foul play is not suspected –as determined by the coroner—the owner of the land is responsible for taking whatever steps are necessary to preserve the site, the human remains, and any artifacts associated with it until a final disposition is made [section 175. (1b)]. The investigation by the coroner and/or archaeologist may find that the burial site is a burial ground, aboriginal people's burial ground or irregular burial site and the Registrar may declare it as such (Sections 176 and 177).

In the case of an irregular burial site –a burial site not intended as a place of interment for human remains—the owner of the land is responsible for ensuring the human remains are interred in a cemetery located in the same municipality as the site or in an adjoining municipality or to establish the land or land in close proximity to the site as a

cemetery [*Funeral, Burial and Cremation Services Act* section 100 (1) and *Ontario Regulation 30/11* Section 178]. If the burial site is determined to be a burial ground or aboriginal people's burial ground no one is allowed to remove the remains or associated artifacts from the site or conduct scientific analysis of the remains or associated artifacts unless a representative of a person whose remains are interred consents.

3.9. Municipal Act

The *Municipal Act*, 2001, S.O. 2001, c.25 (*Municipal Act*) was consolidated on July 21, 2020, and enables municipalities to be responsible and accountable governments with their jurisdiction. The act authorizes powers and duties for providing good government. The act is administered by the Minister –Ministry—of Municipal Affairs and Housing.

Amongst the many powers enabled by the *Municipal Act* is the power to create By-laws within the municipalities sphere of jurisdiction (Section 11). Under Section 11 (3) a lower-tier municipality and an upper-tier municipality may pass by-laws, subject to the rules set out in subsection (4), respecting matters which includes culture, parks, recreation, and heritage, which may include archaeology.

3.10. Places to Grow Act, 2005 & A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019)

The *Places to Grow Act*, 2005, S.O. 2005, c. 13 (*Places to Grow Act*) was consolidated 20 June 2012. It is intended:

- (a) to enable decisions about growth to be made in ways that sustain a robust economy, build strong communities, and promote a healthy environment and a culture of conservation.
- (b) to promote a rational and balanced approach to decisions about growth that builds on community priorities, strengths and opportunities and makes efficient use of infrastructure.
- (c) to enable planning for growth in a manner that reflects a broad geographical perspective and is integrated across natural and municipal boundaries.
- (d) to ensure that a long-term vision and long-term goals guide decision-making about growth and provide for the co-ordination of growth policies among all levels of government. (2005, c. 13, s. 1).

This act is administered by the Minister –Ministry—of Infrastructure (MOI) and enables decision making across municipal and regional boundaries for more efficient governance in the Greater Golden Horseshoe area and requires a growth plan for the area (section 4). *A Place to Grow: Growth Plan for the Greater Golden Horseshoe* (the *Growth Plan*) is the government’s plan under section 4 of the *Places to Grow Act*.

Niagara Region falls within the Greater Golden Horseshoe (GGH) and is subject to the *Growth Plan* was approved under the *Places to Grow Act*. The most recent version of the *Growth Plan* was approved and went into effect on 16 May 2019. The most recent office consolidation version includes ‘Amendment 1’ that came into effect on 28 August 2020. The goal of the *Growth Plan* is to promote growth and development in the GGH region “in a way that supports economic prosperity, protects the environment, and helps communities achieve a high quality of life”.²⁴ Amendment 1 to the *Growth Plan* updates cultural heritage definitions to align with PPS 2020.

A Place to Grow sets out policies relevant to the conservation of cultural heritage resources within the GGH. Section 1.1 identifies the importance of the conservation of cultural heritage resources, stating:

As the GGH grows and changes, we must continue to value what makes this region unique to ensure the sustained prosperity of Ontario, its people, and future generations. While growth is an important part of vibrant, diversified urban and rural communities and economies, the magnitude of growth that is expected over the coming decades for the GGH presents several challenges...Unmanaged growth can degrade the region’s air quality; water resources; natural heritage resources, such as rivers, lakes, woodlands, and wetlands; and cultural heritage resources.

A Place to Grow indicates that “Our cultural heritage resources and open spaces in our cities, towns, and countryside will provide people with a sense of place” (s. 1.2). It states in Section 4.1 that:

The GGH contains...irreplaceable cultural heritage resources...These lands, features and resources are essential for the long-term quality of life, economic prosperity, environmental health, and ecological integrity of the region. They collectively provide essential ecosystem.

The GGH also contains important cultural heritage resources that contribute to a sense of identity, support a vibrant tourism industry, and attract investment based on cultural

²⁴ The Government of Ontario. May 2019. *A Place to Grow: Growth Plan for the Greater Golden Horseshoe*. p. 3.

amenities. Accommodating growth can put pressure on these resources through development and site alteration. It is necessary to plan in a way that protects and maximizes the benefits of these resources that make our communities unique and attractive places to live.

Policies specific to cultural heritage resources are outlined in Section 4.2.7, as follows:

1. Cultural heritage resources will be conserved to foster a sense of place and benefit communities, particularly in strategic growth areas.
2. Municipalities will work with stakeholders, as well as First Nations and Métis communities, in developing and implementing official plan policies and strategies for the identification, wise use and management of cultural heritage resources.
3. Municipalities are encouraged to prepare archaeological management plans and municipal cultural plans and consider them in their decision-making.

3.11. The Greenbelt Act & The Greenbelt Plan (2017)

3.11.1. The Greenbelt Act

The *Greenbelt Act*, 2005, S.O. 2005, c. 1 (*Greenbelt Act*) is administered by the Minister –Ministry—of Municipal Affairs and Housing (MMAH). It enables the government to designate an area as the Greenbelt Area [section 2(2)] and enables the *Greenbelt Plan* (section 3).

3.11.2. The Greenbelt Plan (2017)

The *Greenbelt Plan* was introduced in 2005 and updated in May 2017. It is the cornerstone of *A Place to Grow* and controls growth in areas with agricultural, ecological, and hydrological features. Niagara Region includes sections of the Greenbelt, specifically Protected Countryside and the Niagara Escarpment Plan Area.

Section 4.4 of the Greenbelt Plan deals with Cultural Heritage Resources, with the following policies applying:

- Cultural heritage resources will be conserved to foster a sense of place and benefit communities.
- Municipalities will work with stakeholders, as well as First Nations and Métis communities, in developing and implementing official plan policies and strategies for the identification, wise use and management of cultural heritage resources.

- Municipalities are encouraged to consider the Greenbelt's vision and goals in preparing archaeological management plans and municipal cultural plans and consider them in their decision-making.

3.12. Niagara Escarpment Planning and Development Act & Niagara Escarpment Plan (2017)

3.12.1. Niagara Escarpment Planning and Development Act

The *Niagara Escarpment Planning and Development Act*, R.S.O. 1990, Chapter N.2 (*Niagara Escarpment Planning and Development Act*) was consolidated on 29 May 2019. The purpose of the *Niagara Escarpment Planning and Development Act* "is to provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible with that natural environment" (R.S.O. 1990, c. N.2, s. 2). The *Niagara Escarpment Planning and Development Act* lists the protection of unique historic areas as an objective but does not include specific content related to archaeology or cultural heritage. The act enables the Niagara Escarpment Commission which administers planning under the *Niagara Escarpment Planning and Development Act* through the *Niagara Escarpment Plan*.

3.12.2. Niagara Escarpment Plan (2017)

The *Niagara Escarpment Plan (NEP)* was approved on 1 June 2017 and is meant to be read in conjunction with other provincial policies, including the *Provincial Policy Statement*, and provides regionally specific land policies. It is intended to build on the *Provincial Policy Statement* to establish a land use planning framework for the Niagara Escarpment area. The *NEP* takes precedence over the *Provincial Policy Statement* where there is a conflict. Where the *NEP* does not contain a policy included in the *Provincial Policy Statement*, the *Provincial Policy Statement* policy applies.

It is an objective of the *NEP* to conserve the escarpment's archaeological resources.

Section 1.6 of the *NEP* identifies minor urban centres which include rural settlements, villages, and hamlets in the *NEP* area. Section 1.7 of the *NEP* addresses urban areas with the objective "to minimize the impact and prevent further encroachment or urban growth on the Escarpment environment" (sub-section 1.7.1). Section 1.8 of the *NEP* addresses Escarpment Recreation Areas. Each of these sections have objectives to "conserve cultural heritage resources, including features of interest to First Nation and Métis communities" (sub-sections 1.6.1 (4), 1.6.8 (9d), 1.7.5 (9d) and 1.8.1 (7)).

Section 2.10 of the *NEP* has detailed cultural heritage and archaeology policies. Policies relating to archaeology are as follows:

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.

At the time of writing, definitions related to cultural heritage and archaeology in the *Niagara Escarpment Plan* are from the 2014 *Provincial Policy Statement*. Development proposals in *NEP* areas will need to consider cultural heritage definitions from both the 2014 and 2020 *Provincial Policy Statement*.

4. State of Archaeological Planning in Niagara Region

4.1. Planners Survey Results

To understand the current state of archaeological planning in Niagara Region's Local Area Municipalities, a survey was distributed to Local Area Municipal planners. The survey asked questions intended to help understand how archaeological assessments are addressed in the planning process. A second survey was distributed to Upper and Single Tier municipalities with an existing AMP to learn about their experiences.

4.1.1. Niagara Region Local Area Municipal Survey Results

The Region's twelve Local Area Municipalities were surveyed about archaeology in their planning process. Responses from planners at Local Area Municipalities in the Region generally indicate that they rely on the Region to identify when archaeology is required and for expertise related to archaeology in planning. Most of the Local Area planners reported that the Region determines the need for archaeological assessment and communicates approval to the Local Area planners when requirements have been met.

Even though many Local Area planners reported that they take direction from the Region about when archaeological assessments are required, there is variation

between municipalities in practice. All Local Area Municipalities are requesting an archaeological assessment for site plans and plans of subdivision, but there is inconsistency for Official Plan Amendments, Zoning By-law Amendments and for Consents, heritage permit applications and foundation permits.

General practice for most Local Area Municipalities is to file archaeological assessment in the planning file for developments and once the project application is deemed complete. There is no other record or repository of archaeological assessments and no way for the planners to look up where archaeological assessments have been done. There are no tools to make use of or retrieve archaeological reports to assist with longer term planning and decision making. Local Area planners do not have a sense of the state of archaeological heritage in their municipality. Municipalities can engage a licensed archaeologist to search the Ontario Register of Archaeological sites for information on registered archaeological sites in their municipality but there is no way of tracking informal discoveries, discovery of human remains or areas that have been cleared of archaeological potential through professional archaeological fieldwork.

Many of the Local Area planners expressed little knowledge about archaeological legislation and requirements. Some planners expressed confusion about when archaeological assessments should be required. Additional tools such as a GIS based potential model, a repository of archaeological assessments, and training or orientation about archaeology requirements related to planning would be necessary for local planners to be comfortable making decisions about archaeology in planning.

Archaeological policy from all the Region's Local Area Municipalities' Official Plans were reviewed and compared to survey responses. In several cases, the Local Area Official Plan policies were detailed; however, in practice the planners reported that they take direction from or defer to the Region for decisions about archaeology. This implies that it is Regional policy directing review of archaeology in planning decisions for Local Area Municipalities instead of local policy.

Niagara-on-the-Lake and Fort Erie which both have existing AMPs and the Town of Pelham with its Heritage Master Plan have the clearest Official Plan policies and understanding of archaeology in the planning process.

4.1.2. Upper and Single Tier Municipalities with Archaeological Management Plans Survey Results

Upper and Single Tier municipalities with an AMP were surveyed to determine their experiences, challenges, and recommendations. Responses from nine upper and single tier municipalities included:

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- District of Muskoka
 - County of Simcoe
 - Regional Municipality of Waterloo
 - Regional Municipality of York
 - City of Hamilton
 - City of Kingston
 - City of London
 - City of Ottawa
 - City of Sault Ste. Marie

Of the nine municipalities surveyed, six have formally adopted their AMPs (City of Hamilton, City of Kingston, City of London, County of Simcoe, Regional Municipality of Waterloo, and Regional Municipality of York).

In general, AMPs were found to be useful for their archaeological potential models and as a tool to standardize processes across their region, county, district, or city. An AMP closes policy gaps where an older official plan was in place or where official plan policy requires additional detail or explanation. An AMP can be a more versatile interim tool for implementing or revising archaeological policy when an official plan amendment would otherwise be required. AMPs were also found to be a useful educational tool for development proponents, municipal planners, and the public about the archaeological history of the area, requirements for archaeological assessment, and the process of including archaeology in development.

Challenges that municipalities identified include logistical and capacity issues around ensuring timely updates to potential models and effective ways of filing archaeological assessment reports for future retrieval and use. Some municipalities had challenges securing a budget for regular review and updates to the AMP and archaeological potential models. Some Upper Tier Municipalities with AMPs have found that the Local Area Municipalities under them do not have the capacity, expertise, or political will to properly implement the plan. Some municipalities use the archaeological potential models from the AMP but no longer rely on policy or implementation tools in their AMP. However, in several cases, the Official Plan has been updated more recently than the AMP and the new Official Plan has more up-to-date policy than the AMP.

Upper and Single Tier Municipalities with an AMP have found the potential mapping and the guideline and implementation procedures useful. They have had some challenges with consistency and a lack of understanding concerning and enforcing requirements.

4.2. State of Official Plan Archaeological Policies

The previous Regional Official Plan and existing Local Area Municipalities' Official Plans, Secondary Plans, Archaeological Management Plans, and Heritage Plans were reviewed to determine the state of archaeological policy in the Region. This review found a lack of consistency both between Regional municipalities and their survey responses. There is a clear need for consistent archaeological policies across the region.

4.2.1. Previous Regional Official Plan Archaeology Policies

The previous Niagara Regional Official Plan (ROP) was approved in 1970 and was last consolidated in 2014. The Region began working on a new Niagara Official Plan (NOP) in 2017, and the plan was approved by the Ministry of Municipal Affairs and Housing with modification in November 2022.

The ROP included archaeological policies that applied to activities in the region. Section 10.C.2.1 outlined policies relating to Built Heritage Resources, Cultural Heritage Landscapes and Archaeological Resources. Regarding archaeological assessments, the ROP stated that:

Policy 10.C.2.1.11 Where an Archaeological Management Plan has not been completed the Region and Local Area Municipalities will require applicants to submit an archaeological assessment, should it be determined that the site meets the provincial and federal criteria for determining areas of archaeological potential. Archaeological assessment reports prepared by licensed consultant archaeologists based on clear, reasonable, and attainable standards and guidelines as set out by the MCM as well as the terms and conditions of an archaeological license under the *Ontario Heritage Act*.

In the case of marine archaeological sites, Policy 10.C.2.1.12 required an assessment by a licensed marine archaeologist for all “partially or fully submerged marine features such as ships, boats, vessels, artifacts from the contents of boats, old piers, docks, wharfs, fords, fishing traps, dwellings, aircraft and other items of cultural heritage value are identified and impacted by shoreline and waterfront developments”.

Following archaeological assessments, ROP Policy 10.C.2.1.13 required that development or site alteration on lands containing, or having the potential to contain, archaeological resources only be permitted if the resources are preserved on site or have been removed, documented, and conserved. Identified significant archaeological

resources must be preserved on site and development must maintain their heritage integrity.

4.2.2. Existing Local Municipal Archaeology and Heritage Plans

Fort Erie (2003) and the Niagara-on-the-Lake (2001) have pre-existing AMPs and schedules in their Official Plans, which indicate Zones of Archaeological Potential.

Lincoln, St. Catharines, Niagara Falls, and West Lincoln's Official Plans have indicated a desire to create local AMPs in consultation with the Region.

Pelham has a Heritage Master Plan (2012) with recommendations yet to be adopted as Official Plan archaeological policies. Niagara Falls has a Heritage Master Plan (2005) which encourages yet to be completed archaeological potential mapping.

All the Local Area Municipalities in Niagara Region have some archaeological policies in their Official Plans. Municipalities with AMPs or Heritage Plans were found to have more detailed archaeological policies than municipalities' without.

4.2.3. Local Official Plan Archaeology Policies

The Local Official Plans all acknowledge potential archaeological resources and require archaeological assessments in consultation with the Region. According to the Official Plans:

- All municipalities require a Stage One archaeological assessment for any development or site alteration on or adjacent to land with archaeological potential. However, due to the lack of archaeological potential mapping and AMPs in the Region, lands which would prompt an archaeological assessment are not readily available to staff or the public. Fort Erie and Niagara-on-the-Lake reference their Zones of Archaeological Potential and Niagara Falls references their Heritage Master Plan which has a partial archaeological record. For the remaining municipalities, the need for an archaeological assessment is determined in pre-consultation with staff and will be required with the complete planning application.
- All municipalities require archaeological review for Official Plan Amendments, Zoning By-law Amendments, Draft Plans of Subdivision, and Draft Plans of Condominium. Minor variances, land severances, and minor zoning amendments can prompt an archaeological assessment in Fort Erie and Niagara-on-the-Lake. Municipal and Regional projects will also undergo assessment in Fort Erie, Niagara-

on-the-Lake, Grimsby, and Welland. Assessments are required for lands located outside an urban area boundary in Fort Erie and Niagara-on-the-Lake but are only required for the lands being developed.

- A common policy found in Fort Erie, Grimsby, Port Colborne, Pelham, Wainfleet, St. Catharines, West Lincoln, and proposed in Niagara Falls' Heritage Master Plan, is that:

Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration which maintains the heritage integrity of the site may be permitted.

- Bonusing for height or density and community benefits is permitted in exchange for the conservation of archaeological resources in Niagara Falls, Welland, and West Lincoln. These municipalities will need to review these provisions considering Bill 108 *More Homes, More Choices Act* and Bill 197 *COVID-19 Economic Recovery Act*.
- The Welland Canal, which runs through the region, is designated as a National Historic Event of Canada. The Cities of St. Catharines and Welland require archaeological assessments within or adjacent to the Canal lands.
- Port Colborne requires that cemeteries not be relocated for private development.
- Marine archaeological policies are found in the Official Plans of Lincoln, Port Colborne, St. Catharines, and Wainfleet. Each municipality requires that a marine archaeological assessment be completed by a licensed marine archaeologist where there may be archaeological potential. If a marine archaeological resource is identified in the assessment, it must be reported to the MCM who will then decide if the site remains *in situ* or is removed for conservation elsewhere.
- Fort Erie, Niagara-on-the-Lake, Lincoln, and St. Catharines' Official Plans require consultation with Indigenous communities concerning archaeology in the municipality.

5. Recommended Upper and Local Municipal Official Plan Policies

5.1. Introduction and Planning Rationale

As stated, the conservation of archaeological resources is a matter of key provincial interest in Ontario. Responsibility to ensure archaeology is completed in planning and EA contexts generally falls to municipalities. To ensure archaeological resources in the Region are conserved, policies for archeological conservation and management should be included in Regional and Local Area Municipal Official Plans. The following official plan policies were recommended as foundational policies in the NOP, and a version of them was included, and are recommended for inclusion in Local Area Municipal Official Plans when eligible for a five-year review as required by Section 26(1.1) (b), Part III of the *Planning Act*.

The foundational policies will enable consistent approaches to archaeological management across the Region. Each municipality may supplement these policies with more specific policy as required. The policies are designed to comply/ be consistent with, and are based on requirements and language used in, the *Ontario Heritage Act*, the *Planning Act*, and the *2020 Provincial Policy Statement*.

Policies and processes relating to Indigenous engagement are under review by the Region and local area Indigenous communities as part of the Corporate Indigenous Engagement Protocol. The consultant recognizes that this process is ongoing and that changes may be required as a result.

The policies recommended in sections 5.3 and 5.4 are intended as suggestions for uniform baseline policy for archaeology across the Region. The recommended policies are consistent with Provincial legislation and policy. Municipalities may craft their own policies, update their existing policies, or adopt these suggested policies when they update their Official Plans; however, any new Local Area Municipality policy or updates to policy should consider and be consistent with the NOP policy language to facilitate a consistent approach across the Region and ensure compliance with Provincial legislation and policy.

5.2. Recommended Updates to Definitions

It is recommended that the following updated definitions concerning archaeology from the *Provincial Policy Statement (2020)*—as superseded in future *Provincial Policy Statement* updates—be adopted in Upper and Local Area Official Plans when eligible for a five-year review as required by Section 26(1.1) (b), Part III of the *Planning Act*.

Archaeological resources: includes artifacts, archaeological sites, marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*.

Areas of archaeological potential: means areas with the likelihood to contain *archaeological resources*. Criteria to identify archaeological potential are established by the Province. The *Ontario Heritage Act* requires archaeological potential to be confirmed by a licensed archaeologist.

Conserved: means the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment that has been approved, accepted, or adopted by the relevant planning authority and/or decision maker. Mitigative measures and/or alternative development approaches can be included in these plans and assessments.

Significant: means in regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.

It is recommended that Official Plans include an information section outlining the provincial interest for archaeology and appropriate definitions to explain the planning rationale and need for archaeological assessment in planning.

5.3. Recommended Niagara Official Plan Archaeological Policy

A version of the recommended policy set was included in the Niagara Official Plan (NOP), which was adopted by Niagara Regional Council in June 2022 and approved with modifications by the Minister of Municipal Affairs and Housing in November 2022, to support the identification and conservation of archaeological resources. In addition, Schedule K of the NOP provides mapped areas of archaeological potential.

Recommended Preamble:

Archaeological sites are highly fragile and non-renewable. The Region recognizes the importance of conserving archaeological resources and the potential to commemorate significant archaeological discoveries in recognition of their contribution to the Region's unique community identity. Part I, 2(d) of the *Planning Act* states that the conservation

of significant archaeological, cultural and historical resources are matters of provincial interest. The Region recognizes that Indigenous and Euro-Canadian, terrestrial and marine archaeological resources and sites contribute to the Region's identity.

Recommended Objective:

Ensure conservation of archaeological resources occurs *in situ* or follows Ontario Government sanctioned guidance for proper excavation, documentation, and preservation of recovered cultural materials and site documentation, in compliance with Provincial requirements, standards or guidelines.

Table 1: Recommended Niagara Official Plan Policies

Policy No.	Policy	Rationale
Policy 1.	Regional and Local Area Municipal planning authorities shall engage with Indigenous communities and consider their interests when identifying, protecting, and managing cultural heritage and archaeological resources. Engagement should occur as early as possible in the archaeological assessment process.	<p>This policy is based on <i>Provincial Policy Statement (2020)</i> section 2.6.5.</p> <p>Planning authorities shall engage with Indigenous communities and consider their interests when identifying, protecting and managing cultural heritage and archaeological resources.</p> <p>In addition, this policy would ensure that the Region is consistent with the requirements of the <i>Environmental Assessment Act</i>, the <i>Places to Grow Act</i>, and the <i>Niagara Escarpment Plan (2017)</i>.</p> <p>Additionally, this policy would ensure the Region is consistent with the <i>Truth and Reconciliation Commission's Calls to Action</i> and the <i>United Nations Declaration on the Rights of Indigenous Peoples</i>.</p>

Policy No.	Policy	Rationale
Policy 2.	The Region will have a detailed emergency protocol created to be shared with project proponents, regional staff and Local Area Municipalities and community members with projects subject to archaeological conditions. This protocol will provide more detail than municipal standard warning clauses and outline guidance for contingency plans to follow for the unexpected discovery of archaeological resources at the regional and local level.	<p>This policy is derived from Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p> <p>This policy is consistent with the <i>MCM Standards and Guidelines for Consultant Archaeologists (2010)</i> which recommends that proponents and contractors prepare "...a contingency plan outlining procedures, documentation, and time requirements in the event that any part of the archaeological site is exposed unexpectedly or in an unplanned manner".</p>

Policy No.	Policy	Rationale
Policy 3.	Archaeological Assessments are required as part of Niagara Region and Local Area Municipal public works projects with ground disturbance and/or work activity on undisturbed ground in areas of archaeological potential. Where an environmental assessment is being undertaken for public works projects in areas of archaeological potential, archaeological assessment should be initiated as part of the environmental assessment study.	<p>This policy is consistent with the <i>Environmental Assessment Act</i> for public works that are subject to an EA archaeological assessment. EAs are required to include a description of the environment that will be affected or that might be expected to be affected, directly or indirectly (Section 6.1 (2, c). Archaeological resources are included in the <i>Environmental Assessment Act</i> definition of environment [Part I1(1, c and d)].</p> <p>This policy ensures that archaeological sites are not disturbed except by a licensed archaeologist, according to Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p>
Policy 4.	When an Archaeological Assessment is required in Niagara Region, the assessment will follow the most updated guidelines and processes as dictated by the MCM – or as superseded.	This policy follows Part I (2) of the <i>Ontario Heritage Act</i> where the minister determines policies, priorities and programs for the conservation, preservation, and protection of the heritage –including archaeology—of Ontario.

Policy No.	Policy	Rationale
Policy 5.	Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.	<p>This policy follows <i>Provincial Policy Statement</i> (2020) section 2.6.2:</p> <p style="padding-left: 40px;">Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.</p> <p>In addition, this policy would ensure that the Region is consistent with the requirements of the <i>Planning Act</i>, the <i>Ontario Heritage Act</i>, and the <i>Environmental Assessment Act</i>.</p>
Policy 6.	It is the policy of the Region and Local Area Municipalities to keep confidential the existence and location of archaeological sites to protect against vandalism, disturbance, and the inappropriate removal of artifacts or cultural heritage resources.	<p>This is recommended good practice. It follows MCM practice before they release archaeological reports to the public.</p> <p>However, the Region or Local Area Municipality may decide to allow information on archaeological sites to be public in some cases. Public archaeology programs or mitigation measures that include public interpretation of a site may be appropriate.</p>

Policy No.	Policy	Rationale
Policy 7.	Unexcavated archaeological sites and resources shall be protected against disturbance until all required archaeological assessments and requirements from the MCM - or as superseded - have been completed.	<p>This policy is a way to ensure archaeological sites in the Region are not disturbed except by a licensed archaeologist according to <i>Ontario Heritage Act</i> Section 48(1) 1 which requires a person to have a license issued by the ministry to carry out archaeological work.</p> <p>This policy is consistent with <i>Provincial Policy Statement</i> section 2.6.2.</p> <p>In addition, this policy would ensure that the Region is consistent with the requirements of the <i>Planning Act</i>, the <i>Ontario Heritage Act</i>, and the <i>Environmental Assessment Act</i>.</p>
Policy 8.	When an Archaeological Assessment is completed within the Region, a hard and digital copy or digital only copy—in a format acceptable to the Region—of the Archaeological Assessment and MCM - or as superseded - review letter will be provided to both the Region and the relevant Local Area Municipality and will be used to update the archaeological inventory and potential mapping.	<p>The MCM emphasizes the need for accurate data and mapping throughout the <i>Standards and Guidelines for Consultant Archaeologists (2010)</i>.</p> <p>In consultation planners highlighted the need for accurate and usable archaeological data to address archaeology in the municipality.</p>
Policy 9.	The Niagara Region Archaeological Management Plan will be subject to a comprehensive review every five years in keeping with the review of the Niagara Official Plan as required by the <i>Planning Act</i> .	Consultation with planners from communities with AMPs recommended formal requirements to review and update the AMP.

Policy No.	Policy	Rationale
Policy 10	The Region will work with the Niagara Peninsula Conservation Authority, Niagara Escarpment Commission, Niagara Parks Commission, Indigenous communities, Local Area Municipalities, educational institutions, museums, community groups, and historical societies to develop public awareness and education initiatives concerning archaeology in the Region.	Public awareness will help to promote the conservation of archaeological resources and support efforts to meet section 2.6.4 of the <i>Provincial Policy Statement</i> and is in keeping with the <i>Niagara Culture Plan</i> . Additionally, the <i>Truth and Reconciliation Commission's Calls to Action</i> calls for "...collaboration with Survivors, Aboriginal organizations, and the arts community, to develop a reconciliation framework for Canadian heritage and commemoration." (79).

5.4. Recommended Local Area Official Plan Archaeological Policy

Recommended Preamble:

Archaeological sites are highly fragile and non-renewable. **City / Town / Township²⁵** recognizes the importance of conserving archaeological resources and the potential to commemorate significant archaeological discoveries in recognition of their contribution to the Region's unique community identity. Part I, 2(d) of the *Planning Act* states that the conservation of significant archaeological, cultural, and historical resources are matters of provincial interest. **City / Town / Township** recognizes that Indigenous and Euro-Canadian, terrestrial, and marine archaeological resources and sites contribute to the local identity.

Recommended Objective:

Ensure conservation of archaeological resources occurs *in situ* or follows Ontario Government sanctioned guidance for proper excavation, documentation, and preservation of recovered cultural materials and site documentation, in compliance with Provincial requirements, standards or guidelines.

²⁵ **City / Town / Township** text is intended to be updated or replaced with the relevant Local Area Municipality's name.

Table 2: Recommended Local Area Official Plan Policies

Policy No.	Policy	Rationale
Policy 1.	City / Town / Township will follow all the archaeology policies of the Niagara Official Plan and Archaeological Management Plan for any archaeological assessment or work undertaken within the municipality.	Application of archaeological policy from the Region across all Local Area Municipalities will ensure consistency across the region. This is consistent with the purpose of the <i>Planning Act</i> to encourage co-operation and co-ordination among various interests.
Policy 2.	The Niagara Official Plan and Archaeological Management Plan must be considered as part of any archaeological assessment or work undertaken within the municipality.	To ensure co-operation and co-ordination as encouraged in the <i>Planning Act</i> . Consideration of the AMP supports the intent of the cultural heritage and archaeological objectives of section 2.6 of the <i>PPS</i> . * If the City / Town / Township has its own archaeological management plan it must be considered as part of any archaeological assessment or work undertaken. In which case, this policy should be updated to include reference to the Local Area Municipality's archaeological management plan.

Policy No.	Policy	Rationale
Policy 3.	Project proponents shall engage with Indigenous communities and consider their interests when identifying, protecting, and managing cultural heritage and archaeological resources. Engagement should occur as early as possible in the archaeological assessment process.	<p>This policy is based on <i>Provincial Policy Statement (2020)</i> section 2.6.5.</p> <p>Planning authorities shall engage with Indigenous communities and consider their interests when identifying, protecting, and managing cultural heritage and archaeological resources.</p> <p>This policy would also ensure that the municipality is consistent with the requirements of the <i>Environmental Assessment Act</i>, the <i>Places to Grow Act</i>, and the <i>Niagara Escarpment Plan (2017)</i>.</p> <p>Additionally, this policy would ensure the municipality is consistent with the <i>Truth and Reconciliation Commission's Calls to Action</i> and the <i>United Nations Declaration on the Rights of Indigenous Peoples</i>.</p>
Policy 4.	Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved or the land has been investigated and cleared or mitigated following clearance from the MCM– or as superseded.	<p>This policy is intended to meet section 2.6.2 of the <i>Provincial Policy Statement</i>:</p> <p>Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.</p> <p>In addition, this policy would ensure that the Region is consistent with the requirements of the <i>Planning Act</i>, the <i>Ontario Heritage Act</i>, and the <i>Environmental Assessment Act</i>.</p>

Policy No.	Policy	Rationale
Policy 5.	Archaeological Assessments are required as part of municipal public works projects with ground disturbance and/or work activity on undisturbed ground in areas of archaeological potential. Where an environmental assessment is being undertaken for public works projects in areas of archaeological potential, archaeological assessment should be initiated as part of the environmental assessment study.	<p>This policy is consistent with the <i>Environmental Assessment Act</i> for public works that are subject to an EA archaeological assessment. EAs are required to include a description of the environment that will be affected or that might be expected to be affected, directly or indirectly (Section 6.1 (2, c). Archaeological resources are included in the <i>Environmental Assessment Act</i> definition of environment [Part I1(1, c and d)].</p> <p>This policy ensures that archaeological sites are not disturbed except by a licensed archaeologist, according to Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p>

Policy No.	Policy	Rationale
Policy 6.	Municipal environmental assessment projects will review the Niagara Region AMP areas of archaeological potential and determine if archaeological assessments are required as part of an Environmental Assessment study.	<p>EAs are required to include a description of the environment that will be affected or that might be expected to be affected, directly or indirectly (Section 6.1 (2, c). Archaeological resources are included in the <i>Environmental Assessment Act</i> definition of environment [Part I1(1, c and d)].</p> <p>This policy ensures that archaeological sites are not disturbed except by a licensed archaeologist, according to Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p>

<p>Policy 7.</p>	<p>The municipality will promote conservation of its archaeological resources and may:</p> <ul style="list-style-type: none"> a) Require an archaeological assessment(s) by a licensed archaeologist, because of a proposal or plan for site alteration or development if any portion of the subject property falls within a zone of archaeological potential, as shown in the Niagara Region's Archaeological Management Plan archaeological potential mapping, or where an archaeological site has been previously registered on the property. b) Require an archaeological assessment(s) for the entire property in compliance with current Provincial requirements, standards, and guidelines for consultant archaeologists; and assess the impact of the proposed development on any archaeological resources identified. For lands located outside a settlement area boundary where site alteration or development will not affect the entire property, the project archaeologist may consult with the MCM on a property-by-property basis to determine if these areas can be exempt. 	<p>Based on consultation with planners and developers, guidelines of the Ministry of Citizenship and Multiculturalism, and relevant legislation. Local Area planners requested clear implementation steps.</p>
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	<p>c) Require a Provincial MCM –or as superseded—review and acceptance letter verifying that an archaeological assessment is compliant with the <i>Standards and Guidelines for Consultant Archaeologists</i> (2011).</p> <p>d) Where appropriate, encourage the communication of appropriate archaeological discoveries and/or cultural narratives to the public through innovative architectural and/or landscape architectural design, public education, public art, or other public realm projects.</p> <p>e) Review Municipal and Regional projects, whether or not they are subject to the <i>Environmental Assessment Act</i>, such as site alteration, development and/or infrastructure projects that involve construction, erection or placing of a building or structure, other activities such as site grading, excavation, removal of topsoil, or peat and the placing and dumping of fill; drainage works, except for the maintenance of existing municipal and agricultural drains to determine impacts upon potential archaeological resources. An archaeological assessment will be required if the lands are located within the zone of archaeological</p>	
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Policy No.	Policy	Rationale
	potential as indicated the Region of Niagara's Archaeological Management Plan, the municipality's archaeological potential mapping, or where an archaeological site has been previously registered on the property.	
Policy 8.	When considering an application for development or site alteration, the municipality may require a marine archaeological assessment to be conducted by a licensed archaeologist pursuant to the <i>Ontario Heritage Act</i> if there is potential for the presence of partially or fully submerged marine features such as (but not limited to) ships, boats, vessels, artifacts from the contents of boats, old piers, docks, wharfs, fords, fishing traps, dwellings, aircraft and other items of cultural heritage value. Any marine archaeological resource that is identified shall be reported to the MCM – or as superseded.	As required by the MCM. This policy is derived from Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.

<p>Policy 9.</p>	<p>If human remains are encountered during development activities in the municipality, all activities must cease immediately. People must not disturb and must move away from the remains. The police and coroner must be contacted who will then secure the site. The appropriate federal, provincial, and local authorities must be immediately contacted. Required provisions under the <i>Funeral, Burial and Cremation Services Act</i>, <i>Ontario Heritage Act</i>, along with other applicable protocol or policy must be followed. Where there are Indigenous burials, they will be addressed in partnership with communities of the closest cultural affiliation. Licensed consultant archaeologists will carry out an archaeological assessment in accordance with the <i>Ontario Heritage Act</i> and the <i>Standards and Guidelines for Consultant Archaeologists</i>. No further development or site alteration including –but not limited to—grading, overburden deposition, soil compaction or other soil disturbances shall take place which may impact the archaeological site prior to the MCM, through the municipality, confirming that all archaeological resource concerns have met licensing and resource conservation requirements. Development which will not</p>	<p>This policy is derived from Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p> <p>This policy is consistent with the MCM <i>Standards and Guidelines for Consultant Archaeologists</i> (2010) which recommends that proponents and contractors prepare "...a contingency plan outlining procedures, documentation, and time requirements in the event that any part of the archaeological site is exposed unexpectedly or in an unplanned manner".</p>
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Policy No.	Policy	Rationale
	negatively impact the archaeological site as determined through consultation with local planning staff may continue on the property prior to approval from the MCM.	
Policy 10	It is the policy of the municipality to keep confidential the existence and location of archaeological sites to protect against vandalism, disturbance, and the inappropriate removal of artifacts or cultural heritage resources.	<p>This is recommended good practice. It follows MCM practice before they release archaeological reports to the public.</p> <p>However, the Local Area Municipality may decide to allow information on archaeological sites to be public in some cases. Public archaeology programs or mitigation measures that include public interpretation of a site may be appropriate.</p>
Policy 11	A standard clause addressing unexpected archaeological finds protocols will be included with all draft and final development approvals.	<p>This policy is derived from Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p> <p>This policy is consistent with the MCM Standards and Guidelines for Consultant Archaeologists (2010) which recommends that proponents and contractors prepare "...a contingency plan outlining procedures, documentation, and time requirements in the event that any part of the archaeological site is exposed unexpectedly or in an unplanned manner".</p>

Policy No.	Policy	Rationale
Policy 12	If deeply buried or previously undiscovered archaeological remains and/or resources are found during construction activities in the municipality, all activities must cease immediately and the Contingency Plan for Accidental Discoveries (as appropriate) shall be applied (see Appendix C).	<p>This policy is derived from Section 48 (1) of the <i>Ontario Heritage Act</i> which states that it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p> <p>This policy is consistent with the <i>MCM Standards and Guidelines for Consultant Archaeologists</i> (2010) which recommends that proponents and contractors prepare "...a contingency plan outlining procedures, documentation, and time requirements in the event that any part of the archaeological site is exposed unexpectedly or in an unplanned manner".</p>
Policy 13	When an Archaeological Assessment is completed within the municipality, a hard and/or digital copy—in a format acceptable to the Local Area Municipality and Region—of the Archaeological Assessment and MCM— or as superseded - review letter will be provided to both the municipality and the Region and will be used to update the archaeological inventory and potential mapping.	<p>The MCM emphasizes the need for accurate data and mapping throughout the <i>Standards and Guidelines for Consultant Archaeologists</i> (2010).</p> <p>Planners highlighted the need for accurate and usable archaeological data to address archaeology in the municipality. Planners from municipalities with AMPs and GIS based potential models were clear that the development community expects regularly updated mapping. The planners also found regular updates useful. Some planners from municipalities with static AMP potential mapping expressed frustration with potential mapping that is not kept current.</p>

Policy No.	Policy	Rationale
Policy 14.	The municipality will work with the Region, Niagara Peninsula Conservation Authority, Niagara Escarpment Commission, Niagara Parks Commission, Indigenous communities, educational institutions, museums, community groups, and historical societies to develop public awareness and education activities concerning the value of archaeology in the municipality.	Public awareness will help to promote the conservation of archaeological resources and support efforts to meet section 2.6.4 of the <i>Provincial Policy Statement</i> and is in keeping with the <i>Niagara Culture Plan</i> . Additionally, the <i>Truth and Reconciliation Commission's Calls to Action</i> calls for "...collaboration with Survivors, Aboriginal organizations, and the arts community, to develop a reconciliation framework for Canadian heritage and commemoration." (79).

In addition to these policies, the Local Area Official Plan policies for "H" zones should be reviewed to ensure that the conservation of cultural heritage resources is identified as a reason for imposing a Holding symbol and any municipal list of required studies include archaeological assessment as a type of report that can be requested by the municipality.

5.5. Recommended Standard Warning Clauses

While the Region's AMP will reduce the risk posed to archaeological sites by development, there will still be instances of unexpected emergency archaeological finds.

Section 48 (1) of the *Ontario Heritage Act* states that it is illegal for any person or agency to alter that archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario. Therefore, for applications on sites that fall wholly or partially within an area of archaeological potential, it is recommended that standard warning clauses be included in pre-consultation comments, Regional comment letters, and required as a condition of approval to be included in future development agreements to advise on the protocols regarding unexpected archaeological discoveries. Recommended standard warning clause wording has been provided below..

5.5.1. Pre-consultation Standard Warning Clause

The following wording will be included in all pre-consultation agreements/comments for properties that fall wholly or partially within an area of archaeological potential:

“The subject lands are in an area of archaeological potential. A Stage <X and X> Archaeological Assessment shall be completed and submitted to the Ministry of Citizenship and Multiculturalism (MCM) for review. No demolition, grading or other soil disturbances shall take place on the property until a letter from the MCM is submitted to the Area Municipality confirming that the required archaeological assessment report(s) have met licensing and resource conservation requirements.”

5.5.2. Development Application Standard Warning Clause

The following wording will be included in all Regional comment letters and/or required as a condition of approval to be included in future development agreements for properties that fall wholly or partially within an area of archaeological potential:

“If deeply buried or previously undiscovered archaeological remains/resources are found during development activities on the subject lands, all activities must stop immediately. If the discovery is human remains, contact the police and coroner to secure the site. If the discovery is not human remains, the area must be secured to prevent site disturbance. The project proponent must then follow

the steps outlined in the Niagara Region Archaeological Management Plan: Appendix C.”

6. Recommended Planning Process

The following recommended process for archaeology assessment on projects in Niagara Region has been written and supported with rationale to provide a baseline reference for clear and consistent guidance across the Region. For planning applications, this process is led by local municipal planners as the approval authority and begins with pre-consultation between the proponent, local municipal planners, and various agencies.

Depending on the location of the proposed development, the Region or Local Area Municipality may require a Stage 1, and if required Stage 2, archaeological assessment(s) as part of a complete application. This ensures standard due diligence and serves as a risk assessment for proponents. If required, Stage 3 and Stage 4 archaeological assessments may be required as a condition of approval. Council may also require whatever they deem necessary for a complete application as detailed in Official Plan policies. Archaeology in the environmental assessment process and for *Ontario Heritage Act* applications follows similar steps and has similar considerations. This section outlines:

- Planning applications where archaeological assessment is required.
- Considerations for Indigenous engagement related to archaeology.
- A step-by-step process for archaeology in planning applications; and,
- Archaeology in Environmental Assessments and *Ontario Heritage Act* applications.

6.1. Indigenous Engagement and Archaeology

Engagement with Indigenous communities is a particularly important part of the archaeological assessment process as it has the potential to document Indigenous cultural patrimony including histories, people, and sacred sites. Project proponents should expect to engage with Indigenous communities on archaeology. The consultant licensed professional archaeologist will have a key role in Indigenous engagement for archaeology, which should occur early in a project that requires archaeological assessments as directed in the Niagara Official Plan section 7.11. The *Standards and Guidelines for Consultant Archaeologists* (2011) require engagement in Stage 3, when you are “assessing the cultural heritage value or interest of an Aboriginal archaeological site that is known to have or appears to have sacred or spiritual importance, or is associated with traditional land uses or geographic features of cultural heritage interest,

or is the subject of Aboriginal oral histories”.²⁶ However, the MCM also has a bulletin *Engaging Aboriginal Communities in Archaeology* (2010) that provides additional details for consultant archaeologists on planning Indigenous engagement. Since one of the criteria used for determining cultural heritage value or interest (CHVI) is value to a community including Indigenous communities and since many Indigenous communities have made it clear that determining CHVI is their right, engagement much earlier than the stage 3 archaeological assessment has become the de facto best practice.

It is recommended that Indigenous engagement occur as early as possible in the process. This is consistent with intent of the MCM S&Gs and the Aboriginal Engagement Bulletin.

²⁶ MCM, Standards and Guidelines for Consultant Archaeologists, Section 3.4. p 57.

6.2. Recommended Niagara Region Archaeology Planning Process

Table 3: Archaeology in the Planning Process

Step	Process	Rationale
1.	<p>To begin the process, a proponent will contact the Local Area Municipality for a pre-consultation meeting or preliminary discussion about the proposal. The Local Area Municipality’s planner on the file will check if the proposed project falls within an area of archaeological potential. If archaeological potential is determined to exist on any portion of the proposed development parcel, it will be subject to the archaeological planning process and Regional planning staff should be included in preliminary discussions/pre-consultation. Regional planners will discuss archaeological requirements with the proponent in pre-consultation.</p> <p>If a proponent has completed archaeological assessments prior to pre-consultation, copies of the archaeological assessment reports and MCM—or as superseded—acknowledgement letter should be submitted to the local municipal planners along with other project documentation, for distribution to the Region.</p>	<p>As archaeological assessments are required by the <i>Environmental Assessment Act</i> and the <i>Provincial Policy Statement</i>, and can be required under the <i>Ontario Heritage Act</i>, it is recommended that development applications be assessed for archaeology at the earliest opportunity.</p> <p>Early assessment is encouraged as a form of risk management for the proponent who can use the results of the assessment to determine where and how to design their development. Mitigating potential future costs and extended timelines.</p> <p>As part of the AMP, archaeological potential mapping will be made available for local municipal planners across the region. This mapping will aid planners, both Regional and local, in determining when archaeological assessments are required and increase understanding of archaeology in local municipalities</p>

Step	Process	Rationale
2.	<p>If the project is not within an area of archaeological potential, the application can be submitted without further archaeological assessment. However, project proponents must be aware of and follow protocols for accidental or unexpected finds and be prepared to engage a consultant archaeologist if necessary. Warning clauses and/or emergency protocol information should be provided to proponents.</p>	<p>As required by Section 48 (1) of the <i>Ontario Heritage Act</i> and defined in Ontario Regulation 170/04, it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p> <p>If archaeological resources are found on site unexpectedly, the proponent is obligated by Section 48(1) of the <i>Ontario Heritage Act</i> to hire a licensed consultant archaeologist to complete an archaeological assessment. It is recommended that the handouts included in this AMP be provided at the pre-consultation meeting to ensure proponents know their role and legislative requirements for unexpected finds.</p>

Step	Process	Rationale
3.	<p>If a project area or property or a portion thereof is identified as having archaeological potential, an archaeological assessment(s) is required.</p> <p>The Regional planner recommends a combined Stage 1 and Stage 2 archaeological assessment. However, the project consultant archaeologist may – based on their professional opinion— recommend starting with a Stage 1 assessment to be followed by a Stage 2 assessment as required. Where there is uncertainty on past site disturbance or the level of disturbance that will result from specific construction methods, a Stage 1 assessment will assist in verifying risk to archaeological resources from the proposed development.</p> <p>The archaeological assessment(s) will be completed by a licensed consultant archaeologist.</p> <p>It is recommended that engagement be undertaken by project proponents with Indigenous communities, at the earliest opportunity to determine if the site holds Indigenous cultural heritage interests.</p>	<p>Archaeological assessments are required by the MCM in areas of archaeological potential. Detailed steps are explained in the Ministry's <i>Standards and Guidelines for Consultant Archaeologists</i> (2011).</p> <p>Indigenous engagement is recommended at the earliest opportunity by the MCM in their <i>Engaging Aboriginal Communities in Archaeology</i> (2010) and <i>Standards and Guidelines for Consultant Archaeologists</i> (2011) documents, which is echoed in Niagara Official Plan policy Section 7.11.</p>

Step	Process	Rationale
4.	<p>The licensed consultant archaeologist will submit the Stage 1 and/or 2 archaeological assessment(s) to the MCM who will review the report(s). If the Ministry finds that the report is compliant with the terms and conditions of the archaeologist's license and the 2011 Standards and Guidelines for Consultant Archaeologists, they will send an acknowledgement letter(s) to the licensed consultant archaeologist.</p> <p>The project proponent will submit the acknowledgement letter and archaeological assessment(s) to the municipal approval authority.</p> <p>The municipality will then provide the Region with a copy of the archaeological assessment to be added to the Region's archaeological assessment repository and aid in updating the archaeological potential mapping.</p>	<p>As required by Section 65 of the <i>Ontario Heritage Act</i>, the MCM is responsible for the review of archaeological assessment reports.</p> <p>To ensure clear communication, it is recommended that a copy of the acknowledgement letter be received by both the Local Area Municipality (approval authority) and Region.</p> <p>Niagara Official Plan policy 6.4.2.7 requires archaeological assessment to follow the Ministry guidelines and processes.</p>

Step	Process	Rationale
5.	<p>If the Stage 1 and/or 2 archaeological assessment(s) concluded that the property or project site does not require additional archaeological assessment and the Province has provided an acknowledgement letter for the assessment(s), local municipal planners can consider archaeological requirements for the application met.</p> <p>If the Stage 2 archaeological assessment found no significant archaeological sites that are recommended to be of further cultural heritage value or interest and recommends that the property be cleared of further archaeological concern, no further archaeological assessment is required.</p> <p>If the Stage 2 archaeological assessment found a site or sites deemed to have cultural heritage value or interest, and that require more assessment, a Stage 3 archaeological assessment is required.</p> <p>It is recommended that engagement be undertaken with Indigenous communities when assessing property in Stage 2 to ensure there are no unaddressed Indigenous archaeological interests connected with the property. Direction for early engagement is emphasized in Niagara Official Plan policy Section 7.11.</p> <p>Additional assessment (Stage 3) could be made part of a conditional approval (i.e., site plan, draft plan, holding provision in zoning). Alternatively, the proponent may wish to have Stage 3 work done on identified archaeological sites prior to submitting the application to determine if revisions to the original site layout are required or whether the development is no longer feasible.</p>	<p>Indigenous engagement is recommended at the earliest opportunity by the MCM in their Engaging Aboriginal Communities in Archaeology (2010) and Standards and Guidelines for Consultant Archaeologists (2011) documents.</p> <p>A Stage 3 archaeological assessment is required by the MCM if an archaeological site is identified. The detailed steps are explained in the Ministry's Standards and Guidelines for Consultant Archaeologists (2011).</p>

Step	Process	Rationale
6.	<p>The project proponent will have their licensed consultant archaeologist complete a Stage 3 archaeological assessment.</p> <p>If an Indigenous site(s) will be investigated as part of the Stage 3 archaeological assessment, the consultant archaeologist and project proponent must engage with the required Indigenous communities. Indigenous communities may require the involvement of nation-members in the archaeological assessment process, such as monitors or field liaisons.</p> <p>Any documentation from the MCM which arises from the site must be shared with Indigenous communities by the licensed archaeologist.</p>	<p>The minimum requirement for Indigenous engagement is during a Stage 3 when assessing the cultural heritage value or interest of an Indigenous archaeological site by the MCM in accordance with the <i>Engaging Aboriginal Communities in Archaeology</i> (2010) and <i>Standards and Guidelines for Consultant Archaeologists</i> (2011) documents.</p>
7.	<p>Depending on the timeline and archaeological situation of the site, partial/phased development may be permitted while assessments are ongoing. This will be determined on a case-by-case basis with local municipal and/or Regional planners, in consultation with the licensed consultant archaeologist. An acknowledgement letter must be received from the MCM which confirms the recommendation for phasing.</p>	<p>The Ministry's <i>Standards and Guidelines for Consultant Archaeologists</i> allows for the licensed consultant archaeologist to recommend partial clearance in cases where a Stage 2 archaeological assessment was completed for the entire property and found archaeological sites in only certain locations. A Stage 3 and potentially Stage 4 archaeological assessment would then be completed for the archaeological sites, and the partial clearance/phasing would be negotiated through the processes of the <i>Planning Act</i>.</p>

Step	Process	Rationale
8.	<p>The licensed consultant archaeologist will submit the Stage 3 report(s) to the MCM who will review the report(s). If the Ministry finds that the report is compliant with the terms of the archaeologist's license, they will send an acknowledgement letter(s) to the licensed consultant archaeologist.</p> <p>The project proponent will submit the acknowledgement letter(s) and the archaeological assessment(s) to the Local Area Municipality, who will circulate them to the Region.</p> <p>A Stage 3 archaeological assessment may present different opportunities for a project proponent. It can demonstrate the limits of and give an idea of the significance of an archaeological site. Based on the results of a Stage 3 archaeological assessment, advice from the consultant archaeologist and engagement with relevant stakeholders a project proponent may decide on different courses of action, including: to proceed with their project as planned following archaeological mitigation measures, to redesign the project to avoid part or all of the archaeological site(s) or to not proceed with the development application.</p>	<p>As required by Section 65 of the <i>Ontario Heritage Act</i>, the MCM is responsible for the review of archaeological assessment reports.</p> <p>To ensure clear communication, it is recommended that a copy of all archaeological assessment(s) and acknowledgement letter(s) be received by both the Local Area Municipality and Niagara Region.</p>

Step	Process	Rationale
9.	<p>A Stage 3 archaeological assessment may be enough to demonstrate a site does not have significant cultural heritage value or interest or that further archaeological investigations will not yield important information about the archaeological heritage of Ontario. The archaeological assessment may determine that the site is significant and recommend a Stage 4 archaeological assessment or avoidance measures.</p> <p>If the consultant archaeologist concludes and the MCM agrees that the site(s) do not require a Stage 4 archaeological mitigation, the local municipal planners may consider archaeological assessment components of the application met.</p> <p>If the site(s) are significant but complete avoidance is an option, an archaeological monitoring and protection plan may be required as a condition of approval.</p> <p>If the site(s) are significant and avoidance is not an option, a Stage 4 archaeological mitigation will be required.</p>	<p>A Stage 4 archaeological mitigation is required by the MCM if it is determined through the Stage 3 that long-term mitigation strategies are required before development can proceed. The detailed steps are explained in the Ministry's <i>Standards and Guidelines for Consultant Archaeologists</i> (2011).</p>
10.	<p>The project proponent will have their licensed archaeological consultant complete the Stage 4 archaeological mitigation.</p>	<p>As required by Section 48 (1) of the <i>Ontario Heritage Act</i> it is illegal for any person or agency to alter an archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario.</p>

Step	Process	Rationale
11.	<p>The licensed consultant archaeologist will submit their report to the MCM who will review the report. If the report meets the terms of the consultant archaeologists license the Ministry will send a letter of acknowledgement.</p> <p>The project proponent will submit the acknowledgement letter and the archaeological assessment to the municipality.</p> <p>The municipality will then provide the Region with a copy of the archaeological assessment to be added to the Region's archaeological assessment repository and used to update the archaeological potential mapping.</p>	<p>As required by Section 65 of the <i>Ontario Heritage Act</i>, the MCM is responsible for the review of archaeological assessment reports.</p> <p>To ensure clear communication, it is recommended that a copy of all archaeological assessment(s) and acknowledgement letter(s) be received by both the Local Area Municipality and Niagara Region.</p>
12.	<p>After Stage 4 archaeological mitigation is complete and accepted by the MCM, the local municipal planners may consider archaeological assessment components of the application met.</p>	<p>The development application may still require further approvals depending on the site, but it is now cleared of further archaeological concerns with approval from the MCM.</p>
13.	<p>Any archaeological assessment reports produced in this process will be added to the Region's archaeological assessment repository and information about sites and properties cleared of archaeological potential will be used to update the Region's archaeological potential mapping.</p>	<p>The municipality and Region are encouraged to update the archaeological potential mapping at regular intervals, at least quarterly.</p> <p>As the mapping is what identifies the need for an archaeological assessment, it is important to ensure accurate archaeological potential mapping is available to municipal and Regional staff and development proponents.</p> <p>Niagara Official Plan policy 6.4.1.3 and 6.4.2.6 require archaeological assessment reports to be sent to the Region and archaeological potential mapping to be updated.</p>

6.3. Archaeology in Other Planning Processes

In addition to the process for archaeological assessment in planning applications detailed in Table 3, archaeological assessments may be required as part of an Environmental Assessment or as part of an application under the *Ontario Heritage Act*.²⁷

6.3.1. Environmental Assessment Act Process

As noted in Section 3.3, archaeological assessments are required as part of environmental assessments to assess which archaeological resources, sites, artifacts or remains will be affected by a project subject to the *Environmental Assessment Act*.

Routine projects may follow a streamlined EA process such as a class environmental assessment, addressed in Part II.1 of the *Environmental Assessment Act*. Class environmental assessments must be approved by the Minister—Ministry of the Environment, Conservation and Parks— (Part II.1). One type of class is a Municipal Class Environmental Assessment, which is used for municipal infrastructure projects such as projects to plan, design, construct, maintain, rehabilitate and/or retire municipal road, water, wastewater, and transit project.²⁸

6.3.2. Ontario Heritage Act Process

The *Ontario Heritage Act* was reviewed as per Bill 108 *More Homes, More Choices Act* (which will be in force on January 1, 2021).

If an application is submitted to Council for proposed works under Part IV (Section 27 and Section 29) properties or Part V designated property, Council has 90 days to review the application with their Municipal Heritage Committee. Within the 90-day period, Council must decide to either refuse the application, consent to the application, or consent with terms and conditions. Both a complete application under the *Ontario Heritage Act* and/or a condition of approval could include an archaeological assessment. This is authorized by the following sections of the *Ontario Heritage Act* which state:

- a. Part IV Section 27(5).

²⁷ Ontario Heritage Trust. n.d. Archaeology – Frequently Asked Questions.

²⁸ Ministry of the Environment, Conservation and Parks. 2020. *Class EA for Municipal Infrastructure Projects*. [online] Accessed at: <https://www.ontario.ca/page/class-ea-municipal-infrastructure-projects>

- b. The notice required by subsection (3) shall be accompanied by such plans and shall set out such information as the council may require.
- c. Part IV Section 33(2).
- d. Application. An application under subsection (1) shall be accompanied by a detailed plan and shall set out such information as the council may require.
- e. Part V Section 42 (2.2).
- f. Content of application. An application under this section shall include such information as the council of the municipality may require.

7. Implementation

Implementation of Niagara Region's AMP will generally follow the process outlined in Section 6 (above) and project proponents are expected to follow the requirements of the standard warning clauses (Section 5.5, above). However, based on input from background research and informal consultation with planners at other municipalities with AMPs and with Niagara Region Local Area Municipal planners, additional implementation measures are required.

7.1. Implementation

The following are recommended for implementation of the AMP.

1. Niagara Region shall maintain an MOU/Service Level Agreement and data sharing agreement(s) with the Local Area Municipalities to ensure archaeological potential mapping and site identification is available for development application pre-consultation review.
 - a. Before information about known archaeological sites will be made public, all personal information from reports and details about location and finds will be removed to protect personal information and sensitive archaeological sites. Specific information about known archaeological sites will be kept confidential to protect against vandalism, disturbance, and the inappropriate removal of artifacts or cultural heritage resources in accordance with Niagara Official Plan policy.
 - i. The MCM emphasizes the need for accurate data and mapping throughout the *Standards and Guidelines for Consultant Archaeologists* (2010).
 - ii. This follows MCM practice before archaeological reports are released to the public.

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- iii. In consultation planners highlighted the need for accurate and usable archaeological data to address archaeology in their municipalities.
 - b. Archaeological potential mapping should be updated at quarterly intervals.
 - i. The MCM emphasizes the need for accurate data and mapping throughout the Standards and Guidelines for Consultant Archaeologists (2010).
 - ii. Planners highlighted the need for accurate and usable archaeological data to address archaeology in the municipality. Planners from municipalities with AMPs and GIS based potential models were clear that the development community expects regularly updated mapping (greater than once a year). The planners also found regular updates useful. Some planners from municipalities with static AMP potential mapping expressed frustration with potential mapping that is not kept current. This also helps prevent a backlog of reports.
 2. Niagara Region recommends that Local Area Municipalities incorporate the policies presented in Section 5.4 to be part of any Local Area Official Plan Updates.
 - a. Once completed, the Indigenous Engagement Protocol shall serve as a companion to the AMP and NOP Indigenous engagement policies to inform the planning process.
 3. Niagara Region will develop and host online archaeology and archaeological planning training seminars for any Regional and Local Area personnel who may need to address archaeological resources through their work, including but not limited to:
 - a. Municipal planners.
 - b. Engineering and public works personnel who will make decisions that may relate to archaeology or may come across unexpected finds in the course of their work.
 - c. Regional and Local Area councillors.
 - d. Regional and Local Area committee members.
 - i. *Conversations with planners highlighted the need and desire for training on archaeology.*
 - ii. *It is recommended that Indigenous perspectives be included with this training in keeping with the Truth and Reconciliation*

Commission’s calls upon “federal, provincial, territorial, and municipal governments to provide education to public servants on the history of Aboriginal peoples, including the history and legacy of residential schools, the United Nations Declaration on the Rights of Indigenous Peoples, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.” (57).

4. The Region and all Local Area Municipalities are encouraged to review and update by-laws that address site alteration and development where there is potential to impact archaeological sites and resources that may be affected by updated archaeological policy, including but not limited to:
 - a. Site alteration by-laws.
 - b. Foundation permit by-laws.
 - c. Property standards by-laws; and,
 - d. Fence by-laws.
5. Niagara Region shall provide Regional branded information materials about archaeological processes to all Local Area Municipal planning departments for reproduction and distribution to project proponents and members of the public. The need for information handouts concerning archaeology in the region was identified through the consultation process.
6. The Region will facilitate data sharing of archaeological information in the following ways:
 - a. The Region will maintain the data sharing agreement with the MCM.
 - b. The Region will maintain legal deposit repository of archaeological assessment reports.
 - i. *A legal deposit repository (which can be virtual or hard copy entity) consists of collection of all archaeological reports completed within the jurisdiction of the respective municipality. This approach has been used by several municipalities in Ontario, including the City of Kingston, to ensure planners and municipal official are aware of all archaeological works completed within the municipality. It can be integrated into a GIS system or function as a stand-alone entity.*
 - c. Niagara Region will host and manage archaeological potential mapping via a GIS platform. To ensure consistent and efficient information and updates to the mapping and repository, the Region and Local Area

Municipalities will need to maintain their data sharing agreements. This GIS information shall be updated at regular intervals, at least quarterly.

- d. To implement the AMP, Local Area Municipal planners will maintain/update existing data sharing agreement(s) with the Region.
 - i. *Local Area planners will need to access detailed archaeological potential mapping including up-to-date GIS layers with potentially sensitive information provided by the MCM.*
7. The Region considers developing and maintaining a list of interest groups who may have an interest in being consulted about archaeological work and/or finds in the Region.

7.2. Expanded Discussions for Implementation

In addition to the before mentioned aspects of implementation, there are several additional considerations and available tools for archaeological resource management and conservation.

7.2.1. Discovery of Human Remains (Military Personnel)

Discovery of human remains is a sensitive subject. Discovery of human remains from a military conflict –such as War of 1812 graves or burial sites—may be particularly sensitive and may be related to Indigenous communities, British-Canadian communities and/or American communities. A burial site or grave of military personnel may be considered a War Grave in a general sense; however, it may not be a War Grave as defined by the *Funeral, Burial, and Cremation Services Act* and its regulations. Archaeological work at a burial site for military personnel may require consultation with the MCM, the Canadian Department of National Defense, Indigenous communities, and international stakeholders (American or British).

7.2.2. Planning Tools

There are a variety of planning management tools available in the Ontario context which can be used for archaeological sites. However, the identification of the management tool must be based upon the results of the evaluation, including the specific heritage values and heritage attributes identified.

Table 4 provides a list of some of the tools available to an Ontario municipality for managing its cultural heritage resources, including archaeology.

Table 4: Planning Tools

Under the Ontario Heritage Act

Designation of an archaeological site under the *Ontario Heritage Act*.

In cooperation with the province, archaeological sites can be protected under Part IV, Part V, and Part VI of the *Ontario Heritage Act*. Archaeological sites and/or potential archaeological resources may be identified as heritage attributes in Part IV designating by-laws or in Part V HCD Plans.

Very few sites have been designated under Part VI to date. These sites tend to be very significant. Archaeological sites designated under Part VI of the *Ontario Heritage Act* are listed in *Ontario Regulation 875* and include:

- The Forget Archaeological Site
- The Lawson Site
- The Roebuck Site
- The Sheguiandah Archaeological Site
- The Township of South Burleigh Archaeological Site

No archaeological sites designated under Part VI of the Act are in Niagara Region.

Under the Planning Act	
Section 29 – Agreement for Studies and Development	<p>Under Section 29 of the <i>Planning Act</i>, a municipality, with the approval of the Minister, may enter into an agreement with any governmental authority or any agency thereof created by statute, to carrying out of studies and to prepare and implement plans and programs for the development or improvement of the municipality.</p> <p>Section 29(2), the <i>Planning Act</i> also indicates that Minister’s permission is not required for agreements with other municipalities.</p> <p>This may be interpreted to including archaeological studies. A Section 29 agreement may be used in cooperative efforts between the Region/Local Area Municipality and Niagara Parks Commission or for projects that cross Local Area Municipal boundaries.</p>
Section 33 – Demolition Control Area	<p>Under Section 33 of the <i>Planning Act</i>, when there is a by-law in place for a demolition control area, no person shall demolish on the lands without a demolition permit issued by Council.</p> <p>If the property is located within an area of archaeological potential, and there is a potential for soil disturbance, a municipality could make an archaeological assessment a requirement in advance of issuing a demolition permit.</p> <p>By way of comparison, consider the following natural heritage example. If a building proposed for demolition housed an endangered species of bat, you would not be able to tear it down until after the bats were moved/relocated. The same principle applies to land with potential for archaeological sites.</p>

Under the Planning Act	
Section 34(3.3) – Zoning by-laws – Significant Archaeological Resources	<p>Under Section 34(3.3) of the <i>Planning Act</i>, council may pass a zoning by-law for prohibiting any use of land and the erecting, locating, or using of any class or classes of buildings or structures on land that is the site of a significant archaeological resource.</p> <p>This can be done by requiring specific setbacks from known archaeological sites or zoning specific uses in areas known archaeological resources (such as zoning as a specific property parcel as a park.)</p>
Section 36 – Holding Provision By-law	<p>Under Section 36 of the <i>Planning Act</i>, Council may place a holding (H) provision by-law on lands to specific the use to which lands may be put to until the holding provision is removed. An official plan must include policies that recommend the H provision include the protection of cultural heritage resources.</p> <p>Holding provisions can be applied to all or part of a property until required archaeological assessments are completed if this is specifically identified within an Official Plan. As outlined above in the recommended OP policies, each municipal government should review its respective OP policies for “H” zones should be reviewed to ensure that the conservation of cultural heritage resources is identified as a reason for imposing a Holding symbol. This has been applied in other municipalities where a Stage 1/2 assessment identifies a significant archaeological resources and additional work is required, but the development proponent is not seeking to develop or alter the site immediately.</p>
Section 38 – Interim Control By-law	<p>Under Section 38(1) of the <i>Planning Act</i>, Council may enact an interim control by-law to be in effect for a maximum of one-year where the Council has through a by-law or resolution directed that a review or study be undertaken in respect of land use planning policies in the municipality or in any defined area thereof. The review or study may include archaeological assessments.</p>

Under the Planning Act	
Section 42 – Conveyance of Land for Park Purposes	Under Section 42 of the <i>Planning Act</i> , Council may as a condition of development or redevelopment require that land be conveyed to the municipality for park or other public recreational purposes. Some municipalities have used this provision to ensure the transfer of lands with archaeological resources and/or potential to protect the archaeological resource.
Secondary Plan	Secondary Plans –that are separate from an Official Plan— should include standard language around archaeological resources based on archaeological policy in an Official Plan. If a secondary plan area has potential for significant archaeological resources, it may include further guidance and requirements for archaeological assessment. Secondary Plans can be used to guide development in the area so that development is sympathetic to archaeological resources.

Other Tools	
Conservation Plan	For complex properties, a site-specific conservation plan may be used to ensure the long-term conservation of the specific cultural heritage values and heritage attributes. This type of plan could be a condition of a municipal approval if policies in the Niagara Official Plan/Local Area Municipal Official Plan allow it.
The Development of Commemorative or Interpretative Plans	<p>The current legislative environment does not yet address intangible heritage or lost heritage effectively nor does it give express instruction or direction on interpretation. These tools help to identify why cultural heritage resources are important and provide tools to that end. This type of document could be a condition of a municipal approval if policies in the Niagara Official Plan/Local Area Municipal Official Plan allow it.</p> <p>It is in keeping with the <i>Niagara Culture Plan's</i> Strategic Direction 2: Creative Places and Strategic Direction 4: Creative Identity.</p>

Other Tools	
National Historic Site of Canada Designation	<p>If a property meets the criteria for a National Historic Site of Canada designation because of its archaeological resources, a municipality can request that the Historic Sites and Monuments Board consider the property. However, the federal government will not designate a National Historic Site of Canada without owner's consent.</p> <p>A National Historic Site of Canada designation on property that is not owned by the federal government is largely a commemorative or interpretive designation, although the <i>PPS</i> does provide some protection for National Historic Sites of Canada. This approach is most appropriate when a site is particularly significant and commemoration and/or interpretation should be implemented.</p>
Use of other legislation: The <i>Municipal Act</i>	<p>The <i>Municipal Act</i> grants municipalities the authority to pass by-laws, including by-laws respecting culture, parks, recreation, and heritage—which includes archaeology (Section 11 (3) 5.). Some municipalities have such provisions of the <i>Municipal Act</i> to require interpretive signage as part of developments and others have used it to implement legal despot by-laws.</p>

7.2.3. Curation

Artifacts recovered from archaeological investigations are the responsibility of the archaeological license holder. These collections are generally stored by the consultant archaeologist. In some cases, collections may be repatriated to local Indigenous communities or transferred to museums and/or universities.

Niagara Region should expect and encourage curation of archaeological finds from sites in the Region to follow industry best practice, requirements of the MCM –or as superseded—and consider the interests and concerns of Indigenous communities. The Region expects project proponents to work with their consultant archaeologists, the Region, Local Area Municipalities, relevant Indigenous communities, and other relevant stakeholders to curate and –when appropriate—make accessible especially significant archaeological collections in public institutions within the Region.

7.2.4. Public Interpretation

Archaeological sites and resources are a significant part of the cultural heritage of Niagara Region. Public interpretation of some significant archaeological sites and exhibits of artifacts—where appropriate—will support objectives of Creative Niagara – Chapter 10 of the 2014 consolidated Official Plan. Objectives in support of public interpretation include:

Objective 10.D.1.1 The Region encourages, and where possible, supports efforts to raise awareness, build understanding and enhance the appreciation of culture and its power to build both vibrant, unique communities as well as a shared identity of Niagara.

Objective 10.E.1.3 To promote cultural/ heritage experiences that attract local, regional and international visitors.

7.3. Scoping of Archaeological Assessments

In some cases, archaeological potential mapping may demonstrate potential but the risk of adverse impacts to archaeological resources is low and a project may include mitigation measures developed in advance. These situations may be discussed during project pre-consultation or—in the case of municipal projects—initial stages of project planning to assist in determining whether requirements for archaeological assessment can be scoped. Specific criteria should be developed to ensure a consistent methodology and application of the considerations outlined in Table 5.

Each case must be considered individually based on the archaeological potential of the area and the merits, concept, and constraints of the project. In some cases, the municipal approval authority may find it necessary to consult with a professional archaeologist where satisfaction of the criteria is unclear. A Stage 1 Archaeological Assessment may be necessary to evaluate archaeological potential in detail and recommend appropriate strategies for next steps. The municipality may want to require a Stage 1 archaeological assessment that documents reasons why a Stage 2 may not be necessary, or outline mitigation measures integrated into project planning.

Scoping considerations outlined in Table 5 reflect feedback, questions and concerns from municipal planners and development proponents asking for clarification on the application of archaeological assessment requirements in various situations.

Regardless of whether an archaeological assessment is scoped, all projects must still follow protocols for accidental discoveries.

Table 5: Scoping Considerations

Situation	Considerations
Fence installation	<ul style="list-style-type: none">• Installation of a fence requires disturbing the ground for the posts and could impact an archaeological site. However, digging a hole for fence posts or deck support is generally not Site Alteration under the <i>PPS</i> definition.• For most fence projects impacts to a potential archaeological site will be limited to select areas and likely not affect most of the site.• In most cases installation of a fence will not significantly disturb an archaeological site.• However, archaeological assessments may be recommended where a fence is proposed on or adjacent to property such as an historic cemetery or the site of a battlefield.• An archaeological assessment may be recommended if a fence project is large enough in scale, such as where heavy construction equipment is used to build it or where it is in a particularly significant archaeologically sensitive area.• Unexpected finds protocols must be followed and if potential archaeological resources are found archaeological assessments should be required.

Deck installation	<ul style="list-style-type: none">• Installation of a deck may require disturbing the ground and could impact an archaeological site. However –depending on the scale of the deck project— it may not be a Site Alteration under the <i>PPS</i> definition.• For most deck projects, impacts to potential archaeological sites will be limited to select areas where posts are installed and will not affect most of the site.• In most cases installation of a deck will not significantly disturb an archaeological site.• Archaeological assessments may be recommended on or adjacent to known significant historic sites, battlefields, or historic cemeteries.• On publicly owned properties installation of a deck may be an opportunity for a public archaeology program.• Unexpected finds protocols must be followed and if potential archaeological resources are found archaeological assessments should be required.
Boundary adjustment where no new construction is proposed.	<ul style="list-style-type: none">• A boundary adjustment application where no development or new construction is proposed will not adversely affect any potential archaeological sites.• The context of the property and motivations of the applicant must be considered. A severance application allows the municipality to require archaeological assessment in case development is planned. Where it seems likely that the severance application is a preliminary step in further development of the property an archaeological assessment may be wise.

Small –less than 36 m²—
slab on grade
construction such as
residential garages or
large sheds.

- The ground will be disturbed by the project. However, the area of disturbance is small and may not be a site alteration under the *PPS* definition.
- If the location of the slab on grade project is within 100 m of a known archaeological site an archaeological assessment should be completed.
- Unexpected finds protocols may be sufficient and if something significant is found archaeological assessments can be required.
- Archaeological assessment may be required if a holding provision is on the zoning for the property.
- If the proposed project is on or adjacent to a known historic cemetery a Stage 1 archaeological assessment is required.

Medium and large—
larger than 36 m²—slab
on grade construction
such as large garages,
barns, and warehouses

- Archaeological assessment is required.
- A medium to large size slab on grade construction project will disturb large areas of land and heavy construction vehicles will disturb and compact additional land.

Sidewalk/multiuse path construction/replacement/widening

- Sidewalk and multiuse path construction, replacement and widening projects may disturb new ground in areas with archaeological potential or may be limited to areas already disturbed. A Stage1 archaeological assessment is required to identify areas that require additional archaeological assessment, and which are disturbed or have already been cleared.
- Consider if excavation for the project will extend beyond the developed or serviced area of the right-of-way or easement. Will new ground be disturbed or has all of it been disturbed in the past. If new ground will be disturbed a Stage 1 archaeological assessment is required.
- These projects may only affect a very small amount of new land and unexpected finds protocols may be sufficient mitigation. However, a Stage 1 AA should be completed to determine potential.

Projects that employ horizontal drilling/tunnelling	<ul style="list-style-type: none"> • Projects that employ horizontal drilling are usually subject to an EA and a Stage 1 AA would be required for the EA. • Does the project require a due diligence background study for a Schedule A+ municipal class EA? If so a Stage 1 AA may be required. • Does the project require a Schedule B or Schedule C municipal class EA? If so a Stage 1 AA is required. • It is difficult to know how deep potential archaeological deposits go and how deep horizontal drilling will occur. A Stage 1 AA would be useful to assess archaeological potential in detail and recommend appropriate mitigation measures. • If drilling is deep enough it may be possible to limit Stage 2 archaeological assessment to areas where the ground will be disturbed from the surface. • It is recommended that archaeological assessment be required for the length of the project in areas of archaeological potential if the depth of horizontal drilling is less than 3.0 m in most areas or less than 5.0 m in a floodplain.
Areas where the historic ground level is known to be below deep fill.	<ul style="list-style-type: none"> • A Stage 1 AA should be required to prove the condition of the ground on the property is disturbed and under deep fill. • It is unlikely that an entire property will be under consistently deep enough fill to avoid a Stage 1 AA. • If a project is within an area of archaeological potential and will be less than 300m from a known archaeological site an archaeological assessment is required.

Construction of Pole Barns and Greenhouses	<ul style="list-style-type: none">• Pole barns and pole greenhouse construction may disturb very little ground compared to other types of construction. This work may not involve site alteration under the <i>PPS</i> definition.• Pole construction using light equipment may only disturb the ground where the holes are excavated for the poles. Significant disturbance of any potential archaeological site will be limited, and AAs may not be required.• Small projects may only affect a very small amount of new land and unexpected finds protocols may be sufficient mitigation.• Large scale commercial pole construction using heavy equipment may adversely affect potential archaeological resources. In areas of archaeological potential an archaeological assessment is required for these projects.
Installation of septic beds	<ul style="list-style-type: none">• Installation of a septic system may disturb a relatively large area of ground depending on the size of the system and construction equipment used.• Or installation may only disturb limited areas where the tank and pipe trenches are placed.• Generally, for a residential septic system or a septic system replacement only a small amount of ground will be disturbed. An archaeological assessment may not be required.• Unexpected finds protocols must be followed.• If a residential septic system installation is within 300 m of a known archaeological site an archaeological assessment is recommended.• Large projects or projects associated with other construction or in areas with archaeological potential require an archaeological assessment.

8. Closing

In summary, the recommendations and resources provided in this section of the report will prepare Regional and Local Area Municipal planners and other municipal personnel who may need to address archaeological considerations to deal with archaeology in planning and other municipal processes. This report outlines clear and consistent legal requirements. It outlines and recommends Regional and Local Area Official Plan policies. It discusses implementation resources and considerations in making decisions about archaeology. Policies and processes relating to Indigenous engagement are under review by the Region and local area Indigenous communities as part of the Corporate Indigenous Engagement Protocol. This process is ongoing, and changes may be required as a result.

By implementing these recommendations, referring to this document, and distributing the resources, planners will be well equipped to address archaeological planning in Niagara Region.

9. References

Denez, Marc

2002 *Unearthing the Law Archaeological Legislation on Lands in Canada*. [online] Accessed at: [Unearthing the Law Archaeological Legislation on Lands in Canada](https://www.pc.gc.ca/en/docs/r/pfa-fap/index) (https://www.pc.gc.ca/en/docs/r/pfa-fap/index)

Government of British Columbia

2019 B.C. Declaration on the Rights of Indigenous Peoples Act. [online] Accessed at: [Declaration on the Rights of Indigenous Peoples Act](https://www2.gov.bc.ca/gov/content/governments/indigenous-people/new-relationship/united-nations-declaration-on-the-rights-of-indigenous-peoples) (https://www2.gov.bc.ca/gov/content/governments/indigenous-people/new-relationship/united-nations-declaration-on-the-rights-of-indigenous-peoples)

Government of Ontario

1960 *Archaeological and Historic Sites Protection Act*. [online] Accessed at: [Archaeological and Historic Sites Protection Act](https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?article=2857&context=rso) (https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?article=2857&context=rso)

1990 *Aggregate Resources Act*, R.S.O. 1990, c. A.8. [online] Accessed at: [Aggregate Resources Act](https://www.ontario.ca/laws/statute/90a08) (https://www.ontario.ca/laws/statute/90a08)

1990 *Environmental Assessment Act*, R.S.O. 1990, c. E.18. [online] Accessed at: [Environmental Assessment Act](https://www.ontario.ca/laws/statute/90e18) (https://www.ontario.ca/laws/statute/90e18)

1990 *Environmental Protection Act*, R.S.O. 1990, c. E.19. [online] Accessed at: [Environmental Protection Act](https://www.ontario.ca/laws/statute/90e19) (https://www.ontario.ca/laws/statute/90e19)

1990 *Niagara Escarpment Planning and Development Act*, R.S.O. 1990, Chapter N.2. [online] Accessed at: [Niagara Escarpment Planning and Development Act](https://www.ontario.ca/laws/statute/90n02) (https://www.ontario.ca/laws/statute/90n02)

1990 *Ontario Heritage Act*, R.S.O. 1990, c. O.18. [online] Accessed at: [Ontario Heritage Act](https://www.ontario.ca/laws/statute/90o18#BK91) (https://www.ontario.ca/laws/statute/90o18#BK91)

1990 *Planning Act*, R.S.O. 1990, c.P13, Part V S. 3.3. [online] Accessed at: [Planning Act](https://www.ontario.ca/laws/statute/90p13) (https://www.ontario.ca/laws/statute/90p13)

2002 *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c. 33 - Bill 209 S.O. 2002, Chapter 33. [online] Accessed at: [Funeral, Burial and Cremation Services Act](https://www.ontario.ca/laws/statute/02f33) (https://www.ontario.ca/laws/statute/02f33)

-
- 2005 *Greenbelt Act, 2005*, S.O. 2005, c. 1. [online] Accessed at: [Greenbelt Act](https://www.ontario.ca/laws/statute/05g01) (https://www.ontario.ca/laws/statute/05g01)
- 2005 *Places to Grow Act, 2005*, S.O. 2005, c. 13. [online] Accessed at: [Places to Grow Act](https://www.ontario.ca/laws/statute/05p13) (https://www.ontario.ca/laws/statute/05p13)
- 2009 Ontario Regulation 359/09: Renewable Energy Approvals Under Part V.0.1 of the *Environmental Protection Act*. [online] Accessed at: [Ontario Regulation 359/09](https://www.ontario.ca/laws/regulation/090359) (https://www.ontario.ca/laws/regulation/090359)
- 2014 *Provincial Policy Statement*. [online] Accessed at: [Provincial Policy Statement](https://www.ontario.ca/document/provincial-policy-statement-2014) (https://www.ontario.ca/document/provincial-policy-statement-2014)
- 2017 *Niagara Escarpment Plan*. [online] Accessed at: [Niagara Escarpment Plan](https://escarpment.org/home) (https://escarpment.org/home)
- 2017 United Nations Declaration on the Rights of Indigenous Peoples. Indigenous and Northern Affairs Canada. [online] Accessed at: [United Nations Declaration on the Rights of Indigenous Peoples](https://www.aadnc-aandc.gc.ca/eng/1309374407406/13093744589583An) (https://www.aadnc-aandc.gc.ca/eng/1309374407406/13093744589583An)
- 2017 *Greenbelt Plan*. [online] Accessed at: [Greenbelt Plan](https://www.ontario.ca/document/greenbelt-plan-2017) (https://www.ontario.ca/document/greenbelt-plan-2017)
- 2019 *A Place to Grow: Growth Plan for the Greater Golden Horseshoe*. [online] Accessed at: [A Place to Grow: Growth Plan for the Greater Golden Horseshoe](https://www.ontario.ca/document/place-grow-growth-plan-greater-golden-horseshoe) (https://www.ontario.ca/document/place-grow-growth-plan-greater-golden-horseshoe)
- 2020 *Provincial Policy Statement*. [online] Accessed at: [Provincial Policy Statement](https://www.ontario.ca/page/provincial-policy-statement-2020) (https://www.ontario.ca/page/provincial-policy-statement-2020)
- Ministry of the Environment, Conservation and Parks
- 2020 *Class EA for Municipal Infrastructure Projects*. [online] Accessed at: [Class EA for Municipal Infrastructure Projects](https://www.ontario.ca/page/class-ea-municipal-infrastructure-projects) (https://www.ontario.ca/page/class-ea-municipal-infrastructure-projects)
- Ministry of Citizenship and Multiculturalism
- n.d. Ministry of Citizenship and Multiculturalism. n.d. Terms and Conditions for Archaeological Licenses. [online pdf] Accessed at: [Terms and Conditions for Archaeological Licenses](http://www.mtc.gov.on.ca/en/archaeology/archaeology_licensing.shtml) (http://www.mtc.gov.on.ca/en/archaeology/archaeology_licensing.shtml)

-
- 2006 *Designating Heritage Properties: A Guide to Municipal Designation of Individual Properties under the Ontario Heritage Act*. Ontario Heritage Toolkit. Accessed from: [Designating Heritage Properties: A Guide to Municipal Designation of Individual Properties under the Ontario Heritage Act](http://www.mtc.gov.on.ca/en/publications/Heritage_Tool_Kit_DHP_Eng.pdf) (http://www.mtc.gov.on.ca/en/publications/Heritage_Tool_Kit_DHP_Eng.pdf)
- 2010 *Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario*. [online] Accessed at: [Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario](#) (Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario)
- 2011 *Standards and Guidelines for Consultant Archaeologists*. [online] Accessed at: [Standards and Guidelines for Consultant Archaeologists](#) (http://www.mtc.gov.on.ca/en/publications/SG_2010.pdf)
- 2016 *Criteria for Evaluating Marine Archaeological Potential A Checklist for Non-Marine Archaeologists*. [online] Accessed at: [Criteria for Evaluating Marine Archaeological Potential A Checklist for Non-Marine Archaeologists](#) (<http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&SRCH=3&ENV=WWE&TIT=&NO=021-0503E>)
- Ministry of Natural Resources and Forestry
- 2020 *Provincial Standards of Ontario*. [online] Accessed at: [Application Standards for Proposed Pits and Quarries](https://www.ontario.ca/page/application-standards-proposed-pits-and-quarries) (<https://www.ontario.ca/page/application-standards-proposed-pits-and-quarries>)
- Ontario Heritage Trust
- n.d. *Archaeology – Frequently Asked Questions*. Accessed from: [Archaeology – Frequently Asked Questions](https://www.heritagetrust.on.ca/user_assets/documents/HIS-004-Archaeology-Frequently-asked-questions-ENG.pdf) (https://www.heritagetrust.on.ca/user_assets/documents/HIS-004-Archaeology-Frequently-asked-questions-ENG.pdf)
- Regional Municipality of Niagara
- n.d. Niagara Culture Plan. [online] Accessed at: [Niagara Culture Plan](#) (Niagara Culture Plan)
- n.d. 2014 Consolidated Regional Official Plan. [online] Accessed at: [2014 Consolidated Regional Official Plan](https://www.niagararegion.ca/living/icp/policy-plan.aspx) (<https://www.niagararegion.ca/living/icp/policy-plan.aspx>)

United Nations

2007 *United Nations Declaration on the Rights of Indigenous Peoples*. [online]
Accessed at: [United Nations Declaration on the Rights of Indigenous Peoples](https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf)
(https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf)

Truth and Reconciliation Commission

2015 *Truth and Reconciliation Commission of Canada: Calls to Action*. Winnipeg, MB.
[online] Accessed at: [Truth and Reconciliation Commission of Canada: Calls to Action](http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf)
(http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf)

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2010 Planning for Ontario's Archaeological Past: Accomplishments and Continuing Challenges. *Revista de Arqueología Americana* (28). p. 7-45.

Appendix D1: Glossary

Aboriginal – Use of the term Aboriginal in this Plan [Niagara Escarpment Plan] is intended to be consistent with the definition provided in the *Constitution Act, 1982*; “Aboriginal peoples of Canada” includes the Indian, Inuit and Métis peoples of Canada (NEP).²⁹

Aboriginal peoples of Canada – In this Act, aboriginal peoples of Canada include the Indian, Inuit and Métis peoples of Canada (*Constitution Act, 1982; Funeral, Burial and Cremation Services Act*).³⁰

Aboriginal people’s burial ground – means land set aside with the apparent intention of interring in it, in accordance with cultural affinities, human remains and containing remains identified as those of persons who were one of the aboriginal peoples of Canada; (“cimetière autochtone”) (*Funeral, Burial and Cremation Services Act*).

Adjacent lands – d) for the purposes of policy 2.6.3, those lands contiguous to a *protected heritage property* or as otherwise defined in the municipal official plan (*PPS 2020*).

Approval Authority - In the land use and development context, this includes any public body (e.g., municipality, conservation authority, provincial agency, and ministry) that has the authority to regulate and approve development projects, that fall under its mandate and jurisdiction (e.g., *Planning Act, Environmental Assessment Act, Aggregate Resources Act*).

Archaeological assessment - For a defined project area or property, a survey undertaken by a licensed archaeologist within those areas determined to have archaeological potential to identify archaeological sites, followed by evaluation of their cultural heritage value or interest, and determination of their characteristics. Based on this information, recommendations are made regarding the need for mitigation of impacts and the appropriate means for mitigating those impacts (*Standards and Guidelines for Consultant Archaeologists*).

Archaeological fieldwork – means any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring,

²⁹ While the term “Indian” is in the official definition of Aboriginal peoples of Canada it is understood that “First Nations” is preferred.

³⁰ While “Aboriginal peoples of Canada” is used in the Constitution it is understood that “Indigenous peoples of Canada” is often preferred.

surveying, recovering, and excavating; (“travaux archéologiques sur le terrain”) (*O. Reg. 170/04*, s. 1.)

Archaeological resources – includes artifacts, archaeological sites, marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act* (*PPS 2020*).

Archaeological site – means any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest; (“site archéologique”) (*O. Reg. 170/04*, s. 1.)

Areas of archaeological potential – means areas with the likelihood to contain *archaeological resources*. **Criteria** to identify archaeological potential are established by the Province. The *Ontario Heritage Act* requires archaeological potential to be confirmed by a **licensed archaeologist** (*PPS 2020*, emphasis added).

Artifact – means any object, material or substance that is made, modified, used, deposited, or affected by human action and is of cultural heritage value or interest; (“artefact”) (*O. Reg. 170/04*, s. 1.)

Avoidance - The process by which alterations to an archaeological site are preserved during the short-term period during which development activities are undertaken.

Borden number - Since 1974, all archaeological sites for the Province of Ontario have been registered with the Ontario Archaeological Sites Database (OASD), maintained by the Heritage Branch and Libraries Branch of the Ontario Ministry of Citizenship and Multiculturalism, Toronto. This database is the official, central repository of all site information for the Province collected under the *Ontario Heritage Act* (1990). An associated Geographic Information System has been developed by the Ministry of Citizenship and Multiculturalism. Within the OASD, registered archaeological sites are organized within the “Borden” system and based on blocks of latitude and longitude, each measuring approximately 13 kilometres east-west by 18.5 kilometres north-south. Each block is assigned a unique four-letter designator and sites within each block are numbered sequentially.

Built heritage resource – means a building, structure, monument, installation or any manufactured **or constructed part or** remnant that contributes to a property’s cultural heritage value or interest as identified by a community, including an **Indigenous** community. Built heritage resources are located on property that **may be** designated under Parts IV or V of the *Ontario Heritage Act*, or **that may be** included on local, provincial, federal and/or **international registers** (*PPS 2020*, emphasis added).

Burial ground – means land set aside with the apparent intention of interring in it, in accordance with cultural affinities, human remains and containing remains identified as those of persons who were not one of the aboriginal peoples of Canada; (“lieu d’inhumation”) (*Funeral, Burial and Cremation Services Act*).

Conserve/Conserved – means the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment **that has been approved, accepted, or adopted by the relevant planning authority and/or decision-maker**. Mitigative measures and/or alternative development approaches can be included in these plans and assessments (*PPS 2020*, emphasis added).

Consultant archaeologist - means an archaeologist who enters into an agreement with a client to carry out or supervise archaeological fieldwork on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client; (“archéologue-conseil”) (*O. Reg.8/06*, s. 1)

Cultural heritage landscape – means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an **Indigenous** community. The area may **include** features such as **buildings**, structures, spaces, **views**, archaeological sites, or natural elements that are valued together for their interrelationship, meaning or association. **Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the Ontario Heritage Act or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms** (*PPS 2020*, emphasis added).

Cultural heritage value or interest - For the purposes of the *Ontario Heritage Act* and its regulations, archaeological resources that possess cultural heritage value or interest are protected as archaeological sites under Section 48 of the *Ontario Heritage Act*. Where analysis of documented artifacts and physical features at a given location meets the criteria stated in the *Standards and Guidelines for Consulting Archaeologists*, that location is protected as an archaeological site and further archaeological assessment may be required.

Cultural heritage value or interest - A property may be determined to have cultural heritage value or interest if it meets one or more of the criteria found in *Ontario Regulation 9/06* under the *Ontario Heritage Act*. A property may be determined to have cultural heritage value or interest of provincial significance if it meets one or more of the

criteria found in *Ontario Regulation 10/06* under the *Ontario Heritage Act (Niagara Escarpment Plan)*.

Cultural heritage resource - Property that includes built heritage resources, cultural heritage landscapes, archaeological resources and/or areas of archaeological potential (*Niagara Escarpment Plan*).

Development Proponent - An entity, consisting of individuals, private corporations, or government bodies, which is undertaking a development project.

Diagnostic artifact - An artifact that indicates by its markings, design, or the material from which it is made, the period it was made, the cultural group that made it or other data that can identify its original context (*Standards and Guidelines for Consultant Archaeologists*).

Environment - means, (c) the social, economic, and cultural conditions that influence the life of humans or a community, (d) any building, structure, machine or other device or thing made by humans (*Environmental Assessment Act*).

Field director - means an archaeologist who supervises archaeological fieldwork, and makes day-to-day decisions relating to archaeological fieldwork, under the supervision of a person holding a professional licence; (“directeur des fouilles”) (*O. Reg 8/06, s. 1*).

First Nation - means a band as defined in the Indian Act (Canada); (“Première Nation”) (Municipal Act).

Greenfield - Outlying locations of the Region, within the Region’s Urban Growth Boundary, on lands that have never previously been developed.

Heritage attributes – means the principal features or elements that contribute to a *protected heritage property’s* cultural heritage value or interest, and may include the property’s built, **constructed**, or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (e.g., significant views or vistas to or from a *protected heritage property*) (*PPS 2020, emphasis added*).

Heritage attributes (Ontario Heritage Act) – means, in relation to real property, and to the buildings and structures on the real property, the attributes of the property, buildings and structures that contribute to their cultural heritage value or interest; (“*attributs patrimoniaux*”) (*Ontario Heritage Act*).

Indigenous (Aboriginal) - Used inclusively in this document to refer to First Nation or Indigenous communities (also known as “bands” under the *Indian Act*), Métis communities, and communities of other Aboriginal peoples who identify themselves as a community, such as those living in urban centres or those belonging to an Indigenous

Nation or tribe that encompasses more than one community (e.g., the Pottawatomi, Mississauga, Mohawk).

Inspect – includes to survey, photograph, measure, and record; (“inspector”) (*Ontario Heritage Act*).

Irregular burial site – means a burial site that was not set aside with the apparent intention of interring human remains in it. (“lieu de sépulture irrégulier”) 2006, c. 34, Sched. D, s. 66. (*Funeral, Burial and Cremation Services Act*).

Licence – means a licence issued under this Act; (“licence”) (*Ontario Heritage Act*).

Marine archaeological site – means an archeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water. (“site archéologique marin”) (*O. Reg. 170/04*, s. 1.).

Project Information Form (PIF) - The form archaeological license-holders must submit to the Ministry of Citizenship and Multiculturalism upon deciding to carry out fieldwork.

Protection - Measures put in place to ensure that alterations to an archaeological site will be prevented over the long-term period following the completion of a development project.

Protected Heritage Property – means property designated under Parts IV, V or VI of the *Ontario Heritage Act* ; property subject to a heritage conservation easement under Parts II or IV of the *Ontario Heritage Act* ; property identified by the Province and prescribed public bodies as provincial heritage property under the Standards and Guidelines for Conservation of Provincial Heritage Properties; property protected under federal legislation, and UNESCO World Heritage Sites (*PPS 2020*).

Restrictive covenants - Section 119 of the *Land Titles Act* (subject to imminent revision) defines restrictive covenants being placed “upon the application of the owner of land that is being registered or of the registered owner of land, the land registrar may register as annexed to the land a condition or restriction that the land or a specified part thereof is not to be built upon, or is to be or is not to be used in a particular manner, or any other condition or restriction running with or capable of being legally annexed to land. R.S.O. 1990, c. L.5, s. 119 (1).” The land registrar may register as annexed to the land a condition, restriction or covenant that is included in a transfer of registered land that the land or a specified part thereof is not to be built upon, or is to be or is not to be

used in a particular manner, or any other condition, restriction or covenant running with or capable of being legally annexed to land. R.S.O. 1990, c. L.5, s. 119 (2).

Significant – regarding cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. **Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.**

Criteria for determining significance for the resources identified in sections (c)-(d) are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used.

While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation (*PPS 2020*).

Site alteration — means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site (*PPS 2020*, emphasis added).

Appendix D2: Niagara Region Archaeological Process Flowchart

LEGEND	
←	Action
■	Proponent/Licensed Archaeologist's Role
■	Ministry's Role
■	Region/Local Area Municipality's Role
■	Factor

