



Class Environmental Assessment for Shabomeka Lake Dam Rehabilitation and Erosion Control Project

Addendum Report

December 2019

Table of Contents

1.0	Introduction	3
2.0	Response to Comments	4
2.1	Ministry of Culture, Tourism and Sport	4
2.2	Ministry of Natural Resources and Forestry	4
3.0	Conclusions	5
3.1	Notice of Filing of Addendum	5
3.2	Part II Order Requests	5
3.3	Notice of Project Approval	6

Appendix A – Cultural Heritage Evaluation Report

Appendix B – Fish Habitat Review Downstream of Dam Site

Appendix C – Notice of Filing of Addendum

1.0 INTRODUCTION

The Shabomeka Lake Dam is located at the outlet of Shabomeka Lake on Semicircle Creek approximately 10 kilometers northeast of the Village of Cloyne, Ontario. Previous studies of the condition of the Shabomeka Lake Dam in 1988, 1989, 2004 and 2005 recommended remedial work to limit the risk of dam failure. The 2005 study completed by Trow Associates concluded that the factor of safety against rotational failure was less than the 1.5 recommended in the Ontario Safety Guidelines.

The Environmental Assessment study, undertaken in accordance with the *Conservation Ontario Class Environmental Assessment for Remedial Flood and Erosion Control Projects* (Class EA), examined three alternative design options for remedial works:

- Alternative 1 – do nothing
- Alternative 2 – complete embankment and structure deconstruction and reconstruction
- Alternative 3 – embankment rehabilitation and control structure reconstruction

Based on the screening exercise and given the existing environmental conditions in the vicinity of the dam, Alternative 3 was recommended as the preferred alternative design. Alternative 3 reduces the potential of a dam failure, has the fewest potential environmental impacts, low potential social impacts and smallest area of potential direct loss of aquatic and terrestrial habitat. There is the potential for this alternative to result in negative impacts to reptiles and other ground-dwelling animals, as well as the potential for negative impacts to fish habitat resulting from construction activities. To mitigate these potential impacts, it is recommended that disturbed natural areas should be restored to pre-construction conditions, or better, and that all exposed soil areas should be stabilized and re-vegetated, upon completion of construction activities.

The *Class Environmental Assessment for Shabomeka Lake Dam Rehabilitation and Erosion Control Projects Project Plan Report* was completed by Stantec Consulting Ltd. (July 2018). The Notice of Filing of the Project Plan Report completed under the Class EA was issued on January 4, 2019. Within the 30 day review period, Comments were received from the Ministry of Culture, Tourism and Sport (MCTS) and the Ministry of Natural Resources and Forestry (MNRF).

The MCTS requested that a Cultural Heritage Evaluation Report (CHER) be completed since the existing dam structure was more than 40 years old.

The MNRF had comments regarding the potential fish community downstream of the dam that may impact the construction and timing of the dam rehabilitation including:

- The existing environment information requires further details regarding the known fish community downstream of the dam to support an accurate assessment of risks associated with the proposed alternatives. There is a reasonable likelihood that lake whitefish and cisco are present below the dam and may utilize areas immediately below the dam for spawning and nursery habitat in the fall and early winter. Additional inventory of the existing fish community within the proposed timing window should be completed to ensure a representative assessment of the fish community is included within the EA.

- The proposed timing of in-water works is as per table 1-1 states in-water works commencing October 1st and ceasing December 15th. The environmental effects screening for potential effects to fish habitat was deemed to be low risk but this was based on incomplete fish community information and absent of any fish community surveys. Depending on the fish community present above and below the dam, the proposed timing for the works may contradict advice to avoid serious harm to fish and fish habitat as outlined on DFO's website if fall spawning fish such as lake whitefish or cisco utilizes areas below the dam.
- Section 5 should describe the proposed works in more detail. Additionally, further details on anticipated impacts to water levels during construction should be described. It's unclear if water levels in Shabomeka will be temporarily altered due to construction of the dam temporary diversion and there should be design drawings for the temporary diversion. Section 6.3 should include a description as to the impacts of the temporary diversion of water on spawning/nursery habitat below the dam. Additionally, a license to collect fish for scientific purposes would be required from the proponent to conduct any fish rescues from within the work area prior to work beginning.

2.0 RESPONSE TO COMMENTS

2.1 MINISTRY OF CULTURE, TOURISM AND SPORT

The *Cultural Heritage Evaluation Report Shabomeka Lake Dam, Township of North Frontenac, Ontario* (December 2019) was completed by Letourneau Heritage Consultants Inc. and is contained in Appendix A. The subject property was evaluated against the nine criteria outlined in Ontario Regulation 9/06 and was found to not meet any of the listed criteria. The report concludes:

The Shabomeka Lake Dam was built in a utilitarian style with common construction methods and materials and underwent extensive rehabilitation and replacement in 1989. No direct associations were identified and the dam was not determined to exhibit any contextual value. Based upon the foregoing analysis, it is LHC's professional opinion that the Shabomeka Lake Dam holds no cultural heritage value or interest under Ontario Regulation 9/06.

2.2 MINISTRY OF NATURAL RESOURCES AND FORESTRY

Mississippi Valley Conservation Authority staff completed additional fish habitat assessment specifically downstream of the dam as documented in Appendix B. The assessment concluded that if Lake Whitefish or Lake Herring were to be found in the watercourse below the dam, the area of concern is not their preferred spawning habitat and the risk of impacting these potential fish during their spawning season can be mitigated through the implementation of standard fish and fish habitat protection measures.

The schedule for the rehabilitation of the Shabomeka Lake dam is October 1st to December 15th as shown in Table 1-1 in the Project Plan Report. This is after the fall drawdown of the lake when flows are low. The rehabilitation of the dam will occur essentially within the existing footprint of the dam and embankment. A temporary culvert will be installed on the north or

south side of the existing concrete control structure to convey flow during the construction period. This will allow the isolation of the concrete control during demolition and construction of the new control structure while still conveying flow downstream. Therefore, it is not expected that there will be any impact on water levels of Shabomeka Lake or on spawning/nursery habitat below the dam, during construction.

Any further required diversion and mitigation measure details will be developed during the detailed design and permitting process. One of the approvals required for the rehabilitation of the Shabomeka Lake dam is under the Lakes and Rivers Improvement Act (LRIA). Through this review and approval process, the MNRF will have a direct authorization for the mitigation measure to be employed during the reconstruction.

3.0 CONCLUSIONS

The information contained in this Addendum document does not impact or change the information contained in Tables 4-1, 4-2 or 4-3 of the July 2018 *Class Environmental Assessment for Shabomeka Lake Dam Rehabilitation and Erosion Control Projects Project Plan Report*. Therefore, the preferred alternative is still Alternative 3 – embankment rehabilitation and control structure reconstruction.

3.1 NOTICE OF FILING OF ADDENDUM

The Notice of Filing of Addendum was sent to all interested parties and agencies listed in Appendix A of the Consultation Report. The Notice of Filing of Addendum was also placed on MVCA's website along with a copy of the Project Plan report. A copy of the notice is provided in Appendix C.

3.2 PART II ORDER REQUESTS

The Part II Order is the legal mechanism whereby the status of an undertaking can be elevated from an undertaking within a Class EA to an Individual Environmental Assessment. According to subsection 16 of the EAA, the Minister may by order require a proponent to comply with Part II of the EAA before proceeding with a proposed undertaking to which a Class EA would otherwise apply. Any individual, group or public agency may request the Minister to issue a Part II Order within the public review period for a Project Plan.

Should a party wish to request the issuance of a Part II Order, the process is as follows:

1. An individual, group or public agency with a concern would bring the concern to the attention of the MVCA.
2. If the concern cannot be resolved by any means employed by the Authority, the individual, group or public agency may formally request that the Authority submit the undertaking to a more rigorous review.

3. If the Conservation Authority considers elevation of the undertaking's status to be inappropriate and the individual, group or public agency with the concern, wishes to pursue the issue, he/she may request within 15 days of the Notice of Filing of Addendum date that the Minister of the Environment issue a Part II Order. The request to issue a Part II Order must be made to the Minister of the Environment in writing. The requester shall forward a copy of the request to the proponent at the same time as submitting it to the Minister.

3.3 NOTICE OF PROJECT APPROVAL

Following final endorsement of the project by the MVCA, expected January 17, 2020 a Notice of Project Approval will be published on the MVCA's website. A copy of the notice will be mailed to Conservation Ontario and all 'interested parties' (as identified from the previous consultation steps).

Appendix A – Cultural Heritage Evaluation Report

FINAL REPORT:

Cultural Heritage Evaluation Report

Shabomeka Lake Dam, Township of North Frontenac, Ontario



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EXECUTIVE SUMMARY

Letourneau Heritage Consulting Inc. (LHC) was retained by Mississippi Valley Conservation Authority (MVCA) to undertake a Cultural Heritage Evaluation Report (CHER) for the Shabomeka Lake Dam in the Township of North Frontenac.

The MVCA is undertaking a Class Environmental Assessment (EA) to examine three design options for remedial works related to the current dam. The preferred alternative involves embankment rehabilitation and control structure reconstruction. This CHER is being undertaken in order to address comments received from the Ministry of Heritage, Sport, Tourism, and Culture Industries (MHSTCI) which indicated that because the existing structure was constructed more than 40 years ago, a CHER should be undertaken in order to determine whether the structure has any cultural heritage value or interest.

This cultural heritage evaluation was undertaken in accordance with the recommended methodology outlined within the Ontario Heritage Toolkit. This process included background research into the property, a site visit to document current conditions, and evaluation of the cultural heritage value or interest of the property based on the criteria outlined in *Ontario Regulation 9/06: Criteria for Determining Cultural Heritage Value or Interest under the Ontario Heritage Act* (O.Reg.9/06). A site visit was undertaken by Christienne Uchiyama on November 1, 2019.

It is LHC's professional opinion that the Shabomeka Lake Dam does not have cultural heritage value or interest.

Table of Contents

EXECUTIVE SUMMARY	III
1 INTRODUCTION	1
1.1 Report Limitations	1
2 STUDY APPROACH	2
2.1 Legislative/Policy Review	2
2.2 Historical Research	2
2.3 Site Analysis.....	2
2.4 Definitions and Abbreviations	2
3 POLICY FRAMEWORK	5
3.1 Provincial Framework.....	5
3.1.1 Environmental Assessment Act.....	5
3.1.2 The Planning Act (1990).....	6
3.1.3 Provincial Policy Statement (2014).....	6
3.1.4 Ontario Heritage Act.....	7
3.1.5 Provincial Context Summary	8
3.2 Local Planning Context	8
3.2.1 County of Frontenac Official Plan (2014).....	8
3.2.2 Township of North Frontenac Official Plan (2017)	9
4 INTRODUCTION TO THE PROPERTY.....	10
4.1 Property Description.....	13
5 HISTORICAL CONTEXT	17
5.1 Natural History and Early Indigenous Land Use	17
5.1.1 Algonquins of Ontario.....	19
5.2 Survey and Early Settlement.....	21
5.3 Shabomeka Lake Dam Morphology	23
5.4 Comparative Analysis.....	30
6 EVALUATION OF CULTURAL HERITAGE VALUE OR INTEREST	34
7 CONCLUSION	36
8 RIGHT OF USE	36
9 SIGNATURES	36

10 REFERENCES	37
11 PROJECT PERSONNEL.....	40

List of Figures

Figure 1: Location of Shabomeka Lake Dam (MNRF, 2019).	11
Figure 2: Shabomeka Lake Dam, Current Conditions (MNRF, 2019).	12
Figure 3: Shoreline road allowance (CU 2019).	13
Figure 4: General view of the property; Semicircle Creek in the foreground (CU 2019).	14
Figure 5: Image of sluice gate for the Shabomeka Lake Dam (CU 2019).	14
Figure 6: Artificial berm located on both sides of the dam (CU 2019).	15
Figure 7: Construction material of main dam component (CU 2019).	15
Figure 8: Rock shoring on all sides of the dam (CU 2019).	16
Figure 9: Overview of dam, showing fences, warning signs, metal frame, and control panels (CU 2019).	16
Figure 10: Image of pictograph at Mazinaw (Erica Lenton, Canada's Historic Places 2008).	19
Figure 11: Mapping showing Shabomeka Lake Dam Location, 1857, 1860, 1878, and 1960.	24
Figure 12: Air photos showing the Shabomeka Lake Dam Location.	25
Figure 13: View of dam in 1989, looking east (MVCA, 2005).	26
Figure 14: View of dam in 1989, looking west (MVCA, 2005).	26
Figure 15: South wall of sluice prior to 1989 rehabilitation (MVCA, 2005).	27
Figure 16: Formwork for new concrete sluice walls in 1989 (MCVA, 2005).	27
Figure 17: Formwork for new concrete portions of concrete sluice in 1989 (MCVA, 2005).	28
Figure 18: Sluiceway pre-1989 reconstruction, showing partial removal of embankments (MCVA, 2005).	28
Figure 19: Upstream view of 1989 reconstruction showing embankments removed (MCVA, 2005).	29
Figure 20: View of new embankment sand and gabion walls, 1989 (MCVA, 2005).	29

List of Tables

Table 1: Examples of significant and designated sites associated with dams in Ontario	30
Table 2: Ontario Regulation 9/06 Criteria	34

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1 INTRODUCTION

Letourneau Heritage Consulting Inc. (LHC) was retained by Mississippi Valley Conservation Authority (MVCA) to prepare a Cultural Heritage Evaluation Report (CHER) for the Shabomeka Lake Dam in the Township of North Frontenac, Ontario.

The MVCA is undertaking a Class Environmental Assessment (EA) to examine design options for remedial works related to the current dam. The continued maintenance by the MVCA throughout the years has kept the dam in working condition. However, a 2014 study by Trow Associates, indicates the dam is at risk of rotational failure¹. Additionally, a 2018 report concluded an embankment rehabilitation and control structure reconstruction would best serve the dam for present and future use.² The preferred alternative involves embankment rehabilitation and control structure reconstruction.

This CHER is being undertaken in order to address comments received from the Ministry of Heritage, Sport, Tourism, and Culture Industries (MHSTCI) which indicated that because the existing structure was constructed more than 40 years ago, a CHER should be undertaken in order to determine whether the structure has any cultural heritage value or interest.

This cultural heritage evaluation was undertaken in accordance with the recommended methodology identified within the *Ontario Heritage Toolkit* (2006). The process included background research into the site, an on-site assessment, and evaluation of the cultural heritage value of the property based on the criteria of *Ontario Regulation 9/06: Criteria for Determining Cultural Heritage Value or Interest under the Ontario Heritage Act* (O. Reg. 9/06).

The Shabomeka Lake Dam is currently owned and operated by Mississippi Valley Conservation Authority.

1.1 Report Limitations

The qualifications of the heritage consultants who authored this report are provided at the end of this report. All comments regarding the condition of the structure relate only to observed materials and structural components that are documented in photographs and other studies. The findings of this report do not address any structural or condition-related issues associated with the dam.

With respect to historical research, the purpose of this report is to obtain sufficient material to evaluate the property. The authors are fully aware that there may be additional historical information not treated here. Nevertheless, the consultants believe that the information collected, reviewed and analyzed is sufficient to conduct an evaluation using O. Reg. 9/06 criteria.

This report reflects the professional opinion of the authors and the requirements of their membership in various professional and licensing bodies.

¹ Trow Associates 2004. Report conclusions are found in the 2018 Stantec Class Environmental Assessment for Shabomeka Lake Dam Rehabilitation and Erosion Control Projects.

² Stantec., 2018. Class Environmental Assessment for Shabomeka Lake Dam Rehabilitation and Erosion Control Projects

2 STUDY APPROACH

This CHER follows a three-step approach to understanding and planning for cultural heritage resources:

- Understanding the heritage planning regulatory framework;
- Understanding the significance of heritage resource (known and potential); and,
- Understanding the existing conditions of the property.

This is consistent with the recommended methodology outlined by the MHSTCI within its 2006 publication *Heritage Property Evaluation*. The MHSTCI identifies three key steps: Historical Research, Site Analysis, and Evaluation.³ This was augmented with a policy analysis to outline the provincial and local policy contexts.

2.1 Legislative/Policy Review

In the Province of Ontario, the process for determining cultural heritage value is prescribed via O. Reg. 9/06. Further, in order to better understand the local context for evaluation of cultural heritage value or interest under the OHA, it must be determined if there are any supplemental municipal approaches or priorities that augment the provincially established process. For example, a municipality can build on the criteria of O. Reg. 9/06 by using adopted thematic history; identifying specific views in its Official Plan; or by adopting an evaluative template. The legislative and policy framework for this CHER is presented below in Section 3 below.

2.2 Historical Research

Historical research was undertaken to outline the history and development of the subject property and place it in its broader community context. Historical research was undertaken to outline the history and development of the subject property and place it in a broader community context. Primary research was undertaken online through Land Registry Office and the Archives of Ontario. Additional online resources included: aerial mapping and historical land surveys. Secondary research was based on the research files/resources held by Letourneau Heritage Consulting Inc. (e.g., historical atlases, local histories, and architectural reference texts).

2.3 Site Analysis

A site visit was conducted on November 1, 2019 by Christienne Uchiyama. The purpose of the site visit was to examine and document the dam and its surrounding context. Permission to access the site via the Township's shoreline road allowance was granted by the MVCA and the Township of North Frontenac.

2.4 Definitions and Abbreviations

Definitions are based on the *Provincial Policy Statement* 2014 (PPS), the *Ontario Heritage Act*, the County of Frontenac Official Plan (2014), and the Township of North Frontenac Official Plan (2017).

³ MHSTCI, 2006: 19.

Adjacent: means those lands adjoining a property on the Heritage Register or lands that are directly across from and near to a property on the Heritage Register and separated by land used as a private or public road, highway, street, lane, trail, right-of-way, walkway, green space, park and/or easement, or an intersection of any of these; whose location has the potential to have an impact on a property on the heritage register; or as otherwise defined in a Heritage Conservation District Plan adopted by by-law.

Archaeological Resources means artifacts, archaeological sites and marine archaeological sites. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*. Such criteria include features such as proximity to water (such as current or ancient shorelines, rolling topography, unusual landforms, and any locally known *significant* heritage areas such as portage routes or other places of past human settlement). Archaeological potential is confirmed through archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act* (North Frontenac OP 2017).

Built heritage means a building, structure, monument, installation or any manufactured remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Aboriginal community. Built heritage resources are generally located on property that has been designated under Parts IV or V of the OHA, or included on local, provincial and/or federal registers.

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 under the OHA. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment. Mitigative measures and/or alternative development approaches can be included in these plans and assessments.

Cultural heritage landscape means a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a *significant* type of heritage form, distinctive from that of its constituent elements or parts. Examples may include, but are not limited to, heritage conservation districts designated under the *Ontario Heritage Act*; and villages, parks, gardens, battlefields, main streets and neighbourhoods, cemeteries, trailways and industrial complexes of cultural heritage value (North Frontenac OP 2017).

Cultural Heritage Resources means one or more *significant* buildings, structures, monuments, installations, or remains associated with architectural, cultural, social, political, economic, or military history, and identified as being important to a community. These resources may be identified through designation or heritage conservation easement under the *Ontario Heritage Act*, or listed by local, provincial or Federal jurisdictions (North Frontenac OP 2017).

Designation means the Townships are encouraged to utilize the Ontario Heritage Act to conserve, protect and enhance the cultural heritage resources in their municipality through the designation by By-law of individual properties, conservation heritage districts and cultural

heritage landscape. Council shall encourage the conservation of cultural heritage resources (County of Frontenac OP 2014).

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*.

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 or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (including significant views or vistas to or from a protected heritage property); or,

Heritage attributes 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.⁴

Integrity as it relates to a heritage property or an archaeological site/resource, is a measure of its wholeness and intactness of the cultural heritage values and attributes. Examining the conditions of integrity requires assessing the extent to which the property includes all elements necessary to express its cultural heritage value; is of adequate size to ensure the complete representation of the features and processes that convey the property's significance; and the extent to which it suffers from adverse affects of development and/or neglect. Integrity should be assessed within a Heritage Impact Assessment.

MHSTCI means Ministry of Heritage, Sport, Tourism, and Culture Industries.

OHA means Ontario Heritage Act.

O. Reg. 9/06 means *Ontario Regulation 9/06: Criteria for Determining Cultural Heritage Value or Interest under the Ontario Heritage Act*.

Significant: in regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people.

Statement of Cultural Heritage Value or Interest should convey why the property is important and merits designation, explaining cultural meanings, associations and connections the property holds for the community. This statement should reflect one or more of the standard designation criteria prescribed in the designation criteria regulation under the OHA (O. Reg. 9/06).

⁴ *Ontario Heritage Act*, R.S.O. 1990, Chapter O.18.

3 POLICY FRAMEWORK

3.1 Provincial Framework

In Ontario, cultural heritage is considered a matter of provincial interest and cultural heritage resources are managed under Provincial legislation, policy, regulations and guidelines. Cultural heritage is established as a key provincial interest directly through the provisions of the *Ontario Heritage Act*, the *Planning Act*, and the Provincial Policy Statement (PPS) 2014. Other provincial legislation deals with cultural heritage indirectly or in specific cases. The *Environmental Assessment Act* and *Environmental Protection Act* use a definition of “environment” that includes cultural heritage resources and *The Funeral, Burial and Cremation Services Act* addresses historic cemeteries and processes for identifying graves that may be prehistoric or historic. These various acts and policies under these acts indicate broad support for the protection of cultural heritage by the Province. They also provide a legal framework through which minimum standards for heritage evaluation are established. What follows is an analysis of the applicable legislation and policy regarding the identification and evaluation of cultural heritage.

3.1.1 *Environmental Assessment Act*

Under the *Environmental Assessment Act*, “environment” is understood to mean,

- Air, land or water,
- Plant and animal life, including human life,
- The social, economic and cultural conditions that include the life of humans or a community,
- any building, structure, machine or other device or thing made by humans,
- any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
- any part or combination of the foregoing and the interrelationship between any two or more of them, in or of Ontario⁵

The *Environmental Assessment Act* aims to provide for the protection, conservation and management of Ontario’s Environment. It applies to all public activities including projects undertaken by municipalities, public utilities and conservation authorities. An analysis of the environment through an Environmental Assessment includes evaluation of “cultural conditions that include the life of humans or a community” and “any building, structure, machine or other device or thing made by humans” which includes artifacts, places, buildings, and structures considered to be potential cultural heritage resources.

Cultural heritage conservation within the *Environmental Assessment Act* ensures that cultural heritage resources will be conserved in municipal projects. Cultural heritage resources with the

⁵ *Environmental Assessment Act*, Part I S.1.

potential to be affected by transportation, water or sewage infrastructure projects, for example, will be identified, assessed, and protected from impact by various conservation tools available.

3.1.2 The Planning Act (1990)

The Planning Act is the primary document for municipal and provincial land use planning in Ontario. This act sets the context for provincial interest in heritage. It states under Part I (2, d): The Minister, the council of a municipality, a local board, a planning board and the Municipal Board, 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. Details about provincial interest as it relates to land use planning and development in the province are outlined in the Provincial Policy Statement which is used under the authority of Part 1 (3).

3.1.3 Provincial Policy Statement (2014)

The Provincial Policy Statement (PPS, 2014) is issued under the authority of Section 3 of the *Planning Act* (1990), providing further direction for municipalities regarding provincial requirements. The PPS 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 PPS. The document asserts that cultural heritage and archaeological resources provide important environmental, economic and social benefits, and directly addresses cultural heritage in Sections 1.7.1d and 2.6. Section 2.6 of the PPS articulates provincial policy regarding cultural heritage and archaeology. Key subsections include:

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

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.

5 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 consider the interests of Aboriginal communities in conserving cultural heritage and archaeological resources.

The PPS makes the consideration of cultural heritage equal to all other considerations in relation to planning and development within the province. In accordance with Section 3 of the Planning Act, a decision of the Council of a municipality, a local board, a planning board, a

Minister of the Crown and a ministry, board, commission or agency of the government, including the Municipal Board, in respect of the exercise of any authority that affects a planning matter, “shall be consistent with” this Provincial Policy Statement.

The PPS defines *significant*, in regard to cultural heritage and archaeology, as resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people.

Within the definition of significance in the PPS, it states that criteria for determining significance for cultural heritage resources are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used. The PPS also notes that while some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation (49).

3.1.4 Ontario Heritage Act

The *Ontario Heritage Act* (2005) and associated regulations establish the protection of cultural heritage resources as a key consideration in the land-use planning process, set minimum standards for the evaluation of heritage resources in the province and give municipalities power to identify and conserve individual properties, districts, or landscapes of “cultural heritage value or interest.”

As identified by MHSTCI in its 2006 document, *Designating Heritage Properties*, “careful research and an evaluation of the candidate property must be done before a property can be recommended for designation”.⁶ This is reiterated in its 2006 publication *Heritage Property Evaluation* in which MHSTCI states that “individual properties being considered for protection under Part IV, Section 29 of the *OHA* must undergo a more rigorous evaluation than is required for listing”.⁷ Properties proposed for designation under Part IV, Section 29 of the *OHA* must meet the requirements of O. Reg. 9/06. This regulation states that a property can be designated if it meets one of the three following criteria:

1. The property has design value or physical value because it,
 - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method;
 - ii. displays a high degree of craftsmanship or artistic merit, or
 - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
 - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community;

⁶ MHSTCI, 2006: 8.

⁷ MHSTCI, 2006: 20.

- ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
 - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
- i. is important in defining, maintaining or supporting the character of an area;
 - ii. is physically, functionally, visually or historically linked to its surroundings, or
 - iii. is a landmark.

If a property has been determined to meet the criteria of O. Reg. 9/06, and the decision is made to pursue designation, the OHA proscribes the process by which a designation must occur. Municipal council may choose to protect a property determined to be significant under the OHA. After the passing of Bill 108 by the Legislative Assembly of Ontario (2019, schedule 11), however, Council's decision may now be appealed to the Local Planning Appeal Tribunal for adjudication.

3.1.5 Provincial Context Summary

Provincial legislation and policy broadly support the conservation of cultural heritage resources within the province. The *Ontario Heritage Act* and regulations establish processes for identification and evaluation of heritage resources.

3.2 Local Planning Context

3.2.1 County of Frontenac Official Plan (2014)

The Township has adopted a number of policies that pertain to cultural heritage resources. These policies are found in the County of Frontenac (the County) Official Plan (OP).

As outlined in Section 6.1, it is the intent of the OP that the County's significant cultural heritage resources be identified, conserved and whenever practical, enhanced and that new development take place in a manner that respects the County's rich cultural heritage.

Additionally, the County's OP requires the OP's of individual townships to include policies that are intended to implement this policy direction, including requiring heritage impact assessments prior to development taking place on lands that contain or are adjacent to cultural heritage resources.

The County encourages the following practices from individual townships:

- i. The Townships are encouraged to establish Municipal Heritage Committees pursuant to the Ontario Heritage Act;

- ii. The Townships are encouraged to support the use of Community Improvement Plans under the Planning Act to help protect, promote and support cultural heritage resources, especially the adaptive re-use of old or heritage buildings;
- iii. The County and the Townships shall consider the interests of Aboriginal communities in conserving cultural heritage and archaeological resources.

3.2.2 Township of North Frontenac Official Plan (2017)

The Shabomeka Lake Dam is located within the Township of North Frontenac.

Section 3.4 of the Township of North Frontenac OP addresses cultural heritage resources and archaeological resources. With respect to the evaluation of cultural heritage value or interest, the OP does not include specific direction for the identification and evaluation of potential cultural heritage resources. As such, the provincial guidance described in 3.1 will be applied to this study. Of note, the OP includes additional direction regarding the location of the Township within Algonquin Territory, stating in 3.4.3:

This Plan recognizes that lands within the boundaries of the Township lie within the historic Algonquin Territory that is part of the Treaty Negotiations with the Federal and Provincial Crowns. An Agreement-in-Principle (AIP) was signed by the Federal and Provincial Governments and the Algonquin Nation in October, 2016. As such, this Plan will respond to direction from the Federal and Provincial Crowns and the Algonquins towards the implementation of the AIP on any Official Plan requirements that arise. Council will seek opportunities for mutually beneficial engagement with the Algonquins on matters that affect aboriginal history and culture.

The Township may consult with the Algonquins of Ontario with regard to land use planning affecting any of the following matters within the land claim area:

1. Protection of water quality and utilization of lakes and rivers within the Land Claim area;
2. Any development that would have an impact on navigable waterways and their waterbeds;
3. Any Archaeological Studies related to proposed development where areas of Algonquin interest have been identified; and
4. Any Environmental Impact Studies related to proposed development where areas of Algonquin interest have been identified.

4 INTRODUCTION TO THE PROPERTY

The Shabomeka Lake Dam, originally known as the Buck Lake Dam, is located within the Township of North Frontenac, approximately 10 km northeast of the Village of Cloyne (Figure 1). The dam is accessed via a Township of North Frontenac shoreline road allowance and is approximately 100 m north of Shabomeka Lake Road. The dam is located at the outlet of Shabomeka Lake on Semicircle Creek. To the east of the property is Shabomeka Lake with several privately-owned cottages located along its shore. To the west is Semicircle Creek and Semicircle Lake. Much of the surrounding area comprises undeveloped Crown lands and Bon Echo Provincial Park is located to the northwest. The dam is located within Part of Lot 23, Concession 12, Township of North Frontenac.

The Shabomeka Lake Dam operates year-round and controls the flow of water from Shabomeka Lake to Semicircle Creek. Its exact date of construction is unknown; however, several documents suggest that the first timber crib structure was built sometime in the early 20th century.⁸⁹¹⁰ The dam eventually fell into disrepair. In the 1950s, Ontario Hydro reconstructed the dam for the Mississippi River Improvement Company (MRIC) when MRIC assumed ownership of the structure.¹¹ The dam underwent major repairs in 1959 and 1970 and was almost completely replaced in 1989.¹² The dam has been owned and operated by the Mississippi Valley Conservation Authority (MVCA) since 1991¹³.

The Shabomeka Lake Dam is not currently listed on the County of Frontenac Heritage Register or the Township of North Frontenac Heritage Register under Parts IV or V of the Ontario Heritage Act. The dam is not adjacent to any properties listed on either register.

⁸ Mississippi Valley Conservation Authority 2005. Shabomeka Lake Dam in Shabomeka Dam – Operation, maintenance and surveillance manual. A copy was provided to LHC Inc. by the proponent.

⁹ Stantec., 2018. Class Environmental Assessment for Shabomeka Lake Dam Rehabilitation and Erosion Control Projects

¹⁰ Past Recovery Archaeological Services Inc., 2018. *Stage 1 & 2 Archaeological Assessments of Shabomeka Lake Dam, Part Lot 23, Concession 12 of the Geographic Township of Barrie, Now Township of North Frontenac, Frontenac County, Ontario*

¹¹ Ibid.

¹² MCVA, 2005 p3

¹³ Ibid.

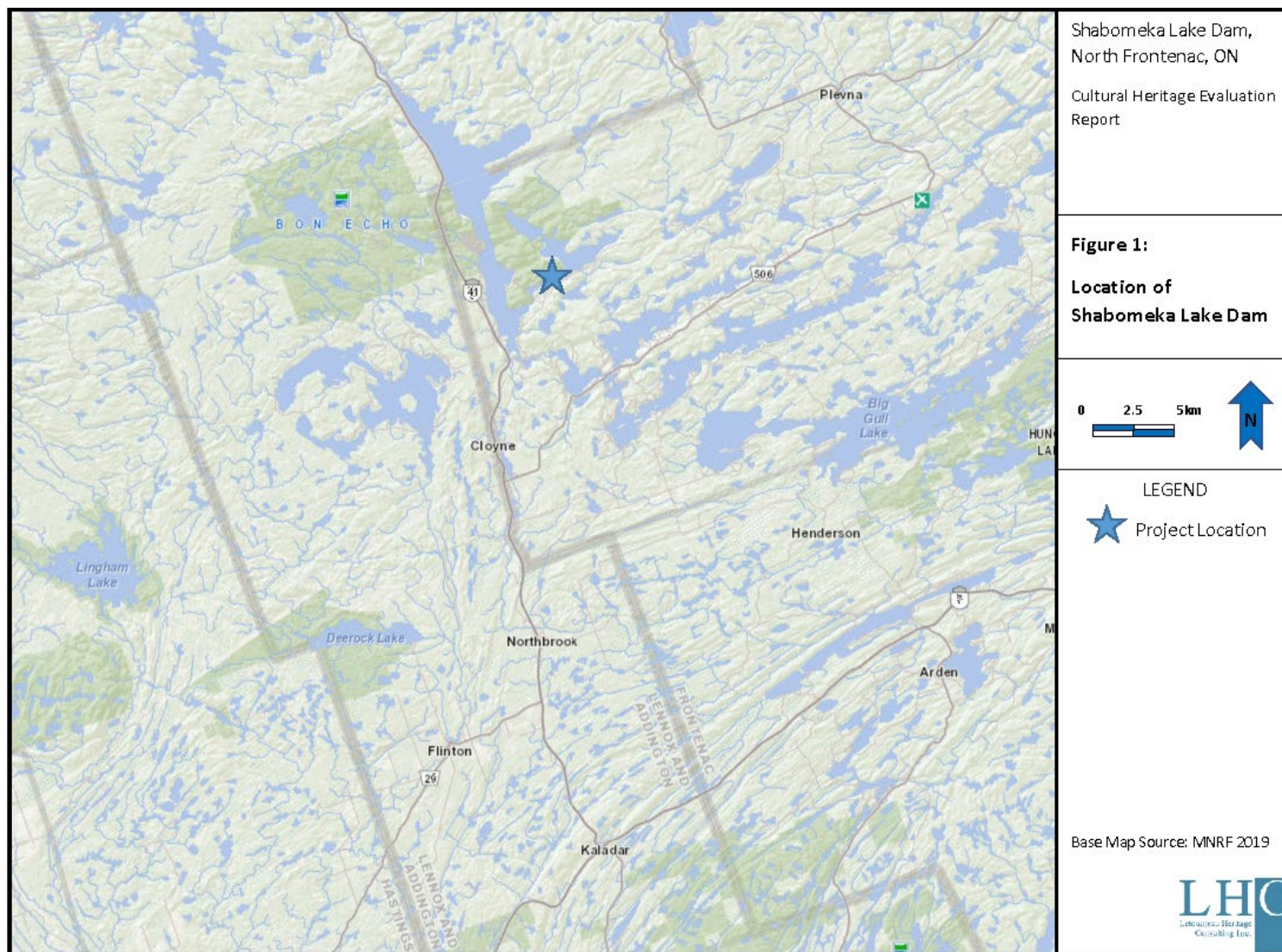


Figure 1: Location of Shabomeka Lake Dam (MNRF, 2019).



Figure 2: Shabomeka Lake Dam, Current Conditions (MNRF, 2019).

4.1 Property Description

Access to the Shabomeka Lake Dam is via a shoreline road allowance; approximately 3m wide (Figure 3). On the east and west side of the dam is the Shabomeka Lake and Semicircle Creek and Lake, respectively. The north and south portions of the lot are bounded by forests and is primarily Crown land (Figure 4).

The dam is a single-bay, poured concrete, stoplog structure with earthen overflow embankment (Figure 5 and Figure 6). The dam contains eight 0.25m x 0.25m x 2.44m stoplogs.¹⁴

Located on the upstream (east) side of the dam is a rock gabion wall, for stability and to prevent erosion (Figure 7 and Figure 8). A steel gantry system is located directly on top of the dam (Figure 9).



Figure 3: Shoreline road allowance (CU 2019).

¹⁴ Mississippi Valley Conservation Authority. 2019. *Understanding Shabomeka Lake Dam*. Accessed from <http://mvc.on.ca/shabomeka-lake-dam/>



Figure 4: General view of the property; Semicircle Creek in the foreground (CU 2019).



Figure 5: Image of sluice gate for the Shabomeka Lake Dam (CU 2019).



Figure 6: Artificial berm located on both sides of the dam (CU 2019).



Figure 7: Construction material of main dam component (CU 2019).



Figure 8: Rock shoring on all sides of the dam (CU 2019).



Figure 9: Overview of dam, showing fences, warning signs, metal frame, and control panels (CU 2019).

5 HISTORICAL CONTEXT

5.1 Natural History and Early Indigenous Land Use

The pre-European contact (pre-contact) history of this area is long and diverse. Archaeologists generally divide the chronology of pre-contact land use in Southern Ontario into three primary periods based on characteristics of settlement patterns and material culture: Palaeo-Indian; Archaic; and, Woodland.

The cultural history of southern Ontario began around 11,000 years ago, following the retreat of the Wisconsin glacier. During this archaeological period, known as the Paleo-Indian period (9500-8000 BCE), the climate was similar to the modern sub-arctic; and vegetation was dominated by spruce and pine forests. The initial occupants of the province, distinctive in the archaeological record for their stone tool assemblage, were nomadic big-game hunters (i.e., caribou, mastodon and mammoth) living in small groups and travelling over vast areas of land, possibly migrating hundreds of kilometers in a single year.¹⁵

During the Archaic archaeological period (8000-1000 BCE) the occupants of southern Ontario continued to be migratory in nature, although living in larger groups and transitioning towards a preference for smaller territories of land – possibly remaining within specific watersheds. The stone tool assemblage was refined during this period and grew to include polished or ground stone tool technologies. Evidence from Archaic archaeological sites point to long distance trade for exotic items and increased ceremonialism with respect to burial customs towards the end of the period.¹⁶

More notably, during the latter part of the Middle Archaic archaeological period (6000-4500 BCE) a Laurentian Archaic archaeological culture appeared in southeastern Ontario, northern New York and Vermont, and western Quebec. The Laurentian Archaic archaeological culture appeared around 6000-5500 BCE and lasted for more than a thousand years. This period is associated with the Canadian biotic province, which was characterised by a unique species community based in mixed deciduous-coniferous forest. A diversity of tool types can be found in Laurentian Archaic sites, including broad bladed projectile points, various chipped stone artifacts, and a range of ground and polished stone tools such as semi-lunar knives, adzes, gouges, and un-grooved axes. A variety of bone tools including needles, barbed harpoons, fish hooks, and bi-pointed gorges along with associated faunal remains provides evidence of specialised fishing and hunting practices.¹⁷ The appearance of copper by the Middle Archaic is indicative of an extensive trade network, while less extensive territories were utilized for subsistence.

The Woodland period in southern Ontario (1000 BCE–CE 1650) represents a marked change in subsistence patterns, burial customs and tool technologies, as well as the introduction of pottery

¹⁵ Chris Ellis and D. Brian Deller, "Paleo-Indians," in *The Archaeology of Southern Ontario to A.D. 1650*. Edited by Chris J. Ellis and Neal Ferris. Occasional publication of the London Chapter, Ontario Archaeological Society, No. 5 (1990): 37.

¹⁶ Chris Ellis *et. al.*, "The Archaic," in *The Archaeology of Southern Ontario to A.D. 1650*. Edited by Chris J. Ellis and Neal Ferris. Occasional publication of the London Chapter, Ontario Archaeological Society, No. 5 (1990): 65-124.

¹⁷ Norman Clermont, "The Archaic Occupation of the Ottawa Valley," in Pilon ed., *La préhistoire de l'Outaouais/Ottawa Valley Prehistory*. Outaouais Historical Society. pp. 47-53. 1999: pp 47-49.

making. The Woodland period is sub- divided into the Early Woodland (1000–400 BCE), Middle Woodland (400 BCE–CE 500) and Late Woodland (500–1650 CE). During the Early and Middle Woodland, communities grew in size and were organized at a band level. Subsistence patterns continued to be focused on foraging and hunting. There is evidence for incipient horticulture in the Middle Woodland as well as the development of long-distance trade networks.¹⁸

Woodland populations transitioned from a foraging subsistence strategy towards a preference for agricultural village- based communities around 500–1000 CE. It was during this period that corn (maize) cultivation was introduced into southern Ontario. The Late Woodland period is divided into three distinct stages: Early Iroquoian (1000–1300 CE); Middle Iroquoian (1300–1400 CE); and Late Iroquoian (1400–1650 CE). The Late Woodland is generally characterized by an increased reliance on cultivation of domesticated crop plants, such as corn, squash, and beans, and a development of palisaded village sites which included more and larger longhouses. These village communities were commonly organized at the tribal level.¹⁹ By the 1500s, Iroquoian communities in southern Ontario – and northeastern North America, more widely – were politically organized into tribal confederacies. South of Lake Ontario, the Five Nations Iroquois Confederacy comprised the Mohawk, Oneida, Onondaga, Cayuga, and Seneca, while Iroquoian communities in southern Ontario were generally organized into the Petun, Huron and Attawandaron (or Neutral) Confederacies

The Late Woodland period (ca. 500–1650 CE) is marked by the establishment of larger village sites, sometimes containing dozens of longhouses and fortified with palisade walls. Agriculture increased during this period, as did regional warfare

During the Late Woodland and up until the 1600s, two distinct linguistic groups lived in the Mazinaw area; which were the Algonquian and Iroquois Confederacies.²⁰ The Mazinaw area was extensively used by the Algonquians, owing to their hunter gatherer way of life; whereas the Iroquois were sedentary and built villages and longhouse.²¹ Between 1650–1750, the area was the hunting ground for the Iroquois, who invaded and defeated the Algonquians in 1616.²² By the early 1700s, disease had caused the Iroquoian population to decline and the void allowed the Algonquians to reclaim their ancestral land. The Algonquians along with the Ojibwa continued their long tradition of hunter and gathering on the land.

One of the most important and lasting evidence of First Nations use of the area is represented by the pictographs along the rock faces of Bon Echo National Park. Specifically, they are located in an area called the Mazinaw Rock. The word “Mazinaw” is believed to mean “a place of meeting” or “picture or painting.”²³ The Mazinaw Pictographs are the largest pictographs in

¹⁸ Michael Spence *et. al.*, “Cultural Complexes of the Early and Middle Woodland Periods,” in *The Archaeology of Southern Ontario to A.D. 1650*. (1990): 125–169.

¹⁹ William Fox, “The Middle Woodland to Late Woodland Transition,” in *The Archaeology of Southern Ontario to A.D. 1650*. (1990): 171–188 and David Smith, “Iroquoian Societies in Southern Ontario: Introduction and Historical Overview,” in *The Archaeology of Southern Ontario to A.D. 1650*. (1990): 279–290.

²⁰ Campbell 2002. The Mazinaw Experience: Bon Echo and Beyond. p1

²¹ Ibid. p3–4

²² Ibid.

²³ Ibid. p1

Southern Ontario and remain one of the most significant archaeological sites in Ontario. The images are spread over 65 rock faces along a 2.5m cliff face and are a large collection of abstract and geometric symbols²⁴ (Figure 10). Altogether, there is an estimated 295 pictographs, believed to be approximately 300 years old and of Algonquian/Ojibwa origin²⁵.

The images are abstract and often depicting animals and mythological figures. One such figure is that of a human with large ears. The figure is known as the “Rabbit Man” or the Algonquian spirit Nanabush.²⁶ It is believed that Nanabush was sent by Kitchi-Manitou, the Great Spirit, to teach the people how to live on the land²⁷. Shamans, who were the link between the real and spirit worlds would paint these images after undergoing a dream vision²⁸. The paintings were created by combining red ochre and water to create a paste. The paste was applied with the fingers and other tools were used.



Figure 10: Image of pictograph at Mazinaw (Erica Lenton, Canada's Historic Places 2008).

5.1.1 Algonquins of Ontario

The following text was provided by the Algonquins of Ontario (AOO) in their review of a similar study. The author is appreciative of the additional background information which has been provided by AOO and has incorporated past AOO comments into this CHER.

²⁴ Ibid.

²⁵ Ibid. p12

²⁶ Ibid. p14

²⁷ Ibid. p15

²⁸ Ibid. p11

The Algonquins lived in present-day Ontario for thousands of years before Europeans arrived. Algonquin territory originally extended from the St. Lawrence River to the French River in the west, south to the Adirondack mountains in New York State, and north above Lake Abitibi. Over the past several hundred years, the description of Algonquin Territory has changed to be the lands and waters on both sides of the Ottawa River watershed from modern Hawkesbury to Lake Nipissing and north past the headwaters of the Ottawa River. Today, ten Algonquin communities comprise the Algonquins of Ontario:

- The Algonquins of Pikwakanagan First Nation
- Antoine
- Kijicho Manito Madaouskarini (Bancroft)
- Bonnechere
- Greater Golden Lake
- Mattawa/North Bay
- Ottawa
- Shabot Obaadjiwan (Sharbot Lake)
- Snimikobi (Ardoch)
- Whitney and Area

Based on a Protocol signed in 2004, these communities are working together to provide a unified approach to negotiate a modern-day Treaty. The Algonquins of Ontario Settlement Area includes a territory of nine million acres within the watersheds of the Kitchissippi (Ottawa River) and the Mattawa River in Ontario.

This unceded territory, encompasses most of eastern Ontario, including the City of Ottawa, and most of Algonquin Provincial Park. More than 1.2 million people live and work within the unceded AOO Settlement Area. There are 84 municipal jurisdictions fully and partially located within the unceded AOO Settlement Area, including 75 lower and single tier municipalities and nine upper tier municipalities.

On October 18, 2016, the AOO and the Governments of Ontario and Canada reached a major milestone in their journey toward reconciliation and renewed relationships with the signing of the Agreement-in-Principle (AIP). The signing of the AIP is a key step toward a Final Agreement, which will clarify the rights of all concerned. By signing the AIP, the APP and the Crown have expressed, in a formal way, their mutual intention and desire for a lasting partnership. This event signaled the beginning of a new relationship between the AOO and the Crown, one in which the mistakes of the past must be supplanted by a new type of mutual respect and cooperation.

5.2 Survey and Early Settlement

In 1846, the County of Frontenac included the townships of Bedford, Barrie, Clarendon, Hinchinbrooke, Kennebee, Loughborough, Olden, Oso, Portland, and Pittsburgh²⁹. Among the largest Townships was Kingston, which served as Canada's capital from 1841 to 1844. By 1850, farmers had settled in the area and the construction of the Addington Colonization Road further increased access into the interior³⁰. By the turn of the century, the lumber industry was in decline and the access to the resources in the interior was no longer needed³¹. The Counties of Frontenac, Lennox and Addington shifted their focus towards tourism and a destination for wealthy nature enthusiasts³². In 1899, Weston Price purchased large portions of the area that would become Bon Echo Provincial Park³³. Price built the Bon Echo Inn, which attracted wealthy tourists who enjoyed the nature and used the area as a getaway from the cities³⁴. In 1920 the inn was sold to Flora MacDonald Denison, a Canadian activist, suffragists, and prominent Canadian businesswoman³⁵. In 1958, Bon Echo was donated by the Denison family to the Provincial Government to open as a park for everyone to enjoy³⁶. In 1982, a portion of Bon Echo Provincial Park was designated as a National Historic Site of Canada³⁷.

Three historic maps were consulted to determine settlement related to 19th century occupation. While these historic maps can provide a great deal of information about the land use history of a property, there are some limitations. Not all features of interest were surveyed to the same degree of accuracy or included on the maps. Furthermore, subscribers to historical atlases were given preference in terms of the degree of detail included for their property. Three 20th century aerial photographs were also consulted to examine changes to the site occurring between 1948 and 1978. Additionally, a 1960 Plan of Barrie Township was consulted.

1857 Barrie Township Map (Figure 11)

The Crown Patent map does not show any specific owners within Lot 23 Concession 12. The dam location is within a red block, which is attributed to an unknown Registered Plan Number. Shabomeka Lake can be seen to the east and an untitled lake to the west (Semicircle Lake). The map suggests that the natural conditions of the dam site – at the outlet of Shabomeka Lake to Semicircle Creek – may not have required significant alteration to accommodate the dam and embankments.

²⁹ Smith's Gazetteer 1846 p.60

³⁰ Past Recovery 2018. p.11

³¹ Ibid.

³² Ibid.

³³ Ibid.

³⁴ Campbell 2000. *The Mazinaw Experience: Bon Echo and Beyond*.

³⁵ Forster 2011. *100 More Canadian Heroines: Famous and Forgotten Faces*

³⁶ Past Recovery 2018. p.12

³⁷ Canada's Historic Places. 1982. *Mazinaw Pictographs National Historical Site of Canada*. Accessed from <https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=10534&pid=0>

1860 Walling Atlas of the Counties of Frontenac, Lennox, and Addington (Figure 11)

The 1860 Walling illustrated atlas does not show any owners on lots within the vicinity of the dam. Shabomeka Lake is marked to the east and the un-tilted Semicircle Lake is depicted to the west. This map does not provide much information on the development of historic Barrie Township, which may be attributed to the delayed settlement of the area during initial Crown efforts.

1878 Meacham & Co. Atlas of the Counties of Frontenac, Lennox, and Addington (Figure 11)

the 1878 atlas depicts limited development in the vicinity of the dam. Similar to the previous atlases no owners, dwellings, settlements, or other built features are noted; however, Shabomeka Lake is clearly depicted and labelled.

1948 Aerial Imagery (Figure 12)

The surrounding area is entirely forested with no signs of any structures or other features. The topography and configuration of the outlet of Shabomeka Lake to Semicircle Creek is similar to present-day and there does appear to be a dam of some sort at the location.

1960 Aerial Imagery (Figure 12)

The 1960 aerial image is similar to that of the 1948 image. The surrounding area remains largely forested with little to no development within the area. A dam is visible, but its exact form is unclear.

1960 Plan of Subdivision of Barrie Township (Figure 11)

The 1960 Plan provides a detailed view of the area. The dam is clearly marked at the western mouth of Shabomeka Lake. A footbridge is also depicted, running north-south above the dam. A portage route is depicted directly north of the dam. Although previous aerial imagery did not show any structures, the 1960 plan does. Several frame cottages can be found along the south shoreline of Shabomeka Lake. Of note are four small and one large cottage within Lot 23. This plan also provides the total area of each plot of land, property boundaries, road allowance, UTM coordinates, and elevations. Development on the lake appears to have begun slowly around this time and lots that were sold were inexpensive due to a lack of access roads. The MRIC had received a number of requests around this time to upgrade the dame to include a road surface for access to the west shore.³⁸

1978 Aerial Photograph (Figure 12)

The 1978 aerial imagery clearly shows the dam between the two lakes. A few cottages can be seen on the north and south shorelines of Shabomeka Lake and the appearance of Shabomeka Lake Road, a logging road. Access roads to several cottages had also been cut through the

³⁸ MVCA, 2005: p. 3.

forest by this time. Access to properties on the western shore of the lake appears to have been seasonal – when the downstream channel immediately below the dam is passable by vehicles.³⁹

5.3 Shabomeka Lake Dam Morphology

Although a timber crib dam appears to have been constructed around the turn of the 20th century to support the logging industry, it is largely believed to have been replaced by a new structure in the 1950s by Ontario Hydro on behalf of the MRIC. In 1959, the former wooden sluice was replaced with a concrete sluice.⁴⁰ Further improvements were undertaken in 1970, when the wooden plank sheeting on the face of the timber cribbing was largely replaced with aluminum sheeting to help reduce the deterioration of the earthen embankments.⁴¹

By 1989, extensive rehabilitation was required to repair damage to the concrete sluiceway and the embankments and to prevent future seepage. Damaged portions of the concrete abutments, which were riddled with holes, were removed and replaced – resulting in an almost completely new sluiceway (Figure 13 to Figure 17). In addition to the near complete replacement of the concrete sluiceway, large portions of the earthen embankments were removed and reconstructed (Figure 18 to Figure 20). A clay cut-off wall was incorporated into the new embankment.⁴² A new wooden deck and gabion walls were also added to the reconstructed dam (Figure 20).

The MVCA assumed ownership and operation of the dam in January 1991 and automated monitoring of water levels and temperatures in 1992.⁴³ Additional changes to the dam include:

- the addition of new stoplogs in 1995 and 2002;
- concrete repairs in 1998; and
- a steel gantry system and locked storage cabinets were added between 2010 and 2014.⁴⁴

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

⁴³ Ibid.

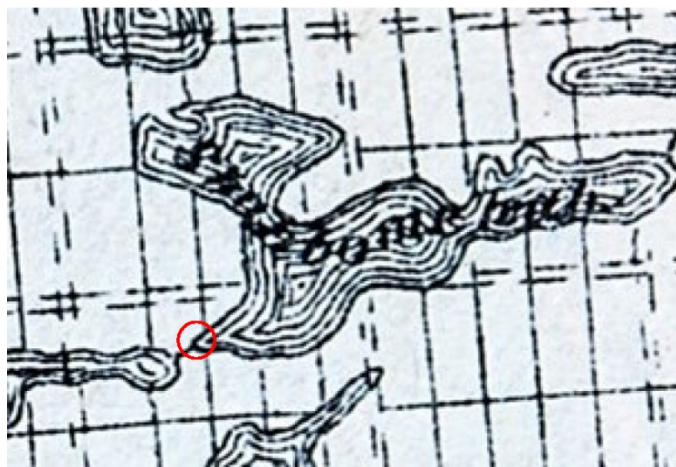
⁴⁴ Ibid.



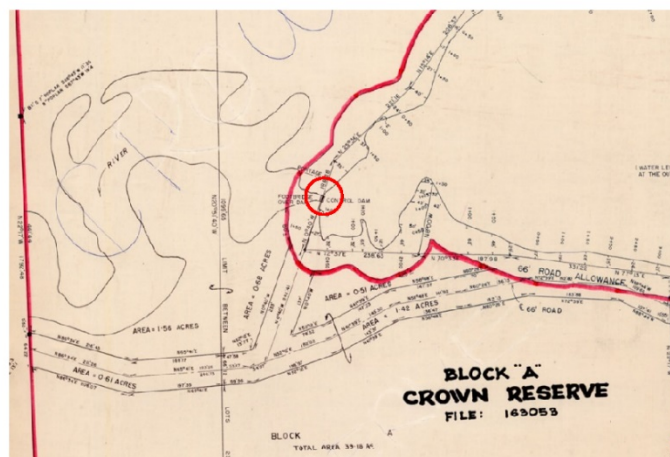
1857



1860



1878



1960

Figure 11: Mapping showing Shabomeka Lake Dam Location, 1857, 1860, 1878, and 1960.



1948



1960



1978

Figure 12: Air photos showing the Shabomeka Lake Dam Location.



Figure 13: View of dam in 1989, looking east (MVCA, 2005).



Figure 14: View of dam in 1989, looking west (MVCA, 2005).



Figure 15: South wall of sluice prior to 1989 rehabilitation (MVCA, 2005).



Figure 16: Formwork for new concrete sluice walls in 1989 (MCVA, 2005).



Figure 17: Formwork for new concrete portions of concrete sluice in 1989 (MCVA, 2005).



Figure 18: Sluiceway pre-1989 reconstruction, showing partial removal of embankments (MCVA, 2005).



Figure 19: Upstream view of 1989 reconstruction showing embankments removed (MCVA, 2005).



Figure 20: View of new embankment sand and gabion walls, 1989 (MCVA, 2005).

5.4 Comparative Analysis

Canadian waterways have been a source of power for over a century. Communities grew from the construction of mills and dams along the Don River, Rouge River, Ottawa River, and many others. Dams were constructed for controlling waterways, tailings management, irrigation, flood control, and are essential in producing the energy needed to power the 21st century homes.⁴⁵ Although small dams were used early in the development of Euro-Canadian towns, large dams became a significant part of Canada's modernization. Today, Canada has over 14,000 dams and 1,100 of those are considered large⁴⁶. The following table provides an overview of a number of comparative examples of dams which have been identified as having cultural heritage value or interest from across Ontario and Canada.

Table 1: Examples of significant and designated sites associated with dams in Ontario

Name and Location	Heritage Recognition	Important Dates	Description for Cultural Heritage Value or Interest	History and Current Use	Other notes
Carrville Mill Dam – City of Vaughan ⁴⁷	Designated under Part IV, Section 29 of the OHA. By-Law 291-87	Constructed c.1816 Repaired in 1907 and 1916	The mill complex was designated for its architectural value and historical associations within the community. The community of Carrville began as a mill village and was dependant on the access to water. The mill was operated by Michael Fisher. Michael Fisher sold the dam to Thomas and William Cook, two prominent members of the community	The dam provided water control and regulation for the economic development of the community. Today the dam is no longer operational but is a reminder of the importance that dams played in the development of Carrville.	Unlike the Shabomeka Lake Dam, this dam is an early example of a mill dam. It is also associated with the development of the surrounding community and has associations with several prominent community members.

⁴⁵ Canadian Dam Association. 2019. *Dams in Canada 2019*

⁴⁶ Ibid.

⁴⁷ The Corporation of the Town of Vaughan Heritage Register. By-Law 291-87

Name and Location	Heritage Recognition	Important Dates	Description for Cultural Heritage Value or Interest	History and Current Use	Other notes
Alton Mill (Beaver Knitting Mill) – Town of Caledon ⁴⁸⁴⁹	Designated under Part IV Section 29 of the OHA. By-Law 2004-201	Constructed in 1881	<p>The mill complex was designated for its architectural value and historical associations within the community.</p> <p>The plain, but rectangular buildings, the ancillary square stone water tower, brick chimney, mill pond and associated dam.</p> <p>Located in the core of the Alton, acts to form significant vistas from Queen Street and its surrounding residential buildings from the 19th century.</p> <p>The dam historically contributed to the economic development of the town.</p> <p>It is one of two remaining industrial stone complexes in Alton. The mill produced fleece lined long underwear, which was known nation wide.</p>	<p>The Alton Mill was vital in the textile industry for Alton, Ontario.</p> <p>Today the Mill acts as a reminder of the textile industry that grew the Town of Alton.</p>	This example is a rare example of a stone industrial complex and is linked to the development of the community. It also maintains and supports the surrounding character and is part of significant vistas.

⁴⁸ The Corporation of the Town of Caledon. 2005. By-Law 2004-201

⁴⁹ Canada's Historic Places. 2004. *Alton Mill*. Accessed from <https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=2088&pid=0>

Name and Location	Heritage Recognition	Important Dates	Description for Cultural Heritage Value or Interest	History and Current Use	Other notes
			The dam attached to the mill was vital in powering the mill along the Credit River.		
Toronto Power Generating Station – Niagara Falls, Ontario ⁵⁰⁵¹	Designated a National Historic Site under the Historic Sites and Monuments Act in 1983.	Constructed in 1906 Purchased by Ontario Hydro in 1922 Operated until 1974	The cultural heritage value or interest of the site can be attributed to its architectural design and historical associations. The building was Canada's first wholly owned hydro-electric dam. An unusual use of Beaux-Arts style for the construction of an industry building. Attributed to architect E.J. Lennox, a prominent Toronto based architect who also designed Old City Hall (Toronto) and Casa Loma.	The construction of the hydro-electric plant allowed for Toronto to attract new businesses, industries, and technologies into Ontario. This significantly grew Toronto as a world class city and provided the residents with the electricity to power a growing industrialized urban centre. Today, the plant is vacant and no plans have been made since it ceased operations in 1974.	This dam has architectural and design value as an early example of its type and style and for its technological and scientific achievement. It also has a number of direct associations to specific themes, individuals and entities.
Queenston-Chippawa Hydro Electric Development –	Designated a National Historic Site under the Historic Sites and Monuments Act in 1990	Began construction in 1917 and finished in 1922	The cultural heritage value of the site is attributed to its architectural value, historical associations, contextual	The first truly mega hydro-electric project in Canada. It provided electricity to many rural towns and villages. The	This dam has architectural and design value as an early example of its type and style and for its technological and scientific

⁵⁰ Ibid. *Toronto Power Generating Station National Historic Site of Canada*. Accessed from <https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=11954>

⁵¹ Parks Canada Directory of Federal Heritage Designations. *Toronto Power Generating Station National Historic Site of Canada*. Accessed from https://www.pc.gc.ca/apps/dfhd/page_nhs_eng.aspx?id=427

Name and Location	Heritage Recognition	Important Dates	Description for Cultural Heritage Value or Interest	History and Current Use	Other notes
Queenston, Ontario ⁵²		Significant new installing in 1925	<p>associations, and engineering achievements.</p> <p>The construction saw many firsts as the massive project required revolutionary engineering methods and designs not seen in the previous era.</p> <p>The large steel framework, reinforced concrete floors, the interior of the power-station with a fully equipped hospital, kitchen, dining room, and offices.</p> <p>The viewscape provided from across the Niagara River to the east and the Falls at Niagara.</p>	<p>station is powered by the Welland River.</p> <p>The project required several years to complete and in 1925 the construction of a secondary plant to meet the demands of the cities, towns, and communities across southwestern Ontario.</p> <p>The dam located along the Niagara River play a major role in diverting water into the stations to produce 2,080 MW.</p>	achievement. It also has a number of direct associations to specific themes, individuals and entities.

⁵² Ibid. *Queenston-Chippawa Hydro Electric Development National Historic Site of Canada*. Accessed from https://www.pc.gc.ca/apps/dfhd/page_nhs_eng.aspx?id=501

6 EVALUATION OF CULTURAL HERITAGE VALUE OR INTEREST

The subject property was evaluated against the nine criteria outlined in O. Reg. 9/06 which states that a “property may be designated under section 29 of the Act if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest.”

Table 2: Ontario Regulation 9/06 Criteria

O. Reg. 9/06 Criteria	Meets Criteria (Y/N)	Summary
1. The property has design value or physical value because it,		
i. is a rare, unique, representative or early example of a style, type, expression, material, or construction method,	No	The Shabomeka Lake Dam is a simple concrete sluice with stoplogs and an earthen embankment; a common design for dams from the 1950s through to today. Significant reconstruction in 1989 resulted in the removal of much of the original structure and the reconstruction of the embankments would have resulted in the removal of much (if not all) of the remnant timber cribbing from earlier iterations of the dam.
ii. displays a high degree of craftsmanship or artistic merit, or	No	The Shabomeka Lake Dam is devoid of artistic elements. Its degree of craftsmanship is consistent with what would be expected of a structure of its stature, location, and age of construction/repairs.
iii. demonstrates a high degree of technical or scientific achievement.	No	The property does not show any distinctive technical or scientific achievement, particularly as compared with other examples of dams which do meet O.Reg.9/06 criteria.
2. The property has historical value or associative value because it,		
i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,	No	Built in the early 20 th century it was neglected and reconstructed in the 1950s. It went through repairs in 1959 and 1970. In 1989 it was rehabilitated.

O. Reg. 9/06 Criteria		Meets Criteria (Y/N)	Summary
ii.	yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or	No	<p>Past Recovery Archaeological Services Inc. conducted a Stages 1 and 2 Archaeological Assessment (2018) which did not result in the identification of any archaeological resources.</p> <p>The extant structure does not have the potential to yield information that would contribute to the understanding of a particular community or culture.</p>
iii.	demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.	No	<p>The Shabomeka Lake dam was constructed by the Regional Office of Ontario Hydro for the Mississippi River Improvement Company.</p> <p>No specific architect, builder, designer, engineer, or theorist significant to the community has been directly attributed to the structure.</p>
3. The property has contextual value because it,			
i.	is important in defining, maintaining or supporting the character of an area,	No	The dam is not a defining character of the area
ii.	is physically, functionally, visually or historically linked to its surroundings, or	No	The dam is functionally linked to its surrounding by its operation; however, this would be true of any dam structure in this location and is not a function of this specific structure nor is it a reflection of any CHVI.
iii.	is a landmark.	No	The dam structure is not a landmark.

7 CONCLUSION

As demonstrated in Table 2, the dam does not meet any criteria of Ontario Regulation 9/06. The Shabomeka Lake Dam was built in a utilitarian style with common construction methods and materials and underwent extensive rehabilitation and replacement in 1989. No direct associations were identified and the dam was not determined to exhibit any contextual value. Based upon the foregoing analysis, it is LHC's professional opinion that the Shabomeka Lake Dam holds no cultural heritage value or interest under Ontario Regulation 9/06.

8 RIGHT OF USE

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In addition, this assessment is subject to the following limitations and understandings:

- The review of the policy/legislation was limited to that information directly related to cultural heritage management; it is not a comprehensive planning review.
- Soundscapes, cultural identity, and sense of place analysis were not integrated into this report.

9 SIGNATURES



Christienne Uchiyama, MA CAHP
Principal, Manager Heritage Consulting Services
Letourneau Heritage Consulting Inc.

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11 PROJECT PERSONNEL

Christienne Uchiyama, MA CAHP

Christienne Uchiyama MA CAHP is Principal and Manager - Heritage Consulting Services with Letourneau Heritage Consulting. She is a Heritage Consultant and Professional Archaeologist (P376) with more than a decade of experience working on heritage aspects of planning and development projects. She is a member of the Board of Directors of the Canadian Association of Heritage Professionals and received her MA in Heritage Conservation from Carleton University School of Canadian Studies. Her thesis examined the identification and assessment of impacts on cultural heritage resources in the context of Environmental Assessment.

Since 2003 Chris has provided archaeological and heritage conservation advice, support and expertise as a member of numerous multi-disciplinary project teams for projects across Ontario and New Brunswick, including such major projects as: all phases of archaeological assessment at the Canadian War Museum site at LeBreton Flats, Ottawa; renewable energy projects; natural gas pipeline routes; railway lines; hydro powerline corridors; and highway/road realignments. She has completed more than 100 cultural heritage technical reports for development proposals at all levels of government, including cultural heritage evaluation reports, heritage impact assessments, and archaeological licence reports. Her specialties include the development of Cultural Heritage Evaluation Reports, under both O. Reg. 9/06 and 10/06, and Heritage Impact Assessments.

Colin Yu, BSc

Colin Yu is a Cultural Heritage Specialist and Archaeologist with Letourneau Heritage Consulting Inc. He holds a BSc with a specialist in Anthropology from the University of Toronto. Colin is currently pursuing a M.A in Heritage and Archaeology from the University of Leicester. He is specializing in identifying socioeconomic factors of 19th century Euro-Canadian settlers through quantitative and qualitative ceramic analysis.

Colin has worked in the heritage industry for over five years, starting out as an archaeological field technician in 2013. He currently holds an Applied Research license from the Ministry of Heritage, Sport, Tourism and Culture Industries (R1104). Colin has worked on a variety of archaeological sites, including Euro-Canadian farmsteads, historic burials, and First Nations villages. Additionally, Colin has led numerous Stage 2-4 archaeological assessments in southern Ontario. Colin has written Stage 1-4 archaeological reports. His specialties include ceramic analysis, archaeological assessments, and archival research.

Appendix B – Fisheries Review Downstream of the Dam Site

December 11, 2019

To: John Price, Director Water Resources Engineering, MVCA

Prepared by: Kelly Stiles, Biologist MVCA

Re: Class Environmental Assessment for the Shabomeka Lake Dam Rehabilitation – Additional Fisheries Assessment

This memo is in response to MNRF's request for additional details regarding the potential fish community downstream of the Shabomeka Lake dam particularly the likelihood of Lake Whitefish and/or Lake Herring utilizing the areas immediately the dam for spawning and nursery habitat in the fall and early winter. Additionally, it will address how the restoration works on the dam during the fall spawning season may impact the fish downstream.

MVCA staff performed a site inspection on October 29, 2019 after the fall drawdown of Shabomeka Lake was completed on October 15, 2019. It was observed that immediately downstream of the dam is a rocky spill area that also functions as a ford. Downstream from the ford the water quickly deepens and widens out into an extensive cattail marsh (see Figures 1 and 2). The marsh habitat was not fished due to the extensive width and depth.



Figure 1: Photo of the habitats immediately downstream of the Shabomeka Lake Dam (October 29, 2019).

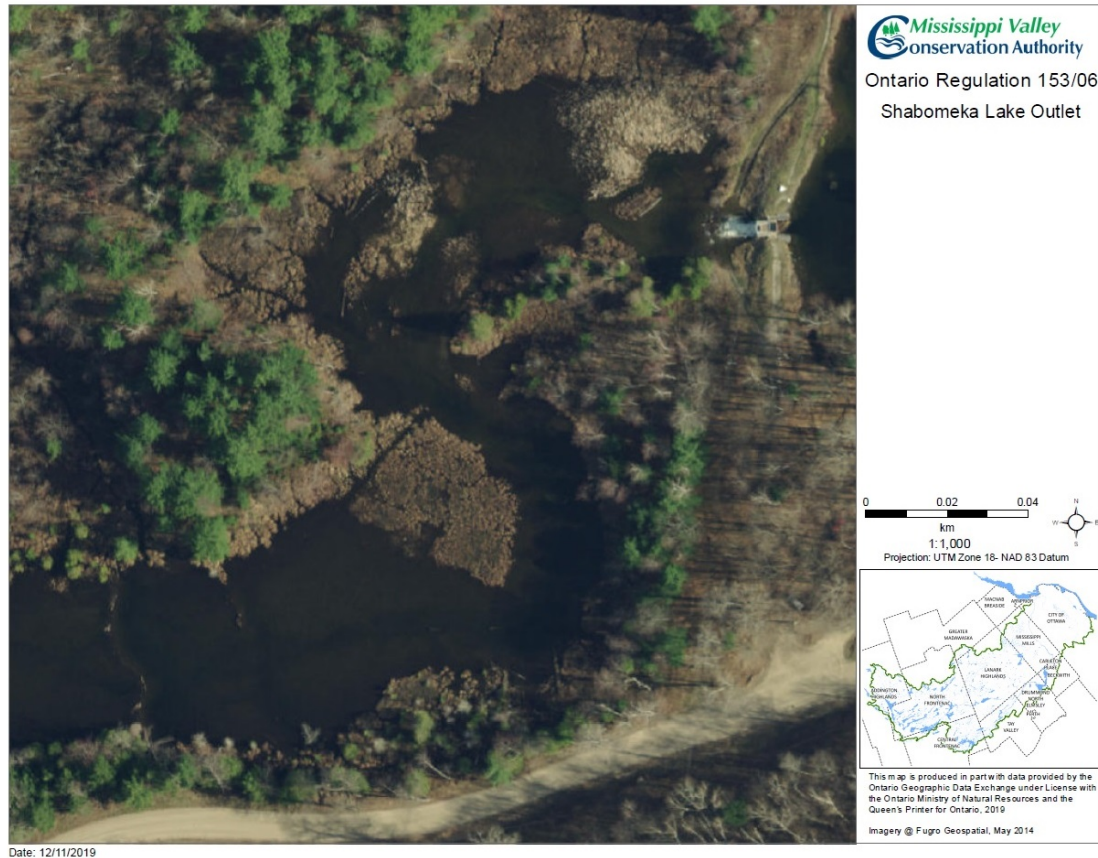


Figure 2: Aerial imagery of the site in question, taken during spring high water, demonstrating the width of the channel and the extent of the wetland habitat immediately downstream of the dam.

The fording area would be poor spawning habitat for either of the fish species of concern. Lake Whitefish prefer to spawn on shoals 1 - 3 meters (m) deep, and Lake Herring prefer similar habitat that is stoney/gravel and 1 – 3 m deep or greater. While the ford provides the appropriate rocky gravel habitat, it is very shallow (<1 m deep in the fall) and it is frequently trafficked by four-wheelers crossing to the north shore of the lake. Downstream of the ford, the substraight becomes more organic as the watercourse transitions into a cattail marsh. If Lake Whitefish or Lake Herring were to be found in the watercourse below the dam, the area of concern is not their preferred spawning habitat and the risk of impacting these potential fish during their spawning season can be mitigated through the implementation of standard fish and fish habitat protection measures.

MNRF Bancroft was consulted (email communication with Erin MacDonald November 15, 2019) about employing best management practices such as excluding the work zone from the downstream habitat and providing by-pass flows for the duration of the works to mitigate impacts on all the fish species that may live in the wetland. MNRF Bancroft is favourable to that proposal but is currently requesting more detail on the exclusion measures that may be used.

Kelly Stiles
MVCA Biologist

Dec 11, 2019

Kelly Stiles, Biologist

Page 2 of 2

Appendix C – Notice of Filing of Addendum



**NOTICE OF FILING OF ADDENDUM FOR REVIEW
SHABOMEKA LAKE DAM REHABILITATION
CLASS ENVIRONMENTAL ASSESSMENT**

The Mississippi Valley Conservation Authority (MVCA) has now completed a review of the Project Plan Report regarding the preliminary design for repairs or reconstruction of the Shabomeka Lake Dam located on Lot 23, Concession XII, Barrie Ward, North Frontenac Township. This project is being considered to increase the lifespan of the dam which currently faces deficiencies from a dam safety perspective.

As a result of comments received during the review of the Project Plan Report an Addendum Report has been prepared in accordance with the Class Environmental Assessment for Remedial Flood and Erosion Control Projects, approved for projects of this type. As described in the Project Plan Report and the Addendum Report, the Preferred Alternative is embankment rehabilitation and control structure reconstruction. The Preferred Alternative reduces the construction impact zone to the existing dam location, does not create any new areas of disturbance and can be completed well within the winter period when lake levels are lowered on a typical annual basis and when it will have the least social-economic disturbance.

Interested persons are invited to review this addendum document on the Conservation Authority's website at: <http://mvc.on.ca> or at the Conservation Authority office, 10970 Highway 7, Carleton Place.

You may provide written comments to this office, within 15 calendar days from the date of this notice to:

John Price, Project Manager, Director, Water Resources Engineering
Mississippi Valley Conservation Authority
10970 Highway 7
Carleton Place, ON, K7C 3P1
Phone: 613-253-0006 Ext. 258 Fax: 613-253-0122
jprice@mvc.on.ca

Subject to comments received as a result of this study and the receipt of necessary approvals and funding, MVCA intends to proceed with the construction of this project. If any individual feels that serious environmental concerns remain unresolved after consulting with Conservation Authority staff, it is their right to request that the project be subject to a Part II Order by the Minister of the Environment. Part II Order requests must be received by the Minister, with a copy to the Conservation Authority, at the following address within 15 calendar days (**January 17, 2020**) following the date of this Notice:

Minister of the Environment
135 St. Clair Avenue West, 15th Floor
Toronto, Ontario
M4V 1P5