

State of Musselman's Lake Sub-Watershed Report and Stewardship Plan Project

● Project Outline and Responsibilities ●

1.0 INTRODUCTION

1.1 Background

The community of Musselman's Lake is located in southern Ontario in the Town of Whitchurch-Stouffville, approximately 45 minutes north east of Toronto. Musselman's Lake is one of the many kettle lakes located along the Oak Ridges Moraine, a 160 kilometre long geological landform that is known as southern Ontario's rain barrel.

The drainage basin and lakeshore of Musselman's Lake have been extensively developed for residential, recreation and agricultural uses. The shift from small summer homes/cottages to larger full-time residential homes has placed a strain on the lake due to direct input of stormwater to the lake without treatment and the absence of a sewage treatment plant, resulting in water quality degradation in the lake. A study completed by the Lake Simcoe Region Conservation Authority in 1989, called the "Musselman Lake Surface Water Quality Report", confirmed that water quality in the lake was degraded and remedial measures and control options were recommended.

1.2 Objective

The main objective of this project is to develop a State of Musselman's Lake Sub-Watershed Report and Stewardship Plan, in consultation with appropriate government agencies, landowners, non-government environmental groups and resident associations, and interested members of the public.

This project will be undertaken utilizing a community-based planning process that encourages community members and other key stakeholders (such as Lake Simcoe Region Conservation Authority (LSRCA) and municipal politicians and staff) to become actively involved from start to finish - a plan that is developed by them and for them.

The State of Musselman's Lake Sub-Watershed Report (SMLR) will identify the present condition of Musselman's Lake and its surrounding drainage along with the land-use, water, recreation, and resource management issues that need to be addressed. The Stewardship Plan (MLSP) will provide an action plan that guides stewardship opportunities, including education, communications, restoration and monitoring. The MLSP will also identify the tools and resources that are available and/or required to take timely actions to promote and ensure a healthy and sustainable lake and associated drainage basin for present and future generations.

1.3 Planning Area

Musselman's Lake is a small, shallow kettle lake with a surface area of 46 hectares, a drainage basin area of 179 hectares (1.79 km²) and a maximum depth of 7.3 metres. Located in the south-east corner of the Lake Simcoe watershed it lies in the ecologically significant and sensitive geological landform of the Oak Ridges Moraine (Figure 1).

Like other kettle lakes, Musselman's Lake was formed by glaciation approximately 12,000 years ago and has only intermittent outflow through a small culvert at the northwest end. Precipitation, surface runoff and groundwater are the sources of inflow into Musselman's Lake with the outflow draining into an adjacent wetland area (Figure 2). This area eventually drains into the East Holland River, which flows to the west and then north through Newmarket and East Gwillimbury where it joins with the West Holland River to become the Holland River, which flows into Cook's Bay at the south end of Lake Simcoe.

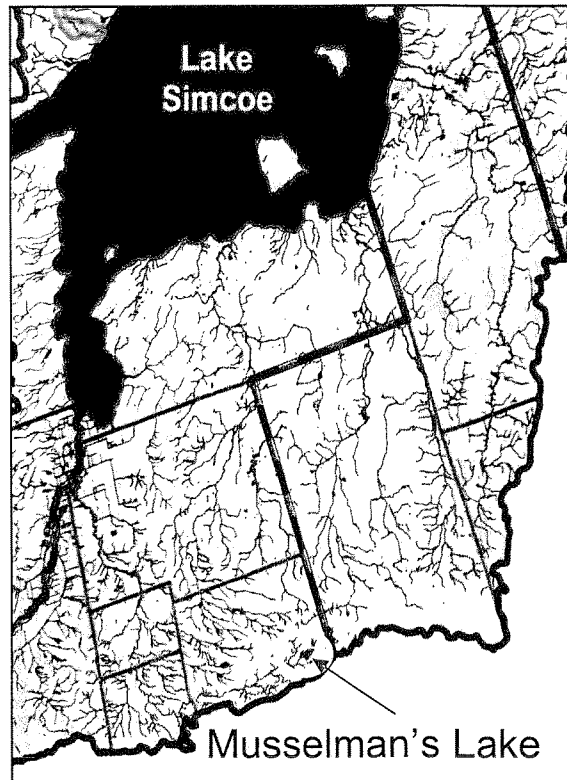


Figure 1 - Location in Lake Simcoe Watershed

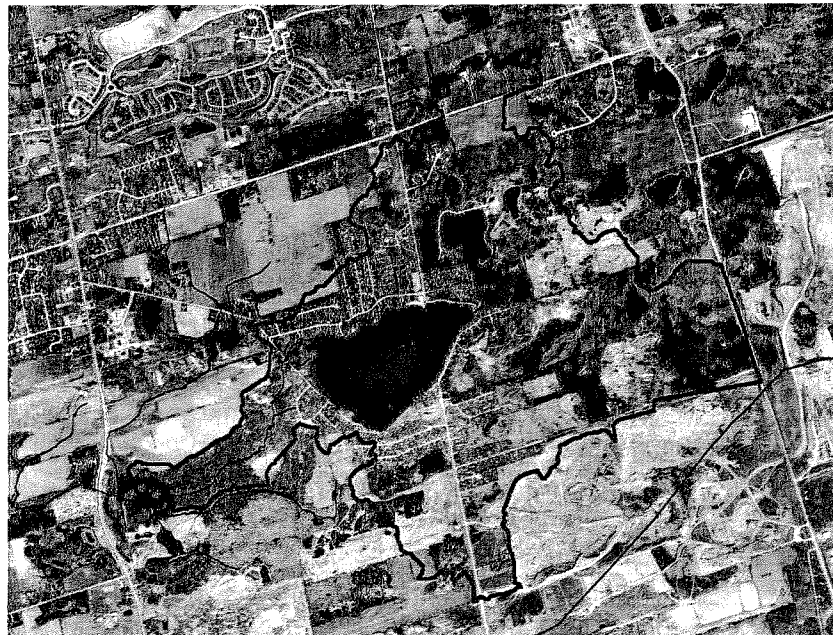


Figure 2 - Musselman's Lake Drainage Basin

2.0 PROJECT DETAILS

The State of Musselman's Lake Sub-Watershed Report and Stewardship Plan is expected to contain the following information:

- an overview chapter in which the physical setting of Musselman's Lake and its surrounding drainage basin, human settlement and water use will be described;
- identification of the natural features and functions of Musselman's Lake and its drainage basin - divided into three categories (land, water and community) for detailed investigation;
- identification and discussion of the issues in the drainage basin as a whole that are particularly important to preserving the ecological integrity of the lake;
- evaluation of land use policies and recommendations for change;
- responsibilities pertaining to the management of Musselman's Lake; including resource managers and landowners;
- recommendations pertaining to the communication of the report's findings;
- report will close with a conclusions/recommendations that will describe the overall state of Musselman's Lake and its drainage basin and recommendations that would identify specific measures needed to improve its future state, as well as a process for ensuring the recommendations do not fall on infertile ground; and
- following the publication of the report, a presentation of the report findings will be prepared for use in meetings or presentations - not only will this consultation bring the science and results of the study to the public, but it will ensure that the recommendations are brought to the forefront of discussions across the entire drainage basin.

2.1 Formation of the Technical Working Group

The first step in the project will be to develop the Musselman's Lake Technical Working Group (ML-TWG) to help identify sources of data, determine the format that will be most useful in the project, and develop a detailed workplan that outlines specific tasks, lead agency, supporting roles and timeline for completion. This committee will consist of technical staff from the Town of Whitchurch-Stouffville, York Region and LSRCA, as well as provincial staff from Ministry of Natural Resources. These agencies will provide scientific information and direction to the project. As was mentioned earlier they will be important in the development of the project as they will be utilizing the end product.

Other groups, such as smaller community groups will be consulted in order to obtain an understanding of what activities are already taking place and to identify local community interests. These groups will also be invited to take part in the planned community meetings and asked to review the draft documents and make recommendations.

2.2 Objectives of the State of Musselman's Lake Sub-Watershed Report and Stewardship Plan Project

1. Involve all partner agencies and the public through active participation.
2. Integrate disciplines, policies, mandates and requirements of all agencies and interests.
3. Identify the location, area, extent, present status, significance, function and sensitivity of the existing natural environment within the sub-watershed.
4. Identify the location and type of development constraints within the sub-watershed.
5. Identify sources of surface water contaminants from agricultural, urban, rural and natural areas and areas where there is a potential for rehabilitation.
6. Evaluate potential impacts on water quality and on the natural environment associated with future development in the sub-watershed.
7. Identify remedial measures and control options to rehabilitate ecosystem health. Prioritize measures and options based on their cost/benefit and produce an implementation strategy (Stewardship Plan), which identifies agency roles and responsibilities and a schedule for completion.
8. Identify opportunities for community involvement.
9. Assess the impact associated with future urban growth on the health of Musselman's Lake and its surrounding drainage basin and develop a strategy to minimize and/or eliminate these impacts.
10. Provide direction for the protection and rehabilitation of natural heritage features.

2.3 Consultation Process

Disseminating information and providing opportunities for consultation/feedback will be critical to the success of this project. The consultation process will include, but is not limited to, the following:

- a "Public Information Session" that should be held as a kick-off to the project to obtain initial comments and/or concerns of the area residents;
- a second "Public Information Session" should be hosted once the state of the Lake is assessed and preliminary options for remediation are developed;
- a third workshop should be hosted to gather feedback regarding the detailed recommendations for the Stewardship Plan; and
- a final consultation meeting should be held once the draft report(s) is/are available.

In conjunction with the four (4) community meetings --- a hot button link on either the Town or LSRCA website should be made available so that the community can stay up to date on the development of the State of Musselman's Lake Sub-Watershed Report and Stewardship Plan.

This component of the project will be undertaken by French Planning Services Inc., a private consultant that is well versed in community consultation and facilitation, as well as a working knowledge of lake management strategies and processes.

2.4 Scope of the Consultation Process

The scope of the consultation process will include:

- working alongside the ML-TWG, including providing guidance and advice for the consultation process;
- gathering and analysing the **existing** science and resource information, and preparing communication materials for the consultation process that are easily understood by the community;
- facilitating, preparing and/or reviewing summaries of stakeholder workshops;
- providing input and reviewing a resident survey; and
- preparing and/or reviewing the final Stewardship Plan and associated communication materials.

2.5 Requirements of the Consultant

The consultant will be required to:

- provide a work plan that includes the sequence of tasks and associated schedule set out within the time frame of the Terms of Reference;
- work alongside the Musselman's Lake Technical Working Group to facilitate the consultation portion of this project;
- contact organizations/develop partnerships for sharing and using existing data; and
- review report outlines, drafts, and final reports with the Technical Committee.

2.6 Consultant Deliverables

See attached schedule (includes task, details, timeline and costs (Appendix 1).

3.0 ROLES AND RESPONSIBILITIES

1. Brian Kemp, LSRCA, shall be the contact person for the MLSP and shall provide the consultant with necessary guidance and advice.
2. The consultant shall submit the outlines, drafts and final reports on time.
3. Brian Kemp, LSRCA, shall organize and handle the formal review of the Draft reports, in consultation with the consultant.
4. The ML-TWG shall prepare reports as outlined in Appendix 1.
5. The Consultant shall prepare reports as outlined in Appendix 1.

Project Component	Lead	Timeline
Formation of Technical Working Group	LSRCA	July 13, 2007
<p>State of Mussleman's Lake Sub-Watershed Report</p> <p>Identification/examination of natural features and functions (incl. monitoring, issue identification, existing natural features, etc.)</p> <ul style="list-style-type: none"> • provides information on the natural and cultural resources found in the Sub-Watershed and attempts to assess their health • developed using an ecosystem approach and indicates where linkages exist between resources • provides those working to develop the Stewardship Plan with sufficient information to identify areas that require protection as well as areas that require rehabilitation 	LSRCA (undertaken by LSRCA staff in consultation with Technical Working Group)	TBD, based on detailed workplan developed by the ML-TWG
<p>Consultation Process and Stewardship Plan</p> <ol style="list-style-type: none"> 1. Kick-off (Public Information Session) 2. State of Sub-Watershed Review and preliminary remedial options 3. development of detailed stewardship plan 4. draft report(s) consultation 	LSRCA under the direction of a private consultant	<ol style="list-style-type: none"> 1. July/August 2. late fall/early winter 2007 3. late winter/early spring 2008 4. early spring

4.0 TIME FRAME AND COSTS

See details in Appendix 1. The consultant will be paid upon a progress schedule based on deliverables identified in the attached schedule (Appendix 1). A 10% holdback will apply until completion of the project. See Appendix 2 - Payment Schedule