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Chapter 6

GREAT LAKES CONSIDERATIONS

APPROVED ASSESSMENT REPORT
for the
Northern Bruce Peninsula Source Protection Area

October 15, 2015

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Table of Contents

CHAPTER 6.0 GREAT LAKES CONSIDERATIONS

6.1 Governance of the Great Lakes	6-1
6.2 Great Lakes Considerations within Drinking Water Source Protection.....	6-1
6.3 Great Lakes Agreements	6-2
6.3.1 Overview	6-2
6.3.2 Great Lakes Water Quality Agreement.....	6-2
6.3.3 The Great Lakes Charter and the St. Lawrence River Basin Sustainable Water Resources Agreement.....	6-3
6.3.4 The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem	6-4
6.3.5 The <i>Great Lakes Protection Act</i>	6-4
6.4 Great Lakes Targets under the Clean Water Act.....	6-4
6.5 Next Steps	6-5
6.5.1 Lake Huron Working Group	6-5
REFERENCES	6-7

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6.0 Great Lakes Considerations

6.1 Governance of the Great Lakes

One-fifth of the world's fresh surface water is found in the Great Lakes-St. Lawrence River system. This system plays a vital role in the geography, economy and lifestyles of residents in Ontario and Quebec, as well as those in the U.S. states of Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and New York (International Joint Commission, 2009). The Great Lakes and their connecting channels provide millions of people with drinking water throughout Ontario and other jurisdictions located on the Great Lakes, including Quebec communities located on the St. Lawrence River and portions of the U.S. Over 85 percent of the population of Ontario relies on the Great Lakes basin for their drinking water (Ministry of the Environment, 2007).

The International Joint Commission (IJC) was established in 1909 by the Boundary Waters Treaty between Canada and the U.S. The IJC was established to help governments find solutions to problems in these waters because Canada and the U.S. realized that the actions by each country in water systems along the border can affect the other country. Three members of the IJC are appointed by the President of the United States and three are appointed by the Governor in Council of Canada, on the advice of the Prime Minister, for a total of six members (International Joint Commission, 2009).

The International Joint Commission's main focus is "assisting governments in achieving their goal of cleaning up the Great Lakes to preventing polluting the system further" (International Joint Commission, 2009).

6.2 Great Lakes Considerations within Drinking Water Source Protection

The *Clean Water Act, 2006*, requires Source Protection Plans to consider policies that relate to the Great Lakes. The Ministry of Environment (MOE) document entitled "A Discussion Paper on Requirements for the Content and Preparation of Source Protection Plans" (Ministry of the Environment, 2009) provides some details on how Great Lakes policies may be included in the Source Protection Plan. Those details are reproduced below.

In addition to considerations of Great Lakes agreements, the *Clean Water Act* establishes a strong mechanism by empowering the Minister of the Environment with the authority to set targets for the Great Lakes or any part thereof. These targets shall address any water quality or quantity issue related to the use of the Great Lakes as a source of drinking water (Section 85) or an emerging Great Lakes problem. The *Clean Water Act* also allows source protection plans to identify policies related to these targets as Designated Great Lakes Policies (*Clean Water Act, 2006*, Section 22). Through the *Clean Water Act*, these Designated Great Lakes Policies have the same legal implementation assertion as Significant Threat Policies.

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6.3 Great Lakes Agreements

6.3.1 Overview

Under the *Clean Water Act*, the Great Lakes Agreements to be considered (Section 14) are listed below (Clean Water Act, 2006):

The Great Lakes Water Quality Agreement of 1978 between Canada and the United States of America signed at Ottawa on November 22, 1978, including any amendments made before or after this section comes into force.

The Great Lakes Charter signed by the premiers of Ontario and Quebec and the governors of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin on February 11, 1985, including any amendments made before or after this section comes into force.

The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem of 2002 entered into between Her Majesty the Queen in Right of Canada and Her Majesty the Queen in Right of Ontario, effective March 22, 2002, including any amendments made before or after this section comes into force.

The Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement between Ontario, Quebec and eight U.S. states.

Any other agreement to which the Government of Ontario or the Government of Canada is a party that relates to the Great Lakes basin and that is prescribed by the regulations.

The first four Agreements are discussed below. At the time of drafting of this report, the Source Protection Committee is not aware of any other Agreement, signed by the Government of Ontario or the Government of Canada, related to the Great Lakes and prescribed by the regulations.

6.3.2 Great Lakes Water Quality Agreement

The Great Lakes Water Quality Agreement (GLWQA), first signed in 1972 and renewed in 1978, expresses the commitment of Canada and the United States to restore and maintain the chemical, physical and biological integrity of the Great Lakes basin ecosystem and includes a number of objectives and guidelines to achieve these goals (International Joint Commission, 2009). In 1987, a Protocol was signed to help develop and implement Remedial Action Plans (RAPs) and Lakewide Management Plans (LaMPs). RAPs focus on the geographic Areas of Concern (AOCs), which are identified under the Canada-Ontario Agreement Respecting Great Lakes Water Quality described in Section 6.3.4.

On June 13, 2009, the Governments of Canada and the United States announced that they would be updating the GLWQA. In the news release, current and emerging challenges such as increased population and urbanization, land use practices and impacts of climate change, were identified as being part of the reason for needing a modernized agreement. The consultation period ended in February, 2010. On behalf of the 36 Conservation Authorities in Ontario, Conservation Ontario

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Council has endorsed the comments with respect to the renewal of this agreement. Key findings from June 2007 were reconfirmed in February, 2010 (Conservation Ontario, 2010). Some of these key findings may also have relevance for the protection of drinking water from the Great Lakes:

Land use impacts are the single biggest driver of in-lake conditions throughout much of the Great Lakes basin and thus, the watershed scale is appropriate for resource management with a central role of tributary watersheds in affecting open lake conditions. Greater levels of funding are required to properly address the watershed protection and restoration priorities of implementation partners, particularly outside of Areas of Concern.

Overall, there is a lack of a solid framework to focus the efforts of the many partners and interests on producing positive results for the Great Lakes. An integrated approach to governance, policy development and implementation, research and monitoring, capital assistance programs, and education and communication/outreach programs is necessary for success. A new agreement must meaningfully engage local partners, including watershed management organizations and municipalities (Conservation Ontario, 2010).

6.3.3 The Great Lakes Charter and the St. Lawrence River Basin Sustainable Water Resources Agreement

The Great Lakes Charter contains agreements between the eight Great Lakes states in the United States as well as the Province of Ontario and the Government of Quebec. The purposes of the Charter are “to conserve the levels and flows of the Great Lakes and their tributaries and connecting waters; to protect and conserve the environmental balance of the Great Lakes basin ecosystem; to provide for cooperative programs and management of the water resources of the Great Lakes basin by the signatory States and Provinces; to make secure and protect present developments within the region; and to provide a secure foundation for future investment and development within the region” (Council of the Great Lakes Governors, 2010).

The Great Lakes Charter was supplemented in 2001 by the Great Lakes Charter Annex and its implementing agreements, including the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement, which pertains to the watershed of the Great Lakes and the St. Lawrence River upstream from Trois-Rivières, Québec within the jurisdiction of eight U.S. states and the Province of Ontario and the Government of Quebec (Ministry of Natural Resources, 2010).

These agreements are not considered relevant to the work conducted for the Northern Bruce Peninsula Source Protection Area Assessment Report. The Water Budget and Water Quantity Stress Assessment included in this Assessment Report consider supply and demand within the watersheds of the Northern Bruce Peninsula SPA. Great Lakes water budgeting must be undertaken on a much larger scale. The information developed through the Water Budget work in the Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region, along with those developed in other Source Protection Regions, can be used by others when considering the larger scale Great Lakes basin water budgets.

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6.3.4 The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem

The governments of Canada and Ontario have signed an agreement to protect the Great Lakes that includes cleaning up 15 Areas of Concern where the natural environment has been severely degraded, which includes reducing harmful pollutants and improving water quality. This agreement also aims to conserve fish and wildlife species and habitats, lessen the threat of aquatic invasive species, and improve land management practices within the Great Lakes basin. This agreement, renewed as the 8th Agreement in January 2015, contains areas of cooperation such as protecting sources of drinking water, understanding the impacts of climate change, and encouraging sustainable use of land, water and other natural resources. The implementation of this agreement helps fulfill the obligations of the Great Lakes Water Quality Agreement (Ministry of the Environment, 2007).

The Agreement contains fourteen Annexes, one of which focuses on efforts to complete the actions necessary to restore the degraded ecosystems in Areas of Concern, such as Nipigon Bay, Niagara River, Bay of Quinte, and the St. Lawrence River in Cornwall. For the remaining 12 Areas of Concern, the Annex requires “making significant progress towards recovery” (Canada-Ontario Agreement, 2002, Annex 1).

6.3.5 The Great Lakes Protection Act

Ontario passed the *Great Lakes Protection Act*, 2015, building on existing Great Lakes partnerships for joint action to fight climate change, reduce harmful algal blooms, protect wetlands and tackle other complex problems in the Great Lakes basin.

The purposes of the proposed *Great Lakes Protection Act*, 2015, are to protect and restore the ecological health of the Great Lakes-St. Lawrence River Basin; and to create opportunities for individuals and communities to become involved in the protection and restoration of the ecological health of the Great Lakes-St. Lawrence River Basin. Purposes also include:

- To protect human health and well being through the protection and restoration of the ecological health of the Great Lakes- St. Lawrence River Basin.
- To protect and restore wetlands, beaches, shorelines, natural habitats, biodiversity and other coastal areas of the Great Lakes-St. Lawrence River Basin.
- To advance science relating to existing and emerging stressors, such as climate change, that improves understanding and management of the Great Lakes-St. Lawrence River Basin.

6.4 Great Lakes Targets under the *Clean Water Act*

The *Clean Water Act* gives authority to the Minister of the Environment to establish targets relating to the use of the Great Lakes as a source of drinking water (*Clean Water Act*, 2006, Section 85). Targets are established to direct and coordinate action on a Drinking Water Source Protection issue or on emerging Great Lakes problems.

If such targets are established, then any of the source protection areas that contribute water to the Great Lakes can designate policies in a Source Protection Plan to these targets (Section 22 (2)). If the target applies to multiple Source Protection Authorities, the Minister can direct these

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authorities to coordinate their planning. If targets are set, policies and steps would need to be established to achieve these targets.

The Minister also has the option of establishing a Great Lakes target for a group of source protection areas. If a target applies to multiple source protection areas, the Minister may direct the Source Protection Authorities to jointly decide on what the relative target should be for each individual source protection area, to contribute to the overall target. Also, policies that govern monitoring to assist in implementing and in determining the effectiveness of a Great Lakes target policy may be established (*Clean Water Act, 2006*).

With regards to obligations from the Source Protection Plan, its effects on decisions and its conflicts with other policies, the *Clean Water Act, 2006*, gives equal legal weight to Designated Great Lakes Policies and Significant Threats Policies, while other source protection policies addressing *moderate* and *low* threats are given lower legal weight. Designated Great Lakes Policies may extend the reach of the Source Protection Plan beyond those vulnerable areas that contain significant threats and into areas with lower vulnerability scoring (*Clean Water Act, 2006*).

Where a Source Protection Plan does not reference any of the Great Lakes policies, the Minister may direct a Source Protection Authority to do so during the process of reviewing and approving the Source Protection Plan (*Clean Water Act, 2006*).

No targets have been set by the Minister at this time.

6.5 Next Steps

Once the Minister declares Great Lakes targets, further action will follow.

6.5.1 Lake Huron Working Group

The Source Protection Regions and areas draining into Lake Huron are:

- North Bay-Mattawa Source Protection Region
- South Georgian Bay Lake Simcoe Source Protection Region
- Ausable Bayfield Maitland Valley Source Protection Region
- Thames-Sydenham and Region Source Protection Region
- Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region

The Chairs of the Source Protection Committees and the Project Managers have formed a Working Group to discuss and address common issues, share knowledge and engage in broader discussions on Great Lakes issues from a drinking water perspective.

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