ONTARIO GREAT LAKES ACTIVITIES UPDATE, FOLLOW-UP*

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CONTENTS

INTRODUCTION 1

EXECUTIVE SUMMARY 1
   Recent Legislative Initiatives 1
   Other Initiatives and Issues 1

LEGISLATION 2
   Great Lakes Protection Act, 2015 2
   Invasive Species Act, 2015 2
   Regulations Implementing the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement 4
   Sewage Bypass Reporting Act, 2017 4

OTHER INITIATIVES AND ISSUES 4
   Canada–Ontario Agreement on Great Lakes Water Quality and Ecosystem Health 4
   Climate Change 5
   Lake Erie Water Quality 7
   Waukesha Water Diversion 8
   Deep Geologic Repository 10
INTRODUCTION

This paper was prepared for Ontario delegates attending the Great Lakes Legislative Caucus Annual Meeting in Toronto, September 22-23, 2017. It forms the basis for a brief presentation on recent legislative initiatives and current issues, from an Ontario perspective.

EXECUTIVE SUMMARY

Recent Legislative Initiatives

- Passed in 2015, the *Great Lakes Protection Act, 2015* requires the Minister of the Environment and Climate Change to maintain *Ontario’s Great Lakes Strategy* and to update it every six years.

- The *Invasive Species Act, 2015* took effect in November 2016; it makes Ontario the first jurisdiction in Canada to have a stand-alone invasive species statute.

- As of January 1, 2015, Ontario had enacted all regulatory measures required to meet its commitments under the *Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement*; the Act regulates transfers of water out of the Great Lakes Basin.

- A Private Member’s Bill currently before the House would require that municipalities report sewage diversions to the Ministry of the Environment and Climate Change and that this information be published.

Other Initiatives and Issues

- *Canada–Ontario Agreement on Great Lakes Water Quality and Ecosystem Health* – Signed in 2014, the eighth edition of this agreement establishes climate change and engagement with First Nations and Métis as priorities.

- *Climate Change* – Ontario’s Great Lakes climate change strategies include implementation of *Climate Ready: Ontario’s Adaptation Strategy and Action Plan*, and a pilot project to assess the ability of municipal water treatment plants to cope with climate change.

- *Lake Erie Water Quality* – In March 2017 the Canadian and Ontario governments released a *Draft Action Plan* for reducing the amount of phosphorous currently being discharged into Lake Erie.

- *Waukesha Water Diversion* – Ontario participated in the recent review of this proposal to divert water from Lake Michigan; the province “remains apprehensive about any diversion by Waukesha.”
• **Deep Geologic Repository** – The fate of OPG’s controversial proposal to bury nuclear waste near Kincardine is still uncertain. In August the federal environment minister requested additional information on alternative sites before making a final decision.

**LEGISLATION**

**Great Lakes Protection Act, 2015**

- In 2015 the Ontario Legislature passed the *Great Lakes Protection Act, 2015*. A key provision of the Act requires the Minister of the Environment and Climate Change to maintain *Ontario’s Great Lakes Strategy* and to update it every six years.

- Adopted in 2012, the *Great Lakes Strategy* is a document setting out how the provincial government will employ a variety of tools and resources and collaborate with the broader Great Lakes community to ensure Great Lakes waters remain usable for drinking, swimming, and fishing.

- The Act also enables the Minister, in consultation with other levels of government and stakeholders, to set objectives relating to the Great Lakes–St. Lawrence River Basin, including targets to reduce algae blooms and prevent the loss of wetlands.

- Another key feature of the Act is the establishment of the Great Lakes Guardians’ Council, composed of provincial government ministers, municipal representatives, First Nations and Métis representatives, and scientists. The Council’s mandate is to identify priorities for action to achieve legislative objectives. At its third meeting, held in May 2017, the Council received updates on
  - the Canada-Ontario *Draft Action Plan* for Lake Erie to reduce phosphorus loadings; and
  - US funding for Great Lakes programs, including the importance of working with our American counterparts to invest in and protect the Great Lakes.\(^1\)

**Invasive Species Act, 2015**

- Ontario has more invasive species than any other Canadian jurisdiction. Whether they are fish, aquatic invertebrates, or plants, invasive species have a deleterious effect on the environment, including the habitats and food supplies that support native fish populations and other marine species.

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\(^1\) Ontario, *Great Lakes Guardians’ Council* (“Third Meeting Summary Notes from May 15, 2017”).
For Ontario, invasive species represent a real threat to the economically important sport and commercial fishing industries.

In response to this threat, the Ontario Legislature passed the *Invasive Species Act, 2015*. When the Act took effect in November 2016, Ontario became the first jurisdiction in Canada to have a stand-alone invasive species statute.

The Act employs a risk-based approach that considers a full range of threats, costs, and benefits to the environment, society, and the economy, and establishes a legislative framework for the prevention, rapid response to, and, where possible, eradication of invasive species.

Regulations to the Act prescribe several “prohibited” invasive species, including the Asian Carp, the Golden Mussel, and the Brazilian Waterweed. The Act makes it illegal to import, possess, deposit, release, transport, breed, buy, sell, lease, or trade prohibited invasive species in Ontario.

Ontario’s Invading Species Awareness Program (initiated in 1992 and continued under the new legislation) received $1.6 million in 2017. The Zebra Mussels Hotline, established under the Awareness Program, was recently expanded to allow people to report sightings of all types of invasive species.²

Silver Carp [a species of Asian carp] are a hazard for boaters. The vibration of boat propellers can make Silver Carp jump up to three metres out of the water. Boaters and water-skiers in areas of the Mississippi and Illinois rivers have been seriously injured by jumping fish.

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Ontario’s *Invading Species Awareness Program*.  

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³ Photographs posted by Great Lakes Fishery Commission (Brazilian waterweed and silver carp) and Center for Great Lakes and Aquatic Sciences, University of Michigan (zebra mussels).
Regulations Implementing the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement

- In 2005 Ontario, Quebec, and the eight Great Lakes states signed the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement. The main purpose of the Agreement is to regulate transfers of water out of the Great Lakes Basin.

- Consistent with other Great Lakes jurisdictions, Ontario introduced additional measures to implement the Agreement by regulating intra-basin transfers—that is, the transfer of water from one Great Lake watershed to another.

- As of January 1, 2015, Ontario had put in place all regulatory measures required to meet its commitments under the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement.4

Sewage Bypass Reporting Act, 2017

- Bill 141, the Sewage Bypass Reporting Act, 2017, was introduced in the House on May 31, 2017. This Private Member’s Bill would amend the Ontario Water Resources Act to require municipalities that own or operate a water treatment facility (or anyone operating a facility on behalf of a municipality) to report certain information to the Ministry of the Environment and Climate Change whenever the municipality diverts untreated sewage into waters that may impair its quality.

- Specifically, municipalities would be required to report the duration and volume of the discharge and the reasons for the diversion.

- In addition, the Bill would require the Ministry to publish this information on a Government website within 24 hours of receiving notice of the discharge.5

OTHER INITIATIVES AND ISSUES

Canada–Ontario Agreement on Great Lakes Water Quality and Ecosystem Health

- In 2014 Canada and Ontario signed the eighth edition of the Canada–Ontario Agreement on Great Lakes Water Quality and Ecosystem Health.

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5 Bill 141, the Sewage Bypass Reporting Act, 2017, 2nd Sess., 41st Leg. (First Reading, May 31, 2017), sponsored by Sylvia Jones, MPP (Dufferin-Caledon).
• First adopted in 1971, the Agreement is the main mechanism through which the Canadian government works with Ontario to help Canada meet its international obligations under the Canada–U.S. Great Lakes Water Quality Agreement.

• As amended in 1987, the Canada–US agreement identifies 43 Areas of Concern (AOCs), 12 of which are Canadian locations. AOCs are places where the environment has been harmed, resulting in problems that include beach closures, loss of fish and wildlife habitat, restrictions on fish consumption, and contaminated drinking water.

• Under the Canada–Ontario Agreement signed in 2014, climate change and ongoing engagement with First Nations and Métis are, for the first time, established as priorities.

• Over the five-year period 2014 to 2019, Canada and Ontario will focus on completing the remedial work necessary to de-list five more Areas of Concern. These are Nipigon Bay, Peninsula Harbour, the Niagara River, the Bay of Quinte, and the St. Lawrence River (at Cornwall). The long-term goal is to de-list the remaining AOCs by 2025.6

Climate Change

• For the Great Lakes, the most obvious signs of climate change are less ice cover during the winter, increased evaporation, more severe storms, changing water levels, and warmer water temperatures. Associated with these changes are a number of negative social, economic, and environmental consequences.

• For example, the increased water run-off from larger storms causes flooding in basements and puts stress on aging municipal water infrastructure. Heavier rainfalls also mean more pollution flowing into the lakes. High levels of bacteria in the water pose a risk to public health, cause beaches to close, and damage local economies and community reputations.

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Hamilton’s Bayfront Beach Closed for the Year

As reported in March 2016, “Bayfront Beach will be closed to swimmers this year as the City of Hamilton studies how to improve water quality. Last year, regular testing for bacteria resulted in the beach being deemed unsafe almost 80 percent of the time between Victoria Day and Labour Day.”

- Ontario is currently pursuing a range of climate change adaptation strategies. In addition to several research and information sharing projects, these strategies include the following:
  
  - Continued implementation of *Climate Ready: Ontario’s Adaptation Strategy and Action Plan*. Adopted in 2011, the Climate Ready Plan ensures that climate change adaptation is considered in all provincial Great Lakes programs and agreements with other jurisdictions.

  - A new pilot project, involving municipalities and the engineering sector, will assess the ability of municipal water treatment plants to cope with the effects of climate change.

  - A provincially-funded study will identify the economic effects of climate change and recommend climate adaptation actions that can be taken to minimize the economic costs related to climate change.

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8 Ibid.
Lake Erie Water Quality

- Lake Erie water quality continues to be a matter of critical importance to regional governments and the millions of area residents who rely on the lake for drinking water.

- Of immediate concern is the amount of phosphorous entering the central and western basins of the lake in the form of fertilizers, animal waste, sewage, and industrial discharges. Experts say these sources are largely responsible for the formation of algae blooms and “dead zones” that have appeared in the lake over the last several years.10

Draft Action Plan

- In March 2017 Canada and Ontario released a Draft Action Plan for reducing the amount of phosphorous that is currently being discharged into Lake Erie.11

- The plan sets out actions the federal and provincial governments, as well as municipalities, conservations authorities, Indigenous communities, and key sectors such as agriculture and industry, can take to reduce phosphorous levels in the central and western basins of Lake Erie by 40%. A plan for reducing phosphorous levels in the east end of the lake is in development.

- Ontario has made several specific commitments under the Draft Action Plan, including
  - working with municipalities to establish a legal effluent discharge limit on the total amount of phosphorous discharged through municipal sewage treatment plants in the Lake Erie basin;
  - supporting the development and implementation of the 4R Nutrient Stewardship Program, a set of internationally-recognized principles that helps farmers reduce the amount of nutrient run-off from farms;
  - regulating more farms under the provincial Nutrient Management Act, 2002, which sets standards for farm buildings used to house animals or store manure;
  - considering climate change in all of its research and monitoring programs relating to Lake Erie; and
  - posting annual updates on Lake Erie and reporting on Lake Erie every three years, as required under the recently enacted Great Lakes Protection Act, 2015.

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Algae blooms can make tap water toxic and harm wildlife. In the summer of 2014 an algae bloom in Lake Erie forced the City of Toledo, Ohio to impose a temporary ban on the use of lake water for drinking, cooking, or bathing. The Draft Action Plan released by the federal and Ontario governments in spring 2017 calls for a 40% reduction in phosphorous levels in the western and central basins of Lake Erie.

**Waukesha Water Diversion**

- As noted earlier, Ontario is a party to the 2005 *Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement*. The Act generally prohibits diversions of water out of the Great Lakes Basin, but allows for limited exceptions for municipalities in counties that straddle the Great Lakes Basin.

- In June 2016 the Regional Body established under the Agreement unanimously approved an application by the City of Waukesha, Wisconsin to divert 31 million litres (8.2 million gallons) per day from Lake Michigan, subject to a number of enforceable conditions. The City made the request because local water supplies have been contaminated by radium.

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12 Photograph included in “Citizen Groups To EPA – Put Lake Erie On Pollution Diet To Curb Harmful Algal Blooms, Protect Drinking Water,” *Niagara At Large*, October 26, 2015.
Waukesha Water Diversion

The above image, included with the Waukesha water diversion application, shows the City situated in a county straddling the Great Lakes watershed. Ontario opposed the original application as a dangerous precedent.

- The Waukesha application was the first water diversion approved under the straddling county exception.

- As (non-voting) members of the Regional Body, Ontario and Quebec participated in the application review process. Among other concerns, Ontario questioned whether Waukesha qualified as a straddling county, and whether the potential cumulative effects of the diversion on Great Lakes water quantity had been fully assessed.

- Ontario (and Quebec) ultimately supported the revised proposal that was approved by the Regional Body; however, Ontario’s Minister of Natural Resources and Forestry stated at the time that the province

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14 Letter from Ministry of Natural Resources and Forestry (Ontario) to Deputy Director, Conference of Great Lakes and St. Lawrence Governors and Premiers (undated).
“remains apprehensive about any diversion by Waukesha and will continue to voice the concerns of Ontarians.”

Deep Geologic Repository

- A proposal by Ontario Power Generation (OPG) to build North America’s first deep rock nuclear waste storage facility at the Bruce nuclear plant in Kincardine, Ontario remains a controversial issue on both sides of the border. OPG is the provincially-owned corporation that produces more than half of the electricity consumed in Ontario each day.

- Under the proposed plan, 200,000 cubic meters (260,000 cubic yards) of low- and intermediate-level radioactive waste would be buried in a bunker 680 meters (2,230 feet) deep in limestone. The proposed underground storage area is within 1.2 kilometers (three-quarters of a mile) of Lake Huron.

- In 2015 a federal review panel gave its overall approval to the project, concluding that “the project is not likely to cause significant adverse environmental effects.”

- After further consideration of the review panel’s recommendations, in 2016 the federal environment Minister requested additional information, including proposals for two alternate project sites.

- OPG reported last December that while building an underground vault in Northern Ontario granite or Southern Ontario sedimentary rock is technically possible, relocating the project to either of these areas would double project costs, require trucking hazardous waste by up to 2,000 kilometres, and take decades to complete, all without improving environmental safety.

- In August the federal Minister requested an update on OPG’s analysis of alternate sites, including the potential cumulative effects of the project on physical and cultural heritage. In a letter to OPG, the Minister said that she would be making a final decision “based on Science and traditional knowledge . . . including the views of Indigenous Peoples, the public and stakeholders.”

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