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December 7, 2009

David Naftzger, Secretary  
Great Lakes-St. Lawrence River Water Resources Regional Body  
c/o Council of Great Lakes Governors  
35 East Wacker Drive, Suite 1850  
Chicago, Illinois 60601

Dear Mr. Naftzger:

As Ontario's incoming member of the Regional Body I am pleased to submit Ontario's Water Management Programs Report and Water Conservation and Efficiency Program Report for review by the Regional Body pursuant to Article 300 of the *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement*. Ontario is voluntarily submitting these reports in keeping with the U.S. interstate Compact deadline of December 8<sup>th</sup>, 2009. While the corresponding Agreement deadline has not yet been reached, Ontario is fulfilling its commitment to meet the Compact deadlines where possible.

To meet its commitments under the Agreement, Ontario is enhancing existing, long-standing water management programs and is developing a provincial water conservation and efficiency strategy. The attached reports highlight the key existing and proposed program elements which contribute to Agreement implementation.

Ontario is not, at this time, submitting a baseline list of existing water withdrawals, diversions and consumptive uses. The intra-basin transfer regulations and policies under development in Ontario must first be brought into force to guide the establishment of the province's list of existing transfers. Options for establishing Ontario's baseline list was the subject of public consultation this summer and fall. We plan to submit the required data in keeping with the timelines of the Agreement.

It is my hope that the information provided in the attached reports demonstrates Ontario's commitment to meeting the provisions of the Agreement to protect and conserve the waters of the Great Lakes-St. Lawrence River Basin for generations to come.

Sincerely,

A handwritten signature in blue ink that reads "Rosalyn Lawrence". The signature is written in a cursive style with a large initial 'R'.

Rosalyn Lawrence  
Assistant Deputy Minister  
Natural Resource Management Division

December 1, 2009

**Province of Ontario  
Water Conservation and Efficiency Program Overview**

The following information is submitted by the Province of Ontario to the Great Lakes Regional Body pursuant to the requirements in Article 300 of the *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement*.

**1. Lead agency/agencies and contact person(s)**

The lead agency is the Ontario Ministry of the Environment. The contact person is Sharon Bailey, Director, Land and Water Policy Branch.

**2. Status of Ontario's water conservation and efficiency goals and objectives consistent with the Basin-wide goals and objectives**

The Ministry of the Environment has been leading the development of Ontario's water conservation and efficiency goals, objectives and programs, working in conjunction with the Ministry of Natural Resources and eight other ministries. Efforts began as early as August 2007 when the ministries met with over sixty-five people from First Nations, municipalities, industry, agriculture and environmental groups to seek input on the draft regional water objectives and initial ideas for Ontario's future objectives and program activities.

The following year the Ministry investigated many of the stakeholders' suggestions, conducted a jurisdictional scan, and funded the development of a municipal outdoor water use manual and associated training seminars by the Ontario Water Works Association. The Ministry also supported research regarding: (1) municipal water conservation and efficiency performance indicators by the Canadian Water Works Association; (2) the water-energy nexus in municipal drinking-water and wastewater systems by POLIS Project on Ecological Governance; and (3) industrial water conservation and efficiency by the University of Guelph. Finally, nine sector-specific meetings and two meetings with the Ontario's Agreement Advisory Panel - a group made of representatives from various stakeholder groups, including municipalities, environmental organizations, and businesses - were held at the end of 2008 and early 2009 to present the results of this work and to solicit additional thoughts as to what should be included in Ontario's water conservation and efficiency strategy.

Most recently, Ontario prepared a proposal paper entitled "*Safeguarding and Sustaining Ontario's Water Resources for Future Generations*" and posted it on the Ontario Environmental Bill of Rights Registry for public comment from August 5 to October 4, 2009. The Proposal Paper addressed how Ontario intends to move forward on three critical water management topics including developing a water conservation and efficiency strategy. The Proposal Paper can be downloaded at [http://www.ene.gov.on.ca/envision/env\\_reg/er/documents/2009/010-6350.pdf](http://www.ene.gov.on.ca/envision/env_reg/er/documents/2009/010-6350.pdf)

The proposal paper identified the economic and environmental benefits of conserving and using water more efficiently and cited Ontario’s commitments under the Agreement to explain why it was developing a strategy for all water users across the entire province. The five water conservation and efficiency goals in the Agreement were identified as part of the basis for the strategy. Five sections were proposed for the strategy itself: guiding principles, mission statement, targets, objectives and possible actions.

In the province’s past discussions, many people expressed strong support for Ontario to adopt objectives similar to the regional water conservation and efficiency objectives developed by the Agreement signatories, with minor refinements to emphasize the importance of taking ecological water needs into account. Accordingly, the following objectives were proposed:

<b>Strategy Objectives</b>	
1. Guide programs toward long-term sustainable water use including taking ecosystem needs for water into account.	<ul style="list-style-type: none"> <li>a. Use adaptive programs that are goal-based, accountable and measurable over time.</li> <li>b. Develop and implement programs openly and collaboratively, including with local stakeholders, Aboriginal people, governments and the public.</li> <li>c. Prepare and maintain long-term water demand forecasts.</li> <li>d. Develop long-term strategies that incorporate water conservation and efficient water use and integrate them with other environmental management practices and considerations like energy use and climate change.</li> <li>e. Review and build on existing programs and planning efforts and consider other jurisdictions’ practices and experiences.</li> </ul>
2. Adopt and implement supply and demand management to promote efficient use and conservation of water resources.	<ul style="list-style-type: none"> <li>a. Maximize water use efficiency and minimize waste of water.</li> <li>b. Promote appropriate innovative technology for water reuse.</li> <li>c. Conserve and manage existing water supplies to prevent or delay the demand for and development of additional supplies.</li> <li>d. Provide incentives to encourage efficient water use and conservation.</li> <li>e. Include water conservation and efficiency in the review of proposed new or increased uses.</li> <li>f. Promote investing and maintenance of efficient water infrastructure and green infrastructure.</li> </ul>
3. Improve monitoring and standardize data reporting among state and provincial water conservation and efficiency programs.	<ul style="list-style-type: none"> <li>a. Improve and increase the measurement and evaluation of water conservation and water use efficiency.</li> <li>b. Encourage measures to monitor, account and report on water loss.</li> <li>c. Track and report program progress and effectiveness.</li> </ul>
4. Develop science, technology and research.	<ul style="list-style-type: none"> <li>a. Encourage the identification and sharing of innovative management practices and state-of-the art technologies.</li> <li>b. Encourage research, development and implementation of water use and efficiency and water conservation technologies and standards.</li> <li>c. Seek and involve traditional knowledge and practices of Aboriginal people in Ontario.</li> <li>d. Strengthen scientific understanding of the linkages between water</li> </ul>

Strategy Objectives	
	conservation practices and ecological needs and responses.
5. Develop education programs and information sharing for all water users.	<ul style="list-style-type: none"> <li>a. Ensure equitable public access to water conservation and efficiency tools and information.</li> <li>b. Inform, educate and increase awareness regarding water use, conservation and efficiency and the importance of water.</li> <li>c. Promote the cost-saving aspect of water conservation and efficiency for both short-term and long-term economic sustainability.</li> <li>d. Share conservation and efficiency experiences, including successes and lessons learned.</li> <li>e. Enhance and contribute to regional information sharing.</li> <li>f. Encourage and increase training opportunities in collaboration with professional or other organizations in order to increase water conservation and efficiency practices and technological applications.</li> <li>g. Ensure that conservation programs are transparent and that information is readily available.</li> <li>h. Aid in the development and dissemination of sector-based best management practices and results achieved.</li> <li>i. Seek opportunities for the sharing of traditional knowledge and practices of Aboriginal people.</li> </ul>

The Province obtained considerable feedback on the Proposal Paper acquired through its receipt of 57 written submissions, holding four engagement sessions across Ontario and individual discussions with the Ontario Water Works Association, Canadian Water and Wastewater Association, Eastern Ontario Municipal Water Association and First Nations. Overall, there was strong support for the basis of the strategy and the proposed objectives. Ontario fully expects its final water conservation and efficiency strategy to be consistent with the regional goals and objectives.

### **3. Current Provincial Legislation, Regulations, Plans, Policies and Guidance related to Water Conservation and Efficiency**

#### Legislation and Regulations

##### ***Ontario Water Resources Act and the Water Taking Regulation***

Water takings in Ontario are governed by the *Ontario Water Resources Act* (OWRA) and the Water Taking Regulation (Ontario Regulation 387/04). The purpose of the OWRA is to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being.

The Permit to Take Water (PTTW) program provides for the conservation, protection, and wise use and management of Ontario's waters. Any person taking more than a total of 50,000 litres of water in a day must first obtain a permit to take water. There is currently an exception for water taken for domestic uses, direct watering of livestock, and firefighting.

Currently, there are some 6,600 permits to take water and there are approximately 1,200 permit applications per year. This includes both applications for new water takings and applications for a new permit for an existing taking when the previous permit expires (approximately 1/3 of permits are renewals). Permitted water uses include: municipal, commercial, industrial, and communal water supplies, agricultural irrigation, recreational uses, water bottling, hydroelectric power generation, and other uses such as construction de-watering.

The regulation and accompanying guidelines and procedures manual establish clear technical requirements and standards to promote consistent, sound, defensible decisions related to permit applications and to promote stronger conservation measures. The regulation identifies the factors to be considered by the ministry when assessing water taking applications, including:

- protection of ecosystem natural function, including minimum stream flow
- impact on groundwater and surface water quantity and quality
- low water conditions
- whether water conservation measures are being implemented or are proposed to be implemented in the use of water, in accordance with best water management standards and practices for the relevant sector if these are available
- demonstrated need for the water (reasonable prospect of use)
- whether there is a medium or high level of water use in the watershed

Permits for new or increased water takings that remove water from a watershed, as specified in the regulation, are prohibited in those tertiary watersheds classified as “high use.” High use watersheds are shown on the Summer Low Flow Map and Average Annual Flow Map specified in the regulation.

As of 2008, all permit holders have been required to collect and record data on the volumes of water taken daily and report these “actual” water takings to the Ministry of the Environment each year.

### ***Safeguarding and Sustaining Ontario's Water Act, 2007***

The Ontario government passed the *Safeguarding and Sustaining Ontario's Water Act, 2007* (SSOWA) to enable implementation of the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement and other amendments to the Permit to Take Water program. With respect to water conservation, SSOWA amended the *Ontario Water Resources Act* to enable a Ministry of the Environment Director to require water conservation plans by PTTW holders and for proposed intra-basin transfers. In addition, regulations may be made under the *Ontario Water Resources Act* requiring persons to develop and implement water conservation plans or to take other measures to promote the efficient use of water or reduce water losses through consumptive use.

### ***Building Code Act, 1992***

Ontario's Building Code is a regulation under the *Building Code Act* that sets out technical and administrative requirements that must be met when a building is constructed, renovated or undergoes a change of use. Plumbing requirements are included in the Building Code. Provisions that support water efficiency (e.g., through

mandating low flow toilets in new construction and additional bathrooms added to existing buildings) were added to the Building Code in 1996 to improve water efficiency in any new construction/renovation that occurs.

Ontario's new Building Code (Ontario Regulation 350/06) replaced the old Building Code (Ontario Regulation 403/97) as of December 31, 2006. While prescriptive requirements are maintained, the new Building Code is written in an "objective-based" format, linking code requirements to underlying objectives. Resource Conservation is one category of objectives and includes Water Conservation. In addition, the new Building Code enables certain "green" technologies, some of which encourage water conservation such as rainwater harvesting and grey water re-use.

In October 2009 Ontario consulted on proposed changes to the Building Code including eliminating the exemptions in the Building Code that allow for the installation of 13 litre toilets in some renovations and some new construction. The changes would only allow for the installation of toilets with a maximum flush cycle of 6 litres or less, as is currently the case for the majority of new construction.

### ***Clean Water Act, 2006***

The purpose of *Clean Water Act, 2006* is to protect existing and future sources of drinking water in Ontario in terms of both quality and quantity of water. It is part of the Ontario Government's commitment to ensure the sustainability of clean, safe drinking water for all Ontarians and to implement the recommendations of the Walkerton Inquiry.

The *Clean Water Act* requires that source protection committees be established, representing the municipalities, industries and people of the local watershed. The committees will assess risks to the source water quality and quantity, and write a plan to address significant drinking water threats. This work includes identifying present and future groundwater and surface water municipal supplies, and areas where large regional aquifers are being recharged. It also involves measuring how much water exists both at surface and below ground, how it moves, and how much water is withdrawn to identify potential water shortages. Part of this process will be looking at the long-term water supply situation of municipalities, and determining whether current or future water availability is threatened.

If there are significant drinking water threats associated with water quantity, the source protection plan must include policies to address those threats. Such policies may address water conservation. The *Clean Water Act* allows for policies in a source protection plan to be implemented through existing regulatory requirements or voluntary initiatives. Municipal by-laws and land-use planning controls could also be used to mitigate a significant drinking water threat.

Under the *Clean Water Act*, source protection planning must also consider several federal and provincial Great Lakes agreements, including the *Great Lakes Charter* and the *Great Lakes-St Lawrence River Basin Sustainable Water Resources Agreement*. For example, when choosing policies in a source protection plan to address a significant drinking water

threat, the source protection committee might consider the water conservation goals under these agreements and look for co-benefits.

### ***Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem***

The *Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) 2007-2010* is the framework through which the Canadian federal government and Province of Ontario work cooperatively to understand, restore and protect the aquatic ecosystem health of the Great Lakes. The 2007 COA links aquatic ecosystem health, water conservation, and sustainable water use. Through the COA, Ontario and Canada committed to fostering sustainable water use and conservation consistent with the intent of the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement.

### ***Green Energy Act, 2009***

On May 14, 2009 the Ontario government passed the Green Energy Act intending to attract new investment, create new green economy jobs and better protect the environment. Part III Energy Efficiency and Efficient Use of Water states that no person shall offer for sale, sell or lease an appliance or product to which this Part applies unless the appliance or product meets the prescribed efficiency standard or requirement and a prescribed label or other prescribed marking that confirms compliance with the prescribed efficiency standard or requirements. Part IV allows for the Lieutenant Governor in Council to make regulations including prescribing water efficiency standards or requirements for the prescribed appliances or products. These regulations are currently under development.

## **Plans, Policies and Guidance**

### **Growth Plan for the Greater Golden Horseshoe**

The Growth Plan for the Greater Golden Horseshoe, 2006, was prepared under the *Places to Grow Act, 2005*, and represents the province's long-term vision for managing the rapid growth that is forecast for this region to 2031. The Plan contains policies that call for more compact and complete communities, require co-ordination between infrastructure investment and land-use planning and support the development of a culture of conservation.

This plan includes water conservation policies: construction of new, or expansion of existing, municipal or private communal water and wastewater systems should only be considered when strategies for water conservation and other water demand management initiatives are being implemented. Municipalities will develop and implement official plan policies and other strategies in support of conservation objectives: water conservation, including water demand management, for the efficient use of water, and water recycling to maximize the reuse and recycling of water.

### **Oak Ridges Moraine Conservation Plan, 2002 and Technical Papers**

The Oak Ridges Moraine Conservation Plan requires that every upper-tier municipality and single-tier municipality within the designated moraine area begin to prepare a water budget and conservation plan for every watershed whose streams originate within the municipality's area of jurisdiction (section 25(1)).

## **Lake Simcoe Protection Plan**

On June 2, 2009 the government released the Lake Simcoe Protection Plan to address environmental protection of the watershed. Drawing on expert advice from scientists, the plan sets a new standard for environmental protection in the province and provides a road map to help restore and protect the health of Lake Simcoe. The plan – which focussed on lands within the Lake Simcoe watershed -- is supported by a regulation (Ontario Regulation 219/09) under the *Lake Simcoe Protection Act, 2008*.

Among other things, the Plan promotes greater efforts to conserve and use water more efficiently in order to maintain future demands for water within sustainable limits. To monitor progress in achieving the water quantity-related objectives of the Plan, the indicators of environmental health relating to water quantity include effective water conservation and efficiency plans (e.g., as measured through reductions in peak water demand, reduced water use per capita, progress in achieving municipal targets).

The Plan contains the following policies to promote greater efforts to conserve and use water more efficiently throughout the Lake Simcoe watershed:

- Within five years of the date the Plan comes into effect, municipalities will prepare and begin implementation of a water conservation and efficiency plan, that has regard to the recommended standards and practices for the municipal sector including those recommended by the Ontario Water Works Association;
- The Ministry of Agriculture, Food and Rural Affairs, in cooperation with key stakeholders, will assist and encourage water conservation and efficiency efforts in the agricultural community through stewardship programs aimed at promoting the adoption of best management practices;
- The Ministry of the Environment will work with other water use sectors such as the major recreational use sector and other commercial and industrial sectors in the Lake Simcoe watershed to encourage the development and implementation of water conservation and efficient use practices for their sector; and
- An application to establish or expand a major recreational use shall be accompanied by a recreation water use plan that demonstrates, for example:
  - water use for maintenance or snow-making or both are kept to a minimum;
  - the use of water-conserving technologies in clubhouses and restaurants and in the irrigation and watering of sports field surfaces, golf fairways, tees and greens, and landscaped areas around buildings and structures; and
  - other water conservation technologies (such as rainwater harvesting or reuse of stormwater) will be used to reduce water use.

## **Ontario Low Water Response**

The province's "Ontario Low Water Response" (OLWR) provides a framework to ensure provincial preparedness, to assist in coordination and to support local response in the event of a drought due to extended periods of low rainfall and high temperatures. OLWR

is intended to mitigate the effects of drought through the implementation of short-term, low-water management strategies in cooperation with the local conservation authorities. These complement the long-term approaches that manage both water supply and demand.

OLWR consists of a tiered level system whereby the level of low water conditions will indicate the placement of the watershed in either a Level I, II or III Low Water Condition. If a low water level is declared for a watershed or part of watershed, all permit holders for water takings in that watershed may be asked to document their water efficiency and conservation practices that are in place or are proposed. Local Water Response Teams may also be required to outline contingency measures that will be adopted within the watershed to achieve water use reduction targets of 10-20%. Varying levels of conservation are required depending on the low water level that has been declared. OLWR reflects the historical partnership between the Ministries of the Environment, Natural Resources, and Agriculture, Food and Rural Affairs, local conservation authorities, municipalities and water users.

### **Provincial Policy Statement (2005)**

Under the authority of Section 3 of the *Planning Act*, the Provincial Policy Statement (PPS) provides policy direction on matters relating to land use planning that are of provincial interest. The PPS sets the policy foundation for regulating the development and use of land. Section 1.6.4.1 of the PPS states that planning for water and sewage services shall promote water conservation and water use efficiency. In addition, section 2.2.1 states that planning authorities shall protect, improve or restore the quality and quantity of water by, among other things, “promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality”.

### **Financial Plans Regulation for the Municipal Drinking-Water License Program and Financial Plans Guidance Document for Drinking-Water Systems and Municipal Wastewater Systems**

As part of the province’s commitment to implement all of Justice O’Connor’s Walkerton recommendations, the Ministry of the Environment put in place a new approvals framework under the *Safe Drinking Water Act* for municipal residential drinking-water systems – the Municipal Drinking-Water License Program. Financial plans are one of the elements which must be put in place for a license to be issued.

A Financial Plans Regulation and Financial Plans Guidance Document were prepared by the Province in 2007. The Regulation outlines requirements set out by the Minister of the Environment. The Guidance Document supports municipalities with the preparation of their financial plans and contains a number of principles, such as:

“Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.”

Taken together, the Financial Plans Regulation and Guideline are a key step in the province’s long term strategy to ensure the financial sustainability of municipal drinking-water and wastewater systems.

#### **4. How Ontario currently promotes Environmentally Sound and Economically Feasible Water Conservation Measures**

Applicants for a Permit to Take Water must complete “Schedule 1 – Implementation of Water Conservation in accordance with Best Management Practices and Standards for the Relevant Sector”. Applicants must identify what water conservation measures and practices they are currently implementing or anticipate implementing over the duration of the permit.

Applicants also must state their goals for reducing the use, loss or waste of water or for increasing the efficiency of water use e.g., litres per day per unit of production or litres per day per capita for the residential sector.

Schedule 1 contains a list of water conservation best management measures and practices for applicants to check off. For the measures and practices checked off, applicants are to provide specific details of the best management practices and to provide information used in determining water conservation and efficiency management practices and measures.

Finally, applicants are asked to identify any approval or certification that they have received for implementing water conservation and efficiency measures e.g., Environmental Farm Plan, Audubon Cooperative Sanctuary Program for Golf Courses.

With respect to the municipal sector, the Ministry provided funding to the Ontario Water Works Association to prepare “*Water Efficiency: Best Management Practice*” in 2005 as well as “*Outdoor Water Use Reduction Manual*” in 2008 and associated seminars. The “*Outdoor Water Use Reduction Manual*” is available at:

[http://www.owwa.com/img/content\\_images/Image/Outdoor%20Water%20Use%20Manual.pdf](http://www.owwa.com/img/content_images/Image/Outdoor%20Water%20Use%20Manual.pdf)

For the agricultural sector, the Ontario Ministry of Agriculture, Food and Rural Affairs provides a number of fact sheets and guides on best management practices containing information on efficient irrigation systems, staggering irrigation schedules and preparing Environmental Farm Plans.

#### **5. Ontario’s water conservation and efficiency program implementation timeline and status**

Ontario is on track to finalize its water conservation and efficiency strategy and begin implementing programs by December 2010.