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March 28, 2003

The Auditor General of Canada and  
The Commissioner of the Environment and Sustainable Development  
240 Sparks Street  
Ottawa, ON K1A 0G6  
Attention: Petitions

Ladies:

**Re: Petition to Assess and Prevent Anthropogenic Causes of  
Permanent Withdrawal of the Finite Water Resources of the  
Middle Great Lakes; Permanent Withdrawal Being a  
Withdrawal of Water Due to Human Activity that is not Replaced  
(i.e. beyond the natural rise and fall of Great Lakes water levels)**

**Outline:** The Great Lakes fresh water supply is approximately 99% glacial deposit, with only 1% being a renewable resource. The fresh water in the Great Lakes is a valuable resource needing strong protection. In other parts of the world, fresh water lakes have been completely dried up by inappropriate use. Sadly, Georgian Bay, as part of Lake Huron, is often referred to as the sixth and “forgotten” Great Lake as it has no lake-wide management plan to meet the requirements of the Canada Ontario Agreement or international agreements. Our organization has become aware of past and current activities that have already drawn down or have the potential to draw down the middle Great Lakes – Lakes Michigan and Huron/Georgian Bay. Since there are no control structures at the outflow of Lake Huron, shoreline alteration and dredging at the outflow and in the St. Clair and Detroit River system can result in permanent withdrawal from the middle Great Lakes. Since the International Joint Commission does not have a Control Board for that part of the Seaway, we have serious concern that no authority has jurisdiction there and, therefore, no authority is assessing impact of shoreline alteration and dredging. The following are the requests for your agencies.

1. With Environment Canada’s climate change prediction of a 100cm. decline in water levels for the middle Great Lakes over the next 20 – 40 years, plus the glacial rebound rise for eastern and northern Georgian Bay, we are requesting that you investigate and assess this matter and, if necessary, make recommendations to the appropriate government agencies to prohibit any activity that has resulted or will result in withdrawal of water from the middle Great Lakes.

2. A critical question that we want answered is – do the appropriate government agencies have the resources and funding to oversee and protect the finite resources of the Great Lakes? For instance, the International Joint Commission (IJC) is currently undertaking a Lower Lakes Levels Study. They have a proposal for the Upper Lakes Levels Study but do not have the funding, we are told, to undertake that Study. They have tried to reassure us that the information is transferable but we disagree that it is. The aquatic life forced out of eastern and northern Georgian Bay wetlands cannot find similar habitat on the adjacent steep granite rock shorelines. We also have information on ozone formation that may be related to increased evaporation rates for Georgian Bay.
3. We are requesting that you ensure that appropriate mitigation measures including compensating structures are applied. Since the entire Great Lakes hydrology has been so significantly altered by construction of Seaway channels and control structures that maintain, within a normal range, water levels for Lakes Superior and Ontario, it is not appropriate or sustainable to allow any further permanent withdrawals out of the middle lakes.
4. And finally, we are asking that you investigate and report as to what authority Canada has at the outflow of Lake Huron into the St. Clair River and downstream into Lake St. Clair and the Detroit River including the entrance to Detroit harbour.

We have noted your comments in your 2001 Report Section 8.24: “And there are potential implications for the health of the Great Lakes when the federal government does not act quickly on identified threats to the environment or when it delays its response.”

To conclude, we are concerned that what you have reported in your 2001 Report, namely that “there are major gaps in essential information” and “cuts in funding for scientific research and monitoring have made an already bad situation worse” may be the root source of these anthropogenic causes of permanent withdrawal from the middle Great Lakes. Your audit “found in many cases that the federal government was not fully exercising its legislative authorities” and further was “missing an opportunity to influence water consumption.” We wholeheartedly agree with the question you have posed – “what is the value of making domestic and international commitments when, in some cases, there is no capacity to deliver?” We agree that inadequate funding for the Canadian Section of the International Joint Commission “puts at risk Canada’s ability to defend its rights and meet its obligations under the Boundary Waters Treaty.” Your recommendations would go a long way towards addressing these concerns but are they being implemented? Our research raises some additional grave concerns, and we request answers.

Please let us know if we can be helpful in providing more information to assist in this process. I can be reached at 416 489-8101 or by email [mmuter@sympatico.ca](mailto:mmuter@sympatico.ca)

The following is a list of current threats that we are aware of and for which we have requests of specific ministries.

1. **Channel depth at outflow of Lake Huron**

We have obtained profiles of the St. Clair River at the outflow of Lake Huron, where by International Agreement the channel is allowed to be dredged to a 30- foot depth. The channel is currently well beyond that depth as you can see from the attached documents.(attachment 1) In addition the Lake Huron shorelines leading into the St. Clair River have been significantly hardened and bedload traps or groynes (steel walls) have been put in place by shoreline property owners. (see attachment 2) This alteration has removed the sand from the current, thereby increasing the outflow. The increased outflow may have caused additional scouring of the riverbed and may have contributed to the increased depth. It appears that the channel will continue to deepen with no consideration of upstream water level effects. It is our understanding that a mitigating weir was in place earlier but was removed when the Seaway was opened.

We are also aware that the US Army Corps of Engineers is undertaking dredging operations at Detroit harbour that also has the potential to draw down the middle lakes.

- **We request that the Ministry of Transport report if channel depth beyond the depth agreed upon by International Agreements is necessary for shipping in the St. Clair River, Lake St. Clair and Detroit River.**
- **We request that the Ministry of Environment report on whether they are prepared to assess accurately the outflow rates from Lake Huron and if they have the capability to accurately assess outflow rates to determine the impact of shoreline alteration and dredging beyond the depth allowed by international agreement or scouring due to increased flow due to the placement of groynes and removal of sand from the current at the Lake Huron outflow.**
- **With no control structure at the outflow of Lake Huron and therefore questionable authority, we request that the Ministers of the Environment, Fisheries and Oceans and Transport Canada assess the impact of shoreline alteration and increased channel depth on outflow rates in the St. Clair and downstream into the Detroit River and consider mitigation including the re-installation of a submerged weir to return the depth to 30 feet.**
- **We request that the Ministry of Foreign Affairs and International Trade report on what jurisdiction Canada has at the outflow of Lake Huron into the St. Clair River and downstream into the Detroit River.**

2. **Energy shortfalls resulting in increased withdrawals.**

Recently we met with a representative of Ontario Power Generation to discuss their plans for increased hydro generation at Niagara Falls. Their plans include a new pipeline for hydro generation, and they are confident they can withdraw water for hydro generation and remain within the levels allowed by the Niagara River Control Board. However, they have not factored into their calculations the 100cm decline for the middle Great Lakes predicted by Environment Canada. They seem to expect that the Niagara River Control Board will lower the range of water levels to which they are allowed to withdraw water. You should know that, in August of 2002 during a summer energy crisis, the St. Lawrence River Control Board allowed increased withdrawals for hydro generation that resulted in a 9-inch decline of Lake Ontario levels. This was within the range that the Board allows, but it is a permanent withdrawal to meet short-term energy needs. The public was not informed of this and, had they been warned, some energy conservation measures might have been put in place to prevent some of that permanent water withdrawal.

- **We request that the Minister of Environment investigate these plans and develop a long-range plan that will include consideration of climate change effects on water levels and assurances that the pipelines will not result in permanent withdrawals from the middle Great Lakes.**
- **We request the Ministry of Foreign Affairs and International Trade assess by reference to the Canadian Section of the International Joint Commission the sustainability of the Great Lakes under climate change water level effects and with increased hydro generation that could result in withdrawals from the middle Great Lakes.**

3. **“Great Lakes Navigation System Review”**

Transport Canada is currently studying plans to review the St. Lawrence Seaway. We have been assured that Transport Canada will not co-fund the United States Army Corps of Engineers’ “Great Lakes Navigation System Review”, since approximately 90% of the work they are proposing would have to be carried out on Canadian sovereign land. However, some modifications will likely be planned and again, with no control structure at the outflow of Lake Huron, deepening and widening the Seaway channels has the potential to lower the middle Great Lakes. Environment Canada estimates that the current proposals would lower them by at least 15 inches if not more. In terms of withdrawal, that is the equivalent of 54 cubic kilometers. That amount was withdrawn permanently when the Seaway was opened, but at that time no environmental impacts were considered. The International Joint Commission is now willing to consider environmental impacts. To date, to our knowledge, neither Environment Canada, Department of Fisheries and Oceans, Canadian Environmental Assessment Agency, Foreign Affairs and International Trade, nor the International Joint Commission has been asked to comment on the Seaway review proposals.

- **We request that the Ministry of Environment report on whether they have been consulted on the proposals in the “Great Lakes Navigation System Review” and if not why not.**
- **We request your investigation of the Seaway Review to get the assurance we all need that appropriate government agencies are consulted and that no Seaway modifications will be considered that will result in withdrawals of water from the finite resource we have in the Great Lakes.**

#### 4. **Introduction of more invasive species**

The United States Army Corps of Engineers’ “Great Lakes Navigation System Review” includes plans to allow “Panamax” or international container ships into the Great Lakes. Invasive species already introduced into the Great Lakes from ballast water exchange from ocean vessels continue to create havoc in the Great Lakes. To allow even larger ships with the increased potential to introduce even more invasive species does not make sense environmentally.

- **We request that the Ministers of Environment, Fisheries and Oceans and Transport Canada review the plans to allow large international container ships into the Great Lakes and report on the potential for the introduction of more invasive species into the Great Lakes.**
- ***RECOMMENDATION: That Transport Canada considers developing a transfer port at Montreal and an expanded Great Lakes shipping fleet that would prevent the introduction of any new invasive species. Our proposal would also allow the Seaway to continue at current depth and width configurations.***

#### 5. **The Welland Canal**

The Welland Canal is approaching the end of its lifespan and, since it apparently creates a bottleneck for shipping, proposals are being put forward to replace the Canal. At its current configurations the Welland Canal already allows a permanent withdrawal from the Great Lakes. Any change to deepen, widen or twin the canal will increase this withdrawal.

- **We request that the Ministers of Environment, Transport, and Fisheries and Oceans review this matter and provide assurance that environmental impacts, including the potential for increased withdrawals, will be considered.**

#### 6. **New Pipeline Proposals**

And finally, we are aware of new pipeline proposals for increased water supplies for southern Ontario. Since the tragedy of Walkerton, municipalities have been forced to review their water sources. Without a full understanding of the amount of a pipeline withdrawal returning to the basin, some municipal proposals are moving ahead. Rather than assess and clean up their ground water supplies, municipalities are currently proposing to put in new pipelines and increase existing pipeline withdrawals from Lake Huron and Georgian Bay. The water from these pipelines will be used for agriculture and golf courses where a significant amount will be lost to evaporation.

Since many of these rural areas do not have municipal sewage treatment facilities a significant amount of waste water will be placed in septic systems and not directly back into the middle lakes basins. Additionally, the extension of the pipeline from Collingwood to Alliston to Bradford is outside the Georgian Bay basin. We are concerned that this could create a precedent of an inter-basin exchange, which is currently prohibited. Since the Great Lakes are a 99% glacial finite deposit, some Federal government authority should be reviewing these proposals, and an assessment should be made of the cumulative effects on water levels.

- **We request that the Ministers of Environment, the Canadian Environmental Assessment Agency, Minister of Fisheries and Oceans, and that the Minister of Foreign Affairs and International Trade by Reference to the International Joint Commission review the cumulative impact of these pipeline proposals.**

Thank you for your interest in addressing our concerns.

Sincerely,

A handwritten signature in black ink that reads "Mary Muter". The signature is written in a cursive style with a large, looped initial "M".

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