

A Public Dialogue on the Future of the Great Lakes

**Proceedings from the ECO-Pollution
Probe Great Lakes Roundtables and
Public Forums**

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Executive Summary

From November 2006-January 2007, the Environmental Commissioner of Ontario (ECO) and Pollution Probe held a series of public events on the future of the Great Lakes in Kingston, Windsor, Hamilton, Thunder Bay, and Toronto. This proceedings document has been prepared to record the comments, concerns and vision of about 500 Great Lakes stakeholders and citizens in Ontario who participated in the ECO-Pollution Probe roundtables and public forums.

During the events, the Environmental Commissioner, Gord Miller suggested that we are at an interesting and critical time for the Great Lakes. Despite good progress in some areas, there is increasing apprehension, on both sides of border, over the future of the Great Lakes. There are new challenges that need our urgent attention, including invasive species, climate change, and the threat of water withdrawals from the Great Lakes.

Rick Findlay from Pollution Probe highlighted the enormous ecological and economic value of the Great Lakes, and suggested that we needed a new, more action-oriented approach to protecting and enhancing the Great Lakes.

The roundtables were organized along five themes: Water Quality and Ecological Processes; Water Levels and Water Use and Consumption; Government and Institutional Support; Business and Economic Development; and Community Health and Wellbeing. Under each of these themes, various concerns and suggestions were made. Members of the public also raised their own comments and concerns around similar issues.

Broad themes: A number of broad themes emerged from the discussions of the roundtables. An overarching theme that was raised throughout the roundtables and public forums was the need for greater Great Lakes presence on the policy agenda. A Great Lakes Vision backed by strong leadership was called for. Participants are also looking for more clarity public reporting and information on the Great Lakes. Calls for greater public engagement resonated across the roundtable discussions, with participants calling for Great Lakes public participation model. Another theme is the relationship of local communities with the Lakes, which is often one in which the Lakes are taken for granted. Other issues that were raised include recognition of the Great Lakes as a global and regional treasure; general support for watershed-based approach to Great Lakes protection; the need for increased investment in the science, research, monitoring and reporting on Great Lakes issues; the need for greater exposure to the Great Lakes in Ontario's education curriculum, as well as more opportunities for public education; and the enormous challenge of reducing the cumulative impact of human activity on the Lakes.

Water Quality and Ecological Processes: There was acknowledgement of good progress in some areas related to water quality since the original Great Lakes Water

Quality Agreement was signed in 1972. However, there remains a feeling that the changing nature of existing threats, and new and emerging threats could overwhelm the progress made over the last 3 decades. There were many comments and suggestions for improvements on the way sewage treatment plants are regulated in Ontario. There continues to be great apprehension about industrial discharges and spills, and the need for more comprehensive monitoring where there is intensive industrial activity. There is tremendous concern over invasive species and the perceived lack of government attention to the issue on the Canadian side. Chemical loadings in the lakes continue to be a concern, and a number of participants called for the outright ban of certain chemicals. The issue of near-shore health was highlighted, with some research suggesting that we may be close to a tipping point. The responsibility of municipalities in protecting the shoreline was a common theme in both upper and lower lakes. The need for progress on the long-standing issues of nutrient run-off and the clean up of Areas of Concern (AOCs) were also raised. The responsibility of municipalities in protecting the shoreline was a common theme in both upper and lower lakes.

Water Levels and Water Use and Consumption: At both the roundtables and the public forums, there was extreme concern expressed over the impact of climate change on lake water levels. There was praise for the Great Lakes Charter Annex, but worry and scepticism over whether jurisdictions would ratify the agreement. Other issues raised were the correlation between water consumption and the cost of water, the trend towards drinking bottled water, and innovative approaches to water conservation.

Business and Economic Development: There was considerable discussion about different approaches to regulating industries that discharge or emit pollutants into the Lakes, including an incentive system, and applying the ‘polluter pays’ principle. There were lengthy discussions about supporting more sustainable resource development, and the lack of integrated decision-making within government to promote resource extraction and sustainable development. Participants also talked about the recognizing the economic value of the ecological goods and services provided to their communities by the Lakes. Concerns were expressed over the effects of climate change and declining water levels on a number of industries, particularly the shipping industry. Some communities are predicting economic hardship as a result of global warming and lower lake levels. Other communities have seen their economic redevelopment languish due to toxics concerns where work has not been completed on AOC delisting, or where government priorities have changed, such as the Great Lakes Heritage Coast.

Community Health and Wellbeing: There was recognition of the importance of a healthy ecosystem and shoreline to attract residents and businesses to Great Lakes communities. Maintaining human health around the Great Lakes emerged as a concern of participants. There was considerable support for citizen-based science to engage the public and volunteer sector in testing, monitoring and reporting on Great Lakes water quality and quantity. Individual issues raised included the importance of highlighting that all recreational activities on the Lakes may be affected by water quality and quantity, and the value of engaging First Nations youth in Great Lakes educational programs.

Government and Institutional Support: Roundtable participants recognized the need for changes in governance and accountability related to the Great Lakes Water Quality Agreement and the Canada-Ontario Agreement, given the perceived lack of clear and direct accountability in the current complex bi-national structure. There was particular concern with what was seen as a weakening of Canada's influence on Great Lakes matters. There is a perception that the current Great Lakes institutional structure has failed to harness the public enthusiasm for the lakes and to engage the public in tackling some of the problems facing the lakes. There was a feeling of optimism regarding the opportunity presented by the renegotiation of the Canada-Ontario Agreement (COA) and the review of the Great Lakes Water Quality Agreement (GLWQA) to address some of these issues. A number of comments were made in favour of an enhanced role of municipalities and First Nations in the negotiation of these agreements.

There was general consensus that current levels of government funding are inadequate to address the challenges facing the Lakes, and support for an increase in financial commitments from senior governments towards the implementation of the Great Lakes agreements. Some participants felt that the public had an important role to play to set the future Great Lakes agenda and push governments to adopt it.

Collectively, these comments and concerns point to an emerging vision for the Great Lakes in Ontario, one that is based on the recognition of the multiple, cumulative and changing stresses on the Lakes, that is based on government commitment, accountability and sufficient financial resources, that promotes citizen engagement and education, and ultimately that is based on everyone- individuals, businesses, municipalities, senior governments and First Nations- doing their part to protect an awesome global asset for which we have responsibility, the Great Lakes.

1. Introduction

Important decisions about Great Lakes governance agreements will be made shortly by governments on behalf of the Great Lakes basin community. These decisions must be guided by a collective vision of the future of the Great Lakes. It is vital that the public be given a forum to publicly engage in discussions in order to shape Ontario's collective vision of the future of the Great Lakes.

To that end, the Environmental Commissioner of Ontario, Gord Miller, and Rick Findlay, director of Pollution Probe's Water Programme, hosted a series of public events on the future of the Great Lakes. Stakeholder roundtables and evening public forums were held in late 2006 and early 2007 in Kingston, Windsor, Hamilton, Thunder Bay and Toronto.

During these events, about 500 people shared their views on the future of the Great Lakes. There were many common themes and shared concerns about the Great Lakes. There were also interesting regional issues that were raised reflecting different circumstances in the Ontario side of the basin, in the upper and lower lakes, and at the eastern and western ends of the basin.

This proceedings document has been prepared by the Office of the Environmental Commissioner of Ontario to reflect the views, questions, concerns on the Great Lakes of the participants in these events. This report does not put forward the views of the Environmental Commissioner of Ontario or Pollution Probe. It is meant to capture the collective vision of the Great Lakes community, in the hopes that this will be an important addition to the ongoing dialogue on the future of the Great Lakes.

2. Background and Context

2.1 Background on the Stakeholder Roundtables

The Great Lakes Stakeholder roundtables involved 25-30 participants in each location. Participation in the roundtables was by invitation only. The invitation list reflected the diversity of local stakeholder groups that live by, and interact with the lakes, including community groups, municipal staff, local industry representatives (port authorities, forestry companies, power companies, petrochemical companies, etc), First Nations representatives, agricultural representatives, environmental organizations, outdoors and recreational organisations, among others. Observers from Environment Canada, and the Ontario Ministries of Natural Resources, Environment and Agriculture, Food and Rural Affairs were also invited.

Rick Findlay, Director of Pollution Probe's Water Programme, facilitated the stakeholder roundtables. Roundtable participants were asked to 'take their organizational hat off', and participate freely in the discussion as an individual. It was agreed that there would be no attribution for comments made.

For each of the five stakeholder roundtables, the morning session was largely devoted to interactive presentations to the roundtable participants, to set the context for the day, and provide useful information for their discussion. This included remarks from the Environmental Commissioner for Ontario, Gord Miller, a presentation by Rick Findlay of Pollution Probe, and presentations by representatives of the Ontario Ministries of Environment and Natural Resources.

The afternoon session was then entirely devoted to stakeholder discussion. Each session was organized along five themes:

1. Water Quality and Ecological Processes
2. Water Levels & Water Use/Consumption
3. Business & Economic Development associated with the lakes
4. Community Health & Well Being
5. Government and Institutional Support

For each of these five themes, participants were asked to consider the following questions:

- What threats do you see?
- What concerns do you have?
- What opportunities are there?
- How can we improve the situation?

2.2 Background on the Public Forums

Public forums co-hosted by the Environmental Commissioner and Pollution Probe were held in the evening in Kingston, Windsor, Hamilton and Thunder Bay. The sessions were attended by between 40-50 members of the public at each location. The sessions began with remarks from Gord Miller and Rick Findlay, to set the context for the evening's discussion. Members of the public were then invited to make statements or ask questions of Gord Miller and Rick Findlay about issues related to the Great Lakes.

2.3 Remarks by Gord Miller, Environmental Commissioner of Ontario

The Environmental Commissioner began by observing that it is an interesting and critical time for the Great Lakes. Despite good progress in some areas, there is increasing apprehension, on both sides of border, over the future of the Great Lakes.

Over the last few years, attention has been turned away from the Great Lakes. And yet there remain widespread water quality issues. There has been a decline in the presence of specific toxics. There has been progress in some Areas of Concern, but little progress on others.

There are new challenges that need our urgent attention, including invasive species that are changing the aquatic ecology of the lower lakes, and threatening the upper lakes.

There are also other complex macro pressures, such as rapid urban growth in southern Ontario and the US, which is driving demand for increased water supply, and sewage capacity. There is increasing pressure for 'big pipe' solutions and the threat of further water diversions, particularly from the Southern US states.

Perhaps the most daunting of these emerging macro pressures is climate change. Its effects are already being felt in the Great Lakes basin, with lowering lake levels. Climate change is and will continue to change our lives.

In this world of change and disruption, we have been observing senior governments turn their attention away from the lakes. This is exacerbated by the lack of information available to alert the public and decision makers to ecological stresses in the lakes, which contributes to their lack of engagement.

The International Joint Commission (IJC) recently released a report with its advice to the two federal governments on the review of the Great Lakes Water Quality Agreement (GLWQA)ⁱ. It includes challenging recommendations that call for a fundamental rethinking of our approach to the GLWQA, in order to make the agreement more action oriented. The IJC should be applauded for their recommendations.

In early December 2006, two reports were released by environmental nongovernmental organizations in Ontario on different aspects of Great Lakes problems. The first, from the Sierra Legal Defence Fundⁱⁱ, was on municipal performance on sewage discharges into the Great Lakes on both sides of the border. It raises serious concerns about the treatment

levels in a number of municipalities. The second was the hard-nosed reportⁱⁱⁱ, of the Ontario Public Advisory Council giving a voice to the citizens of Great Lakes Areas of Concern.

The Canada-Ontario Agreement^{iv} is the way we action out our Great Lakes commitments on this side of the border. It is expiring in March, 2007. We are optimistic about what may be achieved in this renegotiation.

The Environmental Commissioner concluded his remarks by explaining that for all of these reasons, he felt it was important to speak directly to Ontarians, to those people who live and work by the lakes, to understand how the lakes affect their local economy and their quality of life, and to hear their ideas, and suggestions on how to make the Lakes better.

2.4 Presentation by Rick Findlay, Pollution Probe

Mr. Miller's remarks were followed by a presentation by Rick Findlay on current thinking on the future of the Great Lakes.

Mr Findlay provided some background on Pollution Probe's activities related to the Great Lakes. In 2002, Pollution Probe and its partners held a conference in Hamilton called 'Managing Shared Waters'. At the conference, the Great Lakes were discussed as a global asset that should be considered in international terms. It was concluded that despite good efforts by many agencies, there is an absence of coordination on the Great Lakes.

As a result of this conference, Pollution Probe created a bi-national Great Lakes Futures Roundtable. The Futures Roundtable has met ten times since 2003. There was general consensus that public agencies, industry and other stakeholders needed to rise above the problems facing the Great Lakes, rather than simply trying to clean up after the fact.

One outcome of Probe's Futures Roundtable process has been a Vision statement on the Great Lakes^v that calls for a more future-oriented and proactive approach to protecting the Great Lakes basin.

The need to be future oriented and proactive is based on the complexity of the issues that face the Great Lakes. The list of challenges is long: the introduction of toxics, nutrients, and invasive species into the lakes, the clean up of areas of concern, the undervaluing of water and the threat of water withdrawals, the underinvestment in infrastructure, the inevitable impact of climate change on the lakes, shoreline loss, the pressures of development and urbanization, bacteria issues on beaches, and bacterial issues on beaches and viruses in fish, and atmospheric depositions. In the face of all these challenges, there is concern over the capacity of governments and institutions to handle

these complex issues, and there are fewer resources devoted to science, research & monitoring capacity.

In late 2005, a paper was released entitled: 'Prescription for the Great Lakes'^{vi}, written by leading Great Lakes scientists. The paper concluded that the near-shore area of the Great Lakes was at a tipping point. The near-shore provides the building blocks to the aquatic system, and that foundation is under threat. The near-shore aquatic system has lost its ability to adapt to changes, loss of shoreline, the destruction of wetlands, and urban and agricultural run off. These trends are accelerating.

There has been hopeful progress in the US. A presidential executive order created the Regional Collaboration in the US, an engaging process that involved all the Great Lakes stakeholders, which resulted in a comprehensive US \$20 billion, five-year action plan^{vii} to restore and protect the Great Lakes.

Canada is lacking such a national vision and approach on the Great Lakes. As the Great Lakes Water Quality Agreement^{viii} comes under review, it is clear that Canada has huge capacity issues. The same old approach is not working. It is time for a new, more future oriented, proactive approach.

The IJC's recommendations on the Great Lakes Water Quality Agreement (GLWQA) are thought provoking and recommend a fundamental rethinking of the agreement.

Governments could show the necessary leadership on the Canadian side through the renegotiation of the Canada-Ontario Agreement (COA).

It is important to recognize the immense value of the Lakes to our lives and our economy. The report^{ix} of an American economic policy think tank on the Great Lakes economy has some interesting statistics on the social and economic dimensions of the Lakes. Taken as a whole, the Great Lakes regional economy, if it were a country, would be ranked as the 3rd largest economy in the world, after only the US and Japan. It would be ranked 11th largest by population.

A report^x prepared by Dr. Gail Krantzberg for the Ministry of Natural Resources provides an evaluation of the ecological services of the Great Lakes, again underlining the enormous value of the lakes to the Great Lakes community and to the world.

Mr. Findlay then circulated a Vision Statement on the Great Lakes, prepared by the members of the Pollution Probe bi-national Great Lakes Futures Roundtable and led a discussion on the Vision Statement.

2.5 Presentations by MOE, and MNR

At each of the roundtables, a presentation was made jointly by representatives from the Ontario Ministries of Environment and Natural Resources to provide a status update on the Great Lakes activities of both ministries and to answer questions from participants.

2.5.1 MOE presentation

The MOE representative outlined areas of progress on the Great Lakes.

Under the Canada-Ontario Agreement 2002, Ontario committed \$50 million over 5 years; a commitment that ends in March 2007. The funding paid for infrastructure studies, sewage treatment plant upgrades, and the clean up of sources of near-shore bacteriological contamination.

The renegotiation of COA and the review of the GLWQA will provide an opportunity to assess progress and consider what needs to be done in the future.

Two successful initiatives include a bilateral initiative for bald eagle protection, and sediment clean up of PCBs in the Cataraqui River. These initiatives involved municipalities, local organisations and provincial and federal government partners.

We have made progress. Contaminant trends are going down; cormorants have returned; and the regulation of industrial discharges continues, especially of dioxins and furans. There has been solid work done. But there is much more to be done.

Future areas to focus on will likely include the reduction of harmful pollutants, the preservation of biodiversity, the delisting of Areas of Concern, Lake-wide area Management Plans, the effects of climate change, and the promotion of sustainable living.

The new *Clean Water Act*, which will create source water protection areas along the Great Lakes with policies developed specific to subwatersheds of the Great Lakes, will have great influence on activities in the near shore areas of the Great Lakes.

Major Great Lake stressors that need our attention include the rapid rate of growth and population in some areas along the Great Lakes shoreline. This affects everything from habitat loss, to water use, to resource uses. We have to start planning for an additional 4-6 million people in the Greater Toronto Area (GTA) over the next 25 years. What does this represent in terms of infrastructure needs?

At the Toronto roundtable, the MOE representative provided an overview of an Environmental Bill of Rights (EBR) posting seeking public input on the Ontario Government's intention to renew COA for a 3-year period. MOE has chosen a 3-year period before review, which would allow the Great Lakes Water Quality Agreement review to be completed so that insights from the review may be adopted in a longer term COA. Some areas that may be addressed by Ontario in the short term COA renewal include the reduction of harmful pollutants, conservation of biological diversity, promotion of sustainable Great Lakes communities, climate change, and source water protection.

2.5.2 MNR presentation

The Great Lakes constitute 20% of global fresh water. One percent of that is renewable and therefore available for use. The rest forms the Lakes' hydrologic foundation.

The most significant progress that has been made in terms of Great Lakes water quantity has been the agreement on the Great Lakes Charter Annex^{xi}. It involved forging an agreement amongst 8 states and 2 provinces over a four-year period. The area includes huge municipalities, including those outside of the basin that want Great Lakes water. There is huge potential demand just outside of the basin, where groundwater aquifer is depleted, and there are demands of industry and municipalities for increased water supply.

The Annex complements existing treaties and agreements, filling some major policy gaps by dealing with the whole Basin rather than only the waters or the Lakes.

The Chicago Diversion set the original diversion precedent for the Great Lakes. Originally, Chicago discharged sewage to lower Lake Michigan, which resulted in tens of thousands of deaths from cholera and typhoid. The diversion redirected Chicago sewage down the Mississippi. As a result, there is now a dependence on this water in the Mississippi Basin.

In 1999, a company called Nova, based in Sault Ste. Marie proposed to export 600 million litres out of Lake Superior to Asian markets. The Ontario Government originally approved the request. However, it raised the ire of citizens and the Great Lakes states, and many organisations on the US and Canadian sides. In the end, the request did not go through. But the situation prompted the ten provincial and states to come together to discuss how to handle diversion and water taking requests. The outcome was the Charter Annex, which attempts to put real protections in place.

Another driver for the Annex was the concern over the effects of climate change. Warmer temperatures are leading to greater evaporation, and increased precipitation in extreme events is deluging Great Lakes tributaries. Lake Superior is at its lowest level since the 1920s. The combination of climate change and evaporative rates has been huge. Every sector will be impacted.

The Annex Implementing Agreements were signed by the Ontario and Quebec Premiers and the eight Governors in December of 2005. Once the agreement enters into force it will impose a virtual ban on any diversions. Exceptions to the agreement are for communities straddling the basin divide, with the proviso that the water taken must be returned to the basin tributary from which it was taken.

An important element of the Agreements is the commitment of each of the jurisdictions to water conservation. The commitments are tied to timeframes to put multi-sectoral

conservation plans in place. The objectives will be in place by the end of 2007, and the conservation strategy is expected to be in place in a couple of years.

The Annex's greatest impact may be on municipal future water supply needs with respect to proposals to extend pipelines from the Lakes to inland communities. The agreement will narrow their options, and impose a high environmental test. This could affect Ontario municipalities such as the Regions of Waterloo, and York.

3. Summary of Roundtable discussions and public forum dialogues

3.1 Broad Themes

3.1.1 Overview

A number of broad themes emerged from the discussions of the roundtables. An overarching theme that was raised throughout the roundtables and public forums was the need for greater Great Lakes presence on the policy agenda. A Great Lakes Vision backed by strong leadership was called for. Participants are also looking for more clarity public reporting and information on the Great Lakes. Calls for greater public engagement resonated across the roundtable discussions, with participants calling for Great Lakes public participation model. Another theme is the relationship of local communities with the Lakes, which is often one in which the Lakes are taken for granted. Other issues that were raised include recognition of the Great Lakes as a global and regional treasure; general support for watershed-based approach to Great Lakes protection; the need for increased investment in the science, research, monitoring and reporting on Great Lakes issues; the need for greater exposure to the Great Lakes in Ontario's education curriculum, as well as more opportunities for public education; and the enormous challenge of reducing the cumulative impact of human activity on the Lakes.

3.1.2 Putting the Great Lakes on the Public Policy Agenda

Roundtables

Many participants felt that a sense of complacency had set in with respect to the Great Lakes, and that there was no sense of urgency to take action. Some felt that a vision articulated by political leaders that inspires people to care, could serve as a much-needed catalyst.

Participants recognized that the last time the Great Lakes were a priority on the public policy agenda the media was a driving force; just as the media has been a driving force in galvanizing climate change as a policy issue. Suggestions across the various roundtables to reach the media included outreach to local media, holding events with high profile speakers about the Great Lakes, or getting a large TV network to produce a program on the Great Lakes.

As one participant explained, "There is a need to inform and engage the general public, so they understand the natural capital within the Great Lakes basin." Individuals and businesses need to feel connected to the Lakes, including the sense of place associated with living near the Great Lakes. Another participant feels that the Great Lakes will go

back on the public's agenda when the public understands the value of the Lakes as a resource and they are prepared to respect the resource. One way of doing this is linkages to between ecosystem and human health, which is discussed further below.

On a number of occasions, the roundtables raised the issue of bringing people and organizations that care about the Great Lakes together. As one participant observed, "There is a groundswell of interest and concern over the Great Lakes right now. How do we capture the groundswell and turn it into a tidal wave?"

Aside from reaching the public, participants said politicians also need to be reached and need to understand the value of the Great Lakes in their decision-making. One participant pointed to the annual Great Lakes Day in the United States, as a type of opportunity to reach politicians. It is sponsored by the Great Lakes Commission and held annually in Washington DC where US federal politicians meet with state delegations and Great Lakes activists. Great Lakes Day provides the Great Lakes community an opportunity to educate federal politicians and staff about Great Lakes issues and promote decision making in support of the Lakes. The participant who suggested it, thought that two Great Lakes days could be pursued, one in Ottawa and another at Queen's Park.

3.1.3 A Great Lakes Vision and Leadership

Roundtables

The early focus of the discussion in Toronto was on the need for a Great Lakes vision and for the leadership to enact that vision. Participants said that in the past decades there was a Great Lakes Vision that the public bought into. One participant pointed out, these days we have lots of vision papers and no vision. It was suggested that a vision for the lakes needs to move beyond the usual view to restoration and maintenance to protection and improvement. It might allow us to be proactive, where we have not been in the past.

Participants recommended that Great Lakes leaders be identified and celebrated. The Great Lakes need leaders who inspire, according to participants, this will help to draw the public's interest and concern back to the Great Lakes.

3.1.4 Communicating the Great Lakes

Roundtables

Roundtable participants felt that public communication on Great Lakes issues was lacking and is vitally important to engage the public. The need to popularize or 'mainstream' communication and education on the Great Lakes in a way that would resonate with the public was stressed. As one participant explained, "Rather than get bogged down in the science, we need to do a much better job of articulating to the public why they should care about the Great Lakes". It is clear that we need to bridge the disconnect between the Great Lakes expertise that exists and what the public knows and understands. One suggestion for bridging the disconnect was a third-party review of the Great Lakes.

Some participants suggested accessible state of the Lakes reporting at regular intervals, as one step to improving communications around Great Lakes issues. Clear report-back mechanisms need to be integrated into Great Lakes agreements to allow the public to assess progress.

3.1.5 Citizen Engagement, Participation, and Education

Roundtables

An important point about public participation in Great Lakes decision was not made until the final roundtable, when a participant asked: “how do you participate in the institutional structures of transboundary and shared water if you are not a [federal] state?”

There was a perception echoed through each of the roundtables that the Great Lakes institutional structure does not effectively engage the public. A number of models for citizen engagement were considered. It was recognized that the Remedial Action Plan (RAP)/Public Advisory Committee (PAC) model worked well when it was funded.

The Hamilton RAP was held up as an example of a process that is led by community commitment and passion. The Hamilton RAP has an implementation team and a “restoration council” – a public overseer group. The model is not legislated but is an example of collaborative governance at the local level. The involvement of stakeholders has grown over the years. Local investment accounted for 70% of \$205 million during the first ten years. But having the Bay Area Restoration Council taking messages to government made it possible for municipal staff to make large infrastructure investments. Over the last five years 87% of funds were derived from local investment while federal and provincial commitments have remained constant in real terms. These figures for local investment include volunteer labour, however wastewater investment was the larger by orders of magnitude.

The Detroit River RAP was held up as an example of disempowering the public. A participant suggested that members of the public have been excluded from the steering committee.

Another participant suggested that the Remedial Action Plan Public Advisory Committee model worked well, and that there was merit in continuing it even after work around an Area of Concern (AOC) is completed. However, there is no funding for the citizens who were involved in the Remedial Action Plans to convene and organize locally.

On the US side, the EPA had organized meetings with members of all the RAP Public Advisory Councils. It was suggested that the same type of gathering should be organized on the Canadian side, to help create a more unified Great Lakes constituency.

It was suggested that bringing people involved in the Areas of Concern together again might be a good start. Participants who had been involved in the Remedial Action Plan/Public Advisory Committee processes generally found that it had been a successful

approach. Many participants expressed the need for Great Lakes restoration in Ontario to work from the bottom up and that grassroots participation in the policy process needs to be encouraged.

The ‘roundtable^{xiii}’ type process worked well at the provincial and federal levels^{xiii}. Community or regional Great Lakes roundtables could be created with funding from the senior levels of government, as an alternative structure to government, to foster local engagement and to provide government with advice on the Great Lakes.

Past experiences resulted in a participant in Toronto suggesting that thought needs to go into the sort of citizen advisory functions that need to be embedded in both COA and the GLWQA. Participants pointed to the recent process many were involved with regarding the GLWQA, and expressed frustration at shortcoming in the process, leading Roundtable participants to suggest that the agreement process needs an injection of creativity.

The participation mechanisms set up to facilitate source water protection under the Clean Water Act could contribute to the clean up of the Areas of Concern. However, one participant feared that source protection committees will “go the way of the RAPs”, initially engaging the public and then leaving the public behind. It was stressed that the public needs to be put back in the process, and that the government needs to listen to the public.

The bottom line from participants is that public participation is paramount to the management of the Great Lakes. Participants were also concerned that there be better communication and coordination between civil society participants and government agencies doing work with regard to the Great Lakes, in order that gaps are filled and to keep government and the public from “tripping over each other”.

At a number of the ECO-Probe roundtables, the need for dedicated environmental education was raised as a critical factor in raising the public’s consciousness and sense of stewardship for the Lakes and the environment more generally. However, there was great concern that the lack of consciousness has been hampered by the removal of environmental science from the Ontario school curriculum. Both water and the Great Lakes need to be in the Ontario school curriculum. One group, in a position to provide educational support on these issues to school boards, lacks the funds to be able to do so.

Aside from reaching children and students, participants pointed out that the complexity of Great Lakes issues as a major barrier to public participation in Great Lakes decision-making. Generally, information about the state of the Lakes needs to be made available to the public.

Education opportunities discussed included the idea of a Great Lakes Day, discussed as a political and public policy tool above, could also be used to facilitate community education. There may be other tourism and recreation programs that could integrate public education about the Great Lakes. One participant reminded others that

communities need to feel empowered in the process. Their engagement can be facilitated by empowering participation at all levels. The knowledge gained in local watershed clean-ups and Yellow-Fish Road programs can help guide can help carry community members into Great Lakes decision making processes like COA, the GLWQA and the Annex.

Many expressed the need to raise the profile of the Great Lakes in Ontario. One roundtable suggestion that received support was the idea of community champions for the Great Lakes. The concept was used in the Ontario Government's 'Lands for Life' process. Champions helped to increase involvement and commitment at the local level.

Another opportunity is a university extension program like the Sea Grant program in the US. Sea Grant acts as a one-window clearinghouse for policy advice and local information delivered by the United States federal government and the university extension system.

There was a plea to engage First Nations in Great Lakes programs. As one participant summarized, "If First Nations do well, we all do well. If they don't do well, none of us do well."

The need for a change in social and consumer behaviour was raised on a number of occasions. One participant emphasized that behavioural change is costly and needs sustained support, involving community-based social marketing, and consistent and concise messaging. The change in attitudes towards both drunk driving and smoking took several decades and an enormous effort to achieve.

Participants pointed out that politicians need to be convinced that the public wants to see an investment in the Great Lakes. The awareness of the public is key. Understanding the need for life style changes is critical. As one participant explained, "The public does not realize how low the rate of renewal of Great Lakes water is – we cannot continue to live the way we do".

One participant noted a growing sense of despair amongst today's youth and suggested that something needs to be done to counteract that despair. This participant suggested we need to spend more time celebrating the lakes, as well as continuing to engage in stewardship in order to empower youth and the community.

Public Forums

At one of the public forums, a member of the public called on the Ontario Government to do more to educate the public on the Great Lakes. For example, in the State of Michigan, there is signage to explain to tourists how the Great Lakes work and what effect human activity has on them.

One speaker asked that the Province help Ontarians to be more responsible when it comes to the Great Lakes, as that person felt that we have not been doing that.

3.1.6 The Great Lakes – A Global Treasure

Roundtables

In discussions over Pollution Probe's Vision Statement on the Future of the Great Lakes, there was some agreement that: the Great Lakes must be appreciated and treated as a global treasure; that any vision needs to connect the environment and human health; and such a vision should call for a supportive government and regulatory framework. Holding 20% of the world's fresh water resources, and sustaining the lives and economy of 100 million people, the Great Lakes basin region must be valued as an economic and ecological powerhouse. And yet attention and investments into protecting the lakes come nowhere near meeting this value.

3.1.7 Science, research, monitoring and reporting

Roundtables

There was much concern expressed over the lack of government-sponsored monitoring, reporting and science and research being undertaken. Monitoring the bioaccumulation of chemicals in fish was cited as a specific example where very little funding is provided and no agency is taking direct responsibility. It was noted, there have been extensive studies done over the past few decades. One participant suggested it was time that an accounting was done of that body of work to date, to assess what projects are complete and to direct efforts at completing the projects that are languishing.

There are a number of ways to address this gap, including: through funding to academic institutions to engage in research, and through citizen-based monitoring and reporting. In order for any of these gaps to be effectively filled a science strategy with a long-term funding commitment from the government is needed for the Great Lakes

There was consensus that the connection between science and policy must be strengthened. The process of turning information into knowledge is not happening effectively. A scientific feedback process is needed, to better inform decision makers about Great Lakes science on an ongoing basis. Cumulative impacts are an important component of Great Lakes science, which need to be taken into account in Great Lakes decision-making. Performance indicators are needed that can show progress or losses related to aquatic invasive species.

There was a sense amongst participants that the science of the Great Lakes is currently "compartmentalized" or "fragmented". They felt there is a need to paint a total picture from the information gathered, to package it in a way that assists decision makers in determining if we are making progress, and what else needs to be done. Greater links between issues of quantity and quality, and between COA, the GLWQA and the Annex would help the public make better sense of Great Lakes issues. It was suggested that this information could be communicated through an annual Great Lakes report to the public.

Public Forums

A speaker called on a greater commitment to air monitoring of critical contaminants in Ontario. Another speaker said that water quality and water quantity concerns need to be better connected.

3.1.8 Watershed approach

Roundtables

Noting that the Great Lakes need to be managed from their headwaters, many participants expressed favour for the use of a watershed approach to Great Lakes protection. Conservation Authorities (CAs) have a lot of innovative experience in watershed based planning and as a result they have a lot to contribute to the management of the Great Lakes. In fact, it is through watershed management and planning that many Ontarians are connected to the Great Lakes. It was also suggested that greater Conservation Authority involvement might help the public “connect the dots” on restoration at the local level and contribute to the re-initiation of grassroots action. Focusing on the local and giving the public action items to carry out contributes to the empowerment that roundtable participants feel is necessary to make progress on the lakes.

According to a number of participants, the Province should be given credit for its source water protection initiative, which will result in the compilation of a comprehensive dataset on watershed lines. As one participant exclaimed, “Source water protection is a great step forward. I thought I would never see the day that source protection legislation was passed.” There was some discussion over whether the use of a subwatershed scale may be more appropriate than a larger watershed scale.

It was also pointed out that there is interesting work being done by the North American Council for Economic Cooperation (CEC), to map out the three countries’ watersheds^{xiv}.

3.1.9 Human Impact on the Great Lakes

Roundtables

A participant made a comment that resonated profoundly with everyone at one of the roundtables, “The problem isn’t invasive aquatic species, toxics, climate change, or any other of the many issues we face. The Problem is us. Our lifestyle has to adapt to the environment. Until we humble ourselves, and understand that *we are the invasive species*, we won’t get it.”

3.2 Water Quality and Ecological Processes

3.2.1 Overview

There was acknowledgement of good progress in some areas related to water quality since the original Great Lakes Water Quality Agreement was signed in 1972. However, there remains a feeling that the changing nature of existing threats, and new and emerging threats could overwhelm the progress made over the last 3 decades. There were many comments and suggestions for improvements on the way sewage treatment plants are regulated in Ontario. There continues to be great apprehension about industrial discharges and spills, and the need for more comprehensive monitoring where there is intensive industrial activity. There is tremendous concern over invasive species and the perceived lack of government attention to the issue on the Canadian side. Chemical loadings in the lakes continue to be a concern, and a number of participants called for the outright ban of certain chemicals. The issue of near-shore health was highlighted, with some research suggesting that we may be close to a tipping point. The responsibility of municipalities in protecting the shoreline was a common theme in both upper and lower lakes. The need for progress on the long-standing issues of nutrient run-off and the clean up of Areas of Concern (AOCs) were also raised.

3.2.2 Sewage and Stormwater Run-off

Roundtables

Concerns over sewage discharges and storm water run-off were repeatedly expressed at each of the roundtables. There is concern over the increase of sewage discharges due to greater urban intensification, and storm water run-off due to more intense storm activity, that is discharging directly into the lakes. One participant exclaimed, “Primary treatment on the Great Lakes is shocking. It must be addressed. “

It was acknowledged that there has been some good progress in the Cities of Windsor, Kingston and Nipigon, to make the financial commitment to upgrade their sewage treatment systems. However, Red Rock does not have the means to install secondary treatment since the town’s paper mill closed. At a relatively low cost, senior levels of government could provide the necessary financial assistance. This small act would lead to the delisting of the Nipigon AOC.

Concern went beyond secondary treatment. There were several calls for updated provincial direction on a model sewer-use by-law for Ontario.

There were calls for more sustainable storm water techniques, such as lot level best management practices. It was suggested that government agencies could support change in urban planning by promoting low-impact development techniques, as they are beginning to do in the US, or multi-nucleated municipal structures (nodes and corridors) to abate the worst side-effects of sprawl. Ontario can also learn from Sweden and

Germany that advance greater municipal leadership and improved rainwater management.

The Province's "Places to Grow" program was cited as progressive, but it was noted that the program has not fully considered the impact of urban intensification including more impermeable surfaces and stormwater runoff. One participant suggested, "Our approach to infrastructure needs to become more sustainable and water-friendly, with fewer permeable surfaces and more green roofs". Another participant suggested that the Province should put in place a storm sewer by-law for all municipalities.

Public Forums

A number of members of the public had comments on sewage treatment and its impact on the Great Lakes.

One speaker stated that people in the community did not know where to swim because of the extent of the pollution.

During one public forum session, a representative from a sewage treatment utility emphasized the importance of installing state of the art technology for sewage treatment, particularly for leading waterfront cities in Canada. Another suggested that the Province should be open to innovations in sewage treatment.

One speaker called on the provincial and federal governments to introduce more stringent sewage treatment, particularly with respect mandatory secondary treatment.

Another attendee suggested that it is time we better understand the engineering of effective stormwater management ponds.

A speaker called on the Ontario Ministry of the Environment (MOE) to enforce its sewage guidelines. It was unacceptable that 1 billion litres of sewage was allowed to flow into the Cataraqui River, resulting in the closing of local beaches.

One speaker called on the Ontario Government to introduce more stringent standards for the treatment of landfill leachate transferred to sewage treatment systems for disposal.

Another public forum speaker suggested that there is too heavy a reliance on centralized sewage treatment, and that more should be done to develop and permit home-based treatment systems.

3.2.3 Nutrient loading

Roundtables

Concern was expressed over the continued run-off of nutrients from agricultural lands, septic systems and other non-point sources into basin tributaries and the Great Lakes. "The trend in nitrogen in the Great Lakes is going up and up. There has been a

tremendous increase. It is mostly coming from atmospheric deposition and agricultural practices.”

Several participants pointed to successful programs that have helped reduce nutrient run-off. The Ontario Federation of Agriculture has worked with municipalities, and Conservation Authorities to provide small grants for on the ground projects such as septic system inspections and cattle fencing. Funds are matched by the landowner. Another example was a funding program by the City of London to projects outside of its boundaries, in recognition of the activities outside of their community that affect London’s drinking water. The City of Windsor also provides grants to landowners in support of programs for the Detroit River.

One participant suggested providing incentives and on the ground support to farmers is more effective than heavy-handed regulation. Funding programs for local extension projects should be expanded, much like the Clean Our Rural Beaches program (CURB) in the 1990s.

One participant claimed, “No one has been looking at the big picture on phosphorous loadings from sewage treatment plants because MOE is not doing that anymore. The Province needs to stop sewage treatment plant overflows”.

Public Forums

An attendee suggested that the growing populations of geese are exacerbating problem of nutrient loading and beach closures and a coordinated effort is needed to address this problem.

3.2.4 Invasive Species

Roundtables

Frustration was expressed at the slow action on invasive species that threaten the aquatic diversity and ecology of the lakes. In Canada, there has not been much public discussion on the threat of invasive species. Unlike the early chemical bans that resulted in ecosystem recovery, once invasives are established, aquatic ecosystems are permanently altered

There was a wide-ranging discussion on invasive species at each of the roundtables. There was some conversation about the viability of banning ocean-going ships either from the Great Lakes entirely, or only those that do not release their ballast water before entering the Great Lakes system. However, there was concern over the economic impact, particularly in port cities such as Hamilton and Thunder Bay. Some optimism was expressed regarding inter-modal transport, where cargo is moved from ocean-vessels to lake vessels.

One participant clarified that ships no longer discharge their ballast water into the Lakes. The problem is that the sediment left in their ballasts is washed out into the lakes.

Another suggestion was to proceed with proactive action, “There is room at the municipal or state or provincial level, and federal level, for actions on invasive species, which could be taken in advance of a new Great Lakes Agreement.” The State of Michigan’s initiative was cited as an example of such proactive action. Michigan has recently introduced a requirement that Great Lakes ships must obtain a permit to demonstrate that their ballast water has been released before entering a port in the State of Michigan^{xv}.

One participant expressed concern over the ‘piecemeal approach’ that is developing state by state to Great Lakes shipping rules and ballast water. State level actions such as those taken by Michigan should be replaced by a federal –level bi-national answer that is equally applied throughout the Great Lakes. There was recognition that ballast water regulation is the responsibility of the federal, rather than the provincial government.

Other threats that require our urgent attention include pathogens such as Viral Hemorrhagic Septicemia (VHS), which causes hemorrhaging and death in Lake Trout and other salmonoids. VHS represents a serious threat to the ecosystem and to sport and commercial fishing. VHS has already been found in Lakes Huron, St. Clair, Erie and Ontario, and the St. Lawrence River.

Public Forums

A number of members of the public at each forum expressed extreme concern with the inadequate response of Governments to the threat of invasive species. Several called for action by Federal Governments in the US and Canada to impose rules on cargo ships entering the Lakes.

Several speakers were well informed about the Asian carp invading the Chicago River via the Chicago Sanitary and Ship Canal. They expressed concern with the reliability of the electrical barrier keeping the carp out of Lake Michigan.

3.2.5 Near-shore and Shoreline Protection

Roundtables

At roundtables in the South, there was general concern with the rapid change in land use due to population growth. One participant felt that “The Great Lakes Water Quality Agreement has not effectively addressed non-point source inputs”.

There was support for Ontario’s *Clean Water Act*, and hope that it would have some effect on non-point sources. There was also some concern expressed that Ontario policy under the Greenbelt and Places to Grow legislation may be contradictory. One participant called for a more integrated approach to provincial direction in this area.

One participant mentioned the findings of a report entitled, ‘Prescription for Great Lakes: Ecosystem Protection and Restoration’.^{xvi} The report highlights the cumulative impacts

over the last century of chemical and nutrient loadings, invasive species, shoreline and land use changes, and hydrologic modifications. The report sounds the alarm over cumulative stresses on the near shore aquatic ecosystem and suggests that we are nearing the 'tipping point' of irreversible change. The participant strongly urged governments to engage in greater coordination and to look at the stresses more comprehensively. Working on one issue at a time is ineffective and ignores the ecological reality of cumulative stresses.

One roundtable had an interesting discussion on the 'hardening of the shoreline'. Shoreline loss and the 'concretization' of shores due to pressures of development and urbanization is a serious concern.

At another roundtable, there was discussion of alternatives to paved roads and shingled roofs. It was suggested that a conceptual shift in how we approach infrastructure is needed.

There was an interesting discussion on pending waterfront developments in various Great Lakes cities, and the responsibility of authorities to take an ecological perspective when designing new waterfronts. One participant explained, "The decisions we make now about the use of our waterfronts and near shore land will affect what happens ecologically for the next 100 years."

A discussion about natural resource extraction on Lake Superior highlighted similar concerns about the protection on natural shorelines. A suggestion to address this problem was for a Commission, similar in structure to the Niagara Escarpment Commission, but focused on coastal land management. Some else described the idea as a "Greenbelt" for the Lakes to keep shoreline development in check.

One participant suggested that the Provincial Policy Statement should be strengthened with regard to responsibility for shoreline protection.

Public Forums

A speaker expressed frustration over aggregate and mining activity and the placement of electricity poles along the shoreline of Lake Superior, needlessly spoiling a pristine shoreline that is a major tourism attraction.

Another speaker pointed out that a number of small municipalities control huge areas of the Lake Superior shoreline. They have small populations and a small tax base. As a result of the trend towards greater municipal autonomy to take care of environmental concerns, there is concern that these smaller municipalities won't have the resources to protect the shoreline.

Another speaker expressed concern over the weakness of municipal planning rules to protect lands surrounding the Great Lakes. Despite positive wording in support of sustainability in official plans, the final decisions made at the local level often adversely affect the watershed. There is a need for balanced decision making. It is not balanced

now, decisions are made in favour of development. This has led to devastating decisions like building highways through an areas of natural heritage significance. In the North, Conservation Authorities (CAs) seem more oriented towards flood control than watershed protection. Nevertheless, municipalities are increasingly relying on CAs to review decisions that have an impact on the watershed.

3.2.6 Industrial Spills, Discharges and Air Pollution

Roundtables

In Windsor, there was frustration over the limited monitoring of water quality in the St. Clair River and the Detroit River on the Canadian side. Similar concerns were voiced in other communities, where one speaker expressed the need to move beyond the so-called “end of pipe” solutions to more sustainable approaches.

With regard to spills, discharges and air pollution, participants asked questions such as: Who is doing monitoring? Is enough monitoring being done? And is the information being generated accessible to First Nations and the public?

Michigan’s monitoring program was discussed. With the assistance of funding from three levels of government, ten real-time water quality monitors have been installed along ten sewage treatment plants, with public reporting on the internet. The monitoring allows authorities and the public to track combined sewage overflows and spills. There was agreement that a similar scale of monitoring was required on the Canadian side. There was a general consensus that timely information on spills and the quality of surface water is needed for the public, particularly those living downstream from industrial sites, include those living on First Nations reserves.

Another concern raised was the problem of a number of unregulated landfills on First Nations reserves, some of which hold toxics and hazardous waste that are now leaching into Great Lakes tributaries.

Public Forums

One speaker expressed serious concern with the lack of public information to area residents in heavily industrial areas such as Sarnia. In the Aamjiwnaang First Nations reserve near Sarnia, which receives atmospheric deposits from industry, they are observing a dramatic and alarming decline in the birth of male children. The speaker called on senior governments to provide easy access to residents to monitoring data and information on the impact of air emissions, spills and discharges.

A speaker visiting from the US expressed concern over the inadequate monitoring of pollutants on the St. Clair river and Lake St. Clair by Canadian authorities. One speaker living in the Windsor area expressed concern over air pollution from truck traffic crossing the border. This is a concern since air pollution is eventually deposited into the Great Lakes. Another instance of air pollution impacting pollution levels in the Great Lakes raised was the burning of tires as alternative fuel in a cement kiln in Bath.

3.2.7 Chemical loading in the Lakes

Roundtables

In a number of roundtable discussions, anxiety was expressed over the introduction of a multitude of toxics into the lakes, either directly or via sewage effluent discharge. Despite a flurry of action in the 1980s, toxic loadings into the

Lakes remain a major threat.

Although significant progress had been made with some chemicals in the Great Lakes, such as DDT and PCBs, one participant pointed out that significant progress has only been made on those substances that have been banned outright. There was agreement at another roundtable that the 'worst offenders' found in storm water need to be banned.

Historical contamination remains a serious problem. For example, over 100 chemical landfills along the Niagara River that were identified as a threat in the 1970s have yet to be addressed. Four hundred compounds of primary concern have been identified by Environment Canada & Health Canada. A participant suggested that at the very least efforts be made to address these compounds.

A participant explained that air deposits have to be addressed, given that 50% of toxic chemicals in the Great Lakes come from the air. The handling of nuclear waste also needs our attention, particularly the plan to bury radioactive waste within 1 km of Lake Huron.

It was felt that not enough attention is being directed at new chemicals. It was proposed that the onus be put on parties who propose to release new chemicals to demonstrate the safety of these chemicals.

The issue of the introduction of pharmaceuticals and personal care products was raised at several of the roundtables. The increased use of DEET to combat West Nile virus was also cited as a concern due to detectable levels in surface water.

Concern was also expressed that chloride trends are on the increase, and rising levels of flame-retardants are being found in fish. It was noted that the issue of mercury and coal fired power plants is moving forward according to one participant, but needs more force. One roundtable discussed the State of California's proposed approach, a bill to ban the use of toxic chemicals in personal care products and toys. A participant suggested that Ontario should do the same.

Frustration was expressed over the slow action to address the impact of estrogen and other endocrine disrupters in municipal sewage effluent, especially given that pulp and paper mills are required to monitor discharge levels of these toxics closely. Some pharmaceuticals and personal care products contribute endocrine disrupting chemicals into water; they are now detectable in sewage effluent and are affecting fish. It was felt

that there is an urgent need to address this issue before it becomes a problem in drinking water.

Roundtable participants suggested a change in consumer behaviour is needed, as well as take-back and prevention programs for pharmacies and other vendors of pharmaceuticals and personal care products in the Great Lakes basin. Others feel that the burden of proof for the release on new chemicals should be with the chemical producers. It is the chemical producers who should provide proof that their products are not altering or harming human or environmental health.

Claims by regulators that ‘things are getting better’ should be backed up by indicators showing measurable improvements in the health of the Great Lakes.

Public Forums

Echoing concerns heard in the roundtables, one speaker called on the Ontario Government to adopt rules similar to those recently attempted by the State of California to ban the use of certain chemicals in personal care products.

Another speaker called on the Ontario Government to regulate the use of cosmetic pesticides rather than leaving it to municipalities to manage the issue.

3.2.8 Areas of Concern

Roundtables

Concern was expressed about the slow and under-resourced action to clean up the Areas of Concern (AOC). There was also concern over the lack of effort to identify other areas of contamination that require clean up beyond the initial AOCs identified. There is greater urgency now as a result of declining water levels due to climate change. Contaminated soil and sediments may be exposed, these will require rapid clean-up.

One participant suggested that there should be special measures taken by industries located in AOCs. For example, the Province or municipalities could require sewer-use by-laws in AOCs that take into account that it is an AOC. Those sewer-use by-laws should have stringent requirements for pollution prevention.

Another participant noted the cost of not cleaning up the AOCs will be greater over the long term than the cost of cleaning up the AOCs. The participant said that cleaning up the AOCs might promote the growth of sustainable businesses around the lakes. It was suggested that the clean-up work should be undertaken privately because otherwise communities will have to continue to wait for funds from the government.

At the Toronto roundtable there was a lot of discussion about the work that has been done in the past. Participants were clear that the majority of the problems are known, and in most cases communities know what needs to be done, but the work just does not seem to get underway. The frustration resonated, as another participant stated that we need to get

to the bottom of why the AOCs are not improving. Participants were clear that their communities know what they need to do, what they need now is the commitment of the provincial and federal governments to move forward, and provide the resources to carry out the work. This came with the recognition that there will have to be prioritization as everything cannot be done at once, however, going into the future, we need to ask ourselves, are we achieving results?

Public Forums

One speaker at an evening public forum asked when the community was finally going to see the funding to complete the work to delisting the community's AOC. The particular community is in a period of change and would like to redevelop its waterfront, but those plans are on hold until the AOC is delisted.

3.2.9 Fisheries

Roundtables

One participant reminded a roundtable session that there are entire species of Great Lakes fish that have been lost.

3.2.10 Clean Water Act

Roundtables

The *Clean Water Act* was looked upon by a number of participants as an opportunity to gather data that will contribute to improved management of the Great Lakes, however, the Great Lakes and tributary work is being narrowed to the areas of municipal water supply intakes.

3.3 Water Levels and Water Use and Consumption

3.3.1 Overview

At both the roundtables and the public forums, alarm was expressed over the impact of climate change on water lake levels. There was praise for the Great Lakes Charter Annex Agreement, but worry and scepticism over whether the jurisdictions will ratify the agreement. Other issues raised included the correlation between water consumption and the cost of water, the trends towards drinking bottled water, and innovative approaches to water conservation.

3.3.2 Water Consumption and Use

Roundtables

It was acknowledged that Canadians are profligate users of water, although it was recognized that the high water use in Canada, 350 litres per person per day, which includes industrial use. One person suggested that our “water footprint” cannot continue at its current size. Another participant suggested that Ontario was far behind European jurisdictions in applying water efficiency technologies to save water, such as dual flush toilets.

One participant suggested that there will be water use conflicts over the pressure to expand or create new smaller hydro power projects, which may threaten fish habitat.

Concern was expressed over greater consumption of bottled water over municipal water, and misleading information about public drinking water in advertising promoting bottled water and water filtration systems.

A participant suggested that this was in part due to the fact that public interest groups and governments are “constantly looking for the scary contaminant of the day”, and that these tactics scared people from consuming Great Lakes fish and Great Lakes water. This is despite the fact that we have never been better off, in terms of our health and longevity. One participant succinctly pointed out that the popularity of bottled water shows that people are scared of drinking Great Lakes water. This participant suggested that a lot of public confidence could be restored with the use of drinking water treatment processes more sophisticated than simply chlorinating the water, because the public does not think they are being protected. One water utility executive concurred, that as drinking water providers, they are not communicating well enough to the public.

Others pointed to the need to model the cumulative impacts of Permits to Take Water. There was a suggestion that the Province could introduce water efficiency measure to be implemented by municipalities. Another suggestion was for a “cap and trade” system for water consumption, similar to the approach used for emissions trading.

3.3.3 Water diversions

Roundtables

There was great praise for the Great Lakes Charter Annex Implementing Agreements and the role the Province of Ontario played in the negotiations. It was held up as an excellent example of the Province working with grassroots parties to develop direction and achieve its goals at the bi-national negotiating table.

There was apprehension over the many hurdles that must be overcome to get the Charter Annex ratified, given that it is dependent on 10 jurisdictions passing legislation. There was also concern expressed with the lack of understanding of the real capacity of the Great Lakes for cumulative water withdrawals. As one participant explained, “In the Annex discussions, they were picking withdrawal

numbers out of the air. The withdrawal thresholds aren't science-based." Another participant asked how the agreements will be policed, especially for communities outside of the Great Lakes Basin.

One participant said that we are engaging in unsustainable water consumption practices. Referring to a situation in the United States, he stated that, "Irrigation in deserts simply shouldn't be happening".

Some interest was expressed in including consideration of climate change and its effects under the Charter Annex agreement, perhaps in connection with commitments to develop multi-sectoral conservation plans.

Despite the Charter Annex, considerable anxiety remains over future water diversions. One participant cited a new book called "The Great Lakes Water Wars"^{xvii}, which suggests that as water supplies dwindle in the American southwest, there will be tremendous political pressure in the US to allow diversions from the Great Lakes. One example is New Berlin, a suburb of Milwaukee, Wisconsin. New Berlin has made a request to withdraw Great Lakes water to their community, which is just outside the Great Lakes Basin. New Berlin will be a political test of the Great Lakes States' commitment to the Charter Annex Agreements.

Public Forums

A speaker suggested that there was a proposed super highway being negotiated by the NAFTA partners that would extend from Mexico to Michigan. He further suggested that there is an idea to build a pipeline adjacent to the highway that would allow for massive diversions from the Great Lakes. Neither the Environmental Commissioner nor Rick Findlay was aware of any such proposal.

People expressed fear over the US southwest's thirst and the probability they will try to use Great Lakes water to quench their thirst. Other expressed confusion because they thought that the International Joint Commission (IJC) and an international treaty dealt with water withdrawals.

3.3.4 Climate change and Water Levels

Roundtables

The effects of climate change were uniformly recognized as an enormous threat to Great Lakes water levels, particularly as higher temperatures cause year-round evaporation. Lake levels have dropped dramatically in Lake Superior.

According to one participant: "Low water levels in the streams into Lake Superior are causing sand accumulation interrupting the flow of the stream, which eventually cuts off the reproduction of fish. We are already seeing these effects."

The consequences of dropping lake levels are enormous, from changes needed to drinking water and sewage treatment infrastructure to industry and hydro-power plants that are dependent on lake levels for their processes, cargo shipping, irrigation for agriculture, the loss of wetlands, cottaging and aquatic recreational activities, to aquatic habitat and fisheries.

One possible scenario was described by a participant in which lake levels in Lake Huron are reduced by 1 metre due to factors associated with climate change. Given that Lake Huron and Lake Erie are only one metre in elevation apart, the decline in Lake Huron's levels could result in the two lakes merging, overflowing the St. Clair River and Lake St. Clair area, and the heavily industrialized areas of Sarnia and Detroit.

Given the enormity of the problem, a number of participants asked whether any comprehensive modelling had been undertaken to measure the possible impacts of water level variability related to climate change. There was some discussion about research available, most of which were localized, such as a study done by the Bay of Quinte RAP ten years ago, and another study by Dr. Jan Ciborowski from the University of Windsor on the impact of climate change on Lake Erie^{xviii}. One roundtable participant had been involved in the recently completed Lake Ontario-St. Lawrence International Study and pointed to the climate change modelling for Lake Ontario and the St. Lawrence, which was completed for the study using a range of difference climate models.^{xix}

There was general consensus that predictive, comprehensive studies on the potential effects of climate change on the Great Lakes are urgently needed to educate Ontarians about the anticipated impacts. As one participant explained, "We need predictive modelling of the impact of climate change on the Great Lakes. Otherwise, we don't know what to prepare for".

Public Forums

Several members of the public expressed concern and frustration with the fluctuation in water levels that they are already observing.

One speaker said that declining lake levels has led to damage to his dock, which he had to repair. But beyond the financial considerations, the speaker was concerned with the legacy of declining water levels that is being left for future generations.

One speaker asked whether there were statistics on lake levels and water withdrawals from the Great Lakes, and whether there was any way to reverse the decline in lake levels. Another speaker said he was shocked to see the decline in lake levels by his home, and asked for more information on predictions on water levels in the Great Lakes.

3.3.5 Water Pricing and Conservation

Roundtables

Participants were asked to consider if water use in the basin is being tangibly reduced. The participant asking that question reminded the others that the Annex is built on ecological arguments to keep Great Lakes water in the Basin. In order for that to work, said the participant, we need to be leaders in water conservation and efficiency or we will face the embarrassing loss of Great Lakes water.

Across the five Roundtables participants called for more realistic water pricing as an important tool in the promotion of water conservation. . One participant said, “I hope the Provincial Government will have the guts to charge for the true cost of water.” One participant suggested that moving to full cost recovery for water would create an economic opportunity, as higher water rates will promote greater water efficiency, which creates demand for water efficiency services for commercial and institutional buildings.

An interesting discussion at one roundtable challenged the notion of water conservation as it is usually presented. Demand management is required, but moving beyond the concept of municipal water supply towards the big picture, involving natural systems, and all ecological goods and services. It represents a move beyond water conservation toward sustainable use.

In addition to full cost pricing, other suggestions were made to promote conservation, ranging from rebates and incentives to mandating building code changes such as dual flush or low flow toilets. Regardless of when changes are made Ontarians, both individuals and industry, need to be encouraged to start conserving water now.

Concern was expressed over the continued debate over private and public ownership of drinking water services. Some suggested that the commercialization of water will be the only way to reflect its true value.

3.4 Business and Economic Development Associated with the Lakes

3.4.1 Overview

There was considerable discussion about different approaches to regulating industries that discharge or emit pollutants into the Lakes, including an incentive system, and applying the ‘polluter pays’ principle. There were lengthy discussions about supporting more sustainable resource development, and the lack of integrated decision-making within government to promote resource extraction and sustainable development. Participants also talked about recognizing the economic value of the ecological goods and services provided to their communities by the Lakes. Concerns were expressed over the effects of

climate change and declining water levels on a number of industries, particularly the shipping industry. Some communities are predicting economic hardship as a result of global warming and lower lake levels. Other communities have seen their economic redevelopment languish due to toxics concerns where work has not been completed on AOC delisting, or where government priorities have changed, such as the Great Lakes Heritage Coast.

3.4.2 Ecological Goods and Services

It was suggested that local agriculture and the benefits of shopping at home need to be promoted to consumers in the basin. Such a movement would provide lots of economic potential to communities in the basin. It could build on the momentum of sustainable communities and LEED^{xx}.

Participants reminded each other to remember the value of the ecological goods provided by the lakes which would help communities build on the ideas discussed in the rest of this section.

3.4.3 Polluter Pays and Economic Incentives

Roundtables

There were a number of discussions around the responsibility of industry and business to take full responsibility for the ecological impacts of their economic activity. While some participants called for further education, others called for a more hard-lined precautionary approach.

A number of incentives or disincentives for greater ecological responsiveness were considered, including tax incentives or disincentives, or incentives for pollution reduction that go beyond regulatory limits. One participant suggested that making environmental responsibility profitable for companies was the most effective approach. Others suggested that recognition of attaining a certified standard, such as the ISO standard, was also effective. One innovative idea was the creation of a Great Lakes Green Seal of Approval for good corporate environmental performance.

One participant suggested that industries and businesses that operate on the Lakes should have cradle-to-grave responsibility for the products they create. Others called for a polluter pays system, where a company's byproducts or residual would have to be managed at 100% their cost.

The government's role in creating markets for clean production was also raised. Vermont was held up as an example of a proactive jurisdiction. The State has a law that requiring all paper procured by the state government must be on chlorine-free paper, from books in schools to toilet paper in roadside rest areas. As a result, at least two Canadian mills have entirely dedicated their paper production to the Vermont market. It was suggested that

similar procurement action by the Province of Ontario could benefit mills in Ontario by creating a new market for chlorine-free paper products.

Pointing out the local impact of global commerce, one participant expressed concern over the failure of companies to decommission industrial sites properly. A plan is needed to manage old and abandoned sites, and to hold companies accountable and liable for decontaminating sites they abandon. Participants named a number of such sites, such as the decommissioning of a former paper mill site on the St. Lawrence River, and an historical contaminated tannery site in eastern Ontario.

3.4.4 Sustainable Resource Development

Roundtables

Proposed resource developments, like quarry or forestry operations, are not considered in an integrated way across the landscape. The rules are inadequate to take into account watershed, shoreline and small stream considerations including the impact on local fisheries. There is a need for integrated decision-making on projects, bringing together the Federal Department of Fisheries and Oceans, and the Ontario Ministries of Natural Resources (MNR), Northern Development and Mines (MNDM), and Municipal Affairs.

One example of inconsistency was given by a participant who explained that a number of shoreline areas along Lake Superior that had been identified as needing greater protection by MNR, but were subsequently identified by MNDM as potential aggregate sites.

Another example given is the Province's thirst for electricity. This is especially apparent in the North as many Great Lakes Basin rivers are being considered for their hydropower potential – even when those rivers are within protected areas.

One participant explained that while MNR is a great source of support in the North, it is in an inherent conflict of interest. Of all the land uses it oversees, forestry always wins out over others. This resulted in the suggestion that, “We need a separate ministry of forestry and a ministry of parks, fish and wildlife”.

There is optimism that Lake Superior could be a model for sustainable resource development, as it does not face the challenges of the industrial legacy of the lower lakes. As one participant summarized: “The Lake Superior watershed basin could serve as a model of how to do it right”.

Some participants pointed out that there is a limit to growth and that we need to recognize that fact, especially since our collective ecological footprint in the basin is 2.5 to 3 times larger than it should be.

Greater protection of the Great Lakes basin could also pay dividends to the tourism and recreational sectors and the natural environment. Fees charged for camping permits or ‘outdoor cards’, like those required for US visiting hunters and anglers, should be

charged to everyone on a consistent basis, and the revenue should be dedicated to conservation efforts and the enhancement of hunting, angling and camping areas. A pilot project near Kenora has created ecologically sensitive green zones, where people are not allowed to camp.

There was also discussion about the need to recognize and protect the ‘6th Great Lake’, Lake Nipigon, at the head of the Lake Superior watershed, which serves as the head of the entire Great Lakes watershed.

Public Forum

A speaker expressed concern over the an an aggregates site at Michipicoten Bay, and the precedent it may set, “It contributes little to local economic development, and may have a significant environmental impact”.

3.4.5 Great Lakes Heritage Coast

Roundtables

At one roundtable, there was discussion over the fate of the previous provincial government’s Great Lakes Heritage Coast initiative along Lake Superior: “It had tremendous local buy-in. Some people invested in tourism outfits to capitalise on the expected business. But this current government has not backed the idea. We want to get this going again.” However, some felt that the initiative was simply a ‘tourism marketing concept’. “We need something better, with more teeth”.

3.4.6 The Future of Great Lakes Shipping

Roundtables

While there was general concern over the impact of declining or fluctuating lake levels on various industries, particular concern was raised over the impact on Great Lakes shipping and port activity.

One participant explained that the shipping industry is very cost sensitive to changes. Fluctuations of even a foot in depth can affect how much cargo can be carried, directly affecting profit margins.

3.5 Community health and wellbeing

3.5.1 Overview

There was recognition of the importance of a healthy ecosystem and shoreline to attract residents and businesses to Great Lakes communities. Maintaining human health around

the Great Lakes emerged as a concern of participants. There was considerable support for citizen-based science to engage the public and volunteer sector in testing, monitoring and reporting on Great Lakes water quality and quantity. Individual issues raised included the importance of highlighting that all recreational activities on the Lakes may be affected by water quality and quantity, and the value of engaging First Nations youth in Great Lakes educational programs.

3.5.2 The value of a healthy ecosystem

Roundtables

Above all, it is the connection to health and wellbeing that people understand most directly. At several of the roundtables, participants discussed the value of a healthy ecosystem in attracting businesses and residents, and the cost in losing businesses and residents when the ecosystem is in decline. This is particularly true for Great Lakes communities, where living by a vibrant lakeshore is considered a great part of a person's quality of life. For some smaller communities, the Lakes have been an asset in helping to attract young professionals.

3.5.3 Human Health around the Great Lakes

One participant informed the roundtable of provision under COA to establish a Great Lakes public health network. The network has been established, and is co-chaired by Health Canada and the Ontario Ministry of Health. There may be an opportunity to engage this new network.

Another participant suggested that there is a growing movement in health promotion related to the environment, e.g. the Massachusetts toxics reduction initiative. A participant at the Toronto Roundtable felt there has been an abandonment of the human health implications of the degraded Great Lakes. In the 1980s, it was the human health implications of the downturn of the Great Lakes that galvanized the public and helped contribute to the formation of Remedial Action Plans. This was considered important in the discussion, as other participants agreed "health and wellbeing" are what the public understands, and it provides a sense of urgency to feed into the for work to be completed.

It was suggested that the Great Lakes should be treated as a region under CEPA.

3.5.4 Citizen Science

Roundtables

At several roundtables, there was interest expressed in the value of citizen science, and the promotion of community monitoring and reporting. Federal and state-level government-supported programs in the U.S. to promote monitoring of streams and

shores by the NGO and voluntary sector have proven successful. To be viable in Ontario, it would require government and foundation funding, as well as technical training.

Public Forums

The interest in citizen science was echoed at one of the public forums, by a speaker who felt that citizen and voluntary sector role in monitoring and reporting is a critical component to the overall monitoring of the Great Lakes.

3.5.5 First Nations Youth Outreach

Roundtables

One participant suggested that one way to counteract the despair felt by some youth on First Nation reserves would be to engage them in environmental stewardship programs much like the Rangers program sponsored by the Ministry of Natural Resources. These could be programs directly related to the Great Lakes, to celebrate the lakes, and encourage youth to become more engaged and to encourage others to become better stewards of the lakes.

3.5.6 Recreational Activity

Roundtables

One participant suggested that the emphasis on beach closures should be expanded to include the impact of water quality and quantity on other aquatic recreational activity, including water skiing. In another discussion it was noted that open beaches and highly visible aquatic activities can be very useful to a social marketing agenda to promote the health of the Lakes. On a similar note, one participant at the Toronto Roundtable suggested combining tourism and recreation activities focused on the lakes with opportunities to provide public education programs.

3.6 Government and Institutional Support

3.6.1 Overview

Roundtable participants see the need for changes in governance and accountability related to the Great Lakes Water Quality Agreement (GLWQA) and the Canada-Ontario Agreement (COA), especially given the perceived lack of clear and direct accountability in the current structure. There is particular concern with what is seen as a weakening of Canada's influence on Great Lakes matters. There is also a perception that the current Great Lakes institutional structure fails to harness the public's enthusiasm for the lakes or engage the public in tackling problems facing the lakes.

There is a feeling of optimism regarding the opportunity presented by the renegotiation of COA and the review of the GLWQA to address some of these issues. A number of comments were made in favour of an enhanced role of municipalities and First Nations in the negotiation of these agreements. There was general consensus that current levels of government funding were inadequate to address the challenges facing the Lakes, and support for an increase in financial commitments from senior governments towards the implementation of the Great Lakes agreements. Some participants feel that the public has an important role to play in setting the future Great Lakes agenda and pushing governments to adopt it.

3.6.2 Accountability

Roundtables

Fundamental concern was expressed at each of the roundtables regarding the lack of adequate government accountability for the implementation of commitments under both the Great Lakes Water Quality Agreement and the Canada-Ontario Agreement Respecting Great Lakes Water Quality.

At a number of the roundtables, this lack of accountability was traced back to changes in 1987, where the Parties assumed more direct responsibility for coordination and assessment of performance under the GLWQA. By integrating the coordination, management, and accountability into the responsibilities of the Parties, and reducing the role of the IJC, accountability has become too diffuse.

Another explanation given was the lack of clarity regarding which level of government to hold accountable for making change in the Great Lakes. One participant described the situation as “confused” and stated that he feared this institutional confusion would continue into the future unless the fundamental changes are made to how the Lakes are governed.

It was felt that the answer to this problem was not a tightening of accountability by imposing additional constraints. If anything, participants felt that the complexity of the institutional structure of the GLWQA already confused accountability.

There is a need for a commitment to a list of priorities, with direct responsibility and accountability assigned, and with proper reporting and public comment. As one participant expressed, “There are no timelines, no performance measures, nothing forcing governments to do what they have committed to do.”

One participant suggested that having members of the public at the negotiating table is the most effective form of accountability. As another participant said: “The top-down approach to Great Lakes water management has been rejected.” There is a critical need now for inclusive institutions in order to effectively address Great Lakes issues.

The IJC has made recommendations regarding accountability related to the GLWQA. It has recommended that both the Canadian Parliament and United States Congress should formally endorse the agreement.

Another suggestion to strengthen accountability was to create a mechanism to bring forward citizen complaints.

Several participants expressed support for making the GLWQA and the COA legally binding on the parties, much like the Charter Annex, which will be legally binding through provincial legislation and via each states' entry into the Compact. One participant suggested that this could be done through a Great Lakes Act. As one participant explained, "A non-binding agreement works against accountability". According to another participant, the international legal framework is based on cooperation, so there is not a mechanism for enforcement. The participant went on to suggest that it is not advisable to start from scratch, however, we do need to fix and improve what we have.

For some participants, accountability might be increased through changes to customer service. One participant pointed to the Ministry of Municipal Affairs and Housing's "one-window" approach to municipal planning, suggesting that a one-window approach would be helpful for community members.

A representative from the IJC informed one roundtable that the IJC's 13th biennial report, to be released on February 7th, would focus entirely on the issue of accountability.^{xxi}

Public Forums

A speaker expressed concern over the IJC's mandate to keep the Great Lakes from being polluted. It was felt that the IJC no longer has the authority to uphold its responsibilities.

3.6.3 Institutional Structure

Roundtables

There was general consensus that the institutional structure for the Great Lakes is confusing, overly cumbersome, and has the effect of blurring the lines of accountability. At one roundtable, a participant went much further, declaring that the Great Lakes organizational chart "is not made for success". The same participant further suggested that, "It is time to say that the Canada-Ontario Agreement has failed, that it has achieved very little".

Another roundtable participant observed that the Great Lakes have been "institutionalized". A new structure is created with every new initiative, such as source water protection, and the Great Lakes Charter Annex. " We are burying ourselves in institutions. We must tackle the issue of institutions this time around".

More effective coordination amongst the various Great Lakes institutions was a recurring theme, both on the Canadian side, and binationally. Concern was expressed with the lack of coordination amongst the many environment and natural resource management programs that have significant impacts on the lakes. There is a need for coordination across government agencies that reflect the interconnections of the ecosystem. One example given was that of Brook Trout streams that are tributaries to Lake Superior. Forest Management Plans affect the stream flow and quality of the stream. The resulting erosion and sediment deposit at the bottom of streams has created sandbars so that the streams are no longer able to break through, threatening trout spawning.

One participant cautioned that before the issue of coordination is tackled, the roles and responsibilities of individual agencies on the Lakes must be clarified. A case in point: the lack of clarity over which agency, the federal or provincial government, or municipalities or conservation authorities, have jurisdiction over near shore areas. As a result, no one agency takes responsibility, and the quality of near shore areas suffers. Another reflective example given was the failure of Great Lakes institutions to find a solution to keep Asian Carp out of the lakes.

There is a general perception that the existing Great Lakes institutional structure fails to harness the public's enthusiasm for the lakes and to engage the public in tackling the problems faced by the lakes.

The IJC has recommended that the Bi-national Executive Committee be changed into a coordinating committee, where members are officially mandated to make decisions on behalf of their organisation with regard to making spending commitments and carrying out programs. The IJC has further recommended that the governance and management functions under the GLWQA and COA be separated. Participants feel that in any realignment of Great Lakes institutions, the institutions have to be focused around the IJC.

One participant recommended a third party, credible evaluation of the Great Lakes programs and governance, for instance, through a formal public inquiry, with input from experts, First Nations, and the public. This type of third party assessment would serve as a conduit to “voice public aspirations, synthesize the science, and provide guidance to governments”.

3.6.4 Leadership

Roundtables

The need for strong government leadership to protect the Great Lakes came up in each of the roundtables. The Province's leadership role in pushing forward the Great Lakes Charter Annex negotiations was recognized. There were calls for leadership in the review and renegotiation of COA and the GLWQA. Some participants have pointed to a general lack of leadership at all levels. The result has been contradictory efforts and fragmentation in the management of the Great Lakes and water files.

3.6.5 Renegotiation of Key Great Lakes Agreements

Roundtables

There was general consensus at the Roundtables that the renegotiation of COA and the review of the GLWQA presented a unique opportunity to make significant changes to the governance of the Great Lakes, to modernize and to set an action-oriented agenda.

There was enthusiasm and support for the recommendations of the IJC to remake the new GLWQA. Participants want to share their excitement over the IJC's advice by bringing it into the living rooms and dinner tables of Ontarians in the hope of reigniting a passion for the Great Lakes.

Frustration was expressed over the review of the Great Lakes Water Quality Agreement. Although there was considerable activity, some participants did not feel that there was government direction or momentum behind the review. It was felt that political engagement and commitment to the process is essential. Several participants pointed to the broader problem of a lack of senior government direction on the Canadian side of the Great Lakes. High-level direction set at the political level and communicated through senior bureaucrats is essential, and is currently lacking.

If senior governments do not show leadership on a new approach to the GLWQA, it was suggested that it may be incumbent on Great Lakes stakeholders to wage a public campaign to lay out an agenda for action that governments can embrace.

With the exception of the Great Lakes Charter Annex process, roundtable participants pointed to the fundamental flaw of provincial staff arriving at key meetings and negotiations without a clear agenda from the ministry on the approach to be taken.

Concern was expressed that Canada and Ontario will allow the COA to lapse after its expiry in March 2007^{xxii}. There was also general concern that Canada and Ontario had not done their homework in creating a vision for what is needed out of a new COA, and have failed to engage the Great Lakes community to help shape that vision, including the consideration of delivery methods.

The US Regional Collaboration Exercise was raised as an example of a government process that engaged a huge array of stakeholders and ordinary citizens. In addition to reaching consensus on a plan for future action on the Great Lakes, it also helped re-establish a Great Lakes constituency in the US. One participant observed that although there are many dedicated individuals and groups in Canada, a unified Great Lakes constituency is sadly lacking in Canada.

Another participant recommended that discussions and actions on water quality and quantity were artificially separated, and that agreements on actions should no longer be separated, but should be combined.

3.6.6 The Role of Canada in the Great Lakes Bilateral Relationship

Roundtables

At one roundtable, there was discussion over the diminishing role of Canada in the Great Lakes bilateral relationship with the United States. There was a strong feeling that the current bilateral institutional arrangement weakened Canada's status as an equal partner in this relationship.

It was explained by one participant that when the IJC had a more prominent role in the bilateral relationship as an impartial broker between the two Parties, it helped to give Canada equal standing in matters related to the Great Lakes, despite the obvious economic and political imbalance between the two countries. However, the IJC's capacity and its role in assessing the performance of the governments and in holding them accountable was severely diminished in 1987. And as a result, Canada's status as an equal partner has suffered.

In another roundtable, it was suggested that the U.S. is simply proceeding with its own Great Lakes agenda and will spend less and less attention on its relationship with Canada on managing the Great Lakes. One participant explained that we are at risk of the Great Lakes becoming two separate entities because Canada has not carried its weight or looked at practical ways to address problems. Several participants concluded that governance reform was vital to re-establish a more balanced Canada-U.S. relationship.

3.6.7 Regional Influence and Integration

Roundtables

What really makes us neighbours is the Great Lakes Basin is the water and the shared environment.

One roundtable discussion focused on a sense of 'disconnectedness' between the geographic regions of the Great Lakes and the decision making centre of power. "We need regional governance, a decentralized planning structure," suggested one participant. Another participant pointed to the need for integration of the regional information at all levels across the Great Lakes Basin to help us to see what is being done in the Basin and where there are gaps.

3.6.8 Municipal Involvement

Roundtables

An increased role for municipalities, even an equal seat at the table when Great Lakes Agreements are negotiated was discussed and generally agreed to at all roundtables. This principle is supported by the International Joint Commission's recommendations to the federal governments on the renegotiation of the Great Lakes Water Quality Agreement. A number of participants felt that control is now at the municipal level and the key changes that need to be made, need to be made locally.

One participant agreed in principle with the concept of greater municipal involvement, but cautioned, “Cities have the mandate, the authority, the responsibility, but not the resources. It is essential that appropriate funding be allocated and distributed.”

Another participant disputed whether cities did have the authority to make commitments at a bilateral negotiating table, and cautioned that Canadian mayors do not share the level of authority that US mayors have. Canadian mayors have to be more careful in their participation, given that they have to return to their community and secure the support of the majority of council before acting on any commitments.

Nevertheless, there was strong support for an increased role for cities and smaller municipalities in Great Lakes management. One participant suggested that the Federation of Canadian Municipalities might be able to play a role by helping municipalities make the types of small changes that contribute to incremental shifts toward sustainability. Municipalities have already shown such leadership in the area of climate change initiatives.

According to one municipal participant, “water is a cash register for some municipalities”. As a result those municipalities are unlikely to promote water conservation because it decreases their revenue, which they cannot afford with increasing infrastructure and maintenance costs. Without capital funding for infrastructure there is increasing pressure to generate sufficient revenues through the water rate, which discourages water conservation and efficiency programs.

3.6.9 Financial Commitment

Roundtables

There was general support for increased financial commitment to the Great Lakes from senior levels of government. The lack of funding over the last number of years has caused delays in delisting the Areas of Concern, RAP committees have been dismantled, and vital infrastructure upgrades have been slowed.

It was noted that the tendency to provide single year allocations makes multi-year planning by local authorities difficult. Delays in receiving funding also cause difficulties for implementing agencies.

A participant gave an example of their experience in the past year. The season’s RAP work was long completed before the CA received its first instalment of funding. This example illustrates the type and extent of the problem of proceeding with the restoration and delisting of the Areas of Concern. It was noted that some money will be available under the provincial source protection program, but the spending accountability framework for those funds was considered onerous, especially for small CAs.

3.6.9 Financial Commitment

program, but the spending accountability framework for those funds was considered onerous, especially for small CAs.

At the macro-level, funding to the IJC was also identified as a problem, the IJC needs to ask both federal governments for funding. A revolving funding mechanism is needed for the IJC.

One participant suggested that generating a Great Lakes Trust Fund from water use be considered as a method to cover some costs of maintaining and cleaning up the lakes.

3.6.10 Public Pressure on Governments

Roundtables

Frustration was expressed over the lack of political commitment to the Great Lakes. Some went further and referred to ‘political interference’. There was an acknowledgement that political commitment is essential. One participant said, “Don’t give politicians the power to run the show. Engage the public to help them get what they want. Wage a public campaign.”

3.6.11 First Nations

Roundtables

One roundtable discussion recognized that First Nations have governance authority and unique constitutional rights. First Nations have to be included and engaged as governments with respect to Great Lakes agreements.

There was some discussion over the lack of clarity over rules on First Nation reserves. It was suggested that while First Nation Councils have a central role to play, communities should not rely on them exclusively. There is a need, and there is some movement toward, creating and engaging citizen groups on First Nation reserves. This should be supported further.

Some participants noted that they would also like to see more inclusive institutions on reserves. They also pointed out that the government must be aware of the differences between First Nations being able to participate as part of the community versus First Nations participation in institutional structures where they have governance authority.

A participant pointed out that several First Nations have taken legal action with respect to the beds of the Great Lakes. The provinces assert their jurisdiction and make First Nations petition for rights, but the provinces have not assumed responsibility in international forums, and they have failed to adequately defend the waters of the Great Lakes.

One roundtable representative reminded the roundtable of a call several years ago for First Nations representation on the International Joint Commission. This recommendation still has merit.

4. Conclusion

Collectively, these comments and concerns point to an emerging vision for the Great Lakes, one that is based on the recognition of the multiple, cumulative and changing stresses on the Lakes, one that is based on government commitment, accountability and sufficient financial resources, one that promotes citizen engagement and education, and ultimately one that is based on everyone- individuals, businesses, municipalities, senior governments and First Nations- doing their part to protect an awesome global asset for which we have responsibility, the Great Lakes.

Appendix 1 Roundtable Participants

Kingston

Participants

Dr. Linda Campbell	Queen's University
Verna Cooke	Polaris Institute
Leonore Foster	city councillor, Pittsburgh district
Barry Jones	Implementation manager, Bay of Quinte RAP
Jim Kelleher	Lower Trent Conservation Authority
	Cornwall and District Environment Committee and Public
	Advisory Committee of the St. Lawrence Remedial
	Action
Elaine Kennedy	Quinte Watershed Cleanup
Manfred Koechlin	City of Kingston
Paul MacLatchy	Academic, Japan
Junichi Nagamine	
Mayor Harvey	
Rosen	Mayor of Kingston
Mara Shaw	Cataraqui Conservation Authority
Ralph Shaw	Kingston Yacht Club
Beth Sills	City of Kingston
Joel Weiner	International Joint Commission
Peter White	Ontario Stone, Sand and Gravel Association

Government observers

Conrad DeBarros	MOE
Duncan Boyd	MOE
Alister Mathers	MNR
Jennifer McKay	EC
Rob Messervey	MNR
Andrew Morley	MOE
Bev Ritchie	MNR

Roundtable Participants

Windsor

Participants

Mary-Lynn Becker	Canadian Consulate in Detroit
Matthew Child	Essex Region Conservation Authority
Dean Clevett	Windsor and District Chamber of Commerce, BASF
Nicole Convey	Windsor and Essex County Development Commission
Derek Coronado,	Citizen's Environmental Alliance
Melanie Coulter	Detroit River RAP
David Cree	Windsor Port Authority
Jim Drummond	Detroit River Canadian Cleanup Committee
John Gannon	IJC
Jim Hassan	Wallaceburg Advisory Team for a Cleaner Habitat
Doug Haffner	Great Lakes Institute for Environmental Research
David McGregor	Brighton Beach Power
Ian Naisbitt	Little River Enhancement Group
Phil Roberts	Essex County Field Naturalists
Betty Semeniuk	Ontario Federation of Agriculture
Larry Silani	Town of Lasalle planning director
David Ullrich	Great Lakes St. Lawrence Cities Initiative
Karen Vigmostad	International Joint Commission
<u>William Pellerin</u>	City of Windsor

Government

Observers

Ted Briggs	
	MOE
John Cooper	MNR
Carla Torchia	EC

Roundtable Participants

Hamilton

Participants

Marilyn Baxter	Hamilton Port Authority
Valerie Cromie	Niagara River RAP
Dean Edwardson	Sarnia - Lambton Environmental Association
Rolanda J. Elijah	Association of Iroquois and Allied Indians
Paul Emerson	Grand River Conservation Authority
John Hall	Hamilton Harbour RAP
Jim Harnum	Public Works, City of Hamilton
Jim Hudson	Bay Area Restoration Council
John Jackson	Great Lakes United
Allan Jones	consultant
Nancy Kodousek	Region of Waterloo
Gail Krantzberg	McMaster University
Craig Mather	consultant
Brian McCarry	McMaster University
Thelma McGillivray	Provincial Council of Women
Sarodha Rajkumar	Dofasco Inc
Anne Redish	Hamilton Harbour RAP
Keith Robson	Hamilton Port Authority
Andy Sebestyn	Stelco
Mark Sproule-Jones	McMaster University
Derek Stack	Great Lakes United
Scott Stewart	City of Hamilton
Cindy Toth	Town of Oakville
David Ullrich	Great Lakes St. Lawrence Cities Initiative
Charlie Worte	Conservation Ontario
Christine Zimmer	Credit Valley CA

Government

Observers

Jim Bowlby	MNR
Duncan Boyd	MOE
Danielle Dumoulin	MNR
Rob Hyde	Great Lakes Environment Office (EC or MOE?)
Rachel Melzer	Great Lakes, MOE
Ralph Moulton	EC
Carol Salisbury	MOE
Mary-Ellen Scanlon	MOE

Roundtable Participants

Thunder Bay

Participants

Iain Angus	Friends of Chippewa Park, Lakehead Region Conservation Authority, Thunder Bay City Councillor
Brian Christie	Lake Superior Conservancy and Watershed Council
Ross Chuchman	City of Thunder Bay
Eric Cline	Lakehead University
Joel Cooper	citizen
Mary Jo Cullen	Concerned Citizens for Michipicoten Bay
Lesley Curtyoys	Lakehead University
Julian Holenstein	City of Thunder Bay
Bruce Hyer	Environment North, eco-tours business person
Damien Lee	Fort William First Nation
Gary McGuffin	Lake Superior Conservancy and Watershed Council, photographer, author
David Nuttall	citizen
Frank Roen	Environment North, Rural Wildlife Association
Graham Saunders	President Environment North
Tim Solomon	Fort William First Nation
Steve Suke	Lakehead Region Conservation Authority
Jane Todd	OPG, Thunder Bay and Atikokan
Gord Van Fleet	Confederation College, Environment North
Chris Walton	Bowater Forest Products

Government

Observers

Ken Cullis	MNR
Patrick Morash	MOE
Martin Nantel	EC
Bill Ringham	MNR
Leona Tarini	MNR

Roundtable Participants

Toronto

Participants

Vicki Barron	WATERFRONT REGENERATION TRUST
Dave Brown	Anglers and Hunters of Ontario
Wayne Caston	Nestle Waters Canada
Susan Chiblow	Chiefs of Ontario
Dick Corfe	St. Lawrence. Seaway Management Corporation
Michael D'Andrea	City of Toronto
Brian Denny	Toronto Region Conservation Authority
Fred Fleischer	Consultant
Bonnie Fox	Conservation Ontario
Adele Freeman	Toronto Region Conservation Authority
Norm Huebel	Canadian Chemical Producers Association
Colin Isaacs	Consultant
Gail Krantzberg	McMaster University
Michael Layton	Environmental Defense Canada
Tim Lotimer	Georgian Bay Association
Brenda Lucas	Gordon Foundation
John Mills	Pelmorex inc., The Weather Channel
Paul Muldoon	Environmental Review Tribunal
Mary Muter	Georgian Bay Association
Anna Pace	City of Toronto
Pat Patton	Nuclear Waste Management Organization
Wayne Stiver	Ontario Waterworks Association
David Ullrich	Great Lakes St. Lawrence Cities Initiative
Joel Weiner	International Joint Commission
Rob Wright	Sierra Legal Defence Fund

Government

Observers

Sharon Bailey	MOE
Scott Duff	OMAF
Susan Humphries	EC
Rachel Melzer	MOE
Ron Messervey	MNR
Bruce Morrison	MNR
Carolyn O'Neil	MOE
Richard Raeburn-Gibson	MOE
Bev Ritchie	MNR
Kevin Wilson	MNR
Selina Young	EC

End Notes

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