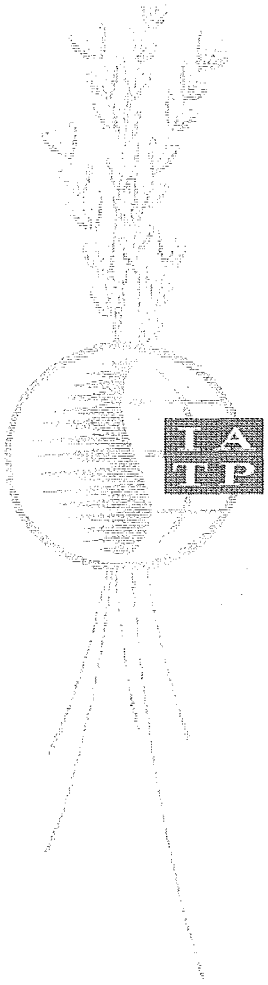
The Relationship of Agriculture, Trade and the Environment to Surface and Ground Water Management in the Great Lakes Basin



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Water Use and Ecosystem Restoration

An Agenda for the Great Lakes and St. Lawrence River Basin

Summary

Water defines the world for people who live in the Great Lakes and St. Lawrence River basin.

Water is the economic, recreational, and spiritual basis of human society here. Water is the foundation of the region's fish, plant, and wildlife communities.

But the basin water system is in danger. Climate change, diversion and export proposals, and industrial, agricultural, and municipal misuse all threaten the source of our culture, our well-being, and the well-being of the living things around us.

Fortunately, news of threats to the lakes has galvanized both public opinion and government interest in better protecting the region's waters. Basin political leaders have begun to act. The U.S. and Canadian federal governments asked the International Joint Commission to write a comprehensive report on protecting Great Lakes waters, which was delivered in March 2000. Ontario, Québec, and Minnesota are developing strategies for managing water use. The Great Lakes provinces and states have been meeting and will soon put forward a collective plan to reform basin water use practices.

The public has a crucial role to play in this process: We must insist that new solutions for sustaining water for future generations *fully* protect *and* restore the already heavily damaged basin water system. To do this, reform projects must address *all* the many changes people cause in the natural state of water, from exporting it for drinking to draining wetlands for development and damming streams for electricity.

This document recommends a comprehensive set of reforms based on specific environmental protection and restoration objectives. These recommendations—environmental "must haves" for any reform project to succeed—can distinguish proposed approaches that lead to sustainable use of Great Lakes waters from those that push the region further down the spiral of non-sustainable water use.

In brief, these recommendations are:

1. The federal, tribal, state and provincial governments should place a moratorium on new or increased water uses, diversions, and other changes to the Great Lakes and St. Lawrence River water system, until a comprehensive conservation and ecosystem restoration strategy has been developed and implemented in legislation and permitting
2. The goal of the strategy must be to protect *and* affirmatively restore the basin water system, not just fend off additional harm
3. A central objective of the strategy must be substantial reductions in basin water consumption and use

4. The comprehensive conservation and restoration strategy must:
   - Address *all* changes to the Great Lakes and St. Lawrence River water system. Managing solely for how much water is used while neglecting, for example, how and where it moves, will not protect water for the benefit of all users, including nonhuman users
   - Provide specific, binational protection and restoration goals for the basin water system
   - Include a basin-wide standard to be applied to all decisions on proposed new water uses or alterations of the water system
   - Be conservation-based, that is, based on protecting and restoring the basin water system as opposed to accommodating and mediating the wasteful needs of use sectors
   - Set conservation targets by use sectors with timelines
   - Take a watershed approach to system protection and restoration by encouraging living within the means of individual watersheds, defined as no larger than major river watersheds
   - Prohibit new diversions of water between watersheds
   - Embody the precautionary principle: use conservative approaches in the absence of perfect information about the needs of the water system
5. The public must have full access to the process for developing and implementing both the basinwide conservation and restoration strategy and the standard for making decisions on proposed water uses and alterations
6. All water use and alteration decisions must be subject to challenge by citizens
7. The process for developing and implementing the strategy and standard must be guided by the region's state, provincial and tribal governments, but it must also respect and accommodate the legitimate role of the federal governments: overseeing the national and international interest in protecting and restoring the basin water system
8. The federal governments must assure the availability of a constitutionally valid mechanism that enables vigorous international, tribal, provincial and state cooperation
9. Should state, local and tribal governments fail to create a strategy, the federal governments should step in to assure that a strategy is created
10. The onus must rest with those proposing new or increased water uses or alterations to the water system to show that they are consistent with the strategy and standard
11. Information on the connection between the basin water system and the life it supports should be continuously and aggressively gathered and assimilated into a publicly accessible, binational water information base that is understandable and useful to lay citizens
12. Regional climate change should be aggressively researched and climate change data evaluated with water data to routinely review the estimated impacts of climate change on basin water quantities and movement
13. The effects of all approved water uses must be monitored for periodic evaluation of the uses against the standard and strategy, and to inform future water use decisions. This monitoring information should be included in the binational water information base

14. Water use approvals must be rescindable if evidence later arises that they are no longer, or never were, consistent with the strategy and standard

15. Every individual's right to water for basic human needs—drinking, cooking, and bathing—must be guaranteed

Introduction

In the Great Lakes region and throughout the globe, the quantity and movement of available water have fundamental impacts on the well-being of plant, fish, wildlife and human communities. When the amount and movement of water in a region is altered, the life that depends on that water is changed, sometimes in ways that threaten its very existence.

Although the Great Lakes and the St. Lawrence River seem vast and powerful, they are in delicate balance with the climate and watersheds that support them. Unfortunately, both climate and watershed functioning are undergoing significant alteration by human beings, with much more such alteration to come if the region does not reform its water use system.

Increasingly reliable projections of climate change effects on the Great Lakes indicate a possible two-foot drop in average water levels within thirty years. U.S. national population and economic trends point to long-term water shortages in the South and Southwest. With 20 percent of the world's fresh water and 95 percent of North America's fresh water, in the long term the Great Lakes region is a predictable target for slaking continental and global thirsts.

The unceasing rise in world population and per-capita water consumption poses serious threats to both the human and nonhuman life that depends on fresh water. By 2025, up to two-thirds of the world's population will face water shortages and several observers have predicted that water will be a major factor in international politics by mid-century. Waters the world over are already being diverted, exported and shipped to thirsty areas, sometimes with disastrous consequences for local ecologies and people. A large world commercial water market could be realized soon. A company is shipping water out of Norway by towing it in large fabric bags across the ocean to Cyprus. A Canadian company wishes to export water from a Newfoundland lake to the Middle East by tanker. Another Canadian company is nearing completion of plans to ship Alaskan water to China. In October 1999 the Sunbelt Corporation of California filed a $10.5 billion claim under the North American Free Trade Agreement over a failed plan to ship water from British Columbia to California.

Trade in water

In 1998 an obscure private company sought, and the province of Ontario granted and then cancelled, a permit to export Lake Superior water to Asia. The abortive proposal was never financially viable, but it pointed up a trend: private water markets may eventually play a role in future water politics. Water services companies have grown rapidly in the last five years, raising large amounts of capital, acquiring firms in related industries, merging into powerful conglomerates and attaining multinational status. International trade agreements created or updated during the 1990s will facilitate the growth of world trade in water, because they define water as a commodity, may apply to water in its natural state, and have much stronger enforcement provisions than previous agreements. Legal analyses assessing these new trade pacts have suggested that the Great Lakes and St. Lawrence River region is vulnerable to proposals to divert and export water out of the basin in large quantities.

Misuse of water

Meanwhile, over the decades, the many governments and private institutions and citizens of the Great Lakes basin have been misusing water because it is so abundant. The region's agricultural producers employ wasteful irrigation practices. The region's towns, cities, counties, and regional townships often fail to repair substantially leaking drinking water supply systems. The region's industries commonly fail to even consider techniques for reducing their often large water use requirements. The region's governments do not vigorously promote conservation by institutional and individual users. Sprawling development engenders ever wilder schemes for moving water.

In general, the region's governments have not sufficiently carried out their responsibilities for properly caring for water, from common law "public trust" responsibilities to treaty requirements for protecting for tribal waters.

Given the growing global water crisis, we in the Great Lakes and St. Lawrence River region must now address our own misuse of water. We have already made many changes in the amount and movement of basin waters without fully understanding the wide range of effects these changes will cause. We have dammed and redirected streams and rivers, paved over groundwater recharge areas, drained wetlands, extracted and contaminated groundwater, tried to control lake levels, and are consuming water at twice the rates of other industrialized nations.

The damage we cause

In the medium term, damage to the basin ecosystem is more likely to occur from the cumulative effect of our many smaller water uses and alterations of flows than from large-scale diversions or other water removals. The numerous cumulative impacts of these activities include:

- Drying out or altering water movement in streams and wetlands so that habitat is effectively destroyed for many species of plant and wildlife
- Lowering groundwater levels, causing dry wells for farmers and communities and causing poorly understood effects on surface waters and the biotic communities they support
- Accelerating runoff and soil erosion and therefore the need for expensive and disruptive dredging to keep commercial and recreational activities viable
- Disrupting the cultures of water-centred communities, especially tribal communities
- Adding to, concentrating and re-releasing contaminants in water

In the future, human activities may result in even greater changes in Great Lakes and St. Lawrence River water levels and flows, and consequently greater threats to the well-being of basin life. These threats include:

- Human-induced climate change, which is predicted to result in a substantial drop of up to two feet, or more than half a meter, in the average water levels in the Great Lakes and St. Lawrence River basin
- Sprawling basin and near-basin housing and commercial development that creates inefficient demands for water, disrupts natural water flows, and induces searches for water far beyond community boundaries
- Basin agriculture, whose practices lose 70 percent or more of irrigation water to evaporation

- Companies that envision selling water or facilitating the movement of water from the Great Lakes and St. Lawrence River basin to the Mississippi River basin, the south and southwestern United States, and the Middle East
- Severe water shortages in other parts of the continent and the world, which in the long term may result not only in export schemes but also in an influx of people and industry to the region because of its abundant water supplies. Unless substantial changes are made in the way basin communities control development, this population shift will result in substantially increased stresses on basin waters

What needs to be done

We do not have adequate regional mechanisms to prevent and correct the problems caused by these activities. Basin jurisdictional coordination is inadequate and decisions are made without taking into account their cumulative and long-term impact on all basin life. Our actions are not guided by an overarching strategy or plan. We do not have an understanding and ethic that recognises the value of conserving and restoring the waters of the Great Lakes and St. Lawrence River basin.

In its February 2000 report, *Protecting the Water of the Great Lakes*, the International Joint Commission notes that basin governments "should develop, with full public involvement and in an open process, the standards and the procedures" for considering water removals from the basin and major new or increased consumptive uses within the basin. The commission also says that the governments "should not authorize or permit any new removals and should exercise caution with respect to major new or increased consumptive use until such standards have been promulgated."

Our Purpose

The current state of the waters of the Great Lakes and the St. Lawrence River basin is alarming. The lowest continuing water levels in thirty years, ongoing wasteful water use, and harmful alterations to natural flows all point to the need for a more effective regime to guide human water activities.

The purpose of this paper is to outline guiding principles for such a regime, and to help develop criteria for making decisions that could affect water quantity and movement. Our hope is that from this paper, and from discussions with U.S. and Canadian policy-makers addressing this challenge, our region will create a framework for protecting and restoring the waters for the benefit of people, plants, fish, wildlife, unique eco-communities and the ecosystem as a whole for generations to come. We see this as an opportunity to:

- Protect the Great Lakes and St. Lawrence River ecosystem from further disruption
- Improve water use so that natural flows in the Great Lakes and St. Lawrence River basin are restored

Based on these imperatives, it is clear that no form of human use or alteration of the natural water system should go unexamined. Therefore the principles and criteria we propose should be applied to:

- Both surface and ground waters
- All human activities that use, or change the movement of, the waters in the Great Lakes and St. Lawrence River basin
- All people and institutions that carry out such activities

Guiding Axioms

We assume three fundamental facts as the basis for our thinking:

- *All water is valuable.* Humans and all living things in the ecosystem need water to survive and they use water repeatedly. Water flowing from the ground or major rivers into the open lakes and out the St. Lawrence River is never going to waste. Removal of any water or disruption of its natural flow in any given place will ultimately affect species that depend on that water and its natural movement.
- *The waters of the Great Lakes and St. Lawrence River basin are finite.* Rain and snow, surface water runoff, and groundwater inflows renew only about 1 percent of the water in the Great Lakes each year. Scientists warn that this renewal rate may decline due to climate change.
- *The waters of the Great Lakes and St. Lawrence River basin underpin a single ecosystem.* Managing the region's waters comprehensively, according to the principles outlined in this document, is essential to preserving basin waters for the material and spiritual sustenance of future generations, and for the survival of the region's plants, fish, wildlife, and unique assemblages of life found in eco-communities such as coastal marshes.

Water Use Principles and Criteria

A. Human communities should live within the means of their watersheds

A central basis of water use management, especially on the state and provincial level, should be the principle that communities must live within the natural means of their local watersheds. The Great Lakes and St. Lawrence River basin is composed of a number of smaller watersheds. A basin-wide management regime must take into account the cumulative impact of water use within a local watershed as well as the larger issue of the non-natural movement of water from one local watershed to another, even if both watersheds lie within the basin boundaries.

As part of the principle of living within the means of one's watershed, communities should not degrade the functioning of their watersheds, that is, the way water enters, moves around, and leaves the watershed.

Most water uses and alterations of the water system are a result of development. Communities located in watersheds that are already using water unsustainably must reduce water use to sustainable levels before permitting further development. Communities located in watersheds where development is possible must plan for minimal impact on the workings of the water system. Industrial, agricultural and residential development should not be allowed to expand so that they require more water than is naturally available within the watershed, or to the point that they interfere with other use of the water, including use by plants, animals and unique assemblages of living things.

Governments should outline watershed boundaries and create water use management institutions to be implemented on a watershed and basin-wide basis. Watersheds should be as small as hydrologically practical, and no larger than major rivers. Overlap and linkages between various ground and surface watersheds should be clearly defined.

Decisions about proposals to remove water or alter its flow should be made in accordance with their scale. For example, the acceptability of a proposed use of water from a small stream should be judged according to the impact the use would have on that stream's watershed.

To implement the principle of living within the means of one's watershed, governments should prohibit non-natural transfers of water between watersheds. In those cases where non-natural interbasin transfers of water now occur, governments should phase out those transfers.

B. The precautionary principle should guide water use decisions and actions

A new management approach must recognize that our understanding of the complexity of the Great Lakes and St. Lawrence River ecosystem is limited and will undoubtedly evolve. Proposed water use and water system alterations will inevitably have unknown impacts. Therefore we should use the precautionary principle—in the absence of certain knowledge, we should have a strong bias toward protection.

The assumption of the precautionary principle in water use management is that all water is used many times by living things in the ecosystem. Even if not readily apparent, using water or altering the water system will most likely harm some living thing. A precautionary approach implies a number of water management policies:

- No alteration of the basin water system should take place unless it is reversible. This means that we must ask ourselves: Can we repair any damage and return to previous conditions if we later discover that an action has unpredicted consequences?
- Any water use must be interruptible. That is, all permitting decisions must be renewed periodically. No permits should be permanent, and if new evidence of ecosystem damage comes to light, it must be possible to immediately reduce or end permitted water uses
- Water-use and alteration actions should be approved only on the basis of "reverse onus": those wishing to take an action should be required to provide information to the public and decision-makers upon which to evaluate its impact. This information should include assessments of potential harm to the ecosystem and how the action can be reversed if unexpected damage occurs
- Cumulative effects of water uses and changes in the water system should be assessed and be the basis upon which decisions are made
- The bias in decision-making should be toward leaving water in the ecosystem in an undisrupted condition, and taking care of human needs by increased conservation, efficiency and other means

C. Restoration and protection of the ecosystem must be the outcome of a basinwide water use management strategy

Any strategy decided on by the state, provincial and tribal governments for managing basin water use must provide specific binational protection and restoration goals for the Great Lakes and St. Lawrence River water system. The strategy must embody a commitment to the public and include the means for meeting these goals.

Permitted alterations of the water system's flow or quantity must be consistent with the strategy. They should be approved only if they protect or restore the integrity of the watershed in which they are proposed. A definition of integrity should include the system's natural functions, such as aquifer recharge, natural filtration and cleansing, base flow into rivers, meandering of rivers, and natural fluctuations of water levels.

In relatively pristine areas, human actions should not cause negative changes in the functioning of the water system, that is, in the quantity and flow of ground and surface waters. In degraded areas, any withdrawals or alterations in the system should contribute to a program of restoration of original functioning.

Opportunities for protecting and restoring the integrity of water systems include:

- Protecting and restoring critical or sensitive areas, such as wetlands, areas buffering lakes and streams, areas essential to support the full range of Great Lakes / St. Lawrence River biodiversity including rare species and representative community types, and areas essential for groundwater and surface water recharge
- Reducing and relocating surfaces that are unable to absorb water
- Improving stormwater management to reduce runoff and ensure that it is released in ways that are not disruptive of normal functioning of the water system
- Removing dams throughout the Great Lakes and St. Lawrence River basin wherever physically and ecologically appropriate. Dam removals are often a large step forward in restoring the functioning of the basin water system
- Restoring water quality by preventing further contamination and cleaning up existing contaminated sites

D. Water conservation should be the primary method for meeting future human needs

Water conservation should increase dramatically. The rate of human water use should be substantially reduced from its current levels. Targets and timetables for reduction in water use should be set for each jurisdiction and use sector. Water conservation must be embraced and applied to all users, especially those that withdraw the most water. Three of the largest water consumption categories—industry, agriculture, and public water supply—must meet rigorous reduction targets. Industry can be motivated to reduce water use by removing pricing plans that charge lower rates to high-volume users. In many cases, industry can also conserve water through reuse, rather than continuous withdrawal and discharge. Efficiency in agriculture can be achieved through wise irrigation practices, like drip irrigation, rather than high-evaporation spraying. Public water supply can be made more efficient by fixing leaking systems, metering all water use, promoting use of water conservation devices, and pricing water no less than it costs to provide it, subject to guarantees that all people will have access to water for the basic human needs of drinking, cooking, and bathing.

States, provinces, and tribes should encourage a continuous reduction in net water use on a watershed-by-watershed basis. New uses should be accommodated by more than commensurate water use reductions within a watershed. If the watershed is eventually shown to be restored, no net increases in water consumption should be allowed.

E. Equitable access to water should be ensured

Basin waters are a basic public trust. Clean potable drinking water and a healthy ecosystem are basic human rights. Water must be available to everyone but it belongs to no one.

- Metering and full-cost pricing should be a priority for all sectors, but no one should be denied access to water for the basic human needs of drinking, cooking, and bathing

- Users who profit from consumptive uses of water or alteration of the water system should be charged a fee for the privilege. These fees should never establish a legal right to alter the system or maintain an alteration of the system. These funds should be invested exclusively in water management activities, such as monitoring, restoration, enforcement, data collection, and research
- Governments should ensure that public and local control is maintained over water provision and treatment systems
- All basin states, provinces, tribes and municipalities should develop drought policies that prioritize uses and practices in times of water shortage
- Humanitarian aid to water-short regions of the earth should not be provided in the form of physical water, but in the form of technology, professional expertise, and conservation planning assistance such as reforestation and other local water protection techniques
- Canada and the United States should fund extensive research into desalination technology, and should assist in the establishment of an economically viable world desalination industry.

F. All decisions must be made in a way that is open and accessible to the public

How and by whom decisions are made about using water or altering the water system are critical to proper management of the Great Lakes and St. Lawrence River ecosystem.

The full range of water-related decision-making processes must be open and subject to challenge by citizens. Such decisions include the development of strategies, policies, and standards as well as specific proposals to use water or alter the water system.

All basin citizens and users of the system, including those who speak for fish and wildlife, should be notified of all water-related decision-making plans, and have their views solicited and incorporated into final decisions. The permitting process must allow citizens to appeal decisions and sue to alter or reverse a permit decision after the fact if the permitted activity is inconsistent with government ecosystem protection standards or causes unanticipated damage.

G. All levels of basin government must participate and work cooperatively in developing and implementing water use strategies and standards

Since the Great Lakes and St. Lawrence River basin is one ecosystem, it is essential that all levels of the region's government work in cooperation. Water use management strategy, standards, information-gathering, and research should be conceived and carried out either collectively or cooperatively.

Given their disparate jurisdictions and resources, the different levels of government should take the lead in different aspects of basin water use management.

The state, provincial, and tribal governments

Constitutionally and traditionally, state, provincial, and tribal governments in both the United States and Canada have the lead responsibility for decisions on use and alteration of the water of the Great Lakes and St. Lawrence River system.

The states and provinces should fully exercise their public trust responsibilities to protect and restore the full functioning of the Great Lakes and St. Lawrence River water system.

Accordingly, they should take the lead in crafting a collective strategy for managing basin water use and changes to the water system that is based on protecting the basin's waters. They should also design the standards and mechanisms that will implement this strategy.

These mechanisms should include institutionalized relationships with nongovernmental organizations, such as Waterkeeper organizations, that have assumed formal or informal stewardship of regional water bodies and water systems.

The federal governments

The federal governments are responsible for protection of transboundary waters and for protecting those aspects of domestic waters that involve national and international interests.

Therefore, rooted solely in the national responsibility to protect internationally shared waters, the federal governments should:

- Take the lead role in assuring the availability of a constitutionally valid mechanism that allows international cooperation to protect Great Lakes and St. Lawrence River waters
- Partner with state, provincial and tribal governments in the development of a basin water use management strategy that is ecologically protective.
- Provide a backstop of protection for the region's waters-dependent ecosystems, rooted solely in the national responsibility to protect shared international waters. Such backstop roles could include assuring that some form of ecosystem protection strategy guides regional water use should regional governments fail to create a strategy, or having the power to veto but not approve certain proposed out-of-basin diversions
- Work to remove ambiguous language from trade agreements regarding natural waters

Local and municipal governments

With the powers delegated to them by the states and provinces, local and municipal governments traditionally take the lead in planning development, permitting specific water use practices, and constructing and maintaining water infrastructure. Therefore, local and municipal governments should take the lead in restricting development projects to available water supplies, and in developing and implementing water conservation programs. Local government should also solicit the input of local citizen activists, such as those involved in the Remedial Action Plan and Zones d'Intervention Prioritaire processes, since they often have extensive knowledge of the effect of human tampering with the water system.

Because of their critical role, local and municipal government must be fully involved in the development of the basinwide water conservation strategy.

Intergovernmental relations

Since only a collective process will successfully protect an ecosystem that spans so many jurisdictions and sovereignties, each level of government with a stake in the ecosystem should have its proper voice in managing the shared waters of the Great Lakes and the St. Lawrence River basin:

- Tribal governments should be included in deliberations by state and provincial governments on a strategy for ecologically protective basin water use management
- The International Joint Commission is the ecosystem's most experienced and effective binational institution. The strategy should request that the commission:
  - create specific, binational protection and restoration goals for the water system
  - serve in an advisory role to the governments for the creation of water use management standards
  - have a standing reference to review the progress of the strategy every ten years
  - serve in an advisory role to the federal governments on the creation of a constitutionally valid binational mechanism for basin water use management
  - play a formal role in any institutional arrangements called for in the strategy
- The standards and mechanisms agreed to for implementing the strategy should be binding on its signatories. Fifteen years after its signing, the non-binding Great Lakes Charter has, for the most part, not been implemented
- The governments agree on a dispute resolution process, perhaps overseen by the International Joint Commission, to address disagreements between federal, tribal, provincial, or state governments over implementation of the collective standards to which they have agreed
- The strategy should include strong mechanisms for assuring that all basin governments act cooperatively in water use management affairs. Such mechanisms include creation of shared institutions and requirements for notification, hearings, and consent
- Any proposal for a new or increased removal of water from the Great Lakes and St. Lawrence River basin should require notification and approval of all federal, provincial, state, and tribal governments in the basin. The basis for approval or denial of such a proposal should lie in the overarching principles and standards for ecologically based water use management created by the basin's governments
- Any proposal for a significant new or expanded consumptive use or alteration of flows within the Great Lakes and St. Lawrence River basin should require notification to the public and formal consideration of comments from basin citizens and all basin federal, provincial, state, and tribal governments
- The governments should agree on a formal dispute resolution process to which federal, tribal, provincial, or state governments can appeal if they are dissatisfied with the decision by another jurisdiction regarding a significant proposed water action
- The relevant deliberations and communications of jurisdictions proposing removals or changes to the water system, and of appeal or dispute resolution bodies considering decisions on such proposals, should be fully open to receive the scrutiny and input of the basin public and all interested basin governments

H. Water use strategy and programmes should be enforceable

For the management regime envisioned in this document to be effective, it must be backed by binding and enforceable laws. Laws adopted in the states and provinces must carry penalties for noncompliance. Citizens should have the right to file suit to compel government action, when

governments fail to enforce the laws. To the extent that the public trust doctrine or other long-standing regional legal principles apply, they must be respected.

I. Water use strategy and programmes should be international in character

The ecosystem respects no political boundaries, though it suffers from them. Canada and the United States must collaborate vigorously to ensure effect protection of the shared ecosystem of the Great Lakes and St. Lawrence River.

Nearly a hundred years of Great Lakes water management under the Boundary Waters Treaty of 1909 suggests that the treaty could be updated or that a new treaty between the United States and Canada could be created to ensure that water use management decisions in the Great Lakes region are made in a manner that is legally binding and in the best interests of both countries and the ecosystem they share. An amendment to the 1909 treaty or a new treaty is needed for several reasons, including:

- Water bodies that do not fall directly on the U.S.-Canada border are not currently covered by the Boundary Waters Treaty. For example, Lake Michigan is wholly within the United States and therefore does not have treaty protection, despite that fact that Lakes Michigan and Huron form a single lake hydrologically
- Most of the criteria for making water decisions under the existing treaty are grounded in what is best for navigation and the generation of hydroelectric power. Ecological and biological considerations are an afterthought
- The treaty does not include the tribes, which are sovereign nations
- The treaty fails to require interjurisdictional consultation among the provinces, states, tribes, and other affected parties
- The dispute resolution provisions of the treaty have never been used in disputes over water in the basin

J. Decisions about water uses require sound data collection and scientific research

Policymakers and the public must have reliable information on which to base conservation programs and decisions to alter the Great Lakes and St. Lawrence River system, and with which to evaluate past decisions. Therefore, all basin governments should collect extensive data on the sources and extent of human use and consumption of water and on ground and surface water quantities and flows. This data should be collected in a uniform manner and on a watershed-by-watershed basis.

Governments should fund extensive studies of:

- Detailed mapping of basin aquifers, including volume and locales of springs or groundwater contribution to surface waters, and of ground and surface recharge and runoff zones
- The functioning of the Great Lakes and St. Lawrence River water systems
- The functioning of water in the basin's ecological communities, particularly for the region's unique assemblages of life in such places as coastal marshes
- Linkage between the region's permitting and other water use databases with public and private databases describing the region's ecological communities
- The impact of climate change on regional precipitation, basin stream flow, and lake and land evaporation and transpiration

- Methods for determining what quantity of water use and consumption is sustainable for a given watershed
- Agricultural and energy-related water uses, and ways to reduce their quantity

Proposals by government or the private sector to use water, renew water use permits, alter the water system, or renew permits for such alterations should be accompanied by extensive, user-supplied studies demonstrating compliance with the standards applicable to the proposed use. Such proposals should also contain commitments for user-funded, ongoing monitoring of the ecosystem impact of permitted alterations or uses.

All such studies and monitoring data should be publicly accessible in a manner that is understandable and useful to lay citizens. This water information should be made publicly available as soon as possible but no later than six months after the end of relevant reporting years. Lack of data should not delay implementation of conservation-based decisions, especially in the short term.

K. Education must be a cornerstone of Great Lakes water use management

Students and adults in the region need to learn about the value of water, the critical need for its conservation, its role in the history and culture of the Great Lakes region, its importance as a scarce commodity and a finite resource that is not primarily either a commodity or resource, and its central role in supporting the full range of native biodiversity and community types.

Funding must be provided to support this kind of education in schools and the media.

Next Steps

The Canadian, United States, tribal, provincial, and state governments should impose an immediate moratorium on all

- New or increased diversions into or out of the Great Lakes and St. Lawrence River basin
- New or expanded uses, diversions, or other changes to the water system within the basin.

until a basin-wide strategy and implementation tools—including enforceable standards and water conservation plans, with targets for each type of user—have been developed and put into legislation and permitting.

December 20, 2001

CANADA PASSES LEGISLATION TO PROTECT GREAT LAKES FROM BULK WATER REMOVALS
http://webapps.dfait-maeci.gc.ca/minpub/Publication.asp?FileSpec=/Min_Pub_Docs/104809.htm
(Note: this URL may wrap on more than one line in your email message. To view the web site, be sure the cut/paste the entire address into your web browser).

John Manley, Minister of Foreign Affairs, today announced that amendments to the International Boundary Waters Treaty Act (IBWTA) have been passed into law. The amendments will prohibit the bulk removal of water from Canadian boundary waters, including the Great Lakes.

"In February 1999 we announced that we would prohibit bulk water removal from boundary waters under federal law and now we have achieved that goal," said Minister Manley. "This will ensure that this critical freshwater resource is protected for future generations."

The prohibition on removals will apply principally to the Great Lakes and other boundary waters, such as the international sections of the St. Lawrence River and Lake of the Woods in Ontario and the St. Croix and Upper St. John rivers in New Brunswick. Separate from the prohibition, the amendments adopted yesterday will also set in place a licensing regime for boundary waters projects such as dams, obstructions or other works.

Environment Minister David Anderson said, "Prohibiting the bulk removal of this vital natural resource protects the ecosystems and communities that depend upon a sustainable supply of water."

The passage of the amendments to the IBWTA is the last step in a three-part strategy to prohibit bulk water removals from all Canadian water basins, announced in February 1999. Last year, the International Joint Commission (IJC), at the request of Canada and the United States, completed a study and released a report that concluded that the ecological integrity of the Great Lakes needs protection. The IBWTA amendments are consistent with the IJC's conclusions and recommendations. In addition, the Minister of the Environment has been working with the provinces and territories to ensure that all of Canada's freshwater resources are protected. All provinces have already put in place or are developing legislation or regulations that accomplish this goal.

Canada's border with the United States is formed, crossed or straddled by more than 300 lakes and rivers. The International Boundary Waters Treaty Act was passed by Parliament in 1911. It implements the 1909 Canada-U.S. Boundary Waters Treaty, which establishes principles and procedures for preventing or settling disputes, particularly regarding the quantity and quality of boundary waters between Canada and the United States.

To further implement this legislation, regulations will be proposed in the coming months that will provide an opportunity for public input and ensure effective and continued implementation.

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A backgrounder is attached.
For further information, media representatives may contact:
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This document is also available on the Department of Foreign Affairs and International Trade's Internet site: http://www.dfait-maeci.gc.ca

Backgrounder

AMENDMENTS TO THE INTERNATIONAL BOUNDARY WATERS TREATY ACT

Canadians are looking to all levels of government to take action to assure the long-term security and integrity of Canada's freshwater resources. As we pass into the 21st century, federal, provincial and territorial governments need to cooperate to ensure a coherent and effective policy that preserves these resources. The amendments to the International Boundary Waters Treaty Act (IBWTA) reaffirm Canada's commitment to act within its jurisdiction to prohibit bulk water removal.

What do the amendments do?

The main element of the amendments to the IBWTA is to prohibit bulk removal of boundary waters (i.e. those shared between Canada and the U.S.) out of their water basins. With these amendments, the Great Lakes and other boundary waters will now have protection from bulk removals under federal law. This is significant because the Great Lakes are of sufficient size to
attract developers of bulk removal -- including for the purposes of export -- or diversion schemes. The federal government is taking action within its jurisdiction to ensure that these incomparable freshwater resources, which belong to all Canadians, are protected from exploitation and environmental damage caused by the bulk removal of water.

Under the 1909 Canada-U.S. Boundary Waters Treaty and the IBWTA, the federal government has jurisdiction over boundary waters, such as the Great Lakes, in order to fulfill Canada's obligation under the Treaty not to affect unilaterally the level and flow of waters on the U.S. side of the boundary. The amendments will give the Minister of Foreign Affairs the authority to:

* impose a prohibition on removals of boundary waters out of their water basins. Exceptions will be considered, such as ballast water, short-term humanitarian purposes and water used in the production of food or beverages (e.g. bottled water); and
* introduce a licensing system, separate from the prohibition, formalizing a 90-year-old process under which the federal government and the International Joint Commission (IJC) have examined and approved certain projects, such as dams and obstructions, under the provisions of the Treaty. The licensing system would not cover ordinary municipal, industrial or agricultural uses.

What about protecting all of Canada's water resources?

In February 1999, Canada announced a three-part strategy to prohibit the bulk removal of water out of all major Canadian water basins. Over the past two years there has been significant progress:

* Canada promised to take action within its jurisdiction by introducing the amendments to the IBWTA. This was done in November 1999. The amendments have now been passed into law.
* The Minister of the Environment, in cooperation with the provinces and territories, proposed to develop a Canada-wide accord to prohibit bulk water removals. This would apply to all waters. Each level of government would take appropriate action within its jurisdiction. All provinces have put into place or are developing legislation or regulations that accomplish this
goal.
* Canada and the U.S. agreed to a joint reference to the IJC on consumptive uses, diversions and removals of Great Lakes waters, including for the purposes of export. The IJC's final report (Protection of the Waters of the Great Lakes, February 2000) concluded that the Great Lakes require protection, especially in the light of the uncertainties, pressures and cumulative impacts from removals, consumption, population and economic growth, and climate change. Recommendations for action to protect the ecological integrity of the Great Lakes Basin are directed by the IJC to all levels of government in Canada and the U.S. The IBWTA amendments are consistent with and supportive of the IJC's conclusions and recommendations.

Prohibition of bulk water removal out of water basins vs. an export ban: which is the better approach?

There is a consensus among Canadians that freshwater resources need protection from bulk removals. What is the best way of achieving this goal?

Prohibiting bulk water removal out of water basins is better than an export ban because it is more comprehensive, environmentally sound, respects constitutional responsibilities and is consistent with Canada's international trade obligations.

* Water is protected in its water basin, before the issue of exporting arises. This is an environmental protection measure of general application, aimed at preserving the integrity of ecosystems.

* Under the Canada-wide accord, each level of government has a responsibility and each level must take action. Canadian governments have full sovereignty over the management of water in its natural state, and in exercising this sovereignty are not constrained by trade agreements.

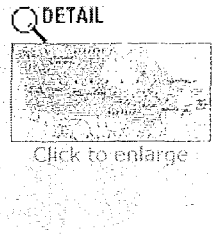
* Water is regulated in its natural state, before it has become a commercial good or a saleable commodity. This is consistent with Canada's international trade obligations.

An export ban may seem like a quick and simple solution. However, it does not focus on the environmental dimension, has possible constitutional limitations, and may be vulnerable to a trade challenge. An export ban would focus on water once it has become a good and therefore subject to international trade agreements. Because these agreements limit the ability of governments to control the export of goods, a ban on exports is likely to be contrary to Canada's international trade obligations. This contrasts sharply with the federal government's approach.

Crazed by thirst

Sep 13th 2001 | VANCOUVER
From The Economist print edition

Canadians are in a lather over water exports



CANADIANS have been worrying about water this summer. First severe drought hit southern Alberta, Saskatchewan and Ontario, turning crops to dust. Then contaminated drinking water left seven people dead in Ontario, and thousands sick in Newfoundland and Saskatchewan. A proposal to export tanker-loads of water from Newfoundland to the United States has triggered alarm. Some Canadians even fear that the North American Free-Trade Agreement (NAFTA) threatens their government's ability to exercise sovereign control over their water.

Canada contains about one fifth of the world's fresh water. That abundance has long been the target of covetous eyes from drier Americans to the south. Inconveniently, most of Canada's big rivers flow north or east. In the 1960s American engineers dreamed up fanciful schemes to divert some of them to the south. Now some Canadian politicians see profit in exporting water southwards by easier means.

In the spring Newfoundland's premier, Roger Grimes, said he would consider a businessman's proposal to pay C$20m ($12.8m) a month to take 13 billion gallons of water a year from a lake and ship it to the United States. Mr Grimes said he was ready to lift Newfoundland's ban on such exports, but only after public hearings.

Opponents fear that this opens a hole in the dyke. Water has long been publicly owned and supplied in Canada (though there is an export trade in bottled water). However, if a province starts to export bulk water, that would turn it into a traded commodity. Critics claim that NAFTA would oblige Canada to supply its trading partners with water on the same terms it gives to its own consumers.

In fact, NAFTA says nothing about water supplies. Officials insist there is no need to worry. They point out that an amendment to the International Boundary Waters Treaty Act, due to be approved later this year, will prohibit the bulk removal of water from basins that straddle the border, notably the Great Lakes (Newfoundland will not be affected).

However, provincial governments have constitutional authority over natural resources. The federal government is pushing the provinces to agree to a national ban on the bulk removal of water from all drainage basins. Only half of the provinces have signed this, but the others have their own bans on removing water.

Even so, the government faces vocal demands to enact a national ban on bulk water exports. It has no plans to do so. "Water is not a [tradable] good, it is a resource that needs to be managed," says Pierre Pettigrew, the trade minister. Indeed: rising demand, pollution and climate change all mean that Canada is using most of its easily accessible water. That is partly because consumers pay a low tariff, unrelated to the amount used, which encourages waste. The environment ministry is now studying ways of pricing water.

In fact, it is not clear whether a federal law banning bulk water exports would trump provincial authority over natural resources. With Alberta and Quebec (and now Newfoundland?) jealous of provincial rights, such a law could trigger a constitutional squabble—something for which Canada's prime minister, Jean Chrétien, may have no stomach. The political splashing looks unlikely to stop.

Sustainable Use of Great Lakes Water: The Diversion Threat's Silver-Lining?

by Allegra Cangelosi

In the not-too-distant future, profit-making industry and water-needy regions will aggressively seek to tap Great Lakes water in order to satisfy consumption demands outside the basin. This prospect is causing serious concern throughout the Great Lakes region, both in the United States and Canada. Several recent events -- including a permit issued by Ontario last year to a venture capital firm (later revoked) allowing overseas sale of Lake Superior water, record low water levels, climate change projections, and proposals to export bulk water elsewhere in North America -- are reminders that the integrity of the Great Lakes hydrologic system is only as safe as we make it.

Do today's Great Lakes diversion policies hold water?

Three policy devices govern U.S. diversions of Great Lakes water. 1) The Water Resources Development Act (WRDA) of 1986 requires the approval of all Great Lakes governors on any proposed diversion of water from the U.S. Great Lakes system outside of the basin. 2) The Great Lakes Charter of 1985, a non-binding agreement between the Canadian premiers and the state governors, urges the premiers and governors to seek each others' approval prior to granting diversion requests above a certain threshold volume. 3) The Boundary Waters Treaty of 1909 commits Canada and the U.S. to refraining from any water resource uses that would harm the waters of the other country. (Canada does not have a domestic policy equivalent to WRDA. A province may issue permits without other provincial approvals, unless the volume triggers the non-binding Great Lakes Charter or action under the Boundary Waters Treaty.)

This list of policy instruments reflects the Great Lakes community's long-standing efforts to steward its natural wealth. Yet, many are beginning to question whether the current legal and policy structures governing Great Lakes water withdrawals are robust enough to protect the lakes in the face of increasing pressure for exports and diversions. This concern is fueling active discourse in the Great Lakes region -- and legislation on Capitol Hill. Congressman Bart Stupak (D-MI) and several other delegation members jointly introduced legislation (H.R. 2595) in August to create a moratorium on water exports, pending evaluation and possibly revision of the current legal framework in order to protect the lakes and other U.S. waters. Congressman Dave Camp (R-MI) and Senator Spencer Abraham (R-MI) followed suit with a bill (H.R. 2973 and S. 1667) requiring a moratorium until the governors of the Great Lakes states develop a joint standard for approving any new diversions.

Fortunately, the discourse has been informed by a detailed legal analysis requested by the Council of Great Lakes Governors, as well as a year-long International Joint Commission reference study, still underway. These efforts raised several issues with the existing regime. For example, there is general agreement that the international charter between states and provinces governing Great Lakes water diversions must be strengthened. Many within the Great Lakes states felt that Ontario should not have been able to issue its permit without first consulting and gaining the approval of the region's other states and provinces. Simply lowering the threshold volume within the Great Lakes Charter would help, but that action alone would not suffice. The Charter, or something like it, also would need to become a legally binding instrument in order to assure adequate state and provincial input into proposed new uses of Great Lakes water. Another concern is that the WRDA provisions could be reversed by future Congresses. Thus, even the U.S. system for restricting domestic water diversions is less than a sure thing.

Both studies addressed the potential implications of international trade law on Great Lakes water management. The General Agreement on Tariffs and Trade (GATT), in particular, could prohibit a simplistic policy of "just say no to water exports" from the Great Lakes, unless it could be shown that exports harm the resource more than in-basin and domestic uses. While provisions in the GATT allow trade limitations based on equitable and credible conservation of exhaustible natural systems, jurisprudence over the matter may reflect less acceptance. Moreover, it may be virtually impossible for the Great Lakes region to design a water management system that is equitable enough to meet strict trade

agreement requirements while respecting existing in-basin and domestic uses. As a result, the World Trade Organization (WTO) itself also represents a wild card in the Great Lakes water governance debate.

Finally, both reports speak to the need for more information to support decisions on proposed diversions and consumptive uses Without it, governments may be hard put to base and defend their decisions regarding proposed water uses on grounds of ecosystem protection.

Could the fear of GATT create a "watershed experience" for the lakes?

It is not clear who, if anyone, "owns" the water of the Great Lakes. The lake bottoms and the oil beneath them are clearly state owned, but the water within the lakes may be held in public trust. Fortunately, while it is not clear if states can sell or restrict the sale of Great Lakes water as property, it is clear that the governors have primary responsibility for protecting the natural resources of their states. Therefore, a water-management policy that has as its guiding principle the protection and restoration of the Great Lakes has the best chance of weathering challenges under GATT, whether or not that policy includes blanket restrictions on exports. This outcome of trade law, accidental or intentional, is good news for the Great Lakes, because such a policy also would have to be comprehensive, encompassing all uses that alter the natural flow regime of the lakes, both in-basin and out. Thus, through an open discussion on water diversions, the region stands to gain a state-of-the-art water conservation regime that will help bring all uses of Great Lakes water into a framework that ensures sustainability. Success would mean improved quality of the Great Lakes environment, more synchrony between our lifestyles within the region and our natural resource "means," and greater security that the Great Lakes resource will be a source of wealth for future generations. Our region also could help show regions throughout the world what a sustainable water management regime looks like. Through doing so, the region would create greater water security globally and thereby diminish future pressure on the Great Lakes.

Such a conservation strategy is a worthwhile undertaking regardless of one's point of view on the allowability of exports. In some ways, what the strategy looks like and whether it includes exports are nested but independent questions.

The substantial task of designing such a conservation strategy -- tempting to avoid -- remains a necessary prerequisite to obtaining any kind of lasting sanction for that strategy, whether regional through the governors and premiers, national through U.S. law, or international via the World Trade Organization (WTO). The work will take many months, and thus should commence as soon as possible. Fortunately, the Council of Great Lakes Governors at its last annual meeting took a significant first step by committing to developing a standard to help the governors make consistent judgments regarding future proposed diversions.

Framing-up a Sustainable Water Use Management System

Developing a standard that is equitable and truly protective and restorative of the Great Lakes resource will be difficult, however, especially in light of our limited ability to understand present or future impacts on the system. Before tangling with details, it will be important for the region's policymakers to resolve several fundamental questions. The answers to these questions will provide an important framework for a sustainable water use management strategy for the Great Lakes.

How should the process respond to the magnitude of the natural resource wealth at stake?

The sustainability of the Great Lakes hydrological system is a Big Ticket Item. Like global climate change, once degradation of the system is evident, it may be too late to reverse. Therefore, the precautionary principle is a critical feature of a sustainable water use management system for the Great Lakes. There should be a high bar for approving new bulk water removals, with the onus on the potential new user to show that the proposed use complements state, federal, and international responsibilities to protect and restore the Great Lakes resource. Since we start with major restoration needs in the Great Lakes, actions consistent with protection and restoration may need to be affirmatively restorative in order to meet this

requirement.

How should the process respond to the complexity of the Great Lakes biohydrological system?

The biohydrological system of the Great Lakes is extremely complex. As noted above, a common standard may be developed to provide the basis for gubernatorial decisions on proposed diversions and bulk removals. Some analysts are proposing to develop an accompanying decision-support system based on a data base of biohydrologic information about the lakes. A common standard indeed would help to organize and systematize the states' decisions to approve or disapprove proposed diversions. Efforts to better chart the extent and dynamics of the system also are to be lauded and are far-overdue. However, policymakers should not design a decision-making process that is overly dependent upon the availability of a predictive model for potential economic and environmental outcomes from proposed new uses of Great Lakes water. The complexity of nature, and its dynamism, still surpasses our ability to make accurate predictions, and, I fear, it always will. Judgments about water-use outcomes ultimately will be subjective. The multiple cross-checks established in the 1996 Water Resources Development Act are the best policy response to this complexity and uncertainty. WRDA wisely requires that all eight states approve any proposed diversion outside the basin from the U.S. Great Lakes, minimizing the potential for bad judgment.

Who should make the decisions?

The political subtext of "who should make the decisions" accompanies (if not dominates) any and all debate on the topic of Great Lakes water diversions. Region-based (i.e. state-level) decision-making is favored by the states, and would be required under the Camp and Abraham legislation. The International Joint Commission and the Stupak legislation do not prescribe the level of government that should be involved. Advocates of region-based decision making argue that water use is a preexisting state authority, and that local decision making will be sensitive to the sustainability needs of the resource. In fact, there are many examples of local interests sullying their own nest; the contaminated sediments in Great Lakes Areas of Concern stand out as an example that is all too close to home. Yet, region-based decision making has to be better than that of a distant decision-maker. Moreover, the system of multiple state-level cross-checks established in the 1996 Water Resources Development Act maximizes the interest of policymakers in making water use decisions that protect the resource. Unlike decisions affecting contamination, judgments in this case are delivered through joint action by region-based officials who are elected and account able. If anything, the final scheme should comprise more rather than fewer cross-checks. Possible additions to the cross-check step would be Great Lakes provinces, and, in the context of international proposals, the Canadian and U.S. federal governments. However, if added to the mix, federal entities should never have the authority to override state or provincial decisions to prevent a diversion (except pursuant to existing authorities such as national security).

What are the political and what are the physical realities?

Political and biohydrological realities can be equally intransigent. Both create parameters which policymakers must accept and work around. However, it is important to accurately differentiate between the two so that overall understanding of any water conservation strategy and its dynamics is elevated. One physical reality that may conflict with political expediency is that the enemy is not always "them," sometimes "the enemy is us." Water use management policies geared at protecting the resource must encompass both in-basin and out-of-basin uses, as both can harm the system. Decisions that seem to endow in-basin uses or domestic diversions with automatic innocuousness, while demonizing lesser out-of-basin uses, seem to mix political and physical realities and should be reexamined and restated accordingly.

What about the need for mid-course corrections?

Especially in light of the unpredictability of the changing global climate and environment, approved bulk water removals and other uses will need to be subject to retrospective evaluation, review, and revisions. At a minimum, a retrospective evaluation process will be necessary to promote ever more accurate predictions of an approved diversion's impacts, as well as to promote accountability. However, it is also true that external conditions may change and make even the best predictions moot. In particular, as mentioned above, global climate change, unforseen collective and cumulative impacts of water uses, and emerging humanitarian needs could transform over time once innocuous uses into serious threats to the sustainability

of the hydrological system. This reality poses difficult process problems that must be addressed. One approach would be to declare that no diversion is guaranteed in perpetuity if external environmental conditions and humanitarian concerns arise which significantly alter the impacts of the use on the system.

This caveat, which would have to be made clear at the outset, undoubtedly would dampen the enthusiasm of some potential financiers of expensive infrastructure to conduct long-term bulk water removal and distribution from the Great Lakes. However, perhaps this caution is appropriate. In the context of a changing global environment, policymakers could otherwise be straight-jacketed -- perhaps forced by international investment agreements -- to subordinate long-term sustainability of the Great Lakes resource to the guarantee of long-term returns on private or public investments approved decades earlier. In keeping with the responsibility of policymakers to protect and restore the resource, it is only fair to lower the expectations of prospective investors in long-term bulk water removals from the Great Lakes by asserting in advance the priority of environmental and humanitarian concerns.

Many Parts for the Many Players

The question of water diversions and bulk removals from the Great Lakes, like no other, invokes the need for bipartisan and multi-jurisdictional cooperation. No one level of government, political party, or indeed nation sharing the Great Lakes will achieve an acceptable water use management policy on its own. Instead, the only hope for a truly protective policy resides in the concerted action by all levels of government, all political parties, and the public. Each of these players has tools and interests essential to the design and implementation of a legally-defensible and protective water use management policy. For example, the Northeast-Midwest Institute, working in close contact with state officials, coordinated the recent bipartisan letter from Great Lakes congressional delegation members to the U.S. Trade Representative that highlighted the need for special recognition within the WTO processes for a Great Lakes water conservation strategy. This recognition may be necessary to assure that even credible and fair approaches may proceed unimpeded. Meanwhile, the Council of Great Lakes Governors and the Great Lakes Commission have set out to explore the nature of a resource protection-based standard for approving proposed water uses, as well as a data base to support it. The International Joint Commission's final report, together with congressional legislation, will help lay the groundwork for any international agreements or federal action needed to codify a conservation system.

The Northeast-Midwest Institute will continue to nurture cooperation in its work with the Great Lakes congressional delegations; the International Joint Commission, as an instrument for carrying out critical U.S./Canadian cooperation; as well as state-level regional organizations like the Council of Great Lakes Governors and the Great Lakes Commission.

Allegra Cangelosi is senior policy analyst with the Northeast-Midwest Institute.

GLIN==> Governors / premiers pledge diversion protection this year

Great Lakes United Sustainable Waters Watch # 9
Week of February 8, 2002

GOVERNORS / PREMIERS PLEDGE DIVERSION PROTECTION THIS YEAR

Seven months after signing the Annex 2001 plan for protecting the Great Lakes against large-scale diversion, the region's ten governors and premiers have finally released a timeline to negotiate the formal, legally binding agreement that would carry out the promises of the annex.

The governors and premiers plan to present a draft reform agreement to the basin public in June of this year, followed by a 90-day comment period. All ten jurisdictions have agreed to hold public meetings to accept citizen comment on the draft plan. They will then revise the draft plan based on the public comment and complete a final document for signature by all ten governors and premiers in late November.

The new agreement is intended to protect the region from bulk water export and diversion by reforming state and provincial water use law to protect the environment rather than only the interests of human water users. By focusing their water use laws on environmental protection and treating all water proposals the same whether intended for use inside or outside the Great Lakes basin, the governors and premiers hope to make future rejections of damaging bulk water export and diversion proposals immune from challenge under U.S. trade laws or international trade agreements.

The timeline is ambitious, given that the parties took almost two years to agree just to the principles of the original Annex 2001 document. The scheduled November completion date would allow conclusion of the process before any change in the lineup of regional executives. At the end of this year the governors of Illinois, Pennsylvania, and Michigan are leaving office and the governors of Minnesota, Wisconsin, Ohio and New York will stand for reelection. The premier of Quebec may also call an election this year. Ontario will have a new premier next month.

The governors and premiers have appointed a group of at least twenty negotiators, a minimum of two from each jurisdiction, to write the new agreement. The executives are still considering possible means for including the governments of sovereign basin tribes and First Nations, some of which border the lakes and connecting channels.

The negotiating group has three subcommittees, responsible for 1) the substance of the agreement itself, that is, the ways in which water use law would be reformed, chaired by Illinois Office of Water Resources Director Don Vonnahme, 2) the means for making the agreement binding on the states, chaired by Matt Hare, natural resources policy coordinator for Michigan Gov. John Engler, and 3) the means for making the agreement binding between the provinces and across the binational border, chaired by Western Hemisphere Acting Team Leader Bill Carr of the Ontario Office of International Relations and Protocol.

The governors and premiers have also invited 24 organizations, including Great Lakes United, the Canadian Environmental Law Association, and the National Wildlife Federation, to advise the negotiators in their efforts. This advisory committee consists of representatives from six key sectors of basin civil society, including environmental groups (five representatives), industry (eight), recreation and tourism (one), municipal water suppliers (four), agriculture (three), and hydropower and other utilities (three). Nine of the 24 advisors will be from Canada. As with the involvement of tribal and First Nations governments in the actual negotiations, the governors and premiers have also not yet determined how First Nations nongovernmental organizations will be involved with the advisory committee. The first meeting of the advisory committee will be held March 15 in Washington, D.C.

Prospects for success

To all appearances the premiers and governors are following through with the commitment they made last June to negotiate a strong agreement. However, the state and provincial negotiators have not been given sufficient resources to carry out their work. Budget shortfalls in all the jurisdictions have resulted in travel restrictions so severe that only two face-to-face meetings among the negotiators are scheduled before the draft plan is made public in June. Most of the negotiations are planned to take place by conference call. The states have pledged limited financial resources for the overall effort, but most of the money is going to centralized administrative support and outside legal help. The states and provinces have not allocated extra resources to their negotiators, nor offered any resources to the advisory committee. This is surprising given the importance of the negotiations.

Like the negotiators, the advisory committee is also scheduled to meet only twice before delivery of the draft plan. The negotiating team has also outlined no structure for receiving input from the advisory committee. This could be problematic, given the likely diversity of views on the committee. Some members of the advisory committee may not even agree that the governors and premiers should be negotiating a water use reform effort in the first place.

For official information on the negotiating or advisory committee process, contact Pete Johnson at the Council of Great Lakes Governors, cglg@cglg.org or 312-407-0177. For unofficial analysis of the negotiation effort or advisory committee process, contact Reg Gilbert at Great Lakes United, reg@glu.org or 716-886-0142; Sarah Miller at the Canadian Environmental Law Association, millers@olap.org or 416-960-2284 x213; or Andy Buchsbaum at the National Wildlife Federation, buchsbaum@nwf.org or 734-769-3351.

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Don't Swallow Their Water Grab

Clauses Put Forth at the Last Minute in Qatar Could Jeopardize the World's Clean, Safe Water

by Maude Barlow

In a world preoccupied with terrorism and war, there was little coverage of the World Trade Organization ministerial meeting earlier this month in Doha, Qatar. What coverage there was, often in newspaper business pages, recounted that after tense negotiations around such issues as antidumping and agriculture subsidies, the now 144 member countries of the WTO had agreed to a new round of trade talks.

What didn't get reported is that in the last-minute wrangling over other issues, the European Union inserted a clause into the final text that puts our fresh water at risk, promotes the privatization of the world's water resources and endangers international environmental treaties.

Going into the meeting, there was a deep divide between the United States, Europe, Japan and Canada -- and everyone else. The North's wealthy countries were pushing an ambitious agenda almost universally opposed by the countries of the South. Well into every night, negotiators struggled with this divide.

The final draft text appeared on the morning of Nov. 14, and delegates, most of whom had not slept the night before, saved their energy for the final fight about the timing of the start of new issues. Only a handful of NGOs -- the few who had been able to travel to remote Qatar -- noticed that, overnight, a new section called Trade and Environment had been added to the text. When the assembly adopted the text later that day, the frantic NGOs couldn't find one delegate who'd noticed this addition. Too bad, because it may have terrible ramifications for the world.

Article 31, iii, calls for "the reduction, or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services." This poses an immediate threat to shrinking freshwater resources, as a "service" and as a "good."

While water has not yet been listed under the WTO General Agreement on Trade in Services (GATS) as an environmental service, several countries -- the U.S. and Canada among them -- are pushing for its inclusion. In any case, the GATS covers hundreds of types of water services under other categories and contains a catalogue of measures that limits what governments can do to conserve and protect water. Canada also wants all member countries to eliminate restrictions on national treatment and market access to water services.

Already, the World Bank and the International Monetary Fund are aggressively promoting water privatization in developing countries, opening the door for huge transnational water corporations to profit from water delivery and wastewater treatment. Under this new WTO provision, a domestic rule that protects water as a public service and a human right could be considered a "non-tariff barrier" to trade and eliminated. So could rules that limit privatization.

Water is clearly a "good" in the General Agreement on Tariffs and Trade (GATT). Article 11 already rules out any quantitative restrictions on the export of a good, but allows tariff measures, such as taxes or dual price systems. But the new text proposes to do away with such export controls, making it illegal to restrict the

export of bulk water for commercial purposes.

Article 32 (also added that last morning) says that 31, iii, must be "compatible with" other WTO rules, particularly the Agreement on the Application of Sanitary and Phytosanitary Standards (SPS), which sets constraints on government polices relating to animal and plant health, including biological contaminants -- and the Agreement on Technical Barriers to Trade (TBT), set up to ensure that nations do not use "non-tariff barriers" (such as environmental laws) in a way that interferes with trade liberalization.

This means that domestic standards to protect water could be challenged by subsuming the trade in environmental services to these already dangerous WTO agreements.

These are not the only threats to the environment in the Doha text. Article 31, i, (also new) attempts to clarify and codify the rules between the WTO and multilateral environmental agreements (MEAs). But, no sooner are MEAs recognized (a development long sought by environmentalists) than the text exempts any country not a signatory to a MEA.

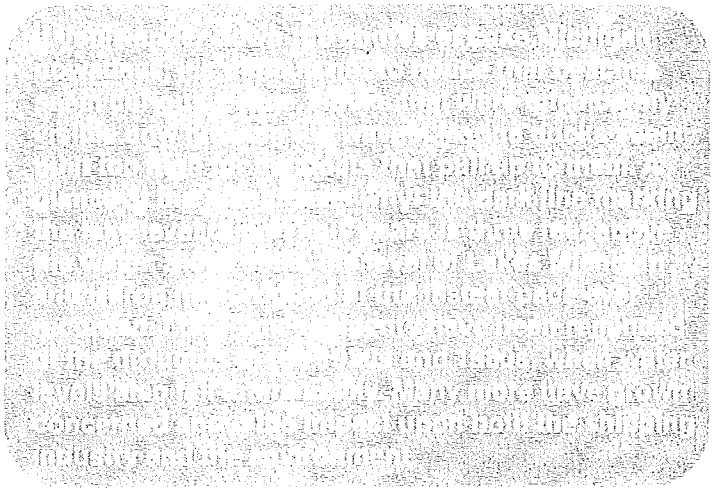
The U.S., for example, has not ratified the Kyoto or the Biosafety Protocols, and would not be bound by any WTO recognition of their trade provisions. In fact, this new provision would act as a disincentive for any country to sign a new MEA; it could benefit from the environmental good deeds of others, but be under no obligation to take action itself.

The delegates also agreed to broad new provisions on market access, which will speed up free trade in logging, mining, fishing and other natural resources. And the agreement on intellectual property (TRIPS) will continue to threaten biological diversity and conservation measures and permit the patenting of life forms, including plants, seeds, genes and animals.

The Doha round was forged under duress; already the North and South blocs disagree on what was agreed to. Civil society has two years before the next meeting to discredit this profoundly undemocratic and environmentally devastating deal.

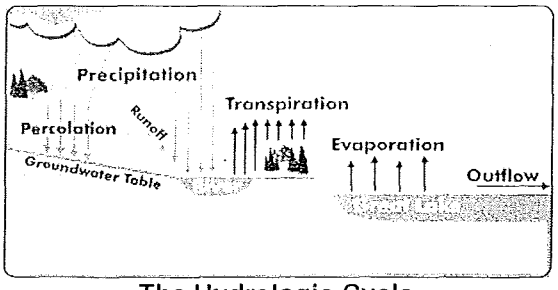
Maude Barlow is the national chairperson of the Council of Canadians, and attended the Qatar meeting as an NGO observer.

Great Lakes Water Levels



Why are Water Levels this Low?

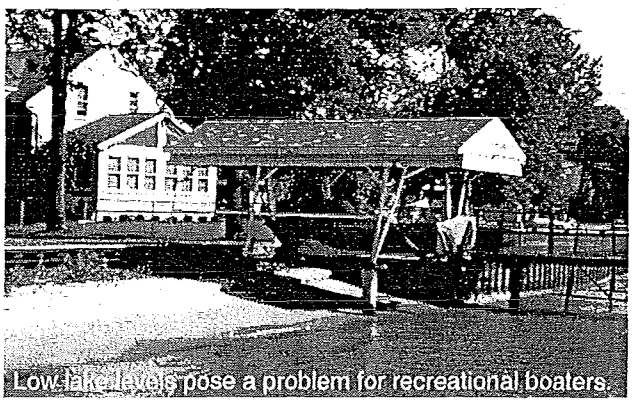
It is easy to assume the lakes rise when it rains, and fall again when the weather dries up. But while the amount of precipitation we receive is certainly important, it is not the only factor that determines lake levels. It's not just the amount of rain and snow we get, but how much stays on the ground that really matters. After a storm, much of the rainwater evaporates quickly; it either dries up while still on the ground or it is absorbed by plants and released back into the air through their leaves. This combined process, known as evapotranspiration, prevents a large amount of rainwater from ever reaching the lakes in the first place. If it is warm and windy, as much as 80% can evapotranspirate before it has a chance to flow into rivers and streams. Only a fraction of the precipitation that becomes groundwater seeps into the lakes. And of course, once the water reaches the lakes, the sun and wind hit the lake surface, evaporating even more of it.



Source: *Living with the Lakes*. U.S. Army Corps of Engineers; Great Lakes Commission. 1999.

The Hydrologic Cycle

When you place a glass of water in the sun, water evaporates quickly; one way to slow it down is by covering the top. When the Great Lakes freeze in winter, the ice cover works just like a lid; the water surface is protected from the sun's rays, and little moisture is lost. But if we have a warm winter, as we have had for the past few years, very little ice forms, and evaporation continues through the winter.



Low lake levels pose a problem for recreational boaters.

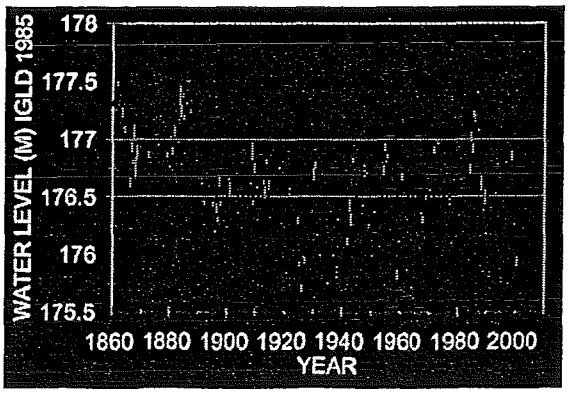
Why has it been so warm?

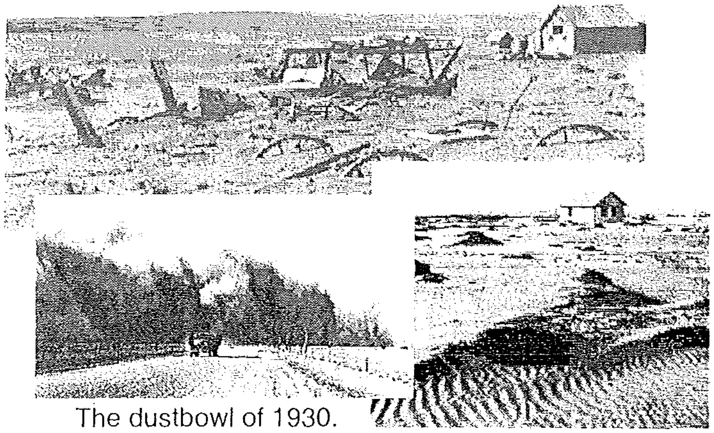
Scientists say that one major factor is a global weather event called El Nino. In an El Nino year, such as 1997, the polar jet stream crosses North America further north than usual, keeping cold air masses away from the lakes. This brings milder winters with light precipitation, so there is less snowmelt and lake ice. Another weather event known as La Nina, which is closely related to El Nino, generally brings colder winters. We had La Nina winters in both 1998-99 and 1999-2000, but despite this tendency towards colder temperatures, the winters were warmer than usual. All these factors have combined to produce a 101.6 cm (40 in.) drop in water levels in Lakes Michigan and Huron over the last 3 years. The other lakes have fallen dramatically as well; during the same period, Superior has fallen 45.72 cm (18 in.), Erie 78.74 cm (31 in.), and Ontario 25.90 cm (10.2 in.) (as of May 2000).

How do these lows compare with past lows?

Despite the low water levels we are currently experiencing, they are not the lowest levels on record. In the early 20th Century the levels of Lakes Michigan and Huron were lower than they are at present, and in 1964 -- their record low -- they were nearly a foot below their present level. The other lakes have also been lower in previous years. At one point in 1926, Superior was 40.64 cm (16 in.) below its present level. In 1936 Lake Erie dipped 55.88 cm (22 in.) lower, and in 1935 Ontario was 78.74 cm (31 in.) lower.

Lake Michigan-Huron water levels, 1860-2000.





The dustbowl of 1930.

Are the lakes low for the same reasons they were in the past?

Scientists know that the droughts of the past were a primary factor, but cannot be completely sure of all the reasons lake levels have dropped. Although we learn more every year, factors that influence lake levels are still poorly understood. Often we cannot compare one drought with another because we simply did not collect the necessary kinds of data in the past.

An example is the effect of wind on evaporation rates. Wind records in the 1930s were kept primarily at airfields, and pilots had little interest in water evaporation. Those few weather stations that did measure evaporation had to rely solely on such methods as placing a pan of water outside and measuring its volume from day to day. This told us the rate at which water would evaporate from a constantly-watered surface, like, say, a putting green. But it told us nothing about how fast fields of seasonal crops—which receive different amounts of water depending on the time of year—were absorbing or releasing it. Now, we not only have a better understanding of evapotranspiration, but we have more measuring stations and can analyze the data with computers much more rapidly than a scientist of the 1930s or 1960s could. Evaporation affected lake levels in these past years, but we simply do not have the data to determine how much. How much do we know, then? Essentially, we know that the great drought that caused the Dust Bowl factored greatly in the low lake levels of the 1930s. Low rainfall also affected levels in the 1960s, and by then, manmade diversions (such as the Chicago Sanitary and Ship Canal) had also increased outflow from the lakes. The outcry this caused led the Supreme Court to limit water use in the Canal since 1967. As we learn more about weather patterns, lake level fluctuation will hopefully be better understood. Scientists have long suspected that lake levels rise and fall in approximately 30-year cycles; they believe the droughts of the 1930s, 1960s, and today correspond to low points in the cycle, but are still working on conclusive proof. Also uncertain is whether El Nino and La Nina, which have played such a prominent role in the present drought, had as much influence on the droughts of the 1930s and 1960s.

What can be done about the lake levels? What is the outlook for the future?

We can be reasonably certain about the levels of the lake in the immediate future. We know that the water levels in June and July are generally the highest of the year and usually begin to drop by midsummer when high evaporation and low runoff periods begin. Beyond that, we are less certain about what will happen, and can take only limited action when it does. One common misconception is that the government can control the lake levels and has done so for years. At first glance, this makes sense—there are dams and canals on Ontario and Superior for navigational purposes. We regulate the water for energy production and commerce, right?

Yes and no. Engineers can build a canal to move ships from Chicago to the Mississippi, and can harness falling water to power a portion of New York State. Dams and diversions afford us a limited amount of control over the amount of water leaving the lakes, but we can do little about how much enters. This depends on the weather, and forecasting is not an exact science. Over the past decade, weather forecasting has improved tremendously. Reasonably accurate forecasts are now routine for 5-7 days in advance, but forecasting beyond that is difficult. Even in years of drought, experts are hesitant to recommend slowing the outflow of water. Manmade diversions, such as those in Chicago and Ontario, have only a minor effect on the lakes when compared with natural climatic variations. Levels sometimes rise as quickly as they fall, even in years of drought, one need only look at the years between 1926 and 1934 to see this! Dredging harbors and channels when the lakes are low is expensive, but too-high water levels erode the shoreline, often causing property damage. For such reasons as these, trying to anticipate Mother Nature is a risky proposition. Because the lakes' fluctuation over time remains a subject of study, the best advice for our communities would be to pay attention to both extremes of the water levels, something that has not been done in the past.

"We need water and coastal management policies that are adaptable to both high- and low lake-level conditions," says Frank Quinn, Senior Research Hydrologist at GLERL. "In the past 30 years, we have had a lot of experience with high lake levels, but relatively little experience managing low-level conditions. We need to consider the fact that these lakes change over time, and we are still learning about how they change. Until we understand the process better, assuming we know enough already could be costly to both the environment and our wallet."

Written by Chad Boutin. Free copies of this publication can be obtained by contacting the Publications Dept. at 734-741-2262, pubs@glerl.noaa.gov, or by visiting our web site www.glerl.noaa.gov

THE GREAT LAKES CHARTER ANNEX

A SUPPLEMENTARY AGREEMENT TO THE GREAT LAKES CHARTER

June 18, 2001

FINDINGS

The Great Lakes are a bi-national public treasure and are held in trust by the Great Lakes States and Provinces. For the last sixteen years, the Great Lakes Governors and Premiers have followed a set of principles to guide them in developing, maintaining, and strengthening the regional management regime for the Great Lakes ecosystem. Protecting, conserving, restoring, and improving the Great Lakes is the foundation for the legal standard upon which decisions concerning water resource management should be based.

There has been significant progress in restoring and improving the health of the ecosystem of the Great Lakes Basin. However, the Waters and Water-Dependent Natural Resources of the Basin remain at risk of damage from pollution, environmental disruptions, and unsustainable water resource management practices which may individually and cumulatively alter the hydrology of the Great Lakes ecosystem.

PURPOSE

In agreeing to this Annex, the Great Lakes Governors and Premiers reaffirm their commitment to the five broad principles set forth in the Great Lakes Charter, and further reaffirm that the provisions of the Charter will continue in full force and effect. The Governors and Premiers commit to further implementing the principles of the Charter by developing an enhanced water management system that is simple, durable, efficient, retains and respects authority within the Basin, and, most importantly, protects, conserves, restores, and improves the Waters and Water-Dependent Natural Resources of the Great Lakes Basin.

State and Provincial authorities should be permanent, enforceable, and consistent with their respective applicable state, provincial, federal, and international laws and treaties. To that end, and in order to adequately protect the water resources of the Great Lakes and the Great Lakes ecosystem, the Governors and Premiers commit to develop and implement a new common, resource-based conservation standard and apply it to new water withdrawal proposals from the Waters of the Great Lakes Basin. The standard will also address proposed increases to existing water withdrawals and existing water withdrawal capacity from the Waters of the Great Lakes Basin.

DIRECTIVES

The Governors and Premiers put forward the following DRECTIVES to further the principles of the Charter.

DIRECTIVE #1

Develop a new set of binding agreement(s).

The Governors and Premiers agree to immediately prepare a Basin-wide binding agreement(s), such as an interstate compact and such other agreements, protocols or other arrangements between the States and Provinces as may be necessary to create the binding agreement(s) within three years of the effective date of the Annex. The purpose of the agreement(s) will be to further the Governors' and Premiers' objective to protect, conserve, restore, improve, and manage use of the Waters and Water-Dependent Natural Resources of the Great Lakes Basin. The agreement(s) will retain authority over the management of the Waters of the Great Lakes Basin and enhance and build upon the existing structure and collective management efforts of the various governmental organizations within the Great Lakes Basin.

DIRECTIVE #2

Develop a broad-based public participation program.

The Governors and Premiers commit to continue a process that ensures ongoing public input in the preparation and implementation of the binding agreement(s) called for in this Annex. Included in this process will be periodic progress reports to the public.

DIRECTIVE #3

Establish a new decision making standard.

The new set of binding agreement(s) will establish a decision making standard that the States and Provinces will utilize to review new proposals to withdraw water from the Great Lakes Basin as well as proposals to increase existing water withdrawals or existing water withdrawal capacity.

The new standard shall be based upon the following principles:

- Preventing or minimizing Basin water loss through return flow and implementation of environmentally sound and economically feasible water conservation measures; and
- No significant adverse individual or cumulative impacts to the quantity or quality of the Waters and Water-Dependent Natural Resources of the Great Lakes Basin; and
- An Improvement to the Waters and Water-Dependent Natural Resources of the Great Lakes Basin; and
- Compliance with the applicable state, provincial, federal, and international laws and treaties.

DIRECTIVE #4

Project review under the Water Resources Development Act of 1986, §1109, 42 U.S.C. §1962d-20 (1986) (amended 2000).

Pending finalization of the agreement(s) as outlined in Directive #1, the Governors of the Great Lakes States will notify and consult with the Premiers of Ontario and Quebec on all proposals subject to the U.S. Water Resources Development Act of 1986, §1109, 42 U.S.C. §1962d-20 (1986) (amended 2000) (WRDA), utilizing the prior notice and consultation process established in the Charter. In doing so, the Governors and

Premiers recognize that the Canadian Provinces are not subject to, or bound by, the WRDA, nor are the Governors statutorily bound by comments from the Premiers on projects subject to the WRDA.

DIRECTIVE #5

Develop a decision support system that ensures the best available information.

The Governors and Premiers call for the design of an information gathering system to be developed by the States and Provinces, with support from appropriate federal government agencies, to implement the Charter, this Annex, and any new agreement(s). This design will include an assessment of available information and existing systems, a complete update of data on existing water uses, an identification of needs, provisions for a better understanding of the role of groundwater, and a plan to implement the ongoing support system.

DIRECTIVE #6

Further commitments.

The Governors and Premiers of the Great Lakes States and Provinces further commit to coordinate the implementation and monitoring of the Charter and this Annex; seek and implement, where necessary, legislation establishing programs to manage and regulate new or increased withdrawals of Waters of the Great Lakes Basin; conduct a planning process for protecting, conserving, restoring, and improving the Waters and Water-Dependent Natural Resources of the Great Lakes Basin; and identify and implement effective mechanisms for decision making and dispute resolution. The Governors and Premiers also commit to develop guidelines regarding the implementation of mutually agreed upon measures to promote the efficient use and conservation of the Waters of the Great Lakes Basin within their jurisdictions and develop a mechanism by which individual and cumulative impacts of water withdrawals will be assessed. Further, the Governors and Premiers commit to improve the sources and applications of scientific information regarding the Waters of the Great Lakes Basin and the impacts of the withdrawals from various locations and water sources on the ecosystem, and better understand the role of groundwater in the Great Lakes Basin by coordinating their data gathering and analysis efforts. Finally, the Governors and Premiers commit to develop in the new binding agreement(s) the water withdrawal rates at which regional evaluations are conducted and criteria to assist in further defining acceptable measures of Improvement to the Waters and Water-Dependent Natural Resources of the Great Lakes Basin.

FINAL PROVISIONS

This Annex shall come into force on the day that all signatures are executed. The Parties have signed the present agreement in duplicate, in English and French, both texts being equally authentic.

DEFINITIONS

Waters of the Great Lakes Basin (also termed in the Great Lakes Charter as "Water Resources of the Great Lakes Basin") means the Great Lakes and all streams, rivers, lakes, connecting channels, and other bodies of water, including tributary groundwater, within the Great Lakes Basin.

Water-Dependent Natural Resources means the interacting components of land, water, and living organisms affected by the Waters of the Great Lakes Basin.

Improvement to the Waters and Water-Dependent Natural Resources of the Great Lakes Basin means additional beneficial, restorative effects to the physical, chemical, and biological integrity of the Waters

and Water-Dependent Natural Resources of the Basin, resulting from associated conservation measures, enhancement or restoration measures which include, but are not limited to, such practices as mitigating adverse effects of existing water withdrawals, restoring environmentally sensitive areas or implementing conservation measures in areas or facilities that are not part of the specific proposal undertaken by or on behalf of the withdrawer.

Signed and entered into the 18th day of June 2001.

George H. Ryan
Governor of Illinois

Frank O'Bannon
Governor of Indiana

John Engler
Governor of Michigan

Jesse Ventura
Governor of Minnesota

George E. Pataki
Governor of New York

Bob Taft
Governor of Ohio

Mike Harris
Premier of Ontario

Tom Ridge
Governor of Pennsylvania

Bernard Landry
Premier of Quebec

Scott McCallum
Governor of Wisconsin

http://www.great-lakes.net/lists/glin-announce/2001-01/msg00035.html

GREAT LAKES SUSTAINABLE WATERS WATCH # 6
Great Lakes United, Week of January 26, 2001

GOVERNORS SEEK COMMENT ON "ANNEX 2001" WATERS PROTECTION PLAN

-Effort to prevent Great Lakes water abuse, export, and diversion
-Good first step, problems need fixing
-No agreement yet with Ontario, Québec
-Hearings needed in Minnesota, Wisconsin, Illinois, Ontario, and Québec

The governors of the Great Lakes states have reached general agreement on changing basin water law so that water use proposals are judged by their effects on the environment. The hope in the "Annex 2001" document is to improve the region's ability to reject environmentally harmful proposals to use Great Lakes water whether inside or outside the Great Lakes basin.

Once Annex 2001 is finalized, sometime this spring, the states and provinces will start negotiating a detailed agreement based on its principles. Find the text of the proposed Annex 2001, fact sheets, analysis, and state hearing dates at www.glu.org.

All the states are accepting comment, some are holding hearings. See below for details and please get involved.

Great Lakes environmental groups have praised the general principles of Annex 2001, but warn that some of its provisions, particularly an exemption for certain "small" uses under 1 million gallons per day, undermine the environmental protection purpose of the plan. The cumulative impacts of the putatively small proposals on local water levels or the Great Lakes basin environment could be dramatic. Furthermore, the exemption would hamper the annex's ability to serve as a defense against bulk water export and diversion proposals. International trade agreements and U.S. commerce law may limit the ability of regional governments to prevent export and diversion projects, unless the efforts to do so are non-discriminatory. *Strict* environmental protection-the exemption makes Annex 2001's environmental protections less strict-may be an acceptable basis for preventing export and diversion proposals.

Current state and provincial water use laws prevent harm only to other human users of water, with little consideration for the effects of water use projects on plant or animal life. The annex would change all that:

"The aforementioned agreements will include a standard that no State or Province will allow a new or increased withdrawal . . . unless the applicant for the withdrawal establishes that its proposal, together with the applicant's existing use:
A. Includes implementation of all reasonable and appropriate water conservation measures; and
B. Does not, individually or cumulatively, together with current basin-wide water uses, cause significant adverse impact to the quantity or quality of the Waters and Water-Dependent Natural Resources of the Great Lakes Basin; and
C. Results in an improvement to the Waters and Water-Dependent Natural Resources of the Great Lakes Basin; and
D. Complies with all applicable laws."

The combination of points B and C-the word "and" between them is key-is rare in environmental law. Wetlands protection and some other environmental laws sometimes require improvements to make up for permitted damage. But Annex 2001 in theory would require *both* no significant damage *and* improvement in order to obtain a water use permit. This combination has the potential to truly protect the Great Lakes basin ecosystem.

The definition of "improvement" in Annex 2001 is substantially better than in previous drafts. The new annex makes it harder to use planned improvements to make up for harm caused by a water use proposal, strengthening the crucial part of point B that forbids "significant" harm by a water use proposal. The annex now also assures that improvements are focused on the water system rather than laudable but unrelated efforts like urban tree planting. Finally, the annex forbids the use of improvement projects mandated in point C from satisfying the basic water conservation requirements of point A. Improvement projects designed to conserve water would have to go *beyond* the requirements of point A.

Other positive provisions of Annex 2001 include making the new system binding on the signers and including the public in future water-related decisions. Both elements are essential for an agreement based on Annex 2001 to actually protect the region.

Although it is a long step in the right direction, Annex 2001 must be greatly modified to successfully prevent abuse of the basin water system and prevent damaging export and diversion projects:

1) Include Canada. The views of Ontario and Québec must be part of the final Annex 2001. The possibility that the states will proceed on their own is extremely dangerous to the region. The basin's waters absolutely must be managed as a whole if the region's protective legal structures are to withstand the scrutiny of international trade court in coming decades. See www.glu.org for a look at Ontario's statement criticizing the current draft of the annex.

2) Delete the exceptions. The new annex, and its requirements for environmental scrutiny, water conservation and improvement, will not apply to certain diversions of less than 1 million gallons per day. This so-called "de minimis exemption" opens a loophole that could eventually lead to a serious loss of basin water. Furthermore, the exemption is actually a substantial step back from the governors' current authority under the U.S. Water Resources Development Act of 1986, under which the governors may veto diversion projects of any size. The "de minimis" provision should be deleted in its entirety from Annex 2001. The question of which small uses should be exempted from the new standards for practical reasons-wells drilled to supply drinking water for one or two homes is an obvious candidate-would be more appropriately addressed in the detailed negotiations that will follow signing of the annex

3) Impose a moratorium on diversions. Rather than defining a size of diversion that is automatically approved, the governors should follow last year's recommendation by the U.S.-Canada International Joint Commission and impose a moratorium on all diversion proposals until the new standards for judging water uses have been negotiated and implemented

4) Create a restoration strategy. Annex 2001 must contain a commitment to develop an overall strategy for protecting the Great Lakes basin ecosystem. Even well-intended improvement measures will be ineffective unless they are part of a plan containing broad ecosystem improvement goals, with specific objectives and dates for achieving them

5) Improve water conservation. The water conservation provisions of the annex are weak. The states and provinces should require "maximum achievable" (rather than "reasonable and appropriate") conservation before new or increased uses are considered. Strong conservation measures are the cornerstone of two critical goals of the annex: effective protection of the Great Lakes basin ecosystem *and* credibility in the eyes of rest of the continent and the world that we are preserving the lakes for their own sake rather than for the (likely illegal) benefit of local economic interests

6) Look at all alterations, not just withdrawals. The scope of water-related proposals affected by the annex's scrutiny should go beyond mere water "withdrawals" (that is, taking water out of lakes, rivers, or the ground). Annex 2001 should be broadened to include the full range of human actions that damage the basin water system and the living things that depend on it. For example, simply slowing down a river's flow can make it impossible for certain fish to reproduce, thereby having a more serious impact on aquatic life than even a large withdrawal. An approval system that treats all human changes to the water system as seriously as standard water withdrawals would be much harder to question as illegal under international trade agreements.

7) Include the St. Lawrence River basin. As the farthest downstream jurisdiction, Québec is the most vulnerable to abuses of the Great Lakes water system; it needs to be centrally involved in protecting it.

8) Include the tribes. Creation of new agreements for managing basin water uses should involve the region's First Nations and tribes, who have a long history of environmental concern and sovereign rights to certain basin waters. Native exercise of tribal rights outside the final agreement could ultimately undermine the state and provincial effort to protect the region's waters.

9) Strong public participation and education. After signing Annex 2001, the states and provinces will start negotiating a detailed agreement for implementing its principles. But the changes in water use implied by Annex 2001 are extensive. Ongoing public involvement in negotiating the final agreement, and the public education such involvement will require, is essential for the final agreement to truly protect the lakes, be understood by the public, and ultimately be passed into law in every state and province.

http://www.dec.state.ny.us/website/greatlakes/publiccommentsummary.html

Public Comments Submitted to the State of New York for Annex 2001 - A Supplementary Agreement to the Great Lakes Charter of 1985

On December 14, 2000 the Council of Great Lakes Governors, acting on behalf of the eight Great Lakes States' Governors and two Provinces' Premiers, released a draft Annex 2001, a supplementary agreement to the Great Lakes Charter of 1985. After allowing the general public time to become familiar with the document, New York Governor George E. Pataki sponsored two public meetings in order to obtain comments on the proposed Annex 2001. The meetings were held February 21, 2001 in Buffalo and February 22, 2001 in Oswego. The meetings were open forums designed to maximize the exchange of information and opinions, related to the draft document, among various public and private organizations and citizens within the State of New York.

In all, about 80 citizens participated in the Buffalo and Oswego meetings. An additional 10 participated in a February 28, 2001 meeting in Albany for selected state-wide organizations that could represent a diverse range of business, scientific research, municipal, and environmental interests. Written comments were also received from 28 individuals or organizations.

Overall, the commenters believed the Annex was a good first draft but required greater emphasis on resource protection and clarification of specific terms and concepts, such as the definition of "withdrawal," the *de minimis* threshold, the health and safety exemption, and cumulative impact provisions. Industry groups did not oppose the overall goal of the Annex, but are very skeptical that this document will help achieve that goal. There was widespread agreement that New York State ought to take an aggressive position to protect the water and ecological quality of the Great Lakes basin because of its geographic location downstream in the basin (where the impacts of water diversions would be magnified), and because the future economic viability of the region is intimately tied to the Great Lake's freshwater resources.

The following is a summary of the major comments received.

1. The majority of citizens believed the Annex should ban all new water diversions from the Great Lakes basin, or at least impose a moratorium on them until their impacts can be better determined and understood. Specifically:

- This Annex appears to promote public consumption of the water resource and may stimulate an increase in diversion/withdrawal proposals.
- The Governors should be willing to go to court to defend a ban/ moratorium.
- The ban is necessary to get the support of the Premieres of Ontario and Quebec.
- The Annex should address why the International Joint Commission's recommendation to ban water removals has not been considered.
- There is not enough information about the long-term effects of diversions on the basin to allow for diversions. The effects of global climate change, urban sprawl, and changing lake levels are of special concern because they can be significant and cannot be accurately forecasted.
- The full range of impacts from diversions should be determined before they are allowed.
- What evidence is there to show how existing diversions have/are harming the environment?
- A basin-wide management information system is needed that focuses decision-making on data quality, consistent interpretation, and water conservation.
- The volume and complexity of information required to support the decision-making process and criteria established in the Annex will necessitate an enormous funding commitment by the Federal governments of both countries.

- There are already provisions for emergency withdrawals based on public health emergencies.

- Ban all out-of-basin removals; Great Lakes water should not be used to support unsustainable developments in other portions of the United States that face or will soon face water shortages.

2. The Annex should include stronger language about the diversion issue. Specifically:

- The environmental impact assessment process, required under U.S. and State environmental laws, should be included and required for any diversion/withdrawal proposals.

- The terms "diversion," "withdrawal" and "removal" appear to be used inconsistently or need to be further defined.

- The Annex should focus on protecting the public health and safety of the people within the Great Lakes basin over the public health needs of other regions.

- Communities withdrawing water for public health emergencies should be required to return the water to the Great Lakes basin.

- The Annex needs to define criteria constituting a public health emergency, significant adverse effect, and water improvement standard.

- The Annex needs to outline how diversion/withdrawal impacts and enhancements will be monitored and how the rules will be enforced for consistency basin-wide.

- Existing diversions of Great Lakes water should be evaluated to determine if they are currently economically justified and not automatically "grandfathered" in.

- The language should include structural modifications like those in the St. Lawrence River that are designed to sustain water levels for navigation; these basin changes should be considered a diversion since it results in an increased outflow from the basin.

3. The 1 million gallons average per day (mgd) *de minimus* provision was viewed as a major weakness in the document. Specifically:

- The *de minimus* standard should be based on harm to the environment not on water quantities removed.

- Some mechanism is needed to re-evaluate the 1 mgd threshold based on existing/projected hydrological conditions and varying lake water levels.

- How the standard will be applied needs clarification, such as for cumulative diversions less than the *de minimus* standard.

- The *de minimus* standard weakens safeguards on existing public drinking water supplies.

- Industry believes the Annex is unnecessary and will deter future proposals, thereby creating a competitive disadvantage resulting in adverse economic impacts to the states.

- The Annex represents a new and severe regulatory scheme imposed on industry which is already over regulated.

- How are withdrawals of water that becomes modified in form by industrial processes for the purpose of becoming commercial products transported in or out of the basin addressed under the Annex?

- If the Annex was originally intended to prevent out-of-basin withdrawals (ex. The NOVA proposal), why does it include intra-basin withdrawals?

- The Annex should allow for some *de minimis* withdrawals (ex. < 500,000 g/d).
- 1 mgd is actually an insignificant amount of water from the basin.

4. Future deliberations on Annex 2001 and the water diversion issue should:
   - include First Nations;
   - include the public and/or a citizen representative;
   - include the St. Lawrence River and Finger Lakes regions;
   - include the Canadian federal government, not just the Provinces of Ontario and Quebec;
   - include greater public education and outreach;
   - include industry representation and provide greater notification when documents are available for review; and
   - not be conducted behind closed doors.
5. Other specific comments include:
   - Water conservation efforts should be more strongly encouraged by the Annex.
   - Does all water returned to the basin have to be "cleaner?"
   - If environmental benefit projects are required for all withdrawals it represents an unrealistic burden on industry.
   - The "reasonable and appropriate" clause should be removed from the Annex.
   - Terms like "reasonable and appropriate conservation measures," "enhancement of ecosystem," and "enhancement and restoration" need definition.
   - The Provinces should have the same veto power as the Great Lakes Governors.
   - The issue of water as a commodity, its relation to international trade law, and its valuation process needs to be addressed.
   - The legal distinction between water in its natural state and water as a product or commodity needs further legal analysis since this document will become an international agreement and international agreements do not consider water in its natural state as a commodity.
   - The monitoring of unimproved in-basin discharges from approved withdrawals will have a significant impact on state and federal water discharge permitting (ex. SPDES & NPDES) and staff resource capabilities and budgets.
   - The basin-wide focus is good but provisions need to allow for unique watershed conditions/situations.
   - The Annex should include a discussion on how ecological impacts will be addressed and the use of scientific/ecological information to determine the full network of effects.
   - Support for the Annex should include a commitment of funding to the research community in order to develop the scientific information needed for determining individual and cumulative environmental impacts from withdrawals.

http://www.dnr.state.oh.us/water/planing/greatlksgov/anxFAQ.htm

Great Lakes Charter

Frequently Asked Questions About the Working Draft of Annex 2001

A Supplementary Agreement to the Great Lakes Charter, circulated for public comment by the Council of Great Lakes Governors

What is the working draft of Annex 2001?

The proposed Annex 2001 is a nonbinding agreement between the Great Lakes governors and premiers of Ontario and Quebec on the future management of Great Lakes basin waters. The final Annex 2001 will supplement the Great Lakes Charter. In October 1999, the Great Lakes governors and premiers pledged to develop a new common standard against which water withdrawals will be reviewed and a new agreement which will bind the Great Lakes states and provinces more closely to collectively plan, manage and make decisions regarding the protection of the waters of the Great Lakes. The working draft of the proposed Annex 2001 is a public review draft document to meet the governors and premiers commitment on a new standard and agreement.

What is the Great Lakes Charter?

The Great Lakes Charter is a nonbinding agreement that the Great Lakes governors and premiers signed in 1985. The Charter recommended a framework for managing the waters of the Great Lakes basin and called for several new programs in the states and provinces. The goal of the Charter was to provide a framework to protect the waters of the Great Lakes basin from large-scale diversions of water to areas out of the basin.

What does the Annex set out to do?

Under the Annex, the governors and premiers establish a common standard to be used in reviewing water withdrawals that involve the transfer or export of water out of the Great Lakes basin and, in the future, water withdrawals within the basin. The Annex recommends basin-wide binding agreement(s) for the states and provinces for future management of water uses in the Great Lakes basin.

Why are the governors and premiers doing this?

The Great Lakes governors and premiers have 15 years of experience in dealing with water use and diversion issues pursuant to the Great Lakes Charter. A proposed bulk export project in 1998 made it evident that a review of the governors and premiers authority was necessary.

Which states and provinces are included in the Great Lakes basin?

The eight Great Lakes states are Illinois, Indiana, Minnesota, New York, Ohio, Pennsylvania, Michigan and Wisconsin. The two Great Lakes provinces are Ontario and Quebec.

Who does the Annex affect?

The implementation of the Annex is a two step process. The first step will be to apply the standard to water withdrawals reviewed by the governors pursuant to the federal Water Resources Development Act (WRDA) and by the governors and premiers pursuant to the Great Lakes Charter.

The second step will be to review Great Lakes basin water withdrawals pursuant to the binding compact that is developed which will require state and federal legislation. This latter action will impact future proposals for water withdrawals in the Great Lakes basin. Existing uses are to be grandfathered but will be required to meet the standard when additional withdrawals or capacity are requested.

Is the Annex immediately enforceable?

The application of the standard for water withdrawals pursuant to the federal Water Resources Development Act can be implemented immediately. The application of the standard to all water

withdrawals in the Great Lakes basin will require state and federal legislation in the U.S. before being implemented.

Why doesn't the Annex prohibit the bulk export or diversion of Great Lakes water?

Under the Commerce clause of the U.S. Constitution (Article I, Section 8), states are prevented from passing laws that interfere with interstate commerce. The U.S. Supreme Court has found that water is an article of commerce and the Commerce clause applies to state laws regulating interstate water use. The Commerce clause prevents the states from banning transfers of water. State statutes must be based on the protection of the natural resources of the state.

How will the Annex impact current water uses?

Existing uses or withdrawals of water will not be affected immediately. However, the new standard will be used immediately to evaluate all new proposals for transfer or export of water out of the Great Lakes basin. When state and federal governments approve a future basin compact, the new standard will apply to new withdrawals of water. It is possible that a de minimis level will be developed under which small withdrawals are exempted. Current users may well be exempted from meeting the standard until an increase in use or capacity is proposed.

Does the Annex affect both surface and ground water uses?

The proposed Annex uses a definition of ìwaters of the Great Lakes basinî which includes both surface and tributary ground water.

What is the federal Water Resources Development Act of 1986?

In 1986, as a part of comprehensive legislation on water resources development, Congress enacted the authority for the governors to have approval over diversions of water out of the Great Lakes basin. All eight Great Lakes governors must approve any new or increased diversion of water out of the Great Lakes basin. This authority was granted in Section 1109 of that Act. The authority was amended in 2000 to reflect Congressís concern over bulk exports.

How does "resource improvement" fit into water use?

One criterion in the new standard is that the proposed water project should include measures that result in an improvement to the waters and water-dependent natural resources of the Great Lakes basin. The criterion is focused on additional beneficial, restorative effects to the physical, chemical and biological integrity of the Great Lakes and the basin waters. Measures could include actions such as improving or maintain flows in streams that are impacted by poor water quality, altering or removing dams, or protecting stream corridors to protect or improve water quality. Guidelines for ìresource improvementî are to be developed in the next step of this process.

What are the next steps when the Governors and Premiers agree to it?

After the close of the public comment period, comments received in Ohio will be forwarded to the Council of Great Lake Governors. The states and provinces will then review the comments and finalized the proposed Annex 2001. Once approved, the states and provinces are to develop the necessary binding agreements and protocols within three years.

What portions of Ohio will be impacted by this?

The proposed Annex 2001 is focused on water withdrawals in the Lake Erie drainage basin. This involves slightly more than 1/4 of State of Ohio.

How long will the public comment period last?

The working draft of the Annex 2001 will be open for public comment until Feb. 28, 2001.