

**The Great Lakes - St. Lawrence River Basin Sustainable Water
Resources Agreement: Implications for Groundwater
Management**

**Prepared for the Groundwater Workshop on Provincial
Permitting Systems in Canada
January 20, 2006**

Historically, Ontario's water management systems have evolved proactively not only to control our use of the Province's water resources but also reactively to protect our shared water resources from others' designs on our waters. The challenges of protecting the shared waters of the Great Lakes are daunting and difficult. One quarter of all Canadians rely on the Great Lakes St. Lawrence River Basin for their drinking water. Ontario uses more of that water than the other nine Great Lakes jurisdictions ~ 35.1 % according to 1998 data. Canadians consider the Great Lakes a national treasure, but in the US they have less prominence and are viewed more as a regional issue. Ontario and especially Quebec will likely experience greater impacts from reduced water levels in the Great Lakes, because they are the furthest downstream.

For those of us here today considering management options for finite amounts of groundwater, the thought of managing a body of water comprising about a fifth of the world's fresh water supply seems vast. On December 13, 2005 after five years of difficult negotiations, the Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement was signed by all eight States and two Provinces and The Great Lakes - St. Lawrence River Basin Water Resources Compact were signed.

What did the two Agreements have to do with groundwater? The answer is that although the Agreements were to protect the Great Lakes from harmful diversions and large withdrawals, unresolved groundwater stresses in and near to the Great Lakes region perhaps more than any other issue shaped the final agreements. The evolution of these Agreements holds many lessons and raises many questions for us all. Today I would like to talk about the obligations of these Agreements, I would also like to raise geopolitical issues that I am confident will impact water management in all seven provinces sharing borders with the US. Our challenge will be not only to get our own house in order to protect our water resources from over use but to make sure our neighbours to the south do this as well. These agreements could serve as models for others.

These Agreements have extended the prohibitions on diversions from Canadian waters put in place by the Federal government and the Provinces of Ontario and Quebec to the US waters of the Great Lakes. However there are significant exceptions to these rules I will speak to in a moment. The Agreements for the first time set out a series of decision-making standards intended to protect ecological integrity of the region that apply to large requests for water. They require:

- all water be returned, either naturally or after use to the Source Watershed less an allowance for consumptive use,**
- withdrawals or consumptive use shall be implemented to ensure no significant or cumulative adverse impacts to the quality or quantity of the Waters and the Water Dependent Natural Resources and the applicable Source Watershed,**
- include Environmentally Sound and Economically Feasible Water Conservation Measures**

- **comply with all applicable municipal, State, Provincial and Federal Laws as well as regional, interstate and international agreements including the Boundary Waters Treaty, and**
- **a series of criteria to determine if the request is for reasonable use of the waters.**

Of great significance to Ontario communities, Intra-Basin withdrawals from one Great Lake to another are considered to be diversions. Different management restrictions will be applied to these according to the volume and duration of the withdrawal.

Geography and political boundaries have brought ground water concerns to the surface in these negotiations. (first slide). A look at the map of the surface watershed of the Great Lakes Basin shows some jurisdictions have much more of the basin within their boundaries while some states just have a thin ribbon of the surface watershed along the shoreline. This has led to a belief that those near to the Lakes are privileged by their unlimited access while those further inland have realized that their access to alternative water supplies might be curtailed by these Agreements. Many of these communities had been banking on Great Lakes water for future growth and development and as fall backs for polluted groundwater. As this recognition dawned during the final year of negotiations pressure grew to include not only the few communities straddling the basin boundaries but also all the US counties that straddled the basin. States with weak water management systems were not prepared for this specter of water conflicts among residents of their states and lobbied hard and successfully to include all U.S. straddling counties as exceptions to agreement rules (second slide).

There is a wide variation in water management programs among the Great Lakes jurisdictions. (third slide). Six Great Lakes States simply register some water use but do not use a permitting system. Many are reluctant to move to a permitting system. Knowledge about water use and consumption varies and is not uniformly tracked for all users and data collected is not comparable. Ontario clearly has the gold-plated version and ironically, Michigan surrounded on three sides by the Great Lakes has the weakest system. Regrettably, the Agreements did not result in the highest uniform standard in use. No jurisdictions are willing to regulate at the 50,000 litre level used in Ontario. Consequently, the levels and methods of regulation have been left up to each jurisdiction.

These Agreements have plugged loopholes in the Boundary Water Treaty of 1909 and the Water Resources Development Act. Both omitted groundwater as part of their descriptions of the Great Lakes. However while these new Agreements have included groundwater in their definition of the watershed, the signatories were not willing yet to map the Basin beyond the surface water boundaries until they fulfill goals to improve the science and understanding of the groundwater and surface water interface and influences.

There are also requirements for better data collection on consumptive uses. Most jurisdictions rely on consumptive use coefficients but not on actual data to determine uses where they track these uses at all. There are concerns about the accuracy of these coefficients. To be secure in our decisions on future groundwater use in the future we should all be moving to actual rather than estimated data on use and efficiencies.

These agreements will require each of the Great Lakes jurisdictions to have conservation programs in place. Should these programs not be done voluntarily they will become mandatory. Regular reviews will be done to evaluate each of the jurisdictions' water management regimes.

There are requirements to track cumulative use and establish a baseline of how much water is now being used to serve as a the foundation for that data. It is not clear all jurisdictions will have the capacity to do this. While no single diversion will impact the whole system it is clear that already cumulative withdrawals are already having a local impact. Pumping of groundwater in eastern Wisconsin has significantly reduced the amount of groundwater flowing to Lake Michigan by as much as 8.5% reversing the flows of that groundwater away from the Lake. These agreements recognize and consider local impacts in their decision-making framework.

There are vast differences between attitudes of Canadians and the US about water. Water in the US constitution has long been an article of commerce. Water trading is much more widely accepted in the US as an economic and an environmental tool. Canadians sensitive to triggering trade agreement considerations are much more adverse to these concepts. There was great sensitivity about protecting the Great Lakes from trade challenges and applying the same rules to in-basin and out of basin users to avoid charges of discrimination.

While these negotiations were underway, the first NAFTA Chapter 11 challenge was launched by a group of Texas farmers for Mexican groundwater. The outcome of this challenge could set a bad precedent for all our ability to protect local water

resources. Ontario negotiators struggled hard to get ecological conditions to be universal for all applicants to create a level playing field. However, the political decision to include the straddling counties diverges from this. They tried to require applicants from straddling counties to demonstrate they were hydrologically connected to the Basin. While this was included as one of several additional conditions added for the exceptions it was not a mandatory consideration.

US industry insisted that the direct reference to the precautionary principle in the purposes of the Agreements be removed and so they are paraphrased there. Since the Chair of the Congressional Committee that will likely consider these Agreements has stated that climate change is the greatest hoax perpetrated on the American people, most references to climate change have been now been paraphrased in these agreements. There are many process concerns with these negotiations for the public. Ontario had the most extensive public involvement and parallel consultations with First Nations. However the Council of Great Lakes Governors and others failed to follow recommendations of some parties to include Tribes and First Nations from the onset of talks. This led the tribes and First Nations to issue their own water accord.

It will be years before these agreements come into force because new laws will need to be passed in all Eight State legislatures and by the US Congress. Ontario and Quebec regulations will also need revisions to incorporate Annex provisions into laws. Time is not on our side. The City of Waukesha, Wisconsin has made it known that it will be seeking to divert water immediately. It is in the area outside the basin already impacting flows to Lake Michigan.

Throughout this process the Ontario government negotiators were driven to persist in their efforts by sobering geopolitical research they commissioned. I will conclude with a synopsis of this research to make the point that while we are working to refine our water protection regimes to more micro levels of subwatersheds and aquifers, we must keep the big picture in mind.

- The political center of gravity in the U.S. is shifting south and west; this has been reflected in successive presidential elections. Population shifts in the U.S. have altered the composition of the House of Representatives. After the 2000 Census, reapportionment of the House's 435 seats favoured the southern and southwestern states.
- Since George Bush Sr. was elected, 27 Electoral College votes have shifted to the southwestern states. They now account for 59% of national growth in eligible voters since the last presidential election.
- All the elected presidents for 44 consecutive years have come from 3 southern states - Texas, Arkansas, Georgia - and southern California."
- Every Great Lakes State lost at least one seat except for Minnesota while all other Great Lakes states fall significantly below the national average growth rate.

Therefore we can assume:

- **With population increases in the U.S. south and west, and states such as Nevada, New Mexico and Colorado regarded as swing states in the 2004 presidential election, the southwest appears set to find itself increasingly in the political spotlight both in terms of congressional issues and influence and future elections.**
- **Critical water depletion issues in the Ogallala Aquifer, High Plains, California and Mexico are bound to become a political crisis that we will have little power to influence.**