

# Great Lakes—St. Lawrence River Basin Water Conservation and Efficiency Initiative

*May 3, 2007—Draft 4*

## Call for Comments

In late 2005, as part of the “annex” agreements to prevent Great Lakes water diversion and abuse, the eight Great Lakes states and the two Great Lakes provinces of Ontario and Québec agreed to establish a “Regional Body” of the provincial premiers and state governors. Among many other responsibilities, the Regional Body is charged with developing a joint list of objectives for conserving water in the basin as a whole. The annex agreements require that the programs to carry out the objectives be implemented by each jurisdiction on its own, but the overall objectives are to be designed jointly.

Draft objectives have been released and are available for comment through Friday, June 8. Find them at:

[http://cglg.org/projects/water/ConservationEfficiencyInitiative\\_DraftObjectives.asp](http://cglg.org/projects/water/ConservationEfficiencyInitiative_DraftObjectives.asp)

As outlined in detail below, the draft objectives are weak to the point of uselessness. We support objectives that allow substantial flexibility as to how individual jurisdictions can achieve them. But we vigorously protest objectives that allow jurisdictions to do nothing while claiming they are carrying out comprehensive water conservation programs. We urge that the water conservation objectives be completely rewritten.

The objectives are advisory only. The Agreements do not require the provinces and states to implement them. But the Agreement does require that objectives be created, and that they achieve five goals:

1. Ensuring improvement of the waters and water dependent natural resources
2. Protecting and restoring the hydrologic and ecosystem integrity of the Basin
3. Retaining the quantity of surface water and groundwater in the Basin
4. Ensuring sustainable use of waters of the Basin
5. Promoting the efficiency of use and reducing losses and waste of water

While the Agreement does not require the jurisdictions to fulfill the objectives, the Agreement does not allow them to write objectives that cannot fulfill the goals. But this is what the states and provinces have done in the draft they have released for comment.

The objectives should be specific enough, strong enough, and clear enough to let a jurisdiction’s public know if its government is truly working to conserve water, and if it is succeeding at conserving water.

If a jurisdiction does not want to conserve water, that is more or less its choice under the Agreement. But the Agreement requires that jurisdictions be accountable for that decision. As currently drafted, the jurisdictions are attempting to evade accountability.

## Comment, please

The Regional Body commissioned the Council of Great Lakes Governors, to host the process for drafting “water conservation and efficiency objectives.” In mid-March the Council released a draft of the objectives for public comment.

Public comment is desperately needed to improve what is currently a document of no policy value (see critique below). If not substantially rewritten before it is finalized, the document will be a serious step back from the Agreement promise of integrating the region’s efforts to protect Great Lakes water quantities and the Great Lakes basin ecosystem that depends on them.

Water conservation can seem to be a mundane, workaday matter, the province of technicians more than environmentalists, a world of details on the needs of “water use sectors” (general categories of water-using activity) and various specific water withdrawal, distribution, and use technologies.

However, like energy conservation, water conservation is arguably the most important task the region must take on if it is to preserve Great Lakes water quantities. Water Conservation has the potential to protect the resiliency of the ecosystem and to avoid future disputes and shortages. Remember our illusion of plenty in the Great Lakes has led to a culture of waste in the Great Lakes and North America. We use two to three times more water per capita than Scandinavian countries in Europe that enjoy a high quality of life.

The effort to conserve water is critical for its own sake, in directly protecting the lakes, but just as importantly for setting an example to the rest of the continent and the world. As the largest single source of fresh surface water on the planet, the Great Lakes region must establish a moral high ground if it wishes retain its ban on diversion of water outside of the Great Lakes basin over the long term. If the region is not conserving water itself, how can it insist that others do so instead of asking to divert water from the Great Lakes? If we do not vigorously conserve water ourselves, the rational basis of our ban on large-scale, long-distance diversions—to protect the ecological functioning of the Great Lakes—comes into legal question.

One point you omit is that the exceptions will be judged in part on their being no reasonable conservation alternatives. I have been presuming that each jurisdiction’s own definition and requirements for conservation will be applied to proposals originating there. So if a jurisdiction has few conservation requirements then proposals going forward there could receive approvals where in a jurisdiction with strict conservation programs would not approve such projects. Applicants could go in search of the weakest conservation requirements.

Comment is open through Friday, June 8. Comment can be delivered on the Council Web site, [www.cglg.org](http://www.cglg.org), or by mail to Lisa Wojnarowski, Council of Great Lakes Governors, 35 East Wacker Dr. #1850, Chicago, Illinois, 60601.

The following is Great Lakes United’s objective-by-objective critique of the draft document. It is intended to give basin citizens a shared basis for making comments. For those with exceptional interest in water conservation, another basis for comment could be a compact disc with 65 megabytes of water conservation materials from around the United States and Canada, available on request from the Council of Great Lakes Governors, by calling Lisa Lisa Wojnarowski at (312) 407-0177.

### **Great Lakes United’s Critique**

#### **Summary Comments**

In summary, the objectives are so vague that they can provide no value to state and provincial policymakers. Appropriately, the first objective declares that the provincial and state programs should be accountable and measurable. Unfortunately, none of the ensuing objectives can be measured, making accountability for achieving them impossible. The claimed objectives are just general points related to water conservation that policymakers should consider. True objectives reasonably lead to achieving goals. These claimed objectives do not do that.

The Council defends this defect of the draft document by saying in its introduction that, “These objectives are intended to be broad, overarching concepts which will provide context for further State and Provincial action that will be more specific in nature.”

However, the objectives are a mandate of article 304 in the governors and premiers' December 2005 annex agreement, officially called the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement. Article 304 says nothing about “broad, overarching concepts.” It mandates the creation of “objectives.” As commonly understood, objective is specific achievements, , not “concepts which will provide context,” whatever that means.

Simply put, the document as currently drafted is an evasion of the requirements of the Agreement between the states and provinces to decide together what their required conservation programs should achieve.

INSERT HERE A SUMMARY OF THE BELOW POINTS ONCE THEY ARE CERTAIN

### **Background to the objectives**

In December 2005 the eight Great Lakes governors and two Great Lakes premiers of Ontario and Québec signed the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement, a sweeping good-faith attempt to manage the water quantities of the Great Lakes as a region, across the international border and among the ten sovereign states and provinces.

Unlike the companion document agreed to by the states alone—the similarly named Great Lakes-St. Lawrence River Water Resources Compact—the Agreement is non-binding, in effect, voluntary. But twenty-two years after they signed the 1985 Great Lakes Charter, a weaker version of the Agreement, the provinces and states have clearly recognized that the lakes are one system—and one target for out-of-area diverters—and must be managed cooperatively if at all possible.

Although still voluntary, the new Agreement contains more promises than the 1985 Charter and it is more likely that these promises will be carried out, because the Agreement creates a standing organization, called simply the “Regional Body,” to do so. The Regional Body is made up of the two premiers and eight governors of the ten jurisdictions.

Article 304 of the Agreement promises that “the Regional Body shall identify Basin-wide Water conservation and efficiency objectives to assist the Parties (that is, the provinces and states) in developing their Water conservation and efficiency program” by the end of 2007.

### **The draft objectives are very weak**

The governors and premiers' draft objectives are supposed to lead to achievement of five specific goals laid out in the Agreement's Article 304:

1. Ensuring improvement of the waters and water dependent natural resources
2. Protecting and restoring the hydrologic and ecosystem integrity of the Basin
3. Retaining the quantity of surface water and groundwater in the Basin
4. Ensuring sustainable use of waters of the Basin
5. Promoting the efficiency of use and reducing losses and waste of water

The draft proposal provides twenty-five objectives grouped into five categories. The objectives are both so vague and so diverse that they seem to lose sight of their essential purpose—the need for the basin to use the minimum amount of water to satisfy its essential needs for drinking water, economic sustenance, and ecological preservation. The objectives should collectively point towards desired states of regional water conservation, in particular, maximum acceptable rates of water loss for given types of water use across the basin.

The draft objectives do nothing of the kind. Despite the existence of advanced conservation programs all over the world, including in several regions of the United States and Canada, the draft objectives contain no numbers

- **Maximize water use efficiency and minimize waste of water.**

This objective deals with the core of any water conservation effort. But what constitutes maximum efficiency? None of the objectives in the document involve quantifying water conservation. The objectives involve "improving," "encouraging," and "promoting." They never "determine" or "decide" or even "report."

Without an objective that promises an eventual list of ranges of ideal water use levels and acceptable water losses for given water uses basin-wide, state and provincial water conservation programs will not even be able to be accountable.

The ten jurisdictions should have as a collective objective the establishment of ranges of acceptable water loss by water use sector. This is such a basic requirement for a water conservation program that it should be determined at a region-wide level..

- **Promote innovative technology for water reuse as appropriate.**

This objective is substantially weakened by the addition of the phrase "as appropriate." It seems to remove any pressure on jurisdictions to look seriously at reuse options.

To be usable in any program or measurable by the public, this objective should include a definition of what good promotion of innovative technology for water reuse actually entails. This would require a study by the Regional Body of existing promotion efforts and subsequent choices by the Regional Body as to what a basic promotion effort must achieve in various water use sectors. Without such definition, a jurisdiction could meet this objective by simply publishing a brochure.

- **Conserve and manage existing water supplies to prevent or delay the demand for and development of additional supplies.**

This is a different way of restating the first objective of this grouping, but unfortunately does nothing to strengthen it. .

- **Provide incentives to encourage efficient water use.**

This objective is more in the nature of preference for one of the many means by which a jurisdiction can achieve the first part of the first objective in this grouping, "maximize water use efficiency." We agree that the jurisdictions should provide incentives to encourage environmentally responsible behavior, but, as with so many of these objectives, it needs further elaboration. The objective needs to address determining what constitutes a good incentive package. Also this objective should include incentives to "minimize waste of water."

This objective should also include a commitment to remove disincentives to efficient water use and the minimization of the waste of water. . For example, the jurisdictions could agree to an objective of ending the practice of water supply pricing systems that provide lower rates for greater use, a common practice that encourages waste.

One way to improve this objective would be to give a collective character, for example, by establishing a basinwide committee to study the range of possible incentives to good behavior used around the world, assess their relative cost effectiveness, and ultimately provide a list of incentives from which jurisdictions could choose when designing their programs.

- **Include water conservation and efficiency in the review of proposed new or increased uses as appropriate.**

This objective is not needed because it is required in the Agreement's Article 203, "The Decision-Making Standard for Management of Withdrawals and Consumptive Uses." It is second only to the diversion portions of the Agreement in importance.

Astonishingly, this objective is actually a step back from the relevant subsection of the Agreement, Article 203.3, which commits the jurisdictions to assuring that *all* proposals for new and increased water subject to government review *must* institute water conservation measures.

The use of the phrase "as appropriate" in this objective is substantially weaker than the iron-clad commitment of Article 203.3.

Article 203 does not allow for this regression. This objective needs to outline a process for what a good "water conservation and efficiency review" in an approval process for new or increased water uses would be.

- **Promote investment in and maintenance of efficient water infrastructure and green infrastructure.**

"Promote" is too weak. The objective should be to "assure" investment in and maintenance of efficient water infrastructure. As with most of the other objectives, this one needs to define means for determining what a good promotion effort would be.

### **Objectives grouping #3:**

#### **Improve monitoring and standardize data reporting among State and Provincial water conservation and efficiency programs**

This grouping is two-part: 1) improving monitoring, that is, knowing what is going on with water use, and 2) standardizing reporting, that is, improving the ability of the region to have the same information, in the same technical terms, on the same kinds of activities, all across the basin.

- **Improve the measurement and evaluation of water conservation and water use efficiency.**

The Regional Body of the ten jurisdictions' should put there top water management civil servants in a room together to determine what information they need to do their jobs and this common set of measurement and evaluation tools should be implemented across the basin.

- **Encourage measures to account for water loss.**

- **Track program progress and effectiveness.**

The first three objectives bear little relation to the grouping title, which deals with the states and provinces working together to gather the same data and report it in the same way. This critical need, promised in Article 301 of the Agreement, is indispensable for effective management of the Great Lakes and St. Lawrence River waters. The region must eventually be able to look at its performance as a whole; one jurisdiction's performance should be able to be measured against that of other jurisdictions; both are the most basic form of the accountability listed in the document's first objective.

But the three objectives as described in this grouping have no relation to the region's jurisdictions working together. These objectives address only efforts by the individual jurisdictions to obtain water conservation information.

The first two objectives, "Improve the measurement and evaluation of water conservation and water use efficiency" and "Encourage measures to account for water loss," are merely logical subset of the first objective in grouping #2, "Maximize water use efficiency and minimize waste of water." It is not possible to maximize efficiency without knowing how much water is being used, returned, and lost.

The third objective, "Track program progress and effectiveness," like many of the objectives in the document, has no value unless it is more specific.

In any case, none of the three objectives addresses the state-provincial standardization called for in the grouping title and in Article 301 of the Agreement. New objectives should be written to accomplish the purpose. An example replacement objective could be, "Contract with the Royal Society of Canada and the National Academy of Sciences to study the metrics by which water conservation monitoring and data reporting could most effectively serve the overarching water conservation and efficiency goals on a basin-wide level."

#### **Objectives grouping #4**

##### **"Develop science, technology and research"**

The most important research need of any jurisdictional or basin-wide conservation program is a quantitative description of "environmentally sound and economically feasible" water conservation targets and measures. This is the wording of the Agreement requirement that projects proposing significant new or increased withdrawals of basin water must include conservation measures.

Sometimes called "consumptive use coefficients," these are numeric descriptions of reasonable water loss for given water use categories such as coal-fired energy production, residential water use, automotive assembly, and the like. These descriptions can and probably should be ranges, and should always be applied with the wide variation likely to be present within any particular sector in mind.

These consumptive use coefficients, or descriptions of acceptable water loss, or target water use efficiencies apparently, do not already exist. Studies of national water use conducted every five years by the U.S. Geological Survey abandoned use of the coefficients used at that time as having insufficient scientific basis.

Yet without such numbers or ranges of numbers, the basin water conservation strategy cannot be have appropriate targets.

None of the objectives in this critical grouping go to this issue.

The objectives that are included are not specific enough to be useful. They also lack any call for collective action. Developing science, technology and research are more effectively done collectively; this grouping should include objectives that go to the joint activity of all ten jurisdictions in achieving the rest of the objectives.

- **Foster the identification and sharing of innovative management practices and state of the art technologies.**

This general idea is good. As with all the other objectives in the list, "foster" needs to be more specific, defining what good identification and sharing efforts would look like

- **Encourage research, development and implementation of water use and efficiency technologies.**

Research and development of new technologies are almost certainly too ambitious for a single region, especially when the region's water riches assure there is no particular domestic constituency clamoring for the economic

benefits of such technology. The Great Lakes has relatively less government financial resources compared to other regions of the United States and Canada to apply to such an effort in any case. This part of the objective fails to give enough strength to the idea to ensure it has an impact.

The objective should go on to require the implementation of water use and efficiency technologies. Such implementation would be the bread-and-butter activity of any serious conservation program. As with so many of the objectives, “encouraging” implementation on its own is too weak.

- **Seek a greater understanding of traditional knowledge and practices of Basin First Nations and Tribes**

Some of the jurisdictions have few tribes, some many. This “seeking,” should be revised to “obtain,” and should be a collective enterprise of all the jurisdictions. Perhaps this objective should be specific in calling for a basin-wide summit meeting to kick off the process, and a publication that meets aboriginal approval .

### **Objectives grouping #5**

#### **“Develop education programs and information sharing for all water users”**

- **Ensure equitable public access to water conservation and efficiency tools and information.**

The objective is rather opaque. If this objective is intended to address the reduced access to tools and information in less advantaged social and economic groups, it should say so explicitly and be more specific about what better access for such groups would look like. It should also go beyond access to the real goal of any such objective: participation. The objective should then be specific in saying what would constitute better opportunities for participation by such groups.

- **Inform, educate and increase awareness regarding water use, conservation and efficiency and the importance of water.**

This is a crucial objective. It has also been carried out in numerous places around the world. This objective should deal with studying those other efforts, determining what application of resources, market penetration, or change in behavior would constitute a good education program, and measure resulting awareness to determine effectiveness.

- **Share conservation and efficiency experiences, including successes and lessons learned across the Basin.**

This objective is similar to the first objective in grouping #4, which calls for “sharing of innovative management practices and state of the art technologies.” Somehow the two objectives should be merged, and, as noted in our general comment on that grouping, the new objective should address some collective activity of the ten jurisdictions. Perhaps this is an area where all ten governments could agree to contract with an existing organization, such as the Great Lakes Commission, to provide the needed communication.

- **Enhance and contribute to regional information sharing.**

While there is a technical distinction between “contribute” to sharing and simply sharing (the former promising to actually generate something worth sharing), nonetheless this objective should be combined with the above objective.

- **Encourage and increase training opportunities in collaboration with professional or other organizations.**

This objective needs to be worded more clearly to make it understandable.

- **Ensure that conservation programs are transparent and that information is readily available.**

This objective duplicates the second objective in the first grouping, and should be combined with it.

- **Aid in the development and dissemination of sector-based best management practices and results achieved.**

This objective mostly duplicates the first objective in grouping #4 and should be combined with it.

- **Seek opportunities for the sharing of traditional knowledge and practices of Basin First Nations and Tribes.**

This objective should be combined with the final part of Objective grouping #4. The idea behind this objective is admirable, but “seeking,” is not a promise to achieve anything, only to try to do so. A serious commitment to the aim of this objective would embed sharing traditional knowledge in water withdrawal proposal reviews. This objective could read, “Share traditional knowledge and practices (obtained under the third objective of grouping #4) by including consideration of Native traditional knowledge in jurisdictional water use approval processes.”

### **Alternative objectives**

The problems with the regional draft water conservation objectives are so extensive that Great Lakes United proposes a full substitute for the document. Below is a draft of what we propose such a document say.

Jurisdictional water conservation programs should:

- Support implementation of the standard for decisions on diversion by establishing a science-based process for numerically defining the calculation of required return flow. The standard’s acceptable “allowance for Consumptive Use,” a figure sometimes also called “consumptive use co-efficients,” should be numerically defined by major use sector. These allowances or coefficients for any given water use sector should be defined in ranges, reflecting the variation in technical and other requirements within a given sector.
- Use a science-based process to determine which sectors of Great Lakes basin water use would return the greatest value for the dollar invested in conservation. “Value” in this context should be understood in terms of ecosystem protection or improvement and total water withdrawal reduced. Use the results of this information to determine priorities in jurisdictional conservation efforts
- Use a science-based process to prepare a map of the Great Lakes basin indicating degrees of water stress now and projected at intervals in the future. Use the results of this information to determine priorities in jurisdictional conservation efforts
- Educate the public and water users about the need for water conservation. Any serious education effort must include television advertising that is not limited to public service announcements.
- Ensure that public education and water conservation planning efforts can reach those parts of the population that have less-than-average access to official channels and the Internet
- Be accountable by setting measurable objectives, maximizing public input opportunities, and reporting regularly:
  - 1) Jurisdictional conservation program objectives should admit of a quantitative answer to the following question: what difference would progress toward the objective make in terms of environmental protection or



improvement?

2) The public should be allowed some form of input at every stage of major program design and implementation, including both priority setting and resource allocation

3) The public should receive reports on progress toward achievement of objectives, preferably at least annually.

- Pool resources with the other basin states and two provinces to:
  - 1) every five years, assess world water conservation programs for useful application in the basin
  - 2) every five years, assess new water conservation technologies for use in the basin
  - 3) every five years, prepare and maintain long-term (fifty-year) water supply and water demand forecasts for the basin as a whole. These forecasts should include assessment of the impact of population growth, changes in regional economic activity and residential patterns, climate change, and potential effectiveness of water conservation programs
  - 4) every three years report biannually on basinwide water conservation lessons learned
  - 5) obtain basin Native traditional environmental knowledge and practices
- Draw from the regional assessment of world water conservation methods for designing the jurisdictional water conservation programs
- Make use of the regional assessment of new water conservation technologies for deciding which if any technologies the jurisdiction should encourage jurisdictional water users to adopt
- Prepare and maintain long-term (fifty-year) water supply and water demand forecasts for the jurisdiction, incorporating useful information from regional forecasting effort
- Every three years, report on jurisdictional water conservation lessons learned
- Incorporate basin Native traditional environmental knowledge and practices into the jurisdictional water conservation program and water withdrawal proposal approval process

