

PROTECTION OF THE WATERS OF THE GREAT LAKES
THREE YEAR REVIEW

Report Prepared
for
The International Joint Commission
by
The International Water Uses Review Task Force

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EXECUTIVE SUMMARY

The International Water Uses Review Task Force was appointed in July of 2002 to assist the International Joint Commission in its three year review of activities related to its report on Protection of the Waters of the Great Lakes, which was released in February of 2000. The Task Force was specifically requested to provide status reports on legislative, policy, information gathering and other management programs concerning removals of Great Lakes waters or major new or increased consumptive uses. This report summarizes the outcome of the Task Force's research, consultations and deliberations over the past four months. The eight chapters in this report cover eight key topics, namely: decision making considerations; legal and policy considerations; and six chapters dealing with related technical considerations.

DECISION MAKING CONSIDERATIONS

Since February of 2000, both federal governments have taken legislative initiatives to clarify the situation regarding diversions and/or other removals. Aside from these federal actions, the primary policy initiatives have related to Annex 2001 to the Great Lakes Charter, under the leadership of Great Lakes Governors and Premiers, with the support of a senior officials-level Water Management Working Group. The Annex calls for, inter alia, a single resource improvement standard for dealing with both removals of water from the basin and new or expanded uses within the basin. The primary technical initiatives have focussed on efforts to develop a decision support system, led by state and provincial officials, along with the Great Lakes Commission.

Even though the Government of Canada expressed reservations about certain aspects of Annex 2001, governments at all levels in both countries have always cooperated fully on activities related to the Great Lakes Charter, and are continuing to work closely together to seek out common solutions that will benefit both countries. This is indicative of the strong and very constructive relationship that exists between our two countries. Regardless of the outcome of these deliberations, one immediate benefit of the quest for an improved decision making regime is that it is stimulating discussion among water managers in the basin, as well as encouraging a considerable amount of highly relevant research.

The Annex 2001 timetable does not call for binding agreement before 2004, and the discussions on the complex issues that need to be resolved to create the management regime called for by this document are still in preliminary stages. As a result, we have not attempted to pass judgement on the merits of the proposals as currently crafted. Instead, in the chapter on decision making we have pointed out, by way of questions, both the kind of fundamental conceptual concerns that are arising, and the very significant technical challenges that would be involved in developing implementation methodology and a management regime that will be both scientifically sound and legally defensible. Potential legal difficulties are discussed more fully in the chapter on legal and policy considerations. Our assessment, based on extensive consultations and the nature of questions arising from those consultations is that either a) full implementation may have to await

major scientific advances, advances which are not on the immediate horizon, and the assembly of much more information than is currently available, or b) ways will have to be found to significantly simplify the approach before any regime is likely to be supported by all governors and premiers in binding agreements that are then actually implemented by all.

Our assessment of the data suggests that the region does not need to rush to create binding agreements because of an overuse of water. As is indicated in the chapter on water use, we are now relatively certain that the consumptive use “problem” has been consistently and significantly overstated for the past three decades. While there are gaps in the data that make it difficult to do trend analyses and future projections, water use in the basin is relatively stable, and policy makers do not need to rush to create a new management system to solve an immediate problem. Nevertheless, because of the large number of remaining uncertainties, and because conservation is justifiable on its own merits, it would be advisable to continue, and to the extent practicable, accelerate water conservation measures.

Our technical consideration of the potential for long-distance, large-scale removals also indicates that such activity is highly improbable, at least for the near- to mid-term. This suggests to us that the region can take the time to answer the significant conceptual, technical, and legal questions surrounding a standard and management regime that seeks to combine conservation, no significant adverse impact at both an individual and a cumulative level, and resource improvement, without worrying in the near-to mid-term either about projects to move water from the Great Lakes to southern or western North America or about a loss of water because of developments in international trade.

Regarding out-of-basin removals, the approach used for the Akron diversion, “(essentially) no net loss of water”, would be simple, measurable, and, we believe, quite effective. It, along with accompanying conservation and environmental safeguards, could provide both adequate protection of the waters of the Great Lakes, and reasonable access to communities straddling or outside the basin, but close to the basin divide. Another simple, readily available approach to diversions that could be effective and legally defensible is that contained in the Commission’s 2000 report: limit any loss from an out-of-basin diversion to the average loss of water due to in-basin consumptive use, which is under 5%.

LEGAL AND POLICY CONSIDERATIONS

The major legal development in the United States since the release of the IJC’s report in February of 2000 was the enactment of federal legislation which confirms that the federal government has delegated the primary decision making authority to the states because federal and state interests on this issue are congruent. The Water Resources Development Act of 2000 (WRDA 2000), Section 504 directs the states, in cooperation with the two basin Canadian provinces, “to develop and implement a mechanism that provides a common conservation standard embodying the principles of water conservation and resource improvement for making decisions concerning the withdrawal and use of water from the Great Lakes Basin.” WRDA 2000 helped shaped the form

of Annex 2001. It also reinforced the conclusion, one that had been challenged by part of the legal community, that Congress in fact intended the WRDA legislation as a waiver of the Dormant Commerce Clause. As such, decisions made by the governors under WRDA should not violate the U.S. Constitution.

In Canada, the Canadian Parliament passed amendments to the International Boundary Waters Treaty Act. The amendments have yet to be proclaimed, but that is a practical matter that will have to await the adoption of the regulations. Section 13 provides that “...no person shall use or divert boundary waters by removing water from the boundary waters and taking it outside the water basin in which the boundary waters are located.” The prohibition does not apply to “...the removal of boundary waters other than the removal of boundary waters in bulk”; nor to “the removal of boundary waters used in a conveyance, including a vessel, aircraft or train, (a) as ballast; (b) for the operation of the conveyance; or (c) for people, animals or goods on or in the conveyance” nor to “boundary waters used in a non-commercial project on a short term basis for firefighting or humanitarian purposes.”

In the United States, water law in the Great Lakes region is moving slowly from common law of riparian rights to regulated riparianism. Under regulated riparianism, water is seen as a public resource and the state attempts to manage waters pro-actively, creating a planning and permitting system that seeks to anticipate and resolve problems rather than have the legal system deal with them post hoc. Within the region, the move to regulated riparianism is occurring at various rates of speed. Should the Annex 2001 process eventually produce a management system that includes a common decision making standard and binding agreement(s), states will need to incorporate this common regime into the individual regimes that are already developing. In general, water managers seek to make decisions as close to the point of withdrawal or use as possible, and the level of interstate and state-provincial cooperation envisioned under the Annex 2001 process is almost unprecedented. States and provinces never fully implemented the provisions of the Great Lakes Charter that called for information gathering and permitting, and Annex 2001 is calling for a more complex standard and management regime. Should the states succeed in negotiating an interstate compact (which might include the two basin provinces) and having it blessed by the federal government, it would be the first major regulatory compact in the water area. Most interstate compacts divide an interstate resource into state shares, but none of them contain a post-division management regime.

Aside from expressing certain concerns about concepts in the Annex, the Government of Canada also suggested a number of possible concerns about potential non-compatibility between the Annex and both the Boundary Waters Treaty and the Great Lakes Water Quality Agreement. Additionally, it suggested that the binding international agreement between provinces and U.S. states contemplated in the Annex raises concerns regarding Canadian constitutional law. It has been a longstanding position of the Canadian federal government that, notwithstanding the silence of the Constitution Act on the matter, the power to enter into such agreements is exclusive to the federal Crown. This does not mean that it is impossible for Canadian provinces to enter into agreements that may have binding international effect; but, as is the case in the

United States, this would require the facilitation of the federal government.

Presently, the states and provinces are committed to an open-ended, inclusive process that listens to a wide range of stakeholder and expert opinions. They have not yet adopted a decision standard. They have not yet agreed upon the form of the binding agreement. Nor have they resolved other important legal, policy and technical issues. For example, Annex 2001 does not speak of the threshold levels that will trigger review and application of the proposed standards, of the geographical scale which should be used to review small projects, of how to measure improvements to the Great Lakes system, and of the quality and quantity of information that will be necessary to support the proposed standards and decision process. Resolving all the issues in ways that are scientifically sound and legally defensible will take a considerable amount of time. The new State administrations that are the result of the November 2002 elections in the United States will undoubtedly want to play a key role in developing a regime consistent with Annex 2001. With the discussion of any regime far from complete, they will have ample opportunity to shape the resolution of these important issues.

TECHNICAL CONSIDERATIONS

a) Water Use and Related Information

The Great Lakes Commission has estimated 1998 consumptive uses in the basin at 2168 mgd, or 18 % less than their 1993 estimate of 2639 mgd. Earlier IJC-sponsored estimates included 1485 mgd in 1965, 3230 mgd in 1975, and between 1940 mgd and 3890 mgd in 1980. Several binational forecasts prepared between 1973 and 1985 projected year 2000 uses at between 3780 mgd and 6400 mgd. Based on these numbers, we can now say with a relatively high degree of confidence that the consumptive use “problem” has been consistently and significantly overstated for the past three decades.

While the latest data is more complete than earlier attempts, there remain difficult challenges with respect to its accuracy. The effort now being coordinated by the Great Lakes Commission will result in a substantial expansion of the current knowledge base on water use and supply. It will be important for states and provinces to sustain that effort, to intensify and improve measurement, to refine estimates, to validate consumption coefficients, and to begin to identify concrete reasons for any changes over time.

b) Diversions and Other Removals

The possibility of marine tanker export from the Great Lakes has essentially become a dead issue, partly because of public and governmental reactions to the earlier proposal, but also because, based on studies elsewhere, it is now relatively clear that the concept is economically infeasible. Although there will always be concerns in some quarters about large, long-distance diversions, we believe, based on economic and other considerations, that it is highly unlikely that there will be any official interest in such diversions, either into or out of the basin in the

foreseeable future.

No new diversions or new diversion proposals have come to our attention. Nevertheless, in the Great Lakes states, where population is more heavily concentrated than in Canada, some interbasin diversion possibilities are likely to attract communities just outside or straddling the basin divide. This likelihood may be increased by a trend towards consolidation of water utilities over larger geographical areas, including both sides of the basin divide.

c) Cumulative Impact

Since February of 2000, a series of workshops and literature reviews have provided important insights into the nature of the problem. It is now quite clear that any attempt to use the cumulative impact concept in a regulatory or quasi-regulatory way in the Great Lakes water levels context will face serious conceptual problems, as well as very difficult scientific challenges. It is not expected that these hurdles will be overcome for some considerable time.

Regardless of whether cumulative impact can be developed into a quasi-regulatory tool, or continue to be used for informational purposes, it is important that the relevant science proceed as quickly as possible, because all factors (except water conservation) likely to impact on water levels in the future are likely to cumulatively lower water levels. In that regard, the Great Lakes Protection fund is currently supporting two highly relevant modelling projects, and modest scientific progress is also likely to come out of ongoing Lake Ontario regulation studies in about two years time.

d) Climate Change

Although there have been at least two new developments with respect to climate modelling in the Great Lakes Region, the level of uncertainty remains essentially the same as it was three years ago. There is still a wide variation in model results. Climate change could result in large decreases in water levels, small increases, or anything in between. The undetermined but potentially decisive impact of climate change on the Great Lakes ecosystem ought to be a powerful incentive for the region to intensify its collaboration on research, to remain cautious in the way it uses water, and to seek to develop a variety of resilient water management tools that can respond to change.

e) Groundwater

Groundwater research continues to be largely directed at solving quite local problems. There has been only modest progress related to a few of the IJC recommendations on groundwater. Over the longer term, one key to improving the way groundwater is considered in any decision making regime will be our ability to map the groundwater divide. Unlike the surface water divide, groundwater divides shift as water enters or leaves an aquifer, a fact that will always make mapping at least somewhat imprecise. In any event, the mapping of groundwater throughout the

Great Lakes basin is likely to be a very long, arduous process.

A very promising initiative currently being funded by the Great Lakes Protection Fund will better define how groundwater relates to surface water, including flows into the Great Lakes, and develop protocols and data reporting procedures that can be used in both Canada and the United States in routine hydrologic analyses.

f) Conservation

There are a number of reasons why we have consistently overprojected water uses over the past three decades. These include inadequate data and forecasting tools, demographic shifts, and stricter pollution control measures. But we also believe that some of the overprojection is a product of a failure to appreciate that conservation in this water-rich region has been occurring. Unfortunately, there is little measurement of conservation in the region, and we cannot say how much conservation alone has contributed to the quicker than expected levelling off of consumptive uses.

There are a number of important conservation initiatives underway on both sides of the boundary. These efforts are expected to be enhanced in the future by improved coordination, for example through the work on a conservation tool kit that is currently being funded by the Great Lakes Protection Fund. In the long run, virtually all successful water conservation programs have at their core comprehensive metering (if you don't measure, you won't improve), and the setting of prices in such a way that the amount of water used by any activity is a function of its price. We believe there continues to be considerable potential for additional water savings, and that those water savings will not only result in basin-wide benefits, but will also yield significant infrastructure and energy cost savings, as well as contributing to the resolution of many local scale water management problems.

INTRODUCTION

In February 2000, the International Joint Commission submitted its report on Protection of the Waters of the Great Lakes to the governments of the United States and Canada in response to a February 1999 reference. In that report, the Commission recommended that it be given a standing reference to review its recommendations in three years and thereafter at 10-year intervals unless conditions dictate more frequent review. By letters dated September 28, 2000 and November 2, 2000, the governments of the United States and Canada approved this further assignment.

To assist it in its three year review, the International Joint Commission appointed the International Water Uses Review Task Force in July of 2002. The Task Force was asked to review and provide a status report on legislative and policy efforts of the governments of Canada and the United States, and the Great Lakes States and Ontario and Quebec concerning removals or major new or increased consumptive uses. In addition, it was asked to report on the status of information gathering and other management programs that affect Great Lakes water uses. The Directive from the Commission called for a final report by November 8, 2002.

The full Task Force met twice, in Chicago on July 23 and in Ottawa on October 8. In addition, the Co-Chairmen met on August 7 and again on August 20-21 in Ann Arbor, Michigan, and extensive consultations have taken with a variety of experts working on this issue. On October 8, the Task Force presented its preliminary findings to IJC Commissioners at their semi-annual meeting in Ottawa. This final report summarizes the outcome of the Task Force's research, consultations and deliberations.

Since February of 2000, both federal governments have taken legislative initiatives to clarify the situation regarding diversions and/or other removals. Aside from those federal actions, the primary policy initiative has been work towards a multi-jurisdictional regime for decision making led by the Council of Great Lakes Governors and Premiers, while much of the supporting technical activity has been focussed on efforts to develop a decision support system, led by state and provincial officials along with the Great Lakes Commission. Chapter 1 of this report concentrates on the two key state-provincial activities and their status. Chapter 2 provides an analysis of legal and policy issues, while chapters 3 through 8 provide status reports on six related technical subjects. The technical topics include water use data and related information, diversions and other removals, cumulative impact, climate change, groundwater, and water conservation.

In completing its assignment, Task Force members have made every effort to ensure the accuracy of the information provided, including having reviews conducted by selected experts. While much of the information is straightforward facts, in some instances Task Force members have had to go beyond the simple facts and have provided some additional interpretation in order to provide the reader with a reasonably comprehensive picture. In those cases, the interpretations are those of Task Force members alone based on their own personal and professional judgement, and do not necessarily represent the views of the International Joint Commission or its staff.