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The Great Lakes Charter: Toward a Basinwide Strategy for Managing the Great Lakes

By Peter V. MacAvoy*

I. INTRODUCTION

The Great Lakes states and provinces¹ have been blessed with an incomparable water resource that supports the health, lifestyles, and economic activities of tens of millions of people. The increasing demands being placed on this key resource prompted the region's eight governors and two premiers to join forces to forge a coordinated approach to Great Lakes water quantity problems. Their commitment and efforts resulted in the Great Lakes Charter (the Charter),² an historic, good faith agreement among the Great Lakes states and provinces detailing cooperative actions to insure a sufficient, reliable supply of clean Great Lakes water for the use and enjoyment of the region's citizens, including generations to come. In addition to sounding a call for better water resource management within the region, the Charter is also a timely response to an emerging threat from outside the region-the search for alternative sources of water by the arid regions of the United States. The states and [°] provinces are aggressively implementing the Charter's program for managing the growing stresses on the Great Lakes by pursuing water management legislation and through the work of a regional water management committee. These are the first steps in an ongoing process of shaping a comprehensive Great Lakes Basin water resources management strategy.

This paper summarizes the development of the Charter and attempts to characterize the role that the Charter is playing and will play in stimulating and guiding the evolution of a regional water management framework. As less than a year has passed since the signing of the Charter, this review cannot present a lengthy historical perspective, but it may help persons involved with Great Lakes management to appreciate more

^{*} Wisconsin Department of Administration. The author would like to acknowledge the valuable assistance of Jayson Chung of the Wisconsin Coastal Management Program in developing this paper. The editing assistance of the staff of the Center for the Great Lakes is also appreciated.

¹ The Canadian provinces of Ontario and Quebec, and Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin in the United states.

² Reprinted in GREAT LAKES GOVERNORS TASK FORCE, COUNCIL OF GREAT LAKES GOVERNORS, FINAL REPORT AND RECOMMENDATIONS ON WATER DIVERSION AND GREAT LAKES IN-STITUTIONS 40 app. III (1985) [hereinafter cited as Charter].

fully the significance of the Charter and to capitalize on the opportunities the Charter presents.

This paper first presents an overview of regional and national water supply conditions that portend significantly increased demand for Great Lakes water and enumerates some important events leading to the signing of the Charter. The next section describes the provisions of the Charter and its effectiveness as a response to the interbasin diversion and consumptive use issue. Finally, the paper discusses the Charter as a blueprint for future efforts to develop a basinwide Great Lakes water management strategy.

II. ORIGIN OF THE GREAT LAKES CHARTER

A. The Need for Management and Protection of the Lakes

The Great Lakes play a vital role in the regional and national economies of both Canada and the United States and are a primary influence on the quality of life in the region. The Center for the Great Lakes completed a study entitled "The Lake Effect"³ that describes in detail many of the beneficial uses of the lakes. These uses include: serving as an important route for shipping commercial cargo; providing sites and a reliable source of freshwater for one-fifth of U.S. manufacturing; generating more than forty-three billion kilowatt hours of hydroelectric power in the United States and Canada and furnishing water for steam condensers and boilers in seventy U.S. power plants; supplying twenty-six million people with drinking water; and satisfying millions more with water-based recreation and tourism opportunities and scenic national, state, and provincial lakeshore parks.⁴ Besides these economic uses, Great Lakes water resources sustain a rich diversity of land and water-based plant and animal communities, including valuable coastal fish and wildlife habitat. While hard to quantify economically, a reduction in the region's water supply or the lowering of quality due to water loss would diminish the quality of life of many millions of people living in the Great Lakes region.

In the future, the region will rely even more heavily on the Great Lakes. The International Joint Commission estimates that the region's consumptive use of Great Lakes water will double within fourteen years.⁵ To meet this rapid growth in demand without harming the resource base,

³ C. Thurow, G. Daniels & T. Brown, Center For The Great Lakes, Report to the Council of Great Lakes Governors—The Lake Effect: Impact of the Great Lakes on the Region's Economy (1984).

⁴ Id. at 7-8.

⁵ INT'L JOINT COMM'N, GREAT LAKES DIVERSIONS AND CONSUMPTIVE USES, A REPORT TO THE GOVERNMENTS OF THE UNITED STATES AND CANADA UNDER THE 1977 REFERENCE 30, 36 (1985).

water management agencies in the region will have to develop more sophisticated means of promoting water conservation, anticipating the timing and location of new water needs, measuring economic and ecological impacts of new withdrawals, and making tough management decisions affecting competing uses of Great Lakes water.

In addition to recognizing the growing dependence of the region's citizens on the Great Lakes, the Great Lakes governors and premiers are also keenly aware that the enormous lakes pose an inviting target for western and southwestern regions of the United States looking to appropriate new supplies of water to replace or augment their existing sources. Proposals to export water from the Great Lakes region presume that there is surplus water available there. However, the intensive use of the Great Lakes for a wide variety of purposes and the projections for heavily increased demand for Great Lakes water within the region over the next decade and a half indicate that there is no "surplus" available for exporting to the parched regions of North America. In fact, careful management and conservation of the water supply will be necessary to enable the region to meet its own needs.

The western United States' huge appetite for water was nurtured by a long outmoded federal policy of providing cheap water to encourage development of western resources. Since the enactment of the Reclamation Act of 1902,⁶ Congress has spent \$180 billion on water projects.⁷ During the early decades of reclamation financing, Congress extended interest-free repayment schedules for water development costs, increased acreage limits for water deliveries, and adopted other measures loosening payback provisions for water projects.⁸

The effects of federal largesse are reflected by typical recent costs of western water to users. Agriculture, which accounts for eighty-three percent of the daily consumptive use of water in the United States, is the chief beneficiary of federal subsidies.⁹ A 1981 General Accounting Office study reported that the federal government spent between \$54 to \$130 per acre-foot on water project construction, while the cost of the water to the end-user was only \$0.27 to \$9.32 (less than one-tenth of a cent to three cents per thousand gallons).¹⁰ Estimates of the level of federal subsidies extended to irrigation projects range from fifty-seven percent to

⁶ Act of June 17, 1902, ch. 1093, 32 Stat. 388.

 $^{^7}$ Dreyfus, Keynote Address, 1982 The Interbasin Transfer of Water . . . The Great Lakes Connection 5.

⁸ Ognibene, Selling Water Users in the West On Sharing Reclamation Project Costs, NAT'L. J., Aug. 14, 1982, at 1425.

⁹ Rogers, The Future of Water, ATL. MONTHLY, July, 1983, at 87.

¹⁰ GENERAL ACCOUNTING OFFICE, FEDERAL CHARGES FOR IRRIGATION PROJECTS RE-VIEWED DO NOT COVER COSTS, REPORT TO THE CONGRESS (1981).

ninety-seven percent of the total costs over the lifetime of the projects.¹¹ Federal funds continue to flow toward western agricultural projects, such as the Garrison diversion in North Dakota, and demand for water continues to build. Due to massive expansion of irrigation in Nebraska, the area of farm land sustained by water tapped from the Ogallala aquifer is expected to increase by one-quarter by 2020.¹²

While municipal drinking water is more expensive than water for irrigation in the West, this use is also heavily subsidized by the federal government. For example, drinking water costs about fifty-nine cents per thousand gallons in Albuquerque and eighty cents per thousand gallons in Dallas; these prices fail to approximate the true cost of delivering the water to those cities.¹³ In contrast, water drawn from Lake Michigan for domestic use in Milwaukee costs \$1.40 per thousand gallons.¹⁴ Heavy federal spending on water resource development in the West (in 1982, \$36 per capita, versus \$9.75 per capita in the Great Lakes States) has helped boost phenomenal population growth in the last decade and a half.¹⁵ Nevada, the fastest growing state in the 1970's, grew by sixty-four percent in that decade; Arizona, the driest state, grew by fifty-three percent.¹⁶ These population trends have generally continued through the first half of the 1980's.¹⁷

Recently, the inability of current supplies to keep up with growing demand in the West has been highly publicized. Depletion of important groundwater sources has occurred in three major areas—southern Arizona, the High Plains, and California. In the Colorado River Basin, which supplies water to several of the nation's fastest growing cities, consumptive use actually exceeds the renewable regional water supply.¹⁸ Undeniable limits to the ability of the West's traditional water sources to satisfy growing demand has spurred an exploration of alternative methods of obtaining more water. While conservation will certainly play an important role in the West's changing water strategy, continued growth in that region means that structural remedies, even at sharply increased cost, will be vigorously and aggressively sought.

The costs of obtaining water from dwindling sources is rapidly ris-

¹⁴ Dreyfus, supra note 7, at 5; Miller, supra note 13.

17 Id. at 14.

¹⁸ U.S. GEOLOGICAL SURVEY, WATER-SUPPLY PAPER NO. 2250, NATIONAL WATER SUMMARY 1983—HYDROLOGIC EVENTS AND ISSUES 25-26 (1983).

¹¹ Rogers, supra note 9, at 86.

¹² KUCHENBERG, *Great Lakes Need Wise Dispute Resolutions*, CONSERVATION FOUNDATION LETTER, Nov. 1983, at 6.

¹³ Rogers, *supra* note 9, at 86; Dreyfus, *supra* note 7, at 5; Staff issue paper by Allen H. Miller (1983) (available at Wisconsin Coastal Management Program).

¹⁵ Id.

 $^{^{16}}$ Bureau of the Census, U.S. Dep't of Commerce, Statistical Abstract of the United States 14, 211 (105th ed. 1985).

ing. Recently, Colorado Springs paid \$35 million for 13,000-15,000 acrefeet of water, or about \$7.16 per thousand gallons.¹⁹ In Gaines, Texas, the cost of pumping water from the Ogallala aquifer has increased to about \$60 per acre-foot, from \$1.50 per acre-foot ten years ago.²⁰ Rising water costs erode the argument that interbasin diversions are not a serious threat to the Great Lakes because of unfavorable cost-benefit ratios. This argument had little validity in the first place, because U.S. federal involvement in water resources has never been demonstrably guided by economic reason.

The western states have become increasingly interested in the Great Lakes region as a water source. Congress is disbursing \$20 million for studies and demonstration projects of ways to use surface water to recharge the Ogallala aquifer.²¹ The legislation forbids taking water from the Great Lakes for these projects,²² but the Great Lakes are not guaranteed immunity in the future should the results of the projects prove encouraging to their sponsors. Just this year, a California congressman tried to attach an amendment to the House water resources development bill that would have empowered the federal government to study diversions from the Great Lakes and Upper Mississippi River Basins.²³

The reaction of the Great Lakes governors and premiers to western interest in Great Lakes water has been unified and unequivocal—the water is needed here, and proposals for out-of-region water transfers will not be entertained.

B. Events Leading to the Signing of the Charter

The explosive growth of major population centers in the southwestern United States and the steady expansion of irrigated agriculture in the West and the High Plains were acknowledged as potential perils to the Great Lakes. However, the event that crystallized the interbasin diversion threat for many in the region was a 1981 study on transporting coal from the Powder River Basin in Wyoming to the Great Lakes via a coal slurry pipeline.²⁴ One option under this plan involved transporting Lake Superior water to Wyoming for production of the coal slurry by way of a

¹⁹ 1 U.S. WATER NEWS 6 (June 1985).

²⁰ FRESHWATER SOCIETY, SUPPLYING THE DEMAND 5-23 (L. Schroeder ed. 1983).

²¹ High Plains States Groundwater Demonstration Program Act, Pub. L. No. 98-434, 98 Stat. 1675 (1984). See also 2 U.S. WATER NEWS 12 (Jan. 1986).

²² High Plains States Groundwater Demonstration Program Act, supra note 21, § 2.

²³ 43 Cong. Q. 1844 (1985).

²⁴ R. HALSTEAD, WISCONSIN COASTAL MANAGEMENT PROGRAM, THE PROPOSED POWDER RIVER - MIDWEST COAL SLURRY PIPELINE (1985) (Transcript of a meeting between William Westhoff, Powder River Pipeline, Inc. and Representatives of Wisconsin State Agencies); GREAT LAKES GOVERNORS TASK FORCE, COUNCIL OF GREAT LAKES GOVERNORS, FINAL REPORT AND RECOM-

second pipeline. Another readily discernible threat arose in March, 1982, when the U.S. Army Corps of Engineers released its study documenting the depletion of the agriculturally important High Plains Ogallala aquifer.²⁵ The study investigated the possibility of diverting water from adjacent water basins for agricultural use in the High Plains.²⁶

The Great Lakes region responded promptly to these signs of interest in its water resources. In May, 1982, the Wisconsin Coastal Management Council sponsored a conference on the interbasin transfer of water. The next month, the governors and premiers of several Great Lakes States and Provinces met on Mackinac Island in Michigan and resolved that any future diversions of Great Lakes water for use outside the region would not be allowed without the concurrence of all of the Great Lakes States and Provinces and the federal governments of the United States and Canada.²⁷ In June, 1984, the "Futures in Water" conference in Toronto provided an international forum for discussion of regional water issues.²⁸ During that conference the government of Ontario made clear its support for a cooperative jurisdictional approach to Great Lakes management.²⁹ The conference also underscored the economic importance of the Great Lakes and the adverse consequences that water diversions and unchecked consumptive uses would have on the region.³⁰

A few months before the Toronto conference, the Council of Great Lakes Governors (the Council) met in Indianapolis and adopted a major policy resolution on Great Lakes water diversions.³¹ The resolution called on each state to prohibit out-of-region diversions of Great Lakes water without the consent of the other Great Lakes States and the International Joint Commission. It further established the Great Lakes Governors' Task Force on Water Diversion and Great Lakes Institutions (the Task Force) to examine the abilities of a strengthened Great Lakes compact or other institutional mechanisms to enable the region to resist and regulate proposals for interbasin diversions.³² The task force was to report its recommendations back to the Council by the end of 1984.³³

The Task Force, consisting of representatives from all eight Great Lakes States and the two Great Lakes Provinces, discussed a wide range of alternatives for strengthening the region's position relative to potential

- ²⁸ FUTURES IN WATER, ONTARIO WATER RESOURCES CONFERENCE (1984).
- ²⁹ Id. at foreward.
- ³⁰ Id.

- ³² Id.
- ³³ Id.

MENDATIONS ON WATER DIVERSION AND GREAT LAKES INSTITUTIONS 4 (1985) [hereinafter cited as FINAL REPORT].

²⁵ FINAL REPORT, supra note 24, at 4.

²⁶ Id.

²⁷ N. Y. Times, June 13, 1982, at 30, col. 2.

³¹ FINAL REPORT, supra note 24, at 37 app. I.

interbasin diversions. The Task Force examined proposals for federal and state legislation, evaluated strengths and weaknesses of existing Great Lakes regional institutions, and developed a set of findings and principles to guide the wise management of Great Lakes water resources.³⁴ From these findings and principles an agreement among the states and provinces to take coordinated actions to control new and expanded interbasin diversions and consumptive uses took shape. The Task Force's work culminated in a formal presentation of recommendations to the governors and premiers in Milwaukee, Wisconsin, on February 11, 1985. On that same date the leaders of the Great Lakes States and Provinces signed the Great Lakes Charter,³⁵ which for the first time committed all ten jurisdictions to pursue jointly an explicit strategy for the protection and wise use of the waters of the Basin.

III. A PROGRAM FOR PROTECTING GREAT LAKES WATER RESOURCES

A. Provisions of the Charter

In adopting the Charter, the governors and premiers of the Great Lakes region agreed upon immediate steps to improve the region's ability to effectively manage and protect the Great Lakes. The principles of the Charter commit the governors and premiers to managing Great Lakes Basin water in a spirit of cooperation and to following a watershed management approach that respects the hydrologic unity of the Great Lakes system.³⁶ The governors and premiers pledged to seek legislation in their individual jurisdictions to implement the Charter and ensure appropriate management and conservation of the Basin's water resources. They further agreed to refrain from approving major new or increased diversions or consumptive uses of basin water resources without notifying and seeking the consent and concurrence of all affected Great Lakes States and Provinces.³⁷ Finally, the Charter spelled out a program of action aimed at providing better information for future water management decisions to be undertaken jointly by the states and provinces. This program calls for the establishment of a Water Resources Management Committee (the Committee) to oversee the development of a common base of data on Great Lakes water use and availability.³⁸ It also provides for the ongoing maintenance of this data base, the encouragement and support of research in the area of flows and lake levels required to protect Great Lakes Basin natural resources, and the development of a cooperative water re-

³⁴ Id. at 18.

³⁵ Id. at 40.

³⁶ Id. at Principle I, II.

³⁷ Id. at Principle III, IV.

³⁸ Id. at Principle V.

sources management program for the Great Lakes Basin.³⁹ After taking these steps, the region would have the tools necessary to effectively manage basin water resources.

Two important federal court decisions that circumscribe state regulatory decisions guided the Task Force in developing the Charter principle calling for legislation to establish programs and specific standards to manage and regulate the diversion and consumptive use of Basin water resources. In Sporhase v. Nebraska,40 the Supreme Court ruled that a Nebraska law allowing only reciprocal transfers of water across state lines was an unconstitutional burden on interstate commerce, because the law was not sufficiently and directly related to a legitimate state concern for the conservation and preservation of water.⁴¹ The Court said that a state may exercise a preference for protecting the health and welfare of its own citizens, but that economic benefits to the state resulting from restrictions on interstate water transfers must be weighed against possible burdens on interstate commerce.⁴² In El Paso v. Reynolds,⁴³ the District Court of New Mexico found that New Mexico's ban on out-of-state transfers of ground water was unconstitutional. In response, New Mexico revised its groundwater law to require the state to only approve applications to export water if it finds that such an export is neither contrary to the conservation of water within the state nor otherwise detrimental to the public welfare of New Mexico's citizens.⁴⁴ The revised law also established factors to be used in determining whether the water proposed for exportation is needed within New Mexico and whether the importing state has a legitimate need for the water that could not be met internally.⁴⁵ Upon appeal of the original ruling, the District Court found that New Mexico's revised law did not unduly discriminate against out-ofstate users and therefore did not violate the Constitution.⁴⁶

The import of these recent rulings is that water is considered an article of commerce and that states, in exercising their police power, may legitimately regulate and under certain conditions even prohibit diversions, but they may not have outright bans on interstate water transfers. The state legislative strategy recommended by the Charter heeds these rulings: it establishes regulation and monitoring of diversions and consumptive uses for the purpose of protecting the public health and welfare of the state, rather than erecting embargoes on water exports, and it ap-

³⁹ Id.
⁴⁰ 458 U.S. 941 (1982).
⁴¹ Id. at 954-958.
⁴² Id.
⁴³ 563 F. Supp. 379 (D.N.M. 1983).
⁴⁴ N.M. STAT. ANN. § 72-12B-1 (1985).
⁴⁵ Id.
⁴⁶ El Paso v. Reynolds, 597 F. Supp. 694 (D.N.M. 1984).

plies the same regulatory standards to all users of Great Lakes water, whether they are in-state or out-of-state users.⁴⁷

In addition to the foregoing, the Charter carries a very positive message. It calls for the development of the capability within each Great Lakes State and Province to assess the needs for Great Lakes water within the region and provide for these needs through conservation and wise management, and it calls for a regional framework to coordinate management activities of the jurisdictions.⁴⁸ By implementing strong, resource-based management techniques within the region and maintaining unity, the Great Lakes States and Provinces will be in the strongest possible position to meet their citizens' future water needs and can resist attempts to divert water to other regions while staying within the prescribed constitutional guidelines of federal court decisions.

B. Strengths and Limitations of the Charter

The Great Lakes Charter was a joint effort by eight states and two provinces from conception to signing. It represents a strong expression of regional unity that is widely respected. The visibility of the Charter helps establish the Great Lakes region as a unified and influential force in both Washington, D.C., and Ottawa.

As a good faith agreement, the impact of the Charter depends wholly on the commitment of its signatories to fulfilling its intent. The exercise of this commitment is greatly aided by the Charter itself, which prescribes a sequence of specific actions, including instituting enforceable water management programs at the state and provincial level and formalizing the regional interchange of information and views on water use, leading to the development of a Basin water resources management program. The Charter was designed to be a forward-looking document. It creates an opportunity to devise a comprehensive Great Lakes management strategy and then provides specific steps to move the signatory parties in that direction.

The more immediate challenge for the states and provinces is to ensure that the commitments made by virtue of signing the Charter—including the establishment of a regional data base, enacting the necessary regulations for limiting interbasin diversions and major consumptive uses, and working out the prior notice and consultation process—are in fact honored. However, even with these critical elements firmly in place, the protection from large scale interbasin diversions will be far from absolute, simply because of the federal and international interests in water management and uncertainty as to how these interests will be exercised in the future. For that reason, the Charter envisions that ultimately the

⁴⁷ Charter, supra note 2, at Principle III.

⁴⁸ Id. at Implementation of Principles.

desired protection for the resource will come through the implementation of a basinwide water resources management program.

IV. DEVELOPING A BASINWIDE STRATEGY - THE NEXT STEPS

A. The Need for Further Regional Cooperation

The basinwide water resources management program called for by the Charter is necessary to tie together the technical, legal, and political tools developed under the initial stages of the Charter's implementation and to solidify the institutional base for regional management of the Great Lakes. To effectively resist out-of-region interbasin diversions, the Great Lakes States and Provinces must be able to demonstrate a strong united front and the ability to address successfully Great Lakes water management issues on a sustained basis.

Adherence by the region's states and provinces to the regulatory standards recommended by the Great Lakes Governors' Water Diversion Task Force will result in a coordinated and prudent system of protection for the Great Lakes for the time being. To stand up to increasing and conflicting demands for Great Lakes water both from within and from outside the region, however, these standards and the analytical capabilities of administrative agencies will require considerable refinement. The continuation of cooperative programs is needed to build the capacity of governments in the region to manage water use equitably, while taking the economic and environmental wellbeing of the entire region into consideration. Furthermore, development of a regional strategy now, rather than reacting to a specific large scale diversion or consumptive use project at some point in the future, will prevent unnecessary strains on the unity now enjoyed by this large and diverse region.

The case of South Dakota and its sale of water rights to a coal slurry pipeline company is a cautionary lesson. Although enormously popular in the state and hailed as a key to answering the state's own fiscal and water supply problems, the sale angered South Dakota's downstream neighbors. Three states have brought suit against the U.S. Army Corps of Engineers and the Department of Interior for allowing the sale, despite their contention that the amount diverted will not have a significant downstream impact on the Missouri River.⁴⁹ Divisiveness of this sort is totally incompatible with the protection of a resource of the magnitude and importance of the Great Lakes.

The process of developing a basinwide water management strategy can provide a decision-making framework that can forestall collisions of competing interests and authorities. An anticipative program can pro-

⁴⁹ Ashland Daily Press, Jan. 21, 1983.

duce innovative, cooperative solutions to difficult problems, as opposed to reactive compromises based on a least common denominator.

In sum, effective management of the Great Lakes depends a good deal upon obtaining a more sophisticated technical grasp of the resource issue, developing the institutional capacity to handle new demands on the resource, and cementing regional unity. The Great Lakes Charter is just the first step in pursuing these goals.

B. Taking and Maintaining the Initiative

One of the regional strengths evidenced by the Great Lakes Charter is the willingness of the leaders of the states and provinces in the region to seize the initiative in defining issues and anticipating problems before they grow to difficult proportions. This is especially important and advantageous to the region given the lack of a coherent federal policy on the management of water resources from a quantitative perspective. While Congress and federal agencies have left water quantity management largely in state hands, the federal courts have assumed an active role in water allocation and water transfers among the states.⁵⁰ If it were so inclined, Congress also, drawing upon one or more sources of constitutional power, might attempt to preempt state, local and individual rights regarding the regulation and use of water resources.

In this somewhat ambiguous legal/political environment, it is essential that the Great Lakes States and Provinces maintain the initiative in developing water policy for the region. Continuing efforts to work out a basin-wide management program will enable the region to avoid being thrust into a reactive mode rife with uncertainty. Following up on the Charter, the region must set the terms for future debate over the use and protection of Great Lakes waters, and the states must reinforce to the fullest measure possible the balance of their authority remaining under current interpretations of a state's right to manage and regulate the use of water resources found within its boundaries.

On another very practical front, regional initiative is important to continue to increase national and international recognition of the importance of the Great Lakes. Regional activism is especially important in the U.S. in light of the shift in congressional voting blocs in favor of southern and western states. Leadership and unity on water resource policy issues displayed by the Great Lakes region can improve its chances for winning support for Great Lakes management activities from both federal governments and potential ally states and provinces.

⁵⁰ In the Sporhase case, 458 U.S. 941 (1982), the U.S. Supreme Court placed strict limits on how a state might regulate the use of water exported across its borders.

C. Continuing the Process Begun by the Charter

1. Implementation

The signing of the Charter has launched a wave of legislative activity in the region aimed at bringing state management capabilities into line with the standards recommended by the Charter. Illinois, Michigan, New York, and Wisconsin have recently passed legislation implementing specific features of the Charter.⁵¹ Minnesota, Ontario, and Quebec possessed the authority to exercise significant regulatory control over their water resources before the Charter was signed.⁵² The remaining states are in the process of developing programs to implement the Charter. All of the states and provinces must participate in monitoring and assisting legislative developments to insure that a consistent and coordinated system of state and provincial water management programs is established with as little delay as possible.

In addition, the Water Resources Management Committee has been formed and is moving forward to develop a regional data base.⁵³ The Committee, whose work is being supported by a U.S. federal coastal zone management grant,⁵⁴ is examining various options for structuring and operating the data base.⁵⁵ The charge to the Committee to set up a regional water management data base presents challenges of organizational coordination and data management that are normally very difficult to meet even within a single state or province. Therefore, it is noteworthy that each state and province is making available the resources necessary to enable the Committee to carry out its duties effectively and on time. The states and provinces, however, must jointly monitor the progress of the Committee to see its work through to completion.

A linchpin in the development of a basinwide water management strategy is the regional prior notice and consultation process, which will formalize the states' and provinces' commitment to share information and viewpoints on major water use matters. The Committee has begun to examine ways to make the consultation process functional. The development of the regional consultation procedure will be a delicate process since it admits the influence of sister jurisdictions into the exercise of individual state and provincial authority. An emphasis on the welfare of the region and good faith among the states and provinces is essential to

⁵¹ 1985 Ill. Legis. Serv. 993 (West); 1985 Mich. Legis. Serv. 133 (West); 1985 N.Y. Laws 377; 1985 Wis. Laws 60.

⁵² MINN. STAT. ANN. § 105.405 (West 1985). In Ontario and Quebec, constitutionally defined jurisdiction gives the provinces control.

⁵³ Charter, supra note 2, at Principle V.

⁵⁴ Coastal Zone Management Act, Pub. L. No. 92-583, § 306, 86 Stat. 1280 (1972).

⁵⁵ Charter, supra note 2, at Implementation of Principles.

developing the prior notice and consultation procedure, just as it was in achieving the agreements in the Charter.

2. Institutional Foundations

The Great Lakes governors and premiers foresaw the need for adequate institutional support for efforts to implement the Charter. As a result, the Council of Great Lakes Governors (the Council) was designated to serve as a clearing house to monitor Charter implementation and to provide the states and provinces with information and assistance in developing the programs and legislation called for by the Charter.⁵⁶ The Committee is being assisted in its development of a regional data base by the Council and the Great Lakes Commission. The Committee is comprised of representatives appointed by each state and province, but the composition of the Committee could be altered at any point to suit the particular technical or policy issue at hand.

The cooperative regional efforts to follow the Committee's work will also require careful consideration of institutional arrangements. In order for the region to maintain control over its water resources, there must be a smooth transition between the current stage of Charter implementation and subsequent efforts to build upon the resulting legal and information bases.

The question of finding effective institutional arrangements for improving Great Lakes management was one of the original tasks the water diversion task force was charged with.⁵⁷ While the complexity of dealing with the diversion and consumptive use questions prevented the task force from completing a comprehensive evaluation of the capacity of Great Lakes organizations to deal with regional management issues, the task force did look specifically at existing regional institutions' capabilities to implement the common data base and long-range management provisions of the Great Lakes Charter. That evaluation identified the following set of attributes that are critical for successful efforts by any organization attempting to address regional resource issues:

1. Any entity charged with responsibility for undertaking significant regional resource management efforts in the Great Lakes Basin should involve the full participation of all eight Great Lakes States and, if possible, the Great Lakes Provinces of Quebec and Ontario.

2. State representatives to the organization must be effectively linked to their governors, and provincial representatives must be of similar stature.

3. The institution must have at its command adequate technical,

⁵⁶ Charter, supra note 2, at 44.

⁵⁷ FINAL REPORT, supra note 24, at 37-38.

financial, and managerial resources to administer its recommended programs.

4. The institution must be able to draw on the International Joint Commission and the U.S. and Canadian federal governments on a continuing, cooperative basis.

5. The institution must have the administrative structure, breadth of scope and authority, and organizational stability needed to address long term issues.⁵⁸

Whatever institutional arrangements are employed should be flexible and tailored to specific tasks. Recent surveys of resource policy makers and managers in the Great Lakes region show that while existing institutions could be improved, the creation of permanent, new institutions is deemed neither necessary nor desirable.⁵⁹ Consequently, the approach to successfully developing a basinwide water resources strategy calls for drawing upon the strengths and resources of existing institutions and agencies, with ad hoc coordinating and advisory groups assembled to bring the appropriate degree of authority and expertise to bear on specific issues. The Great Lakes Charter was developed by just such a special purpose task force, and the Committee is a similar ad hoc group. The multiple technical and policy tasks involved in creating a basinwide management strategy could be undertaken under the guidance of a variety of institutional arrangements. Forging a unified program of action for such a complex resource management issue in such a diverse region requires forums conducive to focused discussion and realistic expectations. To be effective, institutions and individual representatives must be carefully matched to the tasks with which they are charged.

3. Federal and International Interests

One institutional question that deserves careful thought is how to integrate federal and international interests in the Great Lakes into regional efforts to manage and protect the Great Lakes. In Canada, the demarcation between provincial and federal resource management responsibilities is somewhat clearer than in the United States. The provinces own the water resources within their boundaries and therefore have authority to legislate in areas of domestic, municipal, and industrial water supply. The federal Parliament, however, shares jurisdiction with the provinces in agriculture and health and has exclusive jurisdiction over navigation, as well as the residual power to legislate for the peace, order, and good government of the country. Therefore, care must be

⁵⁸ Id. at 32.

⁵⁹ Institutions/Issues Survey of Great Lakes Institutions distributed to state agencies of the Great Lakes States and Provinces (1984) (available from the Council of Great Lakes Governors); FINAL REPORT, *supra* note 24, at 46 app. IV.

taken to ensure that the Canadian federal government is involved with the provinces of Ontario and Quebec with regard to Great Lakes management.

The U.S. federal government has the potential to become more actively involved in Great Lakes water decisions as its recognition of the Great Lakes as a national resource heightens, and the region's water management capabilities could benefit from its assistance and support. Future efforts initiated by the states and provinces to develop a water management program should make appropriate arrangements for federal participation. As a participant in the policy process, the federal government should be committed to compliance with the resulting basinwide water resource management program. With the Great Lakes Charter, the states and provinces have staked out a clear direction for Great Lakes management, and any federal involvement in Great Lakes management activities should be consistent with work being carried out pursuant to the Charter. If congressional legislation concerning Great Lakes water diversion and consumptive use is desired, then it should faithfully reflect the strategy and policies of the region's states. Coherent and consistent policies at the state, provincial, regional, and federal levels will facilitate efforts to protect the Great Lakes.

A third important actor in Great Lakes management issues is the International Joint Commission (IJC). In discharging its responsibilities under the Boundary Waters Treaty,⁶⁰ the IJC has been confronted with increasingly complex and politically sensitive transboundary environmental problems. Through the U.S.-Canadian Water Quality Agreement, the IJC has played a central role in developing an international response to the basin's serious pollution problems. The IJC should also be a key participant in developing a basinwide water resource management strategy. However, as the water diversions task force pointed out in its final report, if the Commission is to play an integral role in implementing a basinwide strategy, a clarification of its authority over water quantity issues in relation to the Boundary Waters Treaty, and some changes in its administrative procedures are in order.

4. Efforts Outside of Government

In addition to efforts made by governments and organizations directly advising governments, valuable legal and technical contributions to continuing efforts to develop a basinwide water management program will be made by individuals and organizations outside of the government. The legal seminar on water diversions and consumptive uses sponsored by The Center for the Great Lakes is such a contribution. Much has

⁶⁰ Treaty Relating to Boundary Waters and Boundary Questions, Jan. 11, 1909, United States -United Kingdom, T.S. No. 548.

happened in a short time regarding Great Lakes interbasin diversion, and thorough analysis of the steps taken and legal questions raised by work accomplished so far can help put future strategy-building efforts on the right course. The Great Lakes Charter is a clear sign that systems of water rights and water regulation in the region are evolving to deal with new water supply problems that the region faces or will face in the near future. The region's states and provinces need comprehensive analyses of alternative legal and institutional tools that can be used to promote the conservation and wise development of Great Lakes water resources.

Substantial and challenging scientific research must also be done before a sound basinwide water resources management program can be put in place. To demonstrate effective management over Great Lakes water resources, the states and provinces will need to be able to estimate the impacts of changes in flows and levels in the Great Lakes and tributary waters of the Great Lakes ecosystem. Resource management agencies lack the necessary knowledge to make those assessments now. To improve water resource management, the Great Lakes need to be better understood as an ecological system, and resource management institutions in the region will have to build the capacity to develop integrated policies that reflect both the ecological and economic aspects of water resource problems.

Therefore, in addition to overseeing the completion of the specific tasks being undertaken pursuant to the Charter, the region's states and provinces should encourage the funding of coordinated studies and research programs that will provide improved information for future water management decisions.

Nongovernmental organizations can be very influential in heightening the public's understanding of Great Lakes water quantity issues. Strong public concern over these issues will help advance regional management efforts. The Great Lakes Charter received a great deal of popular support, and this support needs to be sustained. Public and private organizations outside government can forward the cause of Great Lakes protection and management by refreshing and deepening the public's appreciation of what is at stake in Great Lakes water quantity issues.

V. CONCLUSION

In recent years, leaders of the Great Lakes States and Provinces have exhibited a heightened appreciation of the value of the Great Lakes to the region's economy and quality of life and a sharpened perception of the Great Lakes as a regional asset unmatched in the rest of the continent. Among policymakers, resource managers, researchers, and informed citizens, there is a recognition that an integrated course of action is needed to balance and protect the interests of those in the region who depend on the water resources of the Great Lakes Basin and to prevent the degradation of those resources in terms of both quality and quantity. Although a more cooperative spirit has evolved in the region, there is still significant institutional resistance to joint management efforts. The signing of the Great Lakes Charter was an historic step toward removing that resistance. In developing the Charter, the region's states and provinces demonstrated their desire to address Great Lakes management problems at a basinwide level and to respond to the needs of all the Basin states and provinces in one truly regional perspective. For the first time, the chief executives of the region's states and provinces agreed to a series of steps that will lead to a basinwide water resource management strategy. The Charter is especially meaningful because of its emphasis on a specific program of implementation, rather than offering only sweeping policy statements. However, only when the steps it has initiated have been completed will the Great Lakes States and Provinces be able to effectively manage the Basin's water resources for the benefit of their citizens. This level of accomplishment will be another milestone in the history of resource management in the region.

The biggest challenge currently facing the region is to maintain the momentum toward the development of an integrated management strategy imparted by the Charter. The states and provinces must be prepared to build upon current efforts to implement the Charter as soon as they are completed. While the outlines of a framework for developing a basinwide water resources management strategy have been drawn, fulfilling the promise of the Charter will rest on the personal commitment and initiative of the governors and premiers and other leaders in the region. Mutual cooperation and good faith will continue to be essential ingredients in the process. Organizations outside of government can and must play a pivotal role by continuing to highlight Great Lakes water quantity issues and by asking questions about progress toward a basinwide water resources management program. The magnitude of the challenge set up by the Charter befits the historical significance of that agreement and will only be met by continued enthusiasm and resolve. .