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United States Senate Committee on the Judiciary

Hearing on S.J. Res. 45
A Resolution Consenting To and Approving the
Great Lakes-St. Lawrence River Basin Water Resources Compact

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Senator Russell D. Feingold, Presiding

Interstate Water Management and the Great Lakes-St. Lawrence River Basin Water Resources Compact

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This testimony is offered in strong support of Senate Joint Resolution 45, "Expressing the consent and approval of Congress to an interstate compact regarding water resources in the Great Lakes-St. Lawrence River Basin." In this testimony, I provide: (1) an overview of managing water resources with interstate compacts in the United States; (2) background on the existing policies and laws regarding interstate Great Lakes water management; and (3) a summary and analysis of the key provisions of the Great Lakes-St. Lawrence River Basin Water Resources Compact.

I am a member of the faculty of Wayne State University Law School in Detroit, Michigan, and have written extensively on interstate water management, Great Lakes law and policy, and U.S.-Canadian transnational law. I previously served on the Advisory Committee to the Council of Great Lakes Governors Water Management Working Group that negotiated and drafted the proposed Great Lakes-St. Lawrence River Basin Water Resources Compact. I offer this testimony in a nongovernmental capacity on behalf of the Great Lakes Environmental Law Center and am not representing any other persons or entities. My curriculum vita is attached to this testimony as Appendix A.

I. MANAGING WATER RESOURCES WITH INTERSTATE COMPACTS IN THE UNITED STATES

Interstate compacts play a significant role in water resource management in the United States. In terms of quantity, most of the available freshwater in the United States is in rivers, lakes, and aquifers that cross state boundary lines. These interstate water resources are most often (and most effectively) managed and allocated by interstate compacts. Interstate compacts are essentially contracts between the party states, subject to federal approval as provided in the U.S. Constitution.[1] When approved by the Congress and signed by the President, interstate compacts have the full force and effect of federal law.

There are over 25 interstate compacts for managing and allocating water resources in force in the United States.[2] These compacts provide the legal framework for managing and allocating some of country's the most important freshwater resources, including the Colorado River, the Rio Grande, the Arkansas River, the Susquehanna River, and the Delaware River. The compacts vary significantly in how they allocate and manage interstate waters. Some interstate compacts, especially in the west, simply divide the waters by volume between the watershed states. Other interstate compacts, especially in the east, provide for more comprehensive regulation and management of water uses.

Most major freshwater resources in the United States are shared by two or more states. Many rivers were used as the boundaries between neighboring states, usually giving the adjacent states shared rights to use of the water. In every part of the country, the major freshwater systems cross state lines. Eight states (Illinois, Indiana, Michigan, Minnesota, Ohio, New York, Pennsylvania, and Wisconsin, as well as the provinces of Ontario and Quebec) share jurisdiction and rights over the Great Lakes, which contain over ninety

[1] *See* U.S. CONST. art. I, § 10, cl. 3

[2] *Alabama-Coosa-Tallapoosa River Basin Compact*, Pub. L. No. 105-105, 111 Stat. 2233 (1997); *Animas - La Plata Project Compact*, Pub. L. No. 90-537, §501(c), 82 Stat. 898 (1968); *Apalachicola-Chattahoochee-Flint River Basin Compact*, Pub. L. No. 105-104, 111 Stat. 2219 (1997); *Arkansas River Compact*, Pub. L. No. 81-82, 63 Stat. 145 (1949); *Arkansas River Basin Compact of 1965*, Pub. L. No. 89-789, 80 Stat. 1409 (1966); *Arkansas River Basin Compact of 1970*, Pub. L. No. 93-152, 87 Stat. 569 (1973); *Bear River Compact*, Pub. L. No. 85-348, 72 Stat. 38 (1958); *Belle Fourche River Compact*, Pub. L. No. 78-236, 58 Stat. 94 (1944); *Big Blue River Compact*, Pub. L. No. 92-308, 86 Stat. 193 (1972); *California-Nevada Interstate Compact*, Nevada Revised Statutes §538.600 (1969); *Canadian River Compact*, Pub. L. No. 82-345, 66 Stat. 74 (1952); *Colorado River Compact*, 70 *Congressional Record* 324 (1928); *Costilla Creek Compact (Amended)*, Pub. L. No. 88-198, 77 Stat. 350 (1963); *Delaware River Basin Compact*, Pub. L. No. 87-328, 75 Stat. 688 (1961); *Klamath River Basin Compact*, Pub. L. No. 85-222, 71 Stat. 497 (1957); *La Plata River Compact*, Pub. L. No. 68-346, 43 Stat. 796 (1925); *Pecos River Compact*, Pub. L. No. 81-91, 63 Stat. 159 (1949); *Red River Compact*, Pub. L. No. 96-564, 94 Stat. 3305 (1980); *Republican River Compact*, Pub. L. No. 78-60, 57 Stat. 86 (1943); *Rio Grande Compact*, Pub. L. No. 76-96, 53 Stat. 785 (1939); *Sabine River Compact*, Pub. L. No. 83-578, 68 Stat. 690 (1954), *as amended*, Pub. L. No. 87-418, 76 Stat. 34 (1962); *Snake River Compact*, Pub. L. No. 81-464, 64 Stat. 29 (1950); *South Platte River Compact*, Pub. L. No. 69-37, 44 Stat. 195 (1926); *Susquehanna River Basin Compact*, Pub. L. No. 91-575, 84 Stat. 1509 (1970); *Upper Colorado River Basin Compact*, Pub. L. No. 81-37, 63 Stat. 31 (1949); *Upper Niobrara River Compact*, Pub. L. No. 91-52, 83 Stat. 86 (1969); *Yellowstone River Compact*, Pub. L. No. 82-231, 65 Stat. 663 (1951). In addition, there are dozens of other interstate compacts that address water quantity, flood control, and water resource information.

percent of the fresh surface water in the United States.[3] The Colorado River watershed covers seven states (California, Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, as well as Mexico) and is an extremely important water supply for these western states. The largest river on the United States' east coast, the Susquehanna, is shared by New York, Pennsylvania, and Maryland. Both the Colorado River and Susquehanna River, like many other major interstate freshwater resources, are managed by a Congressionally approved interstate compact.[4]

A. Management and Allocation of Interstate Waters in the United States

There are three ways to manage and allocate interstate waters in the United States. First, the federal government, through an act of Congress, could establish standards for the use of interstate waters or even apportion specific water resources among the states. While Congress has broad power over interstate waters, it has rarely exercised that power for managing and allocating interstate waters. Congress has taken a central role in protecting interstate water quality through the Clean Water Act,[5] but has not taken a regulatory role in managing interstate water quantity.

Second, the Supreme Court of the United States has on several occasions allocated interstate waters when a dispute between states has arisen. Pursuant to Article III of the United States Constitution, the United States Supreme Court has original jurisdiction over disputes between states.[6] The Court has invoked this jurisdiction several times over the past century to resolve disputes over allocation of interstate waters.[7] In these cases, the Supreme Court has not developed a uniform approach to interstate transboundary water allocation, instead resolving individual disputes with heavy reliance on the specific facts and circumstances. This approach has been termed "equitable apportionment," which merely provides that no single state can command an entire interstate waterway to the detriment of other riparian states. The need for equity in allocating transboundary waters was best stated by Justice Holmes in the Supreme Court's 1931 decision in *New Jersey v. New York* (1931):

> A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it. New York has the physical power to cut off all the water within its jurisdiction. But clearly the exercise of such a power to the destruction of the interest of

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[3] GREAT LAKES COMMISSION, TOWARD A WATER RESOURCES MANAGEMENT DECISION SUPPORT SYSTEM FOR THE GREAT LAKES-ST. LAWRENCE RIVER BASIN 9 (2003).
[4] *Colorado River Compact*, 70 *Congressional Record* 324 (1928); *Upper Colorado River Basin Compact*, Pub. L. No. 81-37, 63 Stat. 31 (1949); *Susquehanna River Basin Compact*, Pub. L. No. 91-575, 84 Stat. 1509 (1970).
[5] Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 896 (1972) (codified at 33 U.S.C. §§ 1251–1376 (2000)).
[6] *See* U.S. CONST. art. III, § 2, cl. 2 ("In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be Party, the supreme Court shall have original Jurisdiction.").
[7] *See, e.g.*, New Jersey v. New York, 283 U.S. 336 (1931); Wisconsin v. Illinois, 278 U.S. 367 (1929); Wyoming v. Colorado, 259 U.S. 419 (1922); Kansas v. Colorado, 206 U.S. 46 (1907).

> lower States could not be tolerated. And on the other hand equally little could New Jersey be permitted to require New York to give up its power altogether in order that the river might come down undiminished. Both States have real and substantial interests in the River that must be reconciled as best they may be.[8]

While the principle of equitable apportionment seems reasonable enough in theory, its application to specific disputes is frustrating and inconsistent. Managing an interstate water resource requires technical expertise, policy development, and cooperation – none of which are characteristic of litigation and judicial rulings. The Supreme Court, to its credit, has recognized that it is not well suited to managing interstate water resources. Instead, the Supreme Court has on numerous occasions recommended the third way of managing and allocating interstate waters – through an interstate compact. In suggesting the use of interstate compacts, the Supreme Court has stated that interstate water management problems are "more likely to be wisely solved by cooperative study and by conference and mutual concession on the part of representatives of the States so vitally interested in it than by proceedings in any court however constituted."[9]

B. **The Interstate Compact as a Legal Authority**

Interstate compacts are powerful legal tools. A compact is essentially a contract between states, subject to federal approval.[10] The compact mechanism is provided in Article I, section 10, of the U.S. Constitution, which declares that "[n]o State shall, without the Consent of Congress . . . enter into any Agreement or Compact with another State, or with a foreign Power."[11]

Many water management compacts are between only two states, though some include up to seven or eight party states (the Colorado River Compact and Great Lakes-St. Lawrence River Basin Water Resources Compact, respectively). Water management compacts are usually negotiated by governors and state agency officials, but can only be approved through state legislation. Just like a contract, a compact has only been agreed to when all party states, through their legislatures, approve the exact same compact terms. Because interstate compacts increase the power of the states at the expense of the federal government, they must also be approved by Congress and signed by the President to take effect.[12] Once effective, interstate compacts have the full force and supremacy of federal law.[13] This allows the terms of a compact to be enforced in federal court and prevents states from ignoring their compact duties.[14]

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[8] New Jersey v. New York, 283 U.S. 336, 342-43 (1931).
[9] New York v. New Jersey, 256 U.S. 296, 313 (1921).
[10] *See* Texas v. New Mexico, 482 U.S. 124, 128 (1987).
[11] U.S. CONST. art. I, § 10, cl. 3.
[12] *See* U.S. CONST. art. I, § 10, cl. 3.
[13] *See* Culyer v. Adams, 449 U.S. 433, 438 (1981) (congressional consent "transforms an interstate compact . . . into a law of the United States").
[14] *See* Texas v. New Mexico, 482 U.S. 124, 128 (1987).

C. Overview of Types of Interstate Water Compacts

Putting aside the Great Lakes-St. Lawrence River Basin Water Resources Compact, interstate water management and allocation compacts tend to follow one of two general models – western and eastern. (There are also some interstate water compacts that confer no substantive rights and merely provide a mechanism for sharing information and conducting joint research.[15]) Interstate compacts were first used in the west in the 1920s and provide the older model. Western water compacts, such as the Colorado River Compact[16] and the Rio Grande Compact,[17] focus on allocating water rights to a shared river among the party states. These western compacts essentially divide the proverbial pie into agreed pieces. While western compacts restrict the total amount of water available to each individual state, the compacts usually do not provide any standards or even guidance for managing individual water withdrawals within the state's total allocation.

When eastern states began to develop interstate compacts for water management in the 1960s and 1970s, they took a very different approach. The two most prominent eastern water compacts are the Delaware River Basin Compact[18] and the Susquehanna River Basin Compact.[19] These eastern water compacts create centralized interstate management authorities comprised of the party states and federal government. These authorities, termed compact commissions, have broad regulatory powers for permitting and managing individual withdrawals or diversions of all waters in the respective river basins. The commissions even set regional standards for discharges of water pollution. This centralized approach has obvious benefits for uniform management of a single resource, but requires a significant loss of state autonomy.[20]

As detailed in section III of this testimony, the Great Lakes-St. Lawrence River Basin Water Resources Compact takes a new approach to the interstate water management compact. It does not allocate specific quantities of water, nor does it give its compact commission allocation powers. Instead, it requires the party states to manage their water withdrawals with common minimum standards for water conservation and sustainable use. It also prohibits most diversions of water out of the Great Lakes basin to protect the total water supply. The Great Lakes compact creates a compact commission that evaluates very large consumptive uses and the few exceptions to the general prohibition on diversions. The compact commission also conducts research, collects data, and supports the water management work of the states.

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[15] *See, e.g.*, the Great Lakes Basin Compact, Pub. L. No. 90-419, 82 Stat. 414 (1968).
[16] *Colorado River Compact*, 70 *Congressional Record* 324 (1928).
[17] *Rio Grande Compact*, Pub. L. No. 76-96, 53 Stat. 785 (1939).
[18] *Delaware River Basin Compact*, Pub. L. No. 87-328, 75 Stat. 688 (1961).
[19] *Susquehanna River Basin Compact*, Pub. L. No. 91-575, 84 Stat. 1509 (1970).
[20] For a detailed discussion of the Delaware River Basin Compact and Susquehanna River Basin Compact, see Joseph W. Dellapenna, *Interstate Struggles Over Rivers: The Southeastern States and the Struggle Over the 'Hooch'*, 12 N.Y.U. ENVTL. L. J. 828, 837–50 (2005).

This new federalist model for creating common state environmental standards to protect interstate natural resources has been termed "cooperative horizontal federalism."[21] Cooperative horizontal federalism is an approach in which states jointly develop common minimum legal standards (substantive and/or procedural) to manage a shared resource, but leave the individual states with the flexibility and autonomy to administer those standards under state law. In the context of Great Lakes water management, cooperative horizontal federalism provides a mechanism for the states to craft regional minimum standards to govern water withdrawals, while allowing states to develop individual programs tailored to their specific needs. The discretion given to states is not absolute; they are subject to programmatic review and enforcement by their peers. Under this approach, the regulatory standards, programmatic obligations, and enforcement mechanisms come from the states' obligations to each other.

II. GREAT LAKES WATER MANAGEMENT LAWS AND POLICIES

The Great Lakes-St. Lawrence River Basin Water Resources Compact builds on over a century of agreements and legal regimes that now constitute the law of the Great Lakes. This section surveys how the various international treaties, Supreme Court decisions, interstate compacts, handshake agreements, and federal and state statutes have set the stage for the Great Lakes-St. Lawrence River Basin Water Resources Compact.

A. Background on the Great Lakes and Great Lakes Region

To best understand Great Lakes water management law and policies, it is important to acknowledge the immense amount of freshwater in the Great Lakes system relative to regional demand and the geographic scope of the Great Lakes as it relates to political boundaries and jurisdictions. The Great Lakes are the world's largest surface freshwater system, containing ninety-five percent of the fresh surface water in the United States and twenty percent of the world's supply.[22] The five Great Lakes (Lake Superior, Lake Michigan, Lake Huron, Lake Erie, and Lake Ontario, along with the St. Lawrence River and connecting channels) contain about 5,440 cubic miles of fresh surface water, with another 1,000 cubic miles of stored ground water in the basin.[23] About 40 million Americans and Canadians rely on Great Lakes basin water for their drinking supply.[24] Simply put, more fresh water is at stake in the management of the Great Lakes than any other single freshwater resource in the world.[25]

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[21] *See* Noah D. Hall, *Toward A New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 COLORADO L. REV. 405 (2006).
[22] *See* GREAT LAKES COMMISSION, TOWARD A WATER RESOURCES MANAGEMENT DECISION SUPPORT SYSTEM FOR THE GREAT LAKES-ST. LAWRENCE RIVER BASIN 9 (2003).
[23] N.G. GRANNEMANN ET AL., THE IMPORTANCE OF GROUND WATER IN THE GREAT LAKES REGION 1 (U.S. Geological Survey Water Resources Investigations Report 00-4008 (2000)).
[24] INTERNATIONAL JOINT COMMISSION, PROTECTION OF THE WATERS OF THE GREAT LAKES: FINAL REPORT TO THE GOVERNMENTS OF CANADA AND THE UNITED STATES 6 (2000), *available at* http://www.ijc.org/php/publications/html/finalreport.html.
[25] *See id.*

The Great Lakes system covers eight states and two provinces within the United States and Canada: Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, New York, Ontario, and Quebec. Hundreds of tribes and First Nations and thousands of local governments and municipalities also share legal responsibilities. Management of Great Lakes water is necessarily an exercise in cooperation among multiple jurisdictions and levels of government, with numerous and potentially overlapping legal regimes.

B. **The Boundary Waters Treaty of 1909: United States and Canada**

A summary of the existing agreements, policies, and laws regarding Great Lakes water management should begin with the Boundary Water Treaty of 1909 between the United States and Canada.[26] It has been in force for nearly a century and as an international treaty it operates as "the Supreme Law of the Land" through the Supremacy Clause of the U.S. Constitution.[27] The Boundary Waters Treaty provides for joint management and cooperation between the United States and Canada for the two countries' shared boundary waters. However, an initial limitation of the Boundary Waters Treaty is evident from the scope of its coverage. "Boundary waters" are defined as:

> the waters from main shore to main shore of the lakes and rivers and connecting waterways . . . along which the international boundary between the United States and . . . Canada passes, including all bays, arms, and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers, and waterways, or waters flowing from such lakes, rivers, and waterways, or the waters of rivers flowing across the boundary.[28]

While four of the five Great Lakes (Superior, Huron, Erie, and Ontario) meet the definition of "boundary waters," Lake Michigan sits entirely within the United States' borders and is thus not considered a "boundary water" under the terms of the Boundary Waters Treaty.[29] Further, the hundreds of tributary rivers and streams, as well as tributary ground water, upon which the boundary Great Lakes depend are also excluded from coverage under the Boundary Waters Treaty.[30]

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[26] Boundary Waters Treaty, Jan. 11, 1909, United States-Great Britain (for Canada), 36 Stat. 2448.

[27] U.S. CONST. art. VI, cl. 2 ("This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land . . . .").

[28] Boundary Waters Treaty, Preliminary Article, 36 Stat. at 2448–49. Of course, the Great Lakes are not the only boundary waters between the United States and Canada, nor have the Great Lakes been the only source of disputes under the Boundary Waters Treaty.

[29] While Lake Michigan is not subject to most of the treaty terms because it is not a boundary water, the Boundary Waters Treaty does extend its guarantees to the mutual right of free navigation to the waters of Lake Michigan. *See* Boundary Waters Treaty, *supra* note 9, art. I, 36 Stat. at 2449. The express extension of the Article I protections for navigation to Lake Michigan makes the exclusion of Lake Michigan from the rest of the Boundary Waters Treaty provisions more strikingly evident.

[30] Boundary Waters Treaty, art. II, 36 Stat. at 2449.

Beyond the limited scope of coverage, the standard for protection provided by the Boundary Waters Treaty is another limitation. The respective parties may not use or divert boundary waters "affecting the natural level or flow of boundary waters on the other side of the [border]line" without the authority of the International Joint Commission,[31] an adjudicative body with equal United States and Canadian representation.[32] The most significant shortcoming of this standard relates directly to the size and scale of the Great Lakes. With their enormous volumes, it would take a massive diversion to have any measurable effect on the levels or flow of the Great Lakes.[33] The vast majority of the water uses and diversions from the boundary Great Lakes have no measurable affect on Great Lakes levels and flows, at least individually. The lack of individual effects does not mean that the withdrawals and diversions have no cumulative effect, but this concern has never led to any formal allegations of Boundary Waters Treaty violations. Ironically, individual withdrawals and diversions from tributary rivers and streams often have a measurable affect on these waters, but these waters are not protected under this provision of the Boundary Waters Treaty.

Perhaps the most significant contribution of the Boundary Waters Treaty is the International Joint Commission, which is often commended for its objectivity and leadership on environmental issues. In recent decades, the International Joint Commission has played a critically important role in studying potential threats to the waters of the Great Lakes and informing both the public and decision makers in the United States and Canada. However, the limited scope of the Boundary Waters Treaty necessitates additional protections and management programs for Great Lakes water resources on both sides of the international border. Canada has taken that step, enacting new bans on all water diversions and comprehensive water management programs, some as direct applications of the Boundary Waters Treaty.[34] Canada has also strongly supported the Great Lakes-St. Lawrence River Basin Water Resources Compact because it would provide improved protection and management of this shared international resource.

C. *Wisconsin v. Illinois*: The Great Lakes in the Supreme Court

Despite the abundant supply of water in the Great Lakes, the region has not been immune from interstate disputes over diversions. As discussed in section I, the United States Supreme Court has original jurisdiction over litigation between states. A brief summary of the Chicago diversion litigation (the series of *Wisconsin v. Illinois* cases[35])

[31] Boundary Waters Treaty, art. III, 36 Stat. at 2449–50.
[32] Boundary Waters Treaty, art. VII, 36 Stat. at 2451.
[33] The Chicago diversion at its maximum (and subsequently prohibited) level of 8500 cubic feet per second (cfs) was found to have lowered water levels in Lakes Michigan and Huron by 6 inches. Wisconsin v. Illinois, 278 U.S. 367, 407 (1929).
[34] *See* International Boundary Waters Treaty Act, R.S.C., ch. I17 (1985), *amended by* 2001 S.C. ch. 40 (Can.).
[35] Wisconsin v. Illinois, 449 U.S. 48 (1980); Wisconsin v. Illinois, 388 U.S. 426 (1967); Wisconsin v. Illinois, 289 U.S. 395 (1933); Wisconsin v. Illinois, 281 U.S. 696 (1930); Wisconsin v. Illinois, 281 U.S. 179 (1930); Wisconsin v. Illinois, 278 U.S. 367 (1929).

demonstrates how the Supreme Court has recognized the unique challenges and interests in Great Lakes water management.

In the early 1880s, Chicago was booming and becoming one of the nation's largest cities when an outbreak of chronic water-borne illnesses threatened the health of residents. The problem, simply put, was that Chicago was disposing of its sewage into Lake Michigan (via the Chicago River), while taking its drinking water from the same source. The solution was a bit more complicated. "In an epic environmentally unsound public works project,"[36] Chicago built a canal to reverse the flow of the Chicago River, changing its output from Lake Michigan to the Illinois River, and ultimately to the Mississippi River and Gulf of Mexico. The project was bold, controversial, and ultimately successful in both protecting public health and linking the Great Lakes with the Mississippi River.[37] Missouri, now downstream from Chicago's sewage, brought an interstate nuisance action in the Supreme Court, unsuccessfully challenging Illinois's discharge of sewage into the Mississippi River system.[38]

With Missouri's challenge overcome and Chicago's population (and sewage) increasing, the city increased the diversions from Lake Michigan from 2541 cubic feet per second (cfs) in 1900 up to 8500 cfs by 1924.[39] That year, Wisconsin, Michigan, and New York (later joined by almost every other Great Lakes state) brought suit in the Supreme Court against Illinois. The complainant states alleged that the Chicago diversion had lowered levels in Lake Michigan, as well as Lakes Huron, Erie, and Ontario, by more than 6 inches, harming navigation and causing serious injury to the complainant states' citizens and property.[40] Illinois's defense was premised on the necessity and federal approval of the diversion, as well as a denial that the diversion caused any actual injury.[41]

Former Justice and Secretary of State Charles Evan Hughes was appointed by the Supreme Court to serve as special master.[42] His report found that Chicago's diversion lowered the levels of Lakes Michigan and Huron by 6 inches and Lakes Erie and Ontario by 5 inches,[43] causing damage "to navigation and commercial interests, to structures, to the convenience of summer resorts, to fishing and hunting grounds, to public parks and other enterprises, and to riparian property generally."[44] The Court adopted the special master's report, concluding that the reduced lake levels caused the complainant states and

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[36] A. Dan Tarlock, *The Law of Equitable Apportionment Revisited, Updated and Restated*, 56 U. COLO. L. REV. 381, 392 (1985).
[37] *See* Robert V. Percival, *The Clean Water Act and the Demise of the Federal Common Law of Interstate Nuisance*, 55 ALA. L. REV. 717, 718–32 (2004).
[38] *See* Missouri v. Illinois, 200 U.S. 496 (1906); Missouri v. Illinois, 180 U.S. 208 (1901).
[39] *See Wisconsin v. Illinois*, 278 U.S. at 417; Sanitary Dist. of Chi. v. United States, 266 U.S. 405, 413 (1925).
[40] *See Wisconsin v. Illinois*, 278 U.S. at 399–400.
[41] *See Wisconsin v. Illinois*, 278 U.S. at 401.
[42] *See Wisconsin v. Illinois*, 278 U.S. at 399. Hughes was originally appointed to the Supreme Court in 1910, but left the Court in 1916 for an unsuccessful run for President. From 1921 to 1925, Hughes served as Secretary of State under President Warren G. Harding.
[43] *See Wisconsin v. Illinois*, 278 U.S. at 407.
[44] *See Wisconsin v. Illinois*, 278 U.S. at 408.

their citizens and property owners "great losses."[45] The Court also rejected Illinois's defense that the diversion was authorized by Congress, concluding that the federal permit was merely a response to the public health threat of the sewage and not a federal decision regarding management of the navigable waters of the Great Lakes.[46]

While generally supporting the claims of the complainant states, the Court recognized the public health implications and economic costs that would come with immediately halting the entire Chicago diversion.[47] The Court thus referred the matter back to the special master for determination of the proper relief.[48] The master's report recommended a phased reduction in the Chicago diversion, allowing the city time to build adequate sewage treatment. The Court adopted the master's recommendations and by 1939 the allowable diversion was limited to 1500 cfs (plus domestic pumping).[49] Subsequent litigation in the Supreme Court continued over several decades regarding Illinois's compliance with the diversion reduction schedule and the amount of water allowed for domestic pumping, with the ultimate result being that the total allowable diversion was increased to 3200 cfs, the level at which it is now capped.[50]

It is notable that the Supreme Court's opinions in the Chicago diversion dispute make only minor references to the Court's previous (primarily western) equitable apportionment cases. The Court's equitable apportionment doctrine began to evolve in the prior cases *Kansas v. Colorado*[51] and *Wyoming v. Colorado*,[52] yet the only references to these decisions were in a string citation regarding the Supreme Court's jurisdiction and a comment regarding the possibility that Congress could take action on the matter.[53] Further, there is no discussion of the various water use doctrines in the relevant states. Nor does the Court establish any rule of law for allocating the waters of the Great Lakes among the states of region. These elements are typically central to the Supreme Court's handling of western equitable apportionment cases.[54]

The Supreme Court's lack of reliance on its previous equitable apportionment cases may have been intentional. Perhaps the Court recognized that Great Lakes water management was less an issue of apportionment of water rights and more an issue of defining the bounds of the states' shared reasonable use duties. While the relatively short opinions do not advance this proposition directly, it is worth noting that the primary Chicago diversion opinion was authored by Chief Justice William Howard Taft, the former

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[45] *See Wisconsin v. Illinois*, 278 U.S. at 409.
[46] *See Wisconsin v. Illinois*, 278 U.S. at 415-18.
[47] *See Wisconsin v. Illinois*, 278 U.S. at 420-21.
[48] *See Wisconsin v. Illinois*, 278 U.S. at 421.
[49] *See* Wisconsin v. Illinois, 281 U.S. 179, 198, 201 (1930); *see also* Wisconsin v. Illinois, 281 U.S. 696, 697 (1930).
[50] *See* Wisconsin v. Illinois, 449 U.S. 48 (1980); Wisconsin v. Illinois, 388 U.S. 426, 427 (1967); Wisconsin v. Illinois, 289 U.S. 395 (1933).
[51] 206 U.S. 46 (1907).
[52] 259 U.S. 419 (1922).
[53] *See* Wisconsin v. Illinois, 281 U.S. at 197–98; Wisconsin v. Illinois, 278 U.S. 367, 409 (1929).
[54] *See generally* Robert H. Abrams, *Interstate Water Allocation: A Contemporary Primer for Eastern States*, 25 U. ARK. LITTLE ROCK L. REV. 155 (2002) and A. Dan Tarlock, *The Law of Equitable Apportionment Revisited, Updated and Restated*, 56 U. COLO. L. REV. 381 (1985).

President whose administration had negotiated the Boundary Waters Treaty of 1909 between the United States and Canada. Taft was an Ohioan, and may have instinctively appreciated both the abundance of Great Lakes water that made allocation unnecessary and the shared importance of the resource among two countries and eight states that made protection of all of its values (navigation, drinking supply, fishing, recreation, etc.) critical.

Speculation about the Court's motivations aside, the Chicago diversion litigation leaves two key legacies in shaping the law of the lakes. First, the Chicago diversion, authorized at 3200 cfs, remains the largest diversion of Great Lakes water out of the basin.[55] Second, while the Court's decisions stop short of an absolute prohibition on diversions, they demonstrate a general preference for protecting the demonstrated interests of other states and in preserving the integrity of the Great Lakes system. Both of these legacies are incorporated into the Great Lakes-St. Lawrence River Basin Water Resources Compact.

D. The First Great Lakes Basin Compact: Coordination and Cooperation

The first Great Lakes Basin Compact[56] (not to be confused with the Great Lakes-St. Lawrence River Basin Water Resources Compact that is currently being considered) created an institution for interstate cooperation and coordination but does not directly shape the law of the lakes or have any substantive impact on water rights in the basin.[57] The Great Lakes Basin Compact was approved by Congress in 1968, although it was negotiated by the Great Lakes states and provinces two decades earlier. The Great Lakes Basin Compact includes each of the eight Great Lakes states as members and creates a Great Lakes Commission comprised of representatives from the member states.[58]

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[55] INTERNATIONAL JOINT COMMISSION, PROTECTION OF THE WATERS OF THE GREAT LAKES: FINAL REPORT TO THE GOVERNMENTS OF CANADA AND THE UNITED STATES 13 (2000), *available at* http://www.ijc.org/php/publications/html/finalreport.html.

[56] Pub. L. No. 90-419, 82 Stat. 414 (1968) [hereinafter Great Lakes Basin Compact]. Joseph W. Dellapenna, *Interstate Struggles Over Rivers: The Southeastern States and the Struggle Over the 'Hooch'*, 12 N.Y.U. ENVTL. L. J. 828, 837–50 (2005).

[57] Prof. Joseph W. Dellapenna has characterized the Great Lakes Basin Compact as typical of the "we'll keep in touch" approach used in many interstate water compacts in the eastern U.S. *See* Joseph W. Dellapenna, *Interstate Struggles Over Rivers: The Southeastern States and the Struggle Over the 'Hooch'*, 12 N.Y.U. ENVTL. L. J. 828, 838-39 (2005).

[58] *See* Great Lakes Basin Compact, art. II, IV, 82 Stat. 414–16. As negotiated by the states, the Great Lakes Basin Compact included a provision to allow the provinces of Ontario and Quebec to join as parties. *See* Great Lakes Basin Compact, art. II.B, 82 Stat. at 414. However, Congress explicitly refused to consent to that provision. *See* Great Lakes Basic Compact, art. IX, 82 Stat. at 419. Nonetheless, the Canadian provinces of Ontario and Quebec have recently been added as associate members.

E. The Great Lakes Charter: A Handshake Agreement

While the Great Lakes Basin Compact is currently the only congressionally-approved interstate compact, it is not the only interstate agreement regarding the management of Great Lakes water. In 1985, the Great Lakes states and provinces signed the Great Lakes Charter.[59] While only a good faith agreement, the Great Lakes Charter contains individual commitments and a cooperative process for Great Lakes water management. However, handshake agreements such as the Great Lakes Charter are not sanctioned by the Constitution,[60] and thus have limited legal value.

The Great Lakes Charter has three key components integrated throughout the agreement: (1) the commitment of the states and provinces to manage and regulate new or increased consumptive uses or diversions of Great Lakes water greater than 2,000,000 gallons per day ("gpd");[61] (2) the prior notice and consultation procedure with all of the states and provinces for new or increased consumptive uses or diversions of Great Lakes water greater than 5,000,000 gpd;[62] and (3) the commitment of the states and provinces to gather and report comparable information on all new or increased withdrawals of Great Lakes water greater than 100,000 gpd.[63]

The Great Lakes Charter's shortcomings are not in its terms, but in its status. If the Great Lakes Charter's terms were incorporated into a binding and enforceable compact, it would have been an important first step toward comprehensive water management of the Great Lakes. Without the legal authority of a binding compact, the Great Lakes Charter's terms have had little impact. The Great Lakes Charter, while cooperative in nature, did not utilize the constitutional compact process, and thus did not obtain the legal status necessary to bring about effective interstate water management. However, many of the Great Lakes Charter's components have been incorporated into the Great Lakes-St. Lawrence River Basin Water Resources Compact now under consideration.

F. State Common Law and Statutory Law: An Overview

While a comprehensive discussion of state-by-state water law in the Great Lakes region is beyond the scope of this testimony, it is important to provide a brief summary of both the common law rules and varying statutory schemes, especially in light of the commitments made by the states in the Great Lakes Charter. The summary shows both the common legal principles that can serve as a foundation for a regional policy.

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[59] The Great Lakes Charter, Feb. 11, 1985, *reprinted in* Great Lakes Governors' Task Force, Council of Great Lakes Governors, Final Report and Recommendation on Water Diversion and Great Lakes Institutions (1985) at app. III, http://www.cglg.org/pub/charter/index.html (last visited Nov. 20, 2005) [hereinafter Great Lakes Charter].

[60] U.S. CONST. art. I, § 10, cl. 3. Unlike a compact, which is approved by Congress pursuant to Article I of the Constitution, the Charter lacks congressional approval and thus has no force of law.

[61] *See* Great Lakes Charter, Progress Toward Implementation (4).

[62] *See* Great Lakes Charter, Consultation Procedures.

[63] *See* Great Lakes Charter, Progress Toward Implementation (3), (4).

All of the Great Lakes states follow the common law of riparian rights for surface water use.[64] Riparian law is premised on the principle that all riparians have correlative rights in shared water bodies.[65] Conflicts regarding these rights are adjudicated according to the concept of reasonable use,[66] as opposed to capture or prior appropriation (as has been traditional in the western states). However, the historical abundance of surface water in the Great Lakes region has produced relatively few conflicts and controversies over surface water allocation and use. As a result, the common law of riparian water rights has produced little guidance to concrete controversies. This legal uncertainty creates at least a theoretical restraint on water users as they make decisions to invest in water-dependent projects.

The common law rules regarding ground water rights in the Great Lakes states are generally less progressive and less uniform than for surface water rights. Historically, ground water and surface water in the Great Lakes states were subject to different rights and rules for allocation.[67] Further, while all of the Great Lakes states generally follow some form of traditional riparian rules for surface waters, the states differ in their common law ground water rules, drawing on doctrines as varied as a modified rule of capture to a reasonable use standard.[68]

In every Great Lakes state, the common law rules for water use and allocation have been altered, to varying degrees, by statute. While a few states had statutory authority regarding water use before the Great Lakes Charter in 1985, the commitments made in the Great Lakes Charter have prompted most states to take some steps toward regulating Great Lakes water withdrawals. Minnesota has the most comprehensive water management and regulatory system in the region, requiring permits for use of any public waters (ground or surface) within the state.[69] Other states have far less comprehensive

[64] The term "riparian" generally refers to rights associated with rivers, while the term "littoral" refers to rights associated with lakes. Substantively, "the operative legal rules are virtually identical and go by the general name of riparianism." JOSEPH L. SAX ET AL., LEGAL CONTROL OF WATER RESOURCES 21 (3d ed. 2000). The Great Lakes system contains both lakes and rivers, and in this article, the term "riparian" refers to both sets of rights.

[65] *See* State v. Zawistowski, 290 N.W.2d 303, 309 (Wis. 1980).

[66] *See* State v. Zawistowski, 290 N.W.2d 303, 309 (Wis. 1980) ("The common law rights of riparian owners to the use of water is limited by the reasonable use doctrine. '[E]very . . . right which a riparian owner acquires, as such, to the waters of the stream flowing through or by his land, is restricted always to that which is a . . . reasonable use, and these terms are to be measured and determined by the extent and capacity of the stream, the uses to which it has been put, and the rights that other riparian owners on the same stream also have.'" (quoting Alfelbacker v. State, 167 N.W. 244, 245 (Wis. 1918))).

[67] *See* JOSEPH L. SAX ET AL., LEGAL CONTROL OF WATER RESOURCES 344 (3d ed. 2000) ("While the dichotomy between the legal regimes applicable to groundwater and surface water is breaking down, some degree of separation continues to be the rule in a majority of American states.")

[68] *Compare* Wiggins v. Brazil Coal and Clay Corp., 452 N.E.2d 958, 964 (Ind. 1983) (establishing a modified rule of capture for ground water use in Indiana: "Ground water is part of the land in which it is present and belongs to the owner of that land. It may be put to use to the fullest extent to further enjoyment of the land, however this right does not extend to causing injury gratuitously or maliciously to nearby lands and their owners.") *with* Smith v. Summit County, 721 N.E.2d 482, 485–86 (Ohio Ct. App. 1998) (adopting the Restatement (Second) of Torts "reasonable use" approach for ground water use in Ohio).

[69] *See* MINN. STAT. § 103G.271 (2004).

regulatory authority.[70] Michigan, which is almost entirely within the Great Lakes basin, has just passed a comprehensive and innovative new statute, in part to comply with the requirements of the Great Lakes-St. Lawrence River Basin Water Resources Compact.[71] Still, such individual state efforts do not protect the entire resource from abuse by one jurisdiction. The Great Lakes-St. Lawrence River Basin Water Resources Compact would achieve more comprehensive protection that builds upon (but does not undermine) individual state efforts.

G. **1986 Water Resources Development Act: The Diversion Veto**

Congress provided strong statutory authority for Great Lakes water management in 1986, enacting section 1109 of the Water Resources Development Act, typically referred to as 1986 WRDA.[72] The statute provides:

> No water shall be diverted or exported from any portion of the Great Lakes within the United States, or from any tributary within the United States of any of the Great Lakes, for use outside the Great Lakes basin unless such diversion or export is approved by the Governor of each of the Great Lake [sic] States.[73]

Thus, any of the Great Lakes governors can veto a proposed diversion of Great Lakes water out of the basin. The statute not only requires the unanimous approval of the governors for a proposed diversion, but further requires unanimous approval of the governors before any federal agency can even study the feasibility of a Great Lakes diversion.[74] While 1986 WRDA is remarkable as a clear statement of Congress' intent to protect the Great Lakes through management,[75] it suffers from several limitations.

1986 WRDA contains no standards to guide the governors in deciding to approve or deny a proposed diversion or diversion study. Nor does it provide any judicial remedy to challenge a governor's decision, even by another Great Lakes state. From a citizens' perspective, 1986 WRDA is fatally limited by its lack of a private right of action to enforce compliance.[76] These omissions may be explained by understanding the threat that 1986 WRDA was intended to address. At the time, the Great Lakes states shared a common concern about the threat of proposed water diversions to other parts of the

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[70] *See* IND. CODE §§ 14-25-1-1 to -13-9 (2004).
[71] *See* MICH. COMP. LAWS § 324.32701, *et seq.* (2008)
[72] Pub. L. No. 99-662, § 1109, 100 Stat. 4082, 4230 (codified as amended at 42 U.S.C. § 1962d-20 (2000)).
[73] 42 U.S.C. § 1962d-20(d) (2000). This section only applies to new diversions; diversions authorized before 1986 are not covered by the veto. *Id*. § 1962d-20(f).
[74] *Id.* § 1962d-20(e).
[75] 1986 WRDA was enacted only a few years after the Supreme Court's decision in *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941 (1982), which limited a state's ability to restrict export of ground water under the dormant commerce clause. As federal legislation authorizing the states to restrict diversions of water, 1986 WRDA creates a shield to a dormant commerce clause challenge.
[76] *See* Little Traverse Bay Bands of Odawa Indians v. Great Spring Waters of Am., Inc., 203 F.Supp.2d 853 (W.D. Mich. 2002).

country. The federal statute was thus meant to create a barrier to water diversions that would harm the region as a whole, as 1986 WRDA provides clear federal authority for preventing Great Lakes diversions.[77]

In 2000, Congress encouraged the states to be more proactive and comprehensive in how they use their authority when it amended 1986 WRDA to include the following provision:

> [T]o encourage the Great Lakes States, in consultation with the Provinces of Ontario and Quebec, 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.[78]

The Great Lakes-St. Lawrence River Basin Water Resources Compact is a direct result of this Congressional directive.

H. **Annex 2001: Setting the Table for a New Great Lakes Compact**

To begin the process encouraged by Congress in 2000, the region's governors and premiers signed an Annex to the Great Lakes Charter Agreement in 2001.[79] Popularly referred to as "Annex 2001," it reaffirmed the commitments in the Great Lakes Charter and contained a new commitment to:

> [F]urther implementing the principles of the [Great Lakes] Charter by developing an enhanced water management system that is simple, durable, efficient, retains and respects authority within the [Great Lakes] Basin, and, most importantly, protects, conserves, restores, and improves the Waters and Water-Dependent Natural Resources of the Great Lakes Basin.
>
> . . . [I]n order to adequately protect the water resources of the Great Lakes and the Great Lakes ecosystem, the Governors and Premiers commit to develop and implement a new common, resource-based conservation standard and apply it to new water withdrawal proposals from the Waters of the Great Lakes Basin. The standard will also address proposed increases to existing water withdrawals and existing withdrawal capacity from the Waters of the Great Lakes Basin.[80]

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[77] 42 U.S.C. § 1962d-20(d) (2000).
[78] *See* Water Resources Development Act of 2000, Pub. L. No. 106-541, § 504, 114 Stat. 2572, 2644–45 (codified as amended at 42 U.S.C. § 1962d-20(b)(2) (2000)).
[79] Annex to the Great Lakes Charter, June 18, 2001, http://www.cglg.org/projects/water/docs/GreatLakesCharterAnnex.pdf [hereinafter Annex 2001].
[80] Annex 2001 at 1.

To achieve these lofty commitments, Annex 2001 provides a number of directives. The first is to develop "Basin-wide binding agreement(s), such as an interstate compact" to implement Annex 2001.[81] Second, is a commitment to a public process and development of technical information to guide the compact process.[82] Third, Annex 2001 proposes several principles to guide the establishment of the new standards for reviewing water withdrawal proposals.[83] These standards have been incorporated into the Great Lakes-St. Lawrence River Basin Water Resources Compact.

To implement the Annex 2001 directives, the governors and premiers (working through the Council of Great Lakes Governors) established a Water Management Working Group and Advisory Committee, comprised of state officials and representatives of various water user sectors, local and federal governments, and conservation organizations.[84] The Water Management Working Group, chaired by Ohio Department of Natural Resources Director Dr. Sam Speck, released a first draft of the proposed agreements on July 19, 2004.[85] The proposal received significant attention during a ninety-day public comment period, with over thirty public meetings and hearings throughout the region and over ten thousand written comments. Many of the comments demonstrated an opposition to diversions and concerns regarding the balance of state and regional control of Great Lakes water.[86] Following the initial public comment period, the Water Management Working Group continued negotiating and drafting the proposed agreements, resolving numerous interstate and interprovincial issues as well as addressing concerns raised by the public and various stakeholders. The result of these negotiations, influenced by the Advisory Committee and public comment process, is the Great Lakes-St. Lawrence River Basin Water Resources Compact and companion Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement.

[81] Annex 2001 at 2.
[82] Annex 2001 at 2-3.
[83] Annex 2001 at 2.
[84] *See* Council of Great Lakes Governors, "Great Lakes-St. Lawrence River Basin Water Resources Compact Project Background, Organization and Road to Development," http://www.cglg.org/projects/water/CompactEducation/Project_Background_Organization_and_Road_to_Development.pdf.
[85] For a summary of the first draft of the proposed Great Lakes Basin Water Resources Compact and Great Lakes Basin Sustainable Water Resources Agreement released in 2004, *see* Noah D. Hall, *Great Lakes Governors Propose Historic Water Resources Compact*, 36 TRENDS, A.B.A. SEC. OF ENV'T, ENERGY, & NAT. RESOURCES NEWSL., No. 2 (2004).
[86] *See* Council of Great Lakes Governors, "Great Lakes-St. Lawrence River Basin Water Resources Compact Project Background, Organization and Road to Development," http://www.cglg.org/projects/water/CompactEducation/Project_Background_Organization_and_Road_to_Development.pdf.

III. GREAT LAKES-ST. LAWRENCE RIVER BASIN WATER RESOURCES COMPACT: SUMMARY AND ANALYSIS OF KEY PROVISIONS

This section summarizes and analyzes the key provisions of the Great Lakes-St. Lawrence River Basin Water Resources Compact (hereinafter "Great Lakes Compact")[87] and companion Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (hereinafter "Great Lakes Agreement").[88] The Great Lakes Agreement is a non-binding policy between the American states and the Canadian provinces, implemented in Canada by the provinces and in the United States through the Great Lakes Compact. The Great Lakes Compact is a binding agreement between the eight American states that have jurisdiction over the Great Lakes. Under the Great Lakes Compact, the world's largest freshwater resource would be protected and managed pursuant to minimum standards administered primarily under the authority of individual states. The Great Lakes Compact puts riparian water use rules and environmental protection standards into a proactive public law regime. The standards represent numerous advances in the development of water use law, including uniform treatment for ground and surface water withdrawals, water conservation, return flow, and prevention of environmental impacts.

This section's analysis of the Great Lakes Compact and Great Lakes Agreement is organized into three parts. Part A begins with the substantive standards for new water withdrawals under the Great Lakes Compact. The standards, anchored in common law riparian principles and incorporating advances in the public law of water management, are the foundation of a sustainable water use policy. Part B of the analysis is the management regime in which the standards will be applied, utilizing both state implementation and regional cooperation and enforcement. Part C of the analysis focuses on the companion agreement, which provides for sub-treaty cooperation between the states and Canadian provinces.

A. The Compact's Decision Making Standard: An Evolution of Riparian Law

At the core of the Great Lakes Compact is the common standards (referred to as the "decision making standard"[89]) for new or increased water withdrawals of Great Lakes basin water. The applicability of these standards is not limited to water taken directly from one of the Great Lakes. Rather, the Great Lakes Compact broadly defines the waters of the Great Lakes to include all tributary surface and ground waters.[90] Just this initial recognition of connected ground water and surface water as a single resource to be

[87] Great Lakes-St. Lawrence River Basin Water Resources Compact, Dec. 13, 2005, text incorporated into S.J. Res 45[hereinafter Great Lakes Compact].
[88] Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement, Dec. 13, 2005, http://www.cglg.org/projects/water/docs/12-13-05/Great_Lakes-St_Lawrence_River_Basin_Sustainable_Water_Resources_Agreement.pdf [hereinafter Great Lakes Agreement].
[89] Great Lakes Compact § 4.11.
[90] Great Lakes Compact § 1.2 (defining "Waters of the Basin" or "Basin Water").

managed uniformly is a long overdue advancement in water law. Addressing both ground and surface water is also critical to the eventual success of any Great Lakes water policy, since ground water comprises over fifteen percent of the total water supply in the Great Lakes basin.[91]

While the decision making standard applies broadly to all waters, it only applies to new or increased withdrawals of water.[92] This follows the express scope of Annex 2001. Existing uses are not grandfathered or protected by the compact; individual jurisdictions are simply free to regulate (or not regulate) existing uses as they see fit. While existing withdrawals are not regulated under the Great Lakes Compact, states are required to implement "a voluntary or mandatory" water conservation program with state-specific goals and objectives for all water users, including existing users.[93]

The decision making standard contains the following criteria for new or increased water withdrawals:

1) All Water Withdrawn shall be returned, either naturally or after use, to the Source Watershed less an allowance for Consumptive Use;
2) The Withdrawal . . . will be implemented so as to ensure that [it] will result in no significant individual or cumulative adverse impacts to the quantity or quality of the Waters and Water Dependent Natural Resources [of the Great Lakes Basin] and the applicable Source Watershed;
3) The Withdrawal . . . will be implemented so as to incorporate Environmentally Sound and Economically Feasible Water Conservation Measures;
4) The Withdrawal . . . will be implemented so as to ensure that it is in compliance with all applicable municipal, State and federal laws as well as regional interstate and international agreements, including the Boundary Waters Treaty of 1909;
5) The proposed use is reasonable, based upon a consideration of the following factors:
    a. Whether the proposed Withdrawal . . . is planned in a fashion that provides for efficient use of the water, and will avoid or minimize the waste of Water;
    b. If the Proposal is for an increased Withdrawal . . ., whether efficient use is made of existing supplies;
    c. The balance between economic development, social development and environmental protection of the proposed Withdrawal and use and other existing or planned withdrawals and water uses sharing the water source;

[91] N.G. GRANNEMANN ET AL., THE IMPORTANCE OF GROUND WATER IN THE GREAT LAKES REGION 1 (U.S. Geological Survey Water Resources Investigations Report 00-4008 (2000)).
[92] Great Lakes Compact § 4.10(1). The Proposed Compact does require registration and reporting for all withdrawals (existing and new or increased) over 100,000 gpd, averaged over any thirty-day period. *See* Great Lakes Compact § 4.1(3). This may facilitate management of existing water withdrawals in the future.
[93] Great Lakes Compact § 4.2(2), (5).

d. The supply potential of the water source, considering quantity, quality, and reliability and safe yield of hydrologically interconnected water sources;
e. The probable degree and duration of any adverse impacts caused or expected to be caused by the proposed Withdrawal and use under foreseeable conditions, to other lawful consumptive or non-consumptive uses of water or to the quantity or quality of the Waters and Water Dependent Natural Resources of the Basin, and the proposed plans and arrangements for avoiding or mitigation of such impacts; and,
f. If a Proposal includes restoration of hydrologic conditions and functions of the Source Watershed, the Party may consider that.[94]

These criteria have discernable roots in common law riparian rules and the doctrine of reasonable use.[95] Criteria (5)(a)–(e) follow closely the factors for determining reasonable use as described in section 850A of the Restatement (Second) of Torts.[96] Further, water conservation—criterion (3)—has long been recognized as a factor in determining the reasonableness of water use under riparian law.[97] Even criterion (2), which prevents a water withdrawal from having "significant" adverse environmental impacts, has a base in common law riparian rules.[98]

Despite the Great Lakes Compact's generally limited focus on managing and regulating only new or increased water uses, criterion (5)(b) requires consideration of "efficient use . . . of existing water supplies."[99] If applied strictly, a community could not obtain approval for an increase in its water withdrawal to meet the needs of a growing population without first implementing conservation measures for its existing uses. Similarly, a manufacturer or irrigator that wishes to expand and increase its water use must first take measures to reasonably reduce its current water use through conservation practices. Through this criterion, the compact could force efficiency improvements and water conservation on many existing users as they expand, encouraging a "hard look" at existing water use practices and methods. Finally, criterion (5)(f) allows consideration of proposals to restore "hydrologic conditions and functions" in the source watershed.[100] Thus, watershed improvements are not strictly required, but can be considered in the overall determination regarding the reasonableness of the proposed use. Water users can

[94] Great Lakes Compact § 4.11.
[95] Grounding the criteria in common law riparian rules as "background principles" gives the Great Lakes states a solid defense against potential takings claims relating to the enforcement of the Compact standards. *See* Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1029 (1992); *see also* Joseph L. Sax, *The Constitution, Property Rights and the Future of Water Law*, 61 U. COLO. L. REV. 257 (1990).
[96] Restatement (second) of Torts § 850A(a) (1977).
[97] Restatement (second) of Torts § 850A(f) (considering "the practicality of avoiding the harm by adjusting the use or method of use" in determining the reasonableness of a water use). The comments to clause (f) note that "[t]he law requires reasonable efficiency in facilities for and methods of using water." Restatement (second) of Torts § 850A(f) cmt. f.
[98] Restatement (second) of Torts § 850A(e) (considering "the extent or amount of harm" caused by a water use in determining its reasonableness).
[99] Great Lakes Compact § 4.11(5)(b).
[100] Great Lakes Compact § 4.11(5)(f).

propose a restoration or improvement as a way of making their water use more compatible with the resources and limitations in the watershed.

The Great Lakes Compact makes clear that the common decision making standard is only a minimum standard.[101] States may impose more restrictive standards for water withdrawals under their authority.[102] Some jurisdictions (such as Michigan and Minnesota) already have permitting standards in place, and this ensures that the compact in no way requires a weakening of state regulatory programs.

The Great Lakes Compact's decision making standard is a major evolution in eastern water law. While it represents historic progress in the advancement of water resources law, it is also grounded in common law riparian rules and various environmental statutes. However, environmental standards are only as good as the management and enforcement systems by which they are applied. Fortunately for the Great Lakes, the Great Lakes Compact provides a meaningful system of interstate water management and enforcement to ensure that the standards are applied across the Great Lakes basin.

B. **State and Interstate Management: Consumptive Uses and Diversions**

The Great Lakes Compact creates two separate approaches to managing new or increased water withdrawals in the Great Lakes basin. The differentiation is based almost entirely on whether the water is used inside or outside of the Great Lakes basin surface watershed boundary. Water use inside of the Great Lakes basin is managed solely by the individual state, with limited advisory input from other states for very large consumptive uses.[103] Water use outside of the basin (a diversion) is subject to a spectrum of collective rules and approval processes, including a general prohibition on most diversions.[104]

1. State Management of In-Basin Consumptive Uses

The Great Lakes Compact requires the states to "create a program for the management and regulation of New or Increased Withdrawals . . . by adopting and implementing Measures consistent with the Decision-Making Standard" within five years.[105] States must set the threshold levels for regulation of water withdrawals to "ensure that uses overall are reasonable, that Withdrawals overall will not result in significant impacts . . . and that all other objectives of the Compact are achieved."[106] If states fail to establish thresholds that comply with these requirements, a default threshold of regulating all new or increased withdrawals of 100,000 gpd or greater (averaged over any ninety-day

[101] Great Lakes Compact § 4.12(1).
[102] Great Lakes Compact § 4.12(1).
[103] Great Lakes Compact § 4.3 and § 4.6.
[104] Great Lakes Compact § 4.8 and § 4.9.
[105] Great Lakes Compact § 4.10(1).
[106] Great Lakes Compact § 4.10(1).

period) is imposed.[107] The states must make reports to the Compact Council, which is comprised of the governor of each party state, regarding their implementation.[108] The Compact Council must then review the state programs and make findings regarding their adequacy and compliance with the Great Lakes Compact.[109]

The states must further develop and promote water conservation programs in cooperation with the Compact Council within two years of the effective date of the Great Lakes Compact.[110] While not specifically regulatory, the state programs are intended to advance the Great Lakes Compact's goals, including protecting and restoring Great Lakes hydrologic and ecosystem integrity.[111] Through their respective conservation programs, states must promote water conservation measures such as "[d]emand-side and supply-side [m]easures or incentives."[112]

Finally, the states are required to develop and maintain a water resources inventory with information regarding both available water resources and water withdrawals within the state.[113] As part of this requirement, all water users (both existing and new) making water withdrawals greater than 100,000 gpd (averaged over any ninety-day period) must register with their state and report the details of their water use.[114] The information gathered by the individual states will create a regional common base of data for interstate information exchange.[115] This information is critical to both state and interstate management of the Great Lakes, especially with regards to cumulative impacts of water withdrawals.[116]

2. Interstate Management of Diversions

The simplest form of interstate management under the Great Lakes Compact is the general prohibition on new or increased diversions of Great Lakes water.[117] Diversions are defined to include both the transfer of Great Lakes basin water into another watershed (interbasin diversion) as well as diversions from one Great Lake watershed into another Great Lake watershed (intrabasin diversion).[118] However, this broad definition belies one of the three major exceptions to the prohibition on diversions: intrabasin transfers.

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[107] Great Lakes Compact § 4.10(2). 100,000 gpd would supply approximately 158 typical households in the Great Lakes region. *See* U.S. Dep't of the Interior, Estimated Use of Water in the United States in 1990 (1993); U.S. Census Bureau, Current Populations Survey, Annual Social and Economic Supplement (2003), http://www.bls.census.gov/cps/asec/adsmain.htm.
[108] Great Lakes Compact § 3.4(1).
[109] Great Lakes Compact § 3.4(2).
[110] Great Lakes Compact § 3.4(2).
[111] Great Lakes Compact § 4.2(2).
[112] Great Lakes Compact § 4.2(4)(d).
[113] Great Lakes Compact § 4.1(1).
[114] Great Lakes Compact § 4.1(3).
[115] Great Lakes Compact § 4.1(2).
[116] Great Lakes Compact § 4.1(6).
[117] Great Lakes Compact § 4.8.
[118] Great Lakes Compact § 1.2 (defining "Diversion").

While not subject to the prohibition on diversions, intrabasin transfers are subject to the "exception standard"[119] and varying state approvals and additional requirements based on the amount of the withdrawal and consumptive use.[120] Intrabasin transfers below 100,000 gpd (averaged over any 90-day period) are left solely to the discretion of the individual state.[121] Intrabasin transfers above the 100,000 gpd threshold but with a consumptive use[122] below 5 million gpd are subject to state management and regulation based on the exception standard,[123] as well as the prior notice process for comments by other states (discussed below).[124] Intrabasin transfers with a consumptive use above 5 million gpd are subject not only to state regulation pursuant to the exception standard and a non-binding regional review process, but also to the unanimous approval of the Compact Council (comprised of each of the governors).[125]

The other two exceptions to the prohibition on diversions involve communities and counties that straddle the surface water basin divide. Sprawling metro areas that have expanded beyond the Great Lakes watershed are a contentious issue in the region. For example, while the city of Milwaukee sits on the shores of Lake Michigan, its suburbs now go beyond the Lake Michigan surface watershed, which is only a few miles from the lakeshore in some areas of Wisconsin.[126] It is important to recognize, however, that the communities just outside the surface watershed are often still within the ground watershed, and may in fact be using ground water connected to the Great Lakes.[127] Thus, both socially and scientifically, these communities could be fairly considered part of the Great Lakes basin.

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[119] The "exception standard" is substantively similar to the decision-making standard. However, instead of requiring a multi-factor reasonable use determination, the exception standard requires that both "[t]he need for all or part of the proposed Exception cannot be reasonably avoided through the efficient use and conservation of existing water supplies" and that "[t]he Exception will be limited to quantities that are considered reasonable for the purposes for which it is proposed." Great Lakes Compact § 4.9(4).

[120] Great Lakes Compact § 4.9(2).

[121] Great Lakes Compact § 4.9(2)(a).

[122] It should be noted that the amount of consumptive use can be far less than the total withdrawal. Consumptive Use is defined in the proposed compact as the portion of the water withdrawn "that is lost or otherwise not returned to the [b]asin due to evaporation, incorporation into products, or other processes." Great Lakes Compact § 1.2 (defining "Consumptive Use"). Estimated consumptive use rates vary by water use sector, but can range from one to two percent for many power plants, to ten to fifteen percent for public water supplies, to seventy to ninety percent for agricultural irrigation. *See* GREAT LAKES COMMISSION, TOWARD A WATER RESOURCES MANAGEMENT DECISION SUPPORT SYSTEM FOR THE GREAT LAKES-ST. LAWRENCE RIVER BASIN 60 (2003). So, for example, a public water supply that operates an intrabasin diversion could withdraw 40 million gpd but only have a consumptive use of 4 million gpd.

[123] Great Lakes Compact § 4.9(2)(b)(i).

[124] Great Lakes Compact § 4.9(2)(b)(iii); *see also* Great Lakes Compact § 4.6 (proposals subject to prior notice).

[125] Great Lakes Compact § 4.9(2)(c). The unanimous approval may include abstentions. Great Lakes Compact § 4.9(2)(c)(iv) ("Council approval shall be given unless one or more Council Members vote to disapprove.").

[126] *See* Dan Egan, Water Pressures Divide a Great Lakes State, Milwaukee J. Sentinel, Nov. 23, 2003, at A1.

[127] *See* Dan Egan, Water Pressures Divide a Great Lakes State, Milwaukee J. Sentinel, Nov. 23, 2003, at A1; N.G. GRANNEMANN ET AL., THE IMPORTANCE OF GROUND WATER IN THE GREAT LAKES REGION 2 (U.S. Geological Survey Water Resources Investigations Report 00-4008 (2000)).

The Great Lakes Compact addresses this issue by bringing straddling communities and counties that use Great Lakes surface water for public water supply purposes into the management regime. A straddling community, defined as an incorporated city or town[128] that uses Great Lakes water for public supply purposes both inside and outside of the surface water basin, is treated similarly to an in-basin withdrawal, subject to state regulation pursuant to the exception standard.[129] To prevent exploitation of this exception by growing incorporated cities and towns through mergers and annexations, the Great Lakes Compact limits the defined straddling community to the boundaries existing as of the effective date of the compact.[130]

A proposal for a diversion in a straddling county, which encompasses a far greater area than a "community," is subject to additional standards and regional approval. First, the water can be used solely for the public water supply purposes of a community that is without "adequate supplies of potable water."[131] Second, the proposal is subject to an additional "cautionary" standard, requiring a showing that the proposal "will not endanger the integrity of the Basin Ecosystem."[132] Finally, the proposal is subject to both non-binding regional review and the unanimous approval of the Compact Council.[133]

The question of whether bottled water shipped out of the basin constitutes a diversion has been an emotional political topic in recent years.[134] Some environmental activists view bottled water as no different from a tanker or pipeline that sends water to distant markets for private profit. The bottled water industry views itself as an in-basin consumptive use, creating a product (bottled water) from a natural resource. Both arguments are perched on slippery slopes. Environmental activists view bottled water as opening the door to massive private sale of the Great Lakes. Industry sees no difference between bottles filled with pure water and bottles filled with water and a little sugar, corn syrup or artificial flavor (also known as soft drinks, or "pop" in the Midwest). The question of whether bottled water constitutes a diversion is so loaded with political controversy that the governors decided not to conclusively address it in the Great Lakes Compact. While the Great Lakes Compact defines water in containers greater than 5.7 gallons (20 liters) as a diversion, it leaves the decision of how to treat water in containers of 5.7 gallons or less to the individual states.[135]

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[128] Great Lakes Compact § 1.2 (defining "Straddling Community").
[129] Great Lakes Compact § 4.9(1).
[130] Great Lakes Compact § 1.2 (defining "Straddling Community").
[131] Great Lakes Compact § 4.9(3)(a).
[132] Great Lakes Compact § 4.9(3)(e).
[133] Great Lakes Compact § 4.9(3)(f)–(g). The unanimous approval may include abstentions. Great Lakes Compact § 4.7(3)(g) ("Council approval shall be given unless one or more Council Members vote to disapprove.").
[134] *See* Noah D. Hall, "Federal and State Laws Regarding Bottled Water," Testimony Before the House Oversight and Government Reform Committee, Domestic Policy Subcommittee (December 12, 2007), available at http://domesticpolicy.oversight.house.gov/documents/20071212195927.pdf and http://works.bepress.com/noahhall/8/.
[135] Great Lakes Compact § 4.12(10).

3. The Compact Council, Enforcement, and Public Process

In addition to providing a mechanism for unanimous approval of the diversion exceptions, the Compact Council has numerous other powers and duties. Comprised of the governors of each party state (or their designated alternates), it can promulgate and enforce rules to implement its duties under the Great Lakes Compact.[136] The Compact Council also has broad authority to plan, conduct research, prepare reports on water use, and forecast water levels.[137] Perhaps most importantly, it can conduct special investigations and institute court actions, including enforcement.[138]

Enforcement is not the sole domain of the Compact Council, however. The Great Lakes Compact contains broad and comprehensive enforcement provisions at both the state and interstate levels. Any aggrieved person can commence a civil enforcement action in the relevant state court against a water user that has failed to obtain a required permit or is violating the prohibition on diversions.[139] Remedies include equitable relief and the prevailing party may recover reasonable attorney and expert witness fees.[140] Any person, including another state or province, can challenge a state action under the Great Lakes Compact (such as issuance of a permit) pursuant to state administrative law, with an express right of judicial review in state court.[141]

The broad enforcement provisions are complemented by similarly progressive public participation provisions. As with the minimum substantive decision making standard, the compact provides minimum procedural public process requirements for the party states and Compact Council. These include: public notification of applications with a reasonable time for comments; public accessibility to all documents (including comments); standards for determining whether to hold a public meeting or hearing on an application; and allowing open public inspection of all records relating to decisions.[142] The Great Lakes Compact also requires additional formal consultation with federally recognized Tribes in the relevant state.[143] In recognition of the Tribes' status as sovereigns, such consultation is handled primarily through either the Compact Council or Regional Body (discussed below).[144]

The Great Lakes Compact becomes effective once ratified through concurring legislation in each party state (which has now occurred) and consented to by Congress.[145] The Great Lakes Compact has no termination date; it remains in force unless terminated by a majority of the party states (five of the eight).[146] As is typical for interstate water

[136] Great Lakes Compact §§ 2.1–2.3, 3.3(1).
[137] Great Lakes Compact § 3.2.
[138] Great Lakes Compact § 3.2.
[139] Great Lakes Compact § 7.3(3).
[140] Great Lakes Compact § 7.3(3).
[141] Great Lakes Compact § 7.3(1).
[142] Great Lakes Compact § 6.2.
[143] Great Lakes Compact § 5.1.
[144] Great Lakes Compact § 5.1.
[145] Great Lakes Compact § 9.4.
[146] Great Lakes Compact § 8.7.

compacts, it is very difficult to amend once enacted. Amendments would require unanimous approval by all state legislative bodies and the consent of Congress.[147]

C. Sub-Treaty State-Provincial Cooperation and the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement

State-provincial cooperation has been a regional goal for decades, implicitly promised by the Great Lakes Charter and the 2001 Annex to the Great Lakes Charter and expressly encouraged by Congress in its 2000 amendments to WRDA.[148] However, including the Canadian provinces in the Great Lakes Compact could bring political and legal challenges. In an attempt to meet the goal of state-provincial cooperation without running afoul of constitutional treaty limitations, the Council of Great Lakes Governors proposed a companion non-binding good faith agreement that includes the provinces of Ontario and Quebec, the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement ("Great Lakes Agreement"). This dual structure creates a legally and politically acceptable mechanism for cooperation with Canadian provinces.

State cooperation with Canadian provinces in the Great Lakes region has obvious ecological and policy benefits, but raises fundamental legal and political concerns. The Compact Clause of the Constitution, included in Article I, section 10, provides that "[n]o State shall, without the Consent of Congress . . . enter into any Agreement or Compact with another State, or with a foreign Power."[149] The same constitutional section also provides that "[n]o State shall enter into any Treaty, Alliance, or Confederation."[150] Thus, the prohibition on states entering into a "Treaty, Alliance, or Confederation" is absolute, while the prohibition on states entering into an "Agreement or Compact," even with a foreign government, is limited only by the political decision of Congress to consent.

The question of what constitutes a "Treaty, Alliance, or Confederation" versus an "Agreement or Compact" can in theory open the door to major constitutional issues of separation of powers and federalism.[151] In the case of the Great Lakes, there is a sensible answer. Congress has already exercised its treaty powers in this area through the Boundary Waters Treaty of 1909, in its 2000 amendments to WRDA it stated a desire for the states to work "in consultation with" the provinces to develop a Great Lakes water

[147] Great Lakes Compact § 8.5.
[148] *See* Water Resources Development Act of 2000, Pub. L. No. 106-541, § 504, 114 Stat. 2572, 2644–45 (codified as amended at 42 U.S.C. § 1962d-20(b)(2) (2000)).
[149] U.S. Const. art. I, § 10, cl. 3.
[150] U.S. Const. art. I, § 10, cl. 1.
[151] According to former Supreme Court Justice Felix Frankfurter, it is left to Congress to determine whether a proposed arrangement is a prohibited "Treaty, Alliance, or Confederation" or a permissible "Agreement or Compact." *See* Felix Frankfurter & James M. Landis, *The Compact Clause of the Constitution—A Study in Interstate Adjustment*, 34 YALE L.J. 685, 694-95 (1925). This determination may elude a rigid legal analysis since it is "in a field in which political judgment is, to say the least, one of the important factors." *Id*. at 695, n.37.

management agreement.[152] The states are wise to interpret this congressional encouragement not as permission to negotiate a compact with the provinces, but rather to develop a non-binding cooperative approach to Great Lakes water management that involves the provinces.

The Great Lakes Compact incorporates the provinces through the "Regional Body," comprised of representatives from each state and province.[153] The primary mechanism for achieving this purpose is the "Regional Review" procedure conducted by the Regional Body. The Regional Body's authority could be fairly described as procedural rather than substantive; and its determinations described as advisory rather than final. The Regional Body's role includes notice, consultation, and public participation, but stops short of final decision making.[154] The parties and Compact Council need only "consider" (but not follow) Regional Review findings.[155] The Regional Review process is also limited to "regionally significant or potentially precedent setting" proposals (as determined by a majority of the members of the Regional Body) and the exceptions to the prohibition on diversions discussed above.[156] The Regional Review process avoids infringing on federal treaty powers, but still gives the provinces an evaluative and procedural role that may prove useful for affecting major decisions.

CONCLUSION

The Great Lakes Compact represents an historic step forward in Great Lakes water policy. The decision-making standard alone is a major evolution in water law. The unified management of surface and ground water brings some scientific reality to the law. And the provisions for enforcement, public process, and cooperation with Canadian provinces ensure more accountable and participatory decision making. However, the mechanism through which these standards and provisions are applied may be the most important advancement. The Great Lakes Compact introduces a new cooperative horizontal federalism approach for crafting multi-state water resource and environmental policy that could be a model for future environmental policy efforts.

[152] Water Resources Development Act of 2000, Pub. L. No. 106-541, § 504, 114 Stat. 2572, 2644–45 (codified as amended at 42 U.S.C. § 1962d-20(b)(2) (2000)).
[153] Great Lakes Compact § 1.2 (defining "Regional Body").
[154] Great Lakes Compact § 4.5(5).
[155] Great Lakes Compact § 4.5(5)(i).
[156] Great Lakes Compact §§ 4.5(1)(c), 4.5(1)(f). A state may, at its discretion and after consulting with the proposal applicant, seek Regional Review for any other proposal within its jurisdiction. *See* Great Lakes Compact § 4.5(2)(c)(ii).

ADDITIONAL RESOURCES:

- Noah D. Hall, *Toward A New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 COLORADO LAW REVIEW 405 (2006) (available online at http://www.greatlakeslaw.org/glelc/files/Hall_Colorado.pdf)

- Noah D. Hall and Bret B. Stuntz, "Climate Change and Great Lakes Water Resources" report prepared for the National Wildlife Federation (2007) (available online at http://online.nwf.org/site/DocServer/Climate_Change_and_Great_Lakes_Water_Resources_Report_FI.pdf?docID=2442)

- Council of Great Lakes Governors, Great Lakes-St. Lawrence River Basin Water Resources Compact Implementation Resources (numerous resources including state legislation, background materials, and resources on interstate compacts prepared by the Council of State Governments--National Center for Interstate Compacts), http://www.cglg.org/projects/water/CompactImplementation.asp.

- For an excellent history of the conflicts regarding Great Lakes water under the existing legal regime, see Peter Annin's recent book, *Great Lakes Water Wars* (Island Press, 2006).