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Great Lakes Natural Resource Center
213 West Liberty Street, Suite 200
Ann Arbor MI 48104-1398
734-769-3351
www.nwf.org

GREAT LAKES-ST. LAWRENCE RIVER BASIN WATER RESOURCES COMPACT: A PRELIMINARY PROGRESS REPORT ON STATE IMPLEMENTATION

Overview

The Great Lakes-St. Lawrence River Basin Water Resources Compact is a binding agreement among the eight Great Lakes States to manage the water resources in the Basin. The Compact requires each state to implement the Compact by taking certain actions over the next five years. Many of these actions involve significant administrative, regulatory, or legislative decisions. This report describes each requirement; compares the states' progress in making decisions to meet the requirement; explains in detail how each state has chosen to address the requirement; and highlights the gaps in implementation and possible next steps.

Significant State Requirements

The Compact prohibits new or increased diversions of water out of the Basin, with strictly limited exceptions, and directs the states to create a regulatory program for in-Basin withdrawals. Other provisions require the states to develop a conservation and efficiency program and gather information about water uses and sources. Many of these requirements are mirrored in the non-binding companion agreement with the Provinces of Ontario and Québec, the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement.

The significant requirements and their deadlines under the Compact are:

- **Immediately**, each state must review proposals for exceptions to the ban on diversions and determine whether and how to review exceptions for small intra-basin transfers;
- **By December 8, 2009**, each state must submit a list of baseline volumes as of December 8, 2008 for withdrawals, consumptive uses and diversions and determine how to calculate the baselines;
- **By December 8, 2010**, each state must develop water conservation and efficiency goals and objectives; implement a water conservation and efficiency program; and commit to promote water conservation measures; and
- **By December 8, 2013**, each state must accept registrations of withdrawals and diversions and develop a water management program to regulate new or increased withdrawals and consumptive uses.

States have already begun to comply with their obligations. Depending on the requirement, some states enacted implementing legislation when they ratified the Compact; others are relying on existing programs; and yet others are awaiting recommendations by advisory committees.

Progress on Immediate Requirements
Review of Proposals for Diversion Exception

Requirement

On December 8, 2008, the Compact prohibits new or increased diversions of water from the Basin, with three exceptions that must meet certain standards: (1) diversions to "straddling communities;" (2) transfers between Great Lakes watersheds (intrabasin transfers); and (3) diversions to "straddling counties." Sections 4.8-4.9. Each state is required to manage and regulate proposals for exceptions in accordance with the standards in the Compact; however, a state can decide whether to manage and regulate proposals for an intrabasin transfer if the new or increased withdrawal is less than 100,000 gallons per day (gpd) average over any 90-day period. Section 4.9.2.a.

Summary of Progress

Only Wisconsin has specified how it would regulate such small intrabasin transfers.

State Details

- Illinois: Not applicable.
- Indiana: No provision as of yet.
- Michigan: No provision as of yet.
- Minnesota: No provision as of yet.
- New York: No provision as of yet.
- Ohio: No provision as of yet.
- Pennsylvania: No provision as of yet.
- Wisconsin: A transfer may be approved if it satisfies the applicable water regulation approvals or, if there are no such approvals, if the transfer meets requirements to be determined by rule. In addition, if the water will be used for public water supply purposes, the proposal must be consistent with an approved water supply plan. Wis. Stat. § 281.346(4)(d)(1).

Gaps in Implementation and Next Steps

Every state except Wisconsin has so far failed to address how they would treat these proposals. Although it is unlikely that a large number of such proposals will come before the states, states may want to resolve the issue as soon as possible.

Progress on Requirements within One Year
Submission of List of Baseline Volumes

Requirement

By December 8, 2009, each state must develop a list of existing withdrawal approvals and/or the capacity of existing systems as of December 8, 2008, and submit the list(s) to the Great Lakes-St. Lawrence River Basin Water Resources Council and the Regional Body.¹ These lists form the baseline volume for future regulation of withdrawals, consumptive uses, and diversions. If capacity is chosen to calculate the baseline, the capacity should be presented in capacity limiting factors; must represent the state of the systems; and must be based upon approval limits or the most restrictive capacity information. Section 4.12.2.

Before submitting the list(s) by the deadline, states must therefore determine which method they will use to determine baseline volumes: withdrawal approvals and/or existing capacity.

Summary of Progress

The following table summarizes whether a baseline volume method has been determined, and if so, whether the state chose withdrawal approvals, existing capacity, or both.

	Baseline Determination	Use of Withdrawal Approvals	Use of Existing Capacity
Illinois	<i>Not applicable</i>		
Indiana	<i>Yes</i>	<i>Yes</i> Facility capability; landfill consumptive use; diversion amount	<i>No</i> (By legislative determination)
Michigan	<i>Yes</i>	<i>Yes</i> Discharge volume; reported withdrawals; system and designed capacity	<i>No</i> (By legislative determination)
Minnesota	<i>Not specified</i>	<i>Possible</i> Appropriation approval	
New York	<i>Not yet</i> Recommendation by September 2009		
Ohio	<i>Yes</i>	<i>Yes</i> Applicable permit limitation	<i>Yes</i> Physical capacity
Pennsylvania	<i>Yes</i>	<i>Yes</i> Applicable permit limitation	<i>Yes</i> Physical capacity

¹ The Council is composed of the Governors of the party states. The Regional Body is composed of the Governors and the Premiers of Ontario and Québec.

Wisconsin	Yes	Yes Applicable permit limitation	Yes Maximum capacity of most restrictive component
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State Details

Illinois: Not applicable.

Indiana: The baseline volume is determined after an investigation using (1) the total capability reported by a "significant water withdrawal facility" (a facility with the capability to withdraw more than 100,000 gallons per day (gpd) of surface and groundwater), (2) the consumptive use attributable to a landfill facility, or (3) the amount of a diversion by a facility. The General Assembly intends the reported facility capability to be considered a "withdrawal approval" under the Compact. Ind. Code § 14-25-15-12.

Michigan: The baseline volume is generally (1) the system capacity used or developed to make a withdrawal on February 28, 2006, if included in an annual report submitted not later than April 1, 2009; (2) the discharge volume for a quarry or mine stated in the discharge authorization on February 28, 2006; (3) the highest annual amount of water withdrawn as otherwise reported for calendar year 2002, 2003, 2004, or 2005; or (4) the total designed withdrawal capacity for a community supply on February 28, 2006 if included in a report submitted not later than April 1, 2009. These amounts are intended to be considered "withdrawal approvals" under the Compact. Mich. Comp. Laws § 324.32701(1)(d).

Minnesota: Not specified. An existing state program requires a water appropriation permit for uses that exceed 10,000 gpd or 1 million gallons in a year. Minn. Stat. § 103G.271; Minn. R. 6115.0620. The withdrawal approvals under this program could form the baseline volume.

New York: By September 4, 2009, the Great Lakes Basin Advisory Council will recommend a method for establishing baseline volumes. N.Y. Env'tl. Conserv. Law § 21-1007(2)(d).

Ohio: The baseline volume is the larger of (1) the limitation in a state permit that specifically regulates and limits the amount of a water diversion, consumptive use, or withdrawal, including permits for transfers from the Lake Erie or Ohio River drainage basins and permits for large consumptive uses; or (2) the physical capacity of the withdrawal system of the applicable facility as of December 8, 2008. Ohio Rev. Code § 1522.07(A). By June 8, 2010, an advisory board shall recommend requirements regarding the review of lists of existing water users, the

establishment of an appeal process for users on the list, and the method for determining the capacity of existing facilities. H.B. 416, 127th Gen. Assem., Reg. Sess., § 3(B)(2), (3), (5) (Ohio 2008).

Pennsylvania: The baseline volume is the larger of (1) the permit limitation on surface water withdrawals by public water supply agencies under the Water Rights Law or withdrawals by public water systems under the Safe Drinking Water Act; or (2) the physical capacity of existing systems. The Department of Environmental Protection must provide notice and consider public comment on the proposed baseline amounts. 2008 Pa. Laws 43, § 8.

Wisconsin: The baseline volume is the amount specified in the general permit, individual permit, or interbasin transfer approval as of December 8, 2008; an interim approval in the event the Department of Natural Resources failed to issue a permit before December 8, 2008; or, for consumptive uses, the authorized base level of water loss specified by the Department as of December 8, 2008. Wis. Stat. § 281.346(2)(e). The amount is generally the maximum hydraulic capacity of the most restrictive component of the water supply system, or the approval limit under other statutes governing water withdrawals. Wis. Stat. § 281.344(4e).

Gaps in Implementation and Next Steps

Every state except New York has determined a method for calculating baseline withdrawals. New York will need to move quickly if the Advisory Council waits until September 2009 to issue its report.

For those states that have determined baseline volumes, two possible issues remain:

- (1) Except for Ohio and Pennsylvania, the states have not provided a calculation method for all existing withdrawals, consumptive uses, and/or diversions. This could lead to uncertainty if a person or facility later submits an application for an increase under a state program or the diversion exceptions.
- (2) The treatment of capacity as a baseline is problematic in several states. The Compact guards against inflated capacity baselines by requiring capacity to be based upon approval limits or the most restrictive capacity information. Indiana and Michigan have designated reported capacity as a withdrawal approval, an approach that would seem to be in tension with the limitations on capacity in the Compact. Ohio and Pennsylvania use physical capacity as a baseline without specifying whether the capacity is based on an approval limit or the most restrictive capacity; this may need to be clarified by rule.

Progress on Requirements within Two Years
Development of Water Conservation and Efficiency Goals and Objectives
Implementation of a Water Conservation and Efficiency Program
Commitment to Promote Water Conservation Measures

Requirement

By December 8, 2010, each state must develop water conservation and efficiency goals and objectives that are consistent with Basin-wide goals and objectives identified by the Council, and implement a voluntary or mandatory water conservation and efficiency program for all users based on the goals and objectives. Each state also must commit to promote "environmentally sound and economically feasible water conservation measures," a term that is specifically defined. Sections 4.2.2, 4.2.4. Among other requirements, the measures must reflect best practices applicable to the water use sector and consider the particular facilities and processes involved. Section 1.2.

Before the deadline, states must therefore determine the nature of the conservation and efficiency program, including whether the program will be voluntary or mandatory. Ideally the specifics would be fleshed out after the state has developed its goals and objectives. States must also determine the types of conservation measures and the means by which they will be promoted.

Summary of Progress

The following table summarizes whether each state has developed its goals and objectives; determined the nature of its conservation program; and determined the nature of the conservation measures to be promoted.

	Goals and Objectives	Conservation and Efficiency Program Determination	Conservation Measures Determination
Illinois	<i>Not yet</i>	<i>Yes, partially</i> Conservation requirements imposed on Lake Michigan allocations	<i>Yes, partially</i> Conservation requirements imposed on Lake Michigan allocations
Indiana	<i>Not yet</i>	<i>Yes</i> Voluntary program to be created in Basin by rule	<i>Not specified</i>
Michigan	<i>Not yet</i>	<i>Not yet</i> Recommendation by August 2009	<i>Yes</i> Measures posted on website, reviewed by registrants and permit holders in state
Minnesota	<i>Not yet</i>	<i>Not specified</i> Efficient measures may be	<i>Not specified</i> Efficient measures may be

		required as condition of statewide water allocation permit	required as condition of statewide water allocation permit
New York	<i>Not yet</i>	<i>Not yet</i> Recommendation by September 2009	<i>Not specified</i>
Ohio	<i>Not yet</i> Recommendation by June 2010	<i>Yes</i> Voluntary program to be created by rule; recommendation by June 2010	<i>Not specified</i>
Pennsylvania	<i>Not yet</i>	<i>Yes</i> Voluntary program in Basin utilizing existing technical assistance center	<i>Not specified</i>
Wisconsin	<i>Draft issued</i> Comment period ended August 2008	<i>Yes</i> Voluntary statewide and Basin programs to be developed by rule	<i>Yes</i> Voluntary statewide measures as well as mandatory and voluntary measures in Basin, to be adopted by rule

State Details

Illinois: A regional organization, municipality, political subdivision, agency or instrumentality, or any other organization, association or individual must obtain an allocation permit from the Department of Natural Resources before using water from the Lake Michigan diversion. 615 Ill. Comp. Stat. 50/5; Ill. Admin. Code tit. 17, § 3730.301(a). Conservation practices are required for each user category, and include adoption of ordinances and development of public programs as applicable. Ill. Admin. Code tit. 17, § 3730.307.

Indiana: The Natural Resources Commission is required to adopt rules to implement voluntary water conservation and efficiency programs. The Commission is specifically prohibited from adopting rules or otherwise implementing a mandatory program unless authorized by the General Assembly. Ind. Code § 14-25-15-5(1) to -(3).

Michigan: By August 8, 2009, the Water Resources Conservation Advisory Council will make recommendations on the development and implementation of a water conservation and efficiency program. Mich. Comp. Laws § 324.32803(4)(f), (5).

The Department of Environmental Quality is required to post environmentally sound and economically feasible water conservation measures on its website not later than March 31, 2009. Mich. Comp. Laws § 324.32708a. Beginning in 2010, registrants and permit holders must acknowledge that they have reviewed applicable measures in an annual report to the Department. Mich. Comp. Laws § 324.32707(1)(j). Owners of farms must also acknowledge that they have reviewed applicable measures in water use conservation plans submitted to the Department of Agriculture. Mich. Comp. Laws § 324.32708(1)(h).

- Minnesota: Not specified. Under an existing program, the Department of Natural Resources may require more efficient use of water by the permittee or applicant as a condition of a water appropriation permit, based on data submitted by these persons and current information on best available water conservation technology and practice. Minn. R. 6115.0770. In addition, public water suppliers serving more than 1,000 people must employ water use demand reduction measures, including evaluation of conservation rate structures and a public education program, before constructing a public water supply well or requesting an increase in the authorized volume of appropriation. Minn. Stat. § 103G.291, subd. 3(c).
- New York: By September 4, 2009, the Great Lakes Basin Advisory Council will recommend water conservation and efficiency programs. N.Y. Envtl. Conserv. Law § 21-1007(2)(c).
- Ohio: The Governor, the Department of Natural Resources, or any other agency of the state may adopt rules and implement voluntary water conservation and efficiency programs. Mandatory programs must be authorized by the General Assembly. Ohio Rev. Code § 1522.05(B)(1). By June 8, 2010, an advisory board shall provide recommendations on the development of conservation objectives and the state's water conservation and efficiency programs. H.B. 416, 127th Gen. Assem., Reg. Sess., § 3(B)(4) (Ohio 2008).
- Pennsylvania: The Department of Environmental Protection is authorized to administer a voluntary water conservation program within the Great Lakes Basin utilizing a water resources technical assistance center established in 2002 through the Water Resources Planning Act. 2008 Pa. Laws 43, § 5(2). Among other responsibilities, the technical assistance center is required to establish a voluntary statewide water conservation program for all water users. 27 Pa. Cons. Stat. § 3120(a)(1). The Environmental Quality Board may not adopt rules to implement a mandatory water conservation program unless authorized by the General Assembly. 2008 Pa. Laws 43, § 6.

Wisconsin: The Department of Natural Resources must develop and implement a statewide water conservation and efficiency program that includes the promotion of environmentally sound and economically feasible water conservation measures through a voluntary statewide program, as well as mandatory and voluntary measures for Great Lakes Basin waters that are necessary to implement exceptions for diversions, general and individual water use permits, and the water supply planning process. Wis. Stat. § 281.346(8)(b). In implementing the program, the Department may not require retrofitting of existing fixtures, appliances, or equipment. Wis. Stat. § 281.346(8)(d). By December 8, 2010, the Department is also directed to implement a water conservation and efficiency program for all users of waters of the Great Lakes basin that is designed to achieve the state's goals and objectives. Wis. Stat. § 281.346(8)(c).

Gaps in Implementation and Next Steps

With the exception of Wisconsin, the states have not developed water conservation goals and objectives. Wisconsin has developed a draft that has not been finalized. Because the goals and objectives serve as a guide for the conservation and efficiency program, the states should focus on this requirement.

With the possible exception of Minnesota, no state has implemented a conservation program for all users. Illinois requires conservation practices for users of the Lake Michigan diversion; however, there is no similar program in place for users of other water in the Basin. Indiana, Ohio, Pennsylvania, and Wisconsin have directed state agencies to create a program. Michigan and New York are awaiting recommendations by advisory committees; Ohio's program will also be informed by recommendations. States will need to work diligently to implement the programs by the deadline.

Only Michigan and possibly Minnesota have developed measures that may meet the specific definition in the Compact. Wisconsin has directed the Department of Natural Resources to develop the measures by rule. As noted above, the conservation practices required by Illinois only apply to Lake Michigan allocations. The remaining states have not specifically addressed the requirement. While these states may expect the measures to be developed together with the conservation program, this should be clarified.

Progress on Requirements within Five Years
Acceptance of Registrations

Requirement

By December 8, 2013, any person who withdraws 100,000 gallons per day or greater average in a 30-day period or diverts water in any amount must register with the party state in which the withdrawal originates, unless the person has previously registered under an existing state program. The Compact requires specific information from the registrants, such as locations and sources, uses made of the water, and places of use and discharge. Section 4.1.3.

Before the deadline, states must therefore determine how to process registrations for withdrawals and diversions and whether to create or rely on a state program.

Summary of Progress

The following table summarizes whether each state has in place a process to accept registrations of withdrawals and diversions.

	Withdrawal Registration	Diversion Registration
Illinois	<i>Partial</i> Notification of groundwater withdrawal in state in excess of 100,000 gpd; Lake Michigan allocation permit	<i>Not yet</i>
Indiana	<i>Almost</i> Registration required for capability to withdraw more than 100,000 gpd from waters in state	<i>Not yet</i>
Michigan	<i>Almost</i> Registration required for capacity to withdraw over 100,000 gpd from waters in state	<i>Not yet</i>
Minnesota	<i>Yes</i> Allocation permit for uses of water in state exceeding 10,000 gpd or 1 million gallons in a year	<i>Not yet</i>
New York	<i>Almost</i> Registration required for withdrawal in excess of 100,000 gpd from Great Lakes Basin	<i>Not yet</i>
Ohio	<i>Almost</i> Registration required for capacity to withdraw more than 100,000 gpd from waters in state; or above threshold for a groundwater stress area	<i>Not yet</i>
Pennsylvania	<i>Yes</i> Registration required for withdrawal that exceeds	<i>Not yet</i>

	10,000 gpd; or is from public water supply agency or hydropower facility	
Wisconsin	<i>Yes</i> Registration required for capacity to withdraw 100,000 gpd or more from waters in state	<i>Yes</i> Registration required to begin diversion

State Details

- Illinois: Under the Water Use Act, a land occupier or person who proposes to develop a withdrawal of groundwater that can reasonably be expected to occur in excess of 100,000 gpd must notify the Soil and Water Conservation District. 525 Ill. Comp. Stat. 45/5. An applicant for a Lake Michigan allocation permit as well as a permittee are required to provide certain information on the withdrawal. Ill. Admin. Code tit. 17, §§ 3730.302, 3730.309.
- Indiana: A "significant water withdrawal facility" (a facility or facilities with the capability to withdraw more than 100,000 gpd of surface and/or groundwater) is required to register with the Natural Resources Commission. Ind. Code § 14-25-7-15.
- Michigan: A property owner who intends to develop capacity to make a new or increased "large quantity withdrawal" (1 or more cumulative total withdrawals of over 100,000 gpd average in any consecutive 30-day period that supply a common distribution system) is required to register the withdrawal. Exceptions include owners who must obtain a permit under the state program and certain owners of non-commercial wells. Mich. Comp. Laws § 324.32705. An online registration process is to be available by July 9, 2009. Mich. Comp. Laws § 324.32706.
- Minnesota: Not specified. Under the applicable rules for an existing state program governing uses that exceed 10,000 gpd or 1 million gallons in a year, applicants must submit information on the withdrawal. Minn. R. 6115.0660.
- New York: A person who withdraws water from the Great Lakes Basin in excess of an average of 100,000 gpd in any consecutive 30-day period must register with the Department of Environmental Conservation. N.Y. Env'tl. Conserv. Law § 15-1605.
- Ohio: The General Assembly specified that an existing program is to be used to comply with the registration requirement in the Compact. H.B. 416, 127th Gen. Assem., Reg. Sess., § 2(B) (Ohio 2008). Under this program, a person who owns a facility that has the capacity to withdraw waters of the state in an amount greater than 100,000 gpd from all sources or is above the threshold established for a groundwater stress area must register the facility with the Department of Natural Resources. Ohio Rev. Code § 1521.16.

Pennsylvania: The Department of Environmental Protection is authorized to implement the registration requirement in the Compact through a state registration program established in 2002 by the Water Resources Planning Act. 2008 Pa. Laws 43, § 5(1). Under the program, registration is required for each person whose total withdrawal or withdrawal use from one or more points of withdrawal within a watershed operated as a system either concurrently or sequentially exceeds an average rate of 10,000 gpd in a 30-day period, as well as each public water supply agency and hydropower facility. 27 Pa. Cons. Stat. § 3118(b)(1); 25 Pa. Code §§ 110.203, 110.304-305.

Wisconsin: A person who begins a withdrawal using a water supply system with a capacity to withdraw an average of 100,000 gpd or more in a 30-day period; increases the system capacity to an average of 100,000 gpd or more in a 30-day period; or begins a diversion must register with the Department of Natural Resources. Wis. Stat. § 281.346(3).

Gaps in Implementation and Next Steps

Illinois must still create a process to accept registrations of withdrawals from non-Lake Michigan surface water. Indiana, Michigan, New York, and Ohio have programs that accept almost all registrations; they require registration of withdrawals greater than 100,000 gpd, rather than withdrawals of 100,000 gpd or above. Illinois' notification requirement for groundwater withdrawals suffers from the same defect. Ideally the threshold would be changed in these states to reflect the registration requirement in the Compact, though the practical impact is negligible. Wisconsin, Pennsylvania, and Minnesota all have a process in place.

The Compact provides that any person who withdraws 100,000 gpd must register with the state. Thus, Michigan's exception for owners of non-commercial wells may not be in compliance. In addition, the Compact requires certain minimum information on withdrawals. The programs in New York and Pennsylvania do not appear to require all of this information.

With the exception of Wisconsin, the states do not have a registration process in place for diversions.

Progress on Requirements within Five Years (Continued)
Development of a Water Management Program for In-Basin Uses

Requirement

By December 8, 2013, each party state must develop a water management program to regulate new or increased withdrawals and consumptive uses, using measures that are consistent with the decisionmaking standard in the Compact. States may determine the scope and threshold levels of their programs. Threshold levels must be set through a considered process in order to assure an effective and efficient program that will 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. Section 4.10.

Before the deadline, states must therefore determine the scope, threshold levels, and standard to be applied in their program.

Summary of Progress

The following table summarizes whether each state has developed a water management program, and if so, the scope, threshold level and standard to be applied.

	Program	Scope	Threshold	Standard
Illinois	<i>Not applicable</i>			
Indiana	<i>Yes</i> Skeletal; to be implemented by rule	In Basin	Withdrawal in excess of 5 million gallons per day (mgd) from Lake Michigan surface water; 100,000 gpd from specified salmonid streams and others by rule; 1 mgd from other sources	<i>Not specified</i>
Michigan	<i>Yes</i>	Statewide	Withdrawal greater than 100,000 gpd	No adverse resource impact; Compact standard applies to permits for withdrawal capacity greater than 2 mgd
Minnesota	<i>Yes</i> Existing program	Statewide	Use that exceeds 10,000 gpd or 1 million gallons in a year; consumptive use of	A broad range of factors to be considered; consumptive uses must be approved by

			more than 2 mgd	legislature
New York	<i>Not yet</i> Recommendation by September 2009			
Ohio	<i>Not yet</i> Recommendation by June 2010		Consumptive use of more than 2 mgd (existing program)	Includes conservation practices, no detrimental impacts
Pennsylvania	<i>Yes</i> Skeletal; to be implemented by rule	In Basin	Withdrawal of 100,000 gpd; consumptive use of 5 mgd	<i>Not specified</i>
Wisconsin	<i>Yes</i>	In Basin	Withdrawal of 100,000 gpd; consumptive use of 5 mgd	Applicable water approvals; State standard applies to withdrawal of 1 mgd; Compact standard applies to withdrawal of 10 mgd and consumptive use of 5 mgd

State Details

Illinois: Not applicable.

Indiana: A person must obtain a permit from the Department of Environmental Management for new or increased withdrawals within the Basin in excess of 5 million gallons per day (mgd) on average over 90 days from Lake Michigan surface water; 100,000 gpd on average over 90 days from specified salmonid streams and other watercourses determined by rule by the Natural Resources Commission; and 1 mgd on average over 90 days from any other source. Ind. Code § 14-25-15-7.

Michigan: A person is prohibited from making a new or increased "large quantity withdrawal" (1 or more cumulative total withdrawals of over 100,000 gpd average in any consecutive 30-day period that supply a common distribution system) from the waters of state if it causes an adverse resource impact. Mich. Comp. Laws § 324.32721(1). By July 9, 2009, a property owner who intends to develop capacity to make such a withdrawal from streams, rivers, or groundwater will be required to use an internet-based assessment tool. Mich. Comp. Laws § 324.32706b(1). The tool calculates the effect of a stream flow reduction on fish populations and

helps determine whether a specific withdrawal causes an adverse resource impact on river systems. Mich. Comp. Laws §§ 324.32706b(2), 324.32701(1)(tt)-(ww). Depending on the severity of the impact and the withdrawal capacity, the owner may be required to self-certify implementation of water conservation measures that the owner considers to be reasonable, or obtain a permit. Mich. Comp. Laws § 324.32706c(4)-(6). In addition, a permit is required for development of new or increased withdrawal capacity of more than 2 mgd from all waters of the state. Mich. Comp. Laws § 324.32723(1)(a)-(b). A permit is granted if the withdrawal meets the Compact decisionmaking standard. Mich. Comp. Laws § 324.32723(6). Exceptions to these requirements include certain owners of non-commercial wells. Mich. Comp. Laws § 324.32727(1)(h).

Minnesota: Under an existing program, the state, a person, partnership, or association, private or public corporation, county, municipality, or other political subdivision of the state that appropriates or uses waters of the state for any use that exceeds 10,000 gpd or 1 million gallons in a year must obtain a water appropriation permit from the Department of Natural Resources. Minn. Stat. § 103G.271; Minn. R. 6115.0620. Exceptions include domestic uses serving less than 25 persons for general residential purposes. Minn. R. 6115.0620(A). The Department considers a broad range of factors in determining whether to grant a permit. Minn. R. 6115.0670. Specific requirements apply to agricultural irrigation, public water supplies, water level maintenance, dewatering, and mining. Minn. R. 6115.0680-6115.0720. In addition, a water use permit involving a consumptive use of more than 2 mgd average in a 30-day period may only be approved if remaining water resources are adequate for needs and approval is given by the Legislature. Exceptions include agricultural uses. Minn. Stat. § 103G.265, subd. 3.

New York: By September 4, 2009, the Great Lakes Basin Advisory Council will recommend threshold levels for regulating new or increased water withdrawals in the state, and the establishment of a permitting program or alternative programs in order to meet the water management objectives of the state. N.Y. Envtl. Conserv. Law § 21-1007(2)(a)-(b).

Ohio: By June 8, 2010, an advisory board shall recommend threshold levels for regulating new or increased water withdrawals in the state. H.B. 416, 127th Gen. Assem., Reg. Sess., § 3(B)(1) (Ohio 2008). The General Assembly must first enact legislation before a water management program may be implemented. Ohio Rev. Code § 1522.05(B)(1). Under an existing program, a new or increased consumptive use of more than an average of two mgd in any 30-day period must obtain a permit from the Department of Natural Resources. Ohio Rev. Code § 1501.33. Permit requirements include maximum feasible conservation practices and no significant detrimental impacts. Ohio Rev. Code § 1501.34(A).

Pennsylvania: The Environmental Quality Board is authorized to adopt regulations governing the criteria and procedures for review and approval of proposals for withdrawals and consumptive uses consistent with the decisionmaking standard in the Compact. The threshold levels for the program are a new or increased withdrawal from the Great Lakes Basin of 100,000 gpd averaged over a 90-day period, or a new or increased consumptive use from the Basin of 5 mgd averaged over a 90-day period. 2008 Pa. Laws 43, § 6(1).

Wisconsin: The implementing legislation creates two programs: one program governs in the absence of the Compact; the other governs once the Compact is in effect. While many provisions are identical, the permitting requirements are more stringent under the post-Compact program. Beginning December 8, 2008, a general permit is required for a new or increased withdrawal that averages 100,000 gpd up to 1 mgd for any 30 consecutive days. Wis. Stat. § 281.346(4s)(d). The permit is granted if applicable water regulation approvals are obtained. Wis. Stat. § 281.346(4s)(d)(3). Beginning on the same day, an individual permit is required for a new or increased withdrawal that averages 1 mgd or greater for any 30 consecutive days. Wis. Stat. § 281.346(5)(d). Withdrawals that average 1 mgd up to 10 mgd, or that average 10 mgd or greater with an average water loss of less than 5 mgd, must meet a state decisionmaking standard. Wis. Stat. § 281.346(5)(e). This standard generally requires that the proposed use is needed and efficient; other sources have been assessed; and water approvals have been obtained or there is no significant adverse environmental impact. Wis. Stat. § 281.346(5m). The remaining withdrawals—those that average 10 mgd or greater with an average water loss of 5 mgd or more—must meet the Compact decisionmaking standard. Wis. Stat. § 281.346(5)(e). All permits require monitoring, reporting, and compliance with water conservation measures.

Gaps in Implementation and Next Steps

New York and Ohio are waiting on recommendations from advisory committees. While the deadline is not until 2013, it may take time for the states to agree on a new water management program. Indiana and Pennsylvania have created skeletal programs that must be fleshed out by rule before they are implemented. The legislative provisions specify the threshold level and scope of the program but not the standard to be applied. Wisconsin's program, while more comprehensive, also requires rules. Michigan's program is self-executing.

Indiana and Michigan do not address consumptive uses in their management programs.

It is unclear whether the decisionmaking standard in Minnesota's program is fully consistent with the standard in the Compact. While the standards share similarities in substance, Minnesota's standard does not condition permit approval on all of the Compact criteria.

Conclusion

Even before the Compact came into effect, states passed legislation to implement the Compact requirements. Some states have satisfied the requirements through existing programs. But there is more to be done. Based on the analysis above, the following is a list of actions that should be taken by the states:

Immediately:

- For every state except Wisconsin, determine how small intrabasin transfers will be treated.

Within one year:

- For New York, choose a method for calculating baseline withdrawals;
- For every state, consider whether the calculations cover all existing withdrawals, consumptive uses and diversions;
- For every state that calculated baseline volumes using capacity, consider whether the calculation is in compliance with the Compact.

Within two years:

- For every state except Wisconsin, develop the state goals and objectives;
- For every state, with the possible exception of Minnesota, implement a conservation program for all users;
- For every state except Michigan and possibly Minnesota, develop measures that meet the specific definition in the Compact.

Within five years:

- For every state except Wisconsin, assess whether the registration process will accept all registrations of withdrawals and diversions required by the Compact and whether existing programs require the necessary minimum information;
- For every state, fully develop a water management program that addresses both withdrawals and consumptive uses and utilizes a standard consistent with the decisionmaking standard in the Compact.

