



Water Withdrawals in Michigan

IMPLEMENTING THE GREAT LAKES COMPACT

By Sara R. Gosman

Is water the new oil, a resource that creates conflict as it becomes inevitably more scarce? Michigan—the Great Lakes State—would seem to be the last place to worry about the problem of water scarcity. The state is surrounded by four of the five Great Lakes. Together, the Great Lakes make up 84 percent of all fresh water in North America and 21 percent of fresh water in the world—more than any other source on earth except the polar ice caps.¹ Moreover, Michigan is fortunate to have many inland lakes, rivers, and streams as well as plentiful groundwater.

FAST FACTS:

While Michigan has abundant water resources and is surrounded by four of the five Great Lakes, only 1 percent of the water in the Great Lakes Basin is renewable.

The Great Lakes Compact and Agreement create a comprehensive, cross-border framework to sustainably manage the water resources of the Great Lakes Basin.

Michigan must strengthen its water conservation and regulatory programs to fulfill its commitments under the Compact and Agreement.

Yet Michigan's water resources are more fragile than they appear. Less than 1 percent of the water in the Great Lakes Basin (Basin) is renewable through precipitation, surface water runoff, and groundwater recharge.² The rest, if consumed or diverted, is lost to the Basin. Even if water uses remain within that 1 percent, local shortages affect users and degrade a natural environment that relies on plentiful fresh water. In the future, the available fresh water in the region may decrease as a result of climate change.³ Scientific models predict lower levels in the Great Lakes—as much as 4.5 feet in Lake Michigan and Lake Huron—and a drop in aquifer levels.⁴

The Region Takes Action

In 2005, the governors of the eight Great Lakes states and the premiers of the Canadian provinces of Ontario and Québec unveiled a comprehensive, cross-border framework to sustainably manage the water resources of the Basin. The framework is set out in two documents that are designed to work in concert with each other: the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (Agreement) and the Great Lakes-St. Lawrence River Basin Water Resources Compact (Compact).⁵

The Agreement is a nonbinding pact among the Great Lakes states and provinces that was approved by the governors and premiers on December 13, 2005. The Compact, which came into force on December 8, 2008, is a binding accord only among the states.⁶ In accordance with the Compact Clause of the United States Constitution, the Compact was ratified by each state legislature, approved by the U.S. House and Senate, and signed by then President George W. Bush.⁷

The Agreement and Compact protect the Basin's water resources in three primary ways. First, they limit new or increased diversions of water from the Basin to only those communities just outside the Basin and only for purposes of public water supply.⁸ Certain diversions are subject to review by all the states and provinces, and a subset of these diversions may be vetoed by any state.⁹ Second, each jurisdiction is required to oversee water withdrawals that remain within the Basin by implementing a conservation program for all users, as well as a regulatory program for new or increased users.¹⁰ The regulatory program must at minimum employ a decision-making standard from the Compact and Agreement.¹¹ Third, the jurisdictions must work together to improve Basin-wide management of the resource by sharing information on water uses and collaborating with regional partners on a science strategy to strengthen the basis for action.¹²

This framework strikes a careful balance between the authority of individual states and provinces to manage their water resources and that of the region to protect the Basin as a whole. The jurisdictions are given some flexibility to choose how to fulfill their commitments, but regional entities have significant oversight responsibilities to ensure minimum standards are met. As one example, a regional body composed of the Great Lakes governors and premiers reviews each jurisdiction's conservation and regulatory programs every five years and issues a declaration of finding as to whether the programs meet the minimum requirements.¹³

Michigan's Water Withdrawal Legislation

When Michigan ratified the Compact on July 9, 2008, it also enacted legislation that created a multifaceted approach to regulating water withdrawals in the state. Under the new Part 327, Great Lakes Preservation, of the Natural Resources and Environmental Protection Act, the Michigan Department of Environmental Quality (DEQ) is tasked with the traditional regulatory function of granting permits to large withdrawals.¹⁴ In addition, the

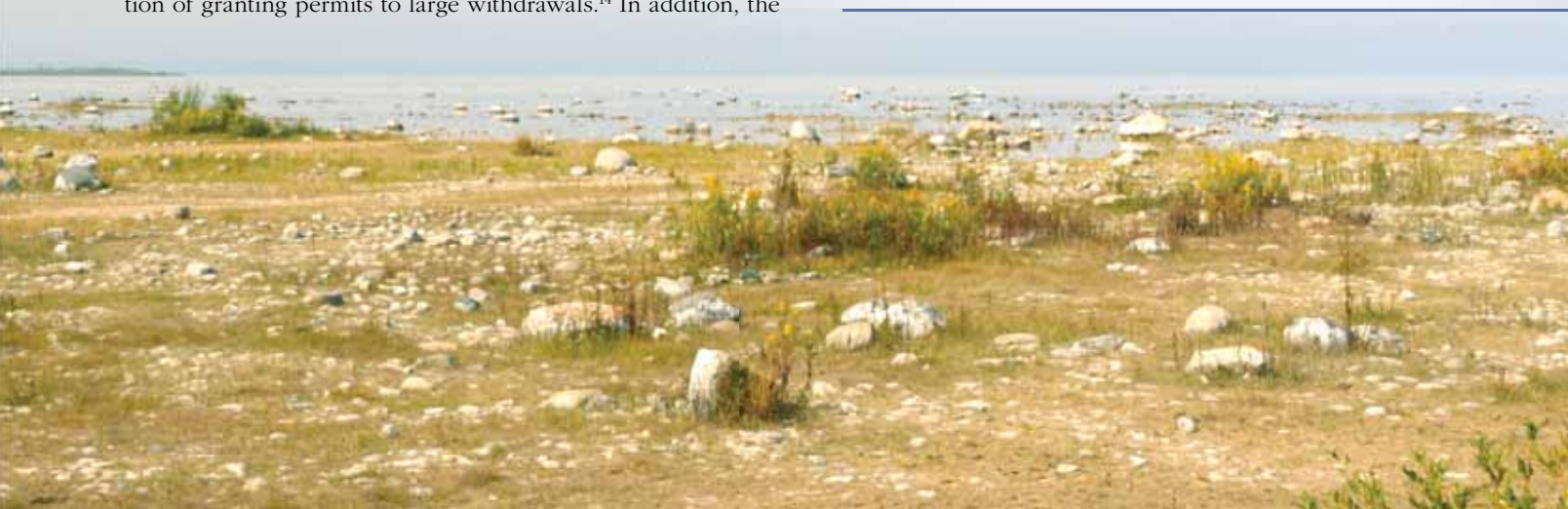
DEQ must manage an innovative online screening test that automatically determines whether smaller withdrawals may proceed before registration.¹⁵

Part 327 prohibits a "[n]ew or increased large quantity withdrawal"—defined as a new or increased withdrawal of more than 100,000 gallons per-day average in any consecutive 30-day period—from causing an "adverse resource impact."¹⁶ An adverse resource impact occurs if fish populations are harmed by a decrease in the amount of water available to a river system or surface water body.¹⁷ For river systems, the harm is measured by the percent decrease in the abundance or density of certain fish populations for each type of river or stream.¹⁸ Fish are the aquatic version of canaries in a coal mine; as organisms at the top of the food chain, they indicate whether the entire water ecosystem is healthy.¹⁹

Property owners that develop the capacity to make new or increased large-quantity withdrawals must register with the DEQ.²⁰ Before the owner may register, the proposed withdrawal must first be screened by an assessment tool accessed through the DEQ's website.²¹ The tool uses information on the withdrawal—such as the source, location, pumping capacity, and frequency—to determine the risk of harm to fish populations in river systems.²²

The online tool sorts withdrawals into zones of increasing risk of causing an adverse resource impact.²³ The withdrawals that create little or no risk according to the tool are allowed to register.²⁴ The withdrawals in the remaining zones must undergo site-specific review by DEQ staff to ensure the tool properly characterized the risk.²⁵ If the review shows that a withdrawal in fact creates a moderate risk, the withdrawal is registered once the owner self-certifies to either generic or sector-specific conservation measures that the owner considers reasonable.²⁶ If the review shows that the withdrawal creates a significant risk—that is, it is likely to cause an adverse resource impact—the owner cannot proceed.²⁷

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For owners who plan to develop new or increased withdrawal capacity of more than two million gallons per day, the registration process is replaced with traditional permit review.²⁸ To obtain a Part 327 permit, the applicant must show that a withdrawal will:

- be accompanied by a return of the withdrawn water to the source watershed less the amount consumed;
- not result in individual or cumulative adverse resource impacts;
- comply with other laws and regional agreements;
- have a use that is reasonable under common-law principles of Michigan water law; and
- not violate public or private rights and limitations imposed by Michigan water law or other Michigan common-law duties.²⁹

In addition, the applicant must self-certify to environmentally sound and economically feasible water-conservation measures.³⁰ Community water suppliers that develop the same large capacity must also meet these criteria under the Michigan Safe Drinking Water Act (SDWA), but there is an exception for political subdivisions if the suppliers have no feasible and prudent alternative and the environmental impact of the withdrawal is balanced by the public benefit.³¹

Partial Progress on Implementation


The Compact sets several deadlines for Michigan and the other Great Lakes states to take action.³² This section will examine Michigan's progress on two key requirements. By December 8, 2010, Michigan should have developed and implemented a water conservation and efficiency program designed to meet state goals and objectives which, in turn, are to be consistent with the region's goals and objectives.³³ By December 8, 2013, Michigan will be required to develop a regulatory program for new or increased

withdrawals that at minimum employs a decision-making standard set out in the Compact.³⁴

The conservation provisions in Part 327 are weak and arguably do not meet the state's commitment under the Compact as of the 2010 deadline. In essence, the provisions encourage large-quantity water users to adopt conservation measures in a variety of circumstances.³⁵ While a conservation program under the Compact can be voluntary or mandatory, it must include all users and adjust to new demands and the potential impacts of cumulative effects and climate.³⁶ The state must also commit to promote environmentally sound and economically feasible conservation measures such as demand-side and supply-side incentives.³⁷ The Part 327 provisions fail to adequately cohere into a program that targets all users, is adaptable, and truly promotes a range of measures.

An advisory committee was tasked with making recommendations on developing and implementing a conservation program under the Compact.³⁸ The committee issued its report in November 2009, which included proposed state goals and objectives to guide a program.³⁹ The goals and objectives were adopted by the deadline, but the rest of the committee's recommendations have not been formally adopted and the committee has been disbanded.

Michigan's permitting programs under Part 327 and the SDWA are closer to the target, but the permitting standard must be strengthened before the 2013 deadline. The Michigan criteria differ in one critical way from the minimum decision-making standard in the Compact and Agreement: while the minimum standard requires that the withdrawal be implemented so as to incorporate conservation measures, Part 327 and the SDWA only require that an applicant "self-certify" compliance with conservation measures.⁴⁰ Perhaps feeling itself limited by the statutory language, the DEQ has not conditioned the permits it has issued under this standard on implementation of any specific measures.⁴¹ Instead, the DEQ has required only that the supplier submit an annual report on the status of implementation. The DEQ has also accepted the measures proposed by the suppliers without analyzing whether more could be done to limit the amount of water used.



Owners of farms who withdraw water for agricultural purposes—a majority of users—are exempt from the annual reporting fee that supports the program.

Concluding Thoughts

Michigan's implementing legislation has been in effect for almost three years. One of the most promising aspects of the legislation is the water-withdrawal-assessment process centered on the online tool. This novel means of predicting resource impacts and providing users with a quick determination was supported by stakeholders from business, industry, environmental organizations, and agriculture and has already won three national awards. The process is a tribute to the Compact and Agreement because it was developed to complement Michigan's regulatory program for water withdrawals.

The assessment process is working well. The DEQ began operating the tool in July 2009. Statistics from the first year show that very few withdrawals were prohibited; of 216 proposed withdrawals, only three were ultimately determined to create a likely adverse resource impact.⁴² While this result could be attributed to an insufficiently protective standard, the more likely reason is that the tool helps users to choose withdrawals that have lesser impacts on water resources. Indeed, the tool is conservatively designed; it flagged many withdrawals that ultimately showed little risk of harm. Of the 44 withdrawals that were submitted for site-specific review by the tool, DEQ staff found that 41 of them could proceed.⁴³

Yet the DEQ's water use program faces severe underfunding. Users who withdraw at least 1.5 million gallons per year are required to pay an annual reporting fee of \$200 to support the program.⁴⁴ But owners of farms who withdraw water for agricultural purposes—a majority of users—are exempt from the fee.⁴⁵ In addition, general funding for the programs has declined from \$895,000 in FY2009 to only \$100,000 in FY2011.⁴⁶ One possible solution to the problem is to create a tiered agriculture fee that protects small family farms while ensuring that larger agribusiness pays its share.⁴⁷ But if the agriculture loophole is not closed or the general funding restored, the promise of the assessment process and the state's entire implementation of the Compact and Agreement are at risk. ■



Sara R. Gosman is an attorney advisor to the National Wildlife Federation on water issues, primarily related to the Great Lakes Compact and Agreement. She is also a lecturer on environmental law at the University of Michigan Law School. From 2004 to 2007, she was an assistant attorney general in the Environment, Natural Resources, and Agriculture Division of the Michigan Department of Attorney General.

FOOTNOTES

1. US EPA, Great Lakes: Basic Information <<http://epa.gov/greatlakes/basicinfo.html>>. All websites cited in this article were accessed March 21, 2011.
2. International Joint Commission, *Protection of the Waters of the Great Lakes* (2000) <<http://www.ijc.org/php/publications/html/finalreport.html>>.
3. Hall & Stuntz, *Climate Change & Great Lakes Water Resources* (Ann Arbor: National Wildlife Federation, 2007), pp 8–9, available at <http://online.nwf.org/site/DocServer/Climate_Change_and_Great_Lakes_Water_Resources_Report_Fl.pdf?docID=2442>.
4. *Id.*
5. The Agreement and Compact can be found at <<http://www.cglg.org/projects/water/Agreement-Compact.asp>>. The framework was divided into two documents because a binding agreement between the states and provinces would require a treaty at the national level.
6. Because Illinois is subject to a Supreme Court consent decree governing the Chicago diversion, the state is not required to comply with several provisions in the Compact and Agreement. See *Wisconsin v Illinois*, 388 US 426; 87 S Ct 1774; 18 L Ed 2d 1290 (1967).
7. US Const, art I, §10.
8. Agreement, arts 200 to 201; Compact, §§4.8 to 4.9. Diverted water must be returned to the source watershed in the Basin, subject to an allowance for consumptive use. Agreement, art 201; Compact, §4.9.
9. Agreement, art 201; Compact, §4.9.
10. Agreement, arts 202, 304; Compact, §§4.2, 4.10.
11. Agreement, art 203; Compact, §4.11.
12. Agreement, arts 301 to 302; Compact, §§1.4, 4.1.
13. Agreement, art 300. The programs of the states must also undergo review by the Compact Council, made up of the Great Lakes governors. Compact, §3.4.
14. MCL 324.32701 *et seq.*
15. MCL 324.32706.
16. MCL 324.32701(1)(cc); MCL 324.32721(1).
17. MCL 324.32701(1)(a).
18. MCL 324.32701(1)(a)(iii) to (v).
19. See Hamilton & Seelbach, *Determining Environmental Limits to Streamflow Depletion Across Michigan*, in *The Book of the States* (Council of State Governments, 2010), p 535, available at <<http://www.miwwat.org/wateruse/documents/BOS%202010%20Hamilton%20and%20Seelbach.pdf>>.
20. MCL 324.32705(1).
21. *Id.* The tool can be found at <<http://www.miwwat.org/>>.
22. MCL 324.32706a(3); Hamilton & Seelbach, *supra*, p 537.
23. MCL 324.32706b(2). The zones are labeled A, B, C, and D. MCL 324.32701(1)(#) to [ww].
24. MCL 324.32706b(3).
25. MCL 324.32706b(4); MCL 324.32706c.
26. MCL 324.32706c(4); MCL 324.32708a.
27. MCL 324.32706c(5) to (6).
28. MCL 324.32705(2)(c); MCL 324.32723(1)(a) to (b).
29. MCL 324.32723(6)(a) to (d), (f).
30. MCL 324.32723(6)(e).
31. MCL 325.1004(3) to (4).
32. The Agreement has a different timeline and, unlike the Compact, is not binding on Michigan.
33. Compact, §4.2.2.
34. Compact, §§4.10 to 4.11, 4.12.1.
35. See MCL 324.32706c(4); MCL 324.32707(1)(j); MCL 324.32708(1)(h); MCL 324.32708a; MCL 324.32710(3)(b).
36. Compact, §§4.2.2, 4.2.5.
37. Compact, §4.2.4.
38. MCL 324.32803(4)(f).
39. Water Resources Conservation Advisory Council, *Findings and Recommendations, A Report of the Water Resources Conservation Advisory Council* (November 2009) <http://www.michigan.gov/documents/dnr/WRCAC_November_2009_report_301194_7.pdf>.
40. Compare Compact, §4.11.3, with MCL 324.32723(6)(e); MCL 325.1004(4).
41. See the large-quantity-water-withdrawal permits issued to the City of St. Joseph (August 28, 2009), Genesee County Drain Commission (August 28, 2009), and Benton Charter Township (February 8, 2010). These can be found at <http://www.michigan.gov/deq/0,1607,7-135-3313_3684_45331-220911--,00.html>.
42. Hamilton, DEQ, Water Resources Division, *Large Quantity Withdrawals (LQWs) First Year* (September 2010) (on file with author).
43. *Id.*
44. MCL 324.32707(7) to (8).
45. MCL 324.32707(7); Hamilton, *supra*. For a list of registrations since July 2009, see <http://www.michigan.gov/documents/deq/deq-wb-dwhe-wwci-wwatregistrants_301492_7.pdf>.
46. 2008 PA 247; 2010 PA 189.
47. Thanks to Nick Schroeck of the Great Lakes Environmental Law Center for his thoughts on this.