



# THE GOOD THE BAD AND THE UGLY

Implementation of the  
Great Lakes Compact



# The Good, The Bad, and The Ugly Implementation of the Great Lakes Compact

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The Great Lakes-St. Lawrence River Basin Water Resources Compact (“Compact”) is at a critical juncture. The Compact, a binding agreement among the Great Lakes states to protect the water resources of the Great Lakes Basin from diversions and excessive withdrawals, became law two and a half years ago. Together with a similar agreement between the states and the Great Lakes Canadian provinces, the Compact set minimum requirements for water use across the Basin. Each state agreed to implement the Compact by meeting a series of deadlines over five years, subject to regional oversight. Today, implementation of the Compact is at the halfway point. Two deadlines have already passed, and the final deadline is December 8, 2013.

Where are the Great Lakes states? That isn’t a rhetorical question. While some states have taken their obligations under the Compact seriously, and indeed chosen innovative approaches, many have opted for the lowest common denominator. All have failed to meet one or more of the deadlines. The Great Lakes-St. Lawrence River Basin Water Resources Council (“Council”)—the regional oversight body created by the Compact—has not stepped up and held the states to account. The Council is operating on a shoestring budget from a foundation grant and cannot even muster the resources to bring the state representatives together for a formal meeting more than once a year.

Implementing the Compact is essential to the health of the Great Lakes, to the interconnected waters of the Great Lakes Basin, and to the people, economy, and wildlife that depend on the entire ecosystem. The Great Lakes are a vast, but surprisingly fragile, natural resource. Together, the five Great Lakes make up 84% of all fresh surface water in North America and 21% of fresh surface water in the world.<sup>1</sup> Yet less than 1% of the water in the Great Lakes Basin is renewable through precipitation, surface water runoff, and groundwater recharge.<sup>2</sup> Even if water uses remain within that 1%, local shortages of surface water or groundwater can dramatically affect users and degrade the environment.

Great Lakes water resources could be even more vulnerable in the future. In a recent review of climate change models, the majority of the models predict decreases in the levels of the Great Lakes over time.<sup>3</sup> The decreases could be very severe; some models show drops of more than eight feet in Lakes Michigan and Huron by the end of the century if carbon dioxide emissions are high.<sup>4</sup> Groundwater may also be affected. Aquifer levels and groundwater recharge rates are expected to drop, particularly in shallow aquifers.<sup>5</sup>

This report reviews the state and regional implementation of the Compact in three critical areas: diversions out of the Basin; water conservation and efficiency; and water withdrawal permitting. For each area, the report gives examples of the good, the bad...and the downright ugly. A summary of these examples follows.

## Diversions out of the Basin

- **THE GOOD...** So far, Wisconsin’s review of the controversial proposal by the city of Waukesha to divert water from Lake Michigan has been exemplary in its thoroughness and responsiveness to public concern.
- **THE BAD...** The region’s guidelines for review of exceptions to the diversion ban are lacking, both because there was no thorough public review of the guidelines before they were adopted, and because the process is not binding on the states.
- **THE UGLY...** Illinois’ decision to divert water to Lake County through the Chicago diversion is not consistent with the standard applied to communities just outside of the Basin in other states.

## Water Conservation and Efficiency

- **THE GOOD...** Ohio made a promising start when an advisory board proposed a program that, while voluntary in nature, has several innovative ideas.
- **THE BAD...** When given the choice between the bare minimum required by the Compact and going above and beyond to protect water resources, many of the states have chosen the path of least resistance.
- **THE UGLY...** It appears that all of the states have failed to meet at least one of the conservation and efficiency requirements in the Compact by the legally binding deadline of December 8, 2010.

## Water Withdrawal Permitting

- **THE GOOD...** Michigan’s groundbreaking online screening test for withdrawals, which has won three national awards, is a novel means of predicting resource impacts and providing users with a quick determination.
- **THE BAD...** Michigan has failed to apply its permitting standard to proposed large withdrawals in a way that is consistent with its obligations under the Compact.
- **THE UGLY...** Under legislation recently passed in Ohio, the state’s permitting program will have the dubious distinction of not only exempting more withdrawals from regulation than any other state, but also flouting several requirements in the Compact.

The good examples of implementation in this report show that the promise of the Compact remains bright. But the Compact needs renewed commitment by the states and the region to address the bad—and stop the ugly.

# Overview

## The Framework

In 2005, the Great Lakes region unveiled a comprehensive framework to sustainably manage the water resources of the Great Lakes Basin. Two documents create the bi-national framework: the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (“Agreement”) and the Great Lakes-St. Lawrence River Basin Water Resources Compact (“Compact”).<sup>6</sup> The Agreement, a non-binding pact among the states of Illinois, Indiana, Michigan, Minnesota, Ohio, New York, Pennsylvania, and Wisconsin, as well as the provinces of Ontario and Québec, 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.

This framework protects the Basin’s water resources by both limiting diversions of water out of the Basin and regulating water uses within the Basin. New or increased diversions are prohibited, with limited exceptions for diversions to near-Basin communities if they meet stringent standards.<sup>7</sup> Transfers between Great Lakes watersheds are also treated as diversions and subject to searching review.<sup>8</sup> Within the Basin, the states and provinces must implement a conservation program for all users, as well as a permitting program for new or increased users.<sup>9</sup>

Underlying this framework is an emphasis on sound decision making through information and science. Each jurisdiction must create a water resources inventory and gather detailed information on water uses.<sup>10</sup> At least every five years, the states and provinces must collectively assess the cumulative impacts of all uses.<sup>11</sup> The states and provinces are also obligated to lead a strategy to improve scientific understanding of water resources, including impacts of water uses on the Basin ecosystem.<sup>12</sup>

The framework gives the jurisdictions flexibility to choose how to fulfill their commitments, but the region oversees implementation to ensure that minimum standards are met. Two regional entities—the Great Lakes-St. Lawrence River Water Resources Regional Body (“Regional Body”) and the Great Lakes-St. Lawrence River Basin Water Resources Council (“Council”)—are charged with periodically reviewing the jurisdictions’ progress on water conservation and efficiency programs and water withdrawal permitting programs.<sup>13</sup> The Regional Body and Council must then issue findings on whether each state and province is meeting the requirements in the Compact and Agreement, and may recommend changes to the programs.<sup>14</sup>

In addition, the framework subjects certain actions—



consumptive uses and diversions—to regional scrutiny because they have a permanent impact on the availability of water in the Basin. As the potential threat to the Basin increases, so does the level of scrutiny. At the low end of the spectrum, states and provinces must be given prior notice and the opportunity to comment on very large consumptive uses within the Basin.<sup>15</sup> In the middle, the Regional Body reviews and comments on certain proposals for an exception to the ban on diversions, primarily those accompanied by very large consumptive uses.<sup>16</sup> And at the high end, the Council must approve a subset of the proposals for an exception, notably diversions to communities outside of the Basin but in counties that “straddle” the Basin line.<sup>17</sup>

## The Timeline

The Compact requires the states to take a series of actions over five years to implement the framework.<sup>18</sup> The Council is charged with assessing the progress of the states after one year, and again at the end of the five years.<sup>19</sup> Each action is integral to the whole; the states and the Council must meet all of the deadlines to fully protect the Great Lakes Basin.

The significant requirements are:

- Beginning on the effective date of December 8, 2008, the Compact prohibits most diversions out of the Basin.<sup>20</sup> By that date, states should have been ready to review proposals for exceptions to this prohibition and determine how to apply the standards set out in the Compact.<sup>21</sup> The Council and Regional Body should also have been ready to determine how to review the proposals subject to their oversight.<sup>22</sup>
- By December 8, 2009, each state must have submitted to the Council and Regional Body a list of baseline volumes as of December 8, 2008, for existing withdrawals, consumptive uses, and diversions.<sup>23</sup> The uses on the list may be exempted from regulation.<sup>24</sup> To meet this deadline, the states must have decided how to accurately measure the volumes for these uses.<sup>25</sup>
- By December 8, 2010, each state must have incorporated water conservation and efficiency into its activities.<sup>26</sup> States must have developed goals and objectives for their programs, determined the scope and nature of the programs, and committed to promote conservation and efficiency measures.<sup>27</sup>
- By December 8, 2013, each state must create a permitting program for new or increased water withdrawals.<sup>28</sup> States must determine the scope and threshold of the withdrawals subject to the program and the standard to be applied on review.<sup>29</sup> States must also develop a water resources inventory and create registration programs for withdrawals and diversions.<sup>30</sup>

This timeline takes into account the effort needed to comply with each requirement, but it is also carefully constructed so that each action builds on the next one. The diversion provisions, which demand little effort by each state yet are a necessary first step to protect the Great Lakes, were effective immediately. The conservation and efficiency program must have been

developed and implemented within two years. This deadline should have provided enough time for the states to engage in a thoughtful planning process. And by focusing on conservation and efficiency first, the states can use the program as a basis for future action; for example, the decisions made on conservation and efficiency practices help to determine the breadth of the permitting program and the information needed on water uses. Finally, the permitting program must be in place by the end of the five-year implementation schedule. This gives the states time to make difficult decisions about the nature of the program, build on their previous actions, and learn from others in the region.

## The Progress

In the two and a half years since the Compact went into effect, the states have taken different paths to implement the framework. Illinois and Minnesota adopted the Compact without creating any additional requirements; these states contend that their existing statutes and programs are sufficient.<sup>31</sup> New York and Ohio deferred to advisory boards for their recommendations, and both states only recently enacted legislation intended to comply with the Compact requirements.<sup>32</sup> Indiana and Pennsylvania created skeletal programs that authorized state environmental agencies to flesh out the details.<sup>33</sup> These agencies have not created detailed programs, and neither state has issued rules under its authority. Finally, Michigan and Wisconsin passed comprehensive legislation intended to cover all aspects of implementation.<sup>34</sup> Both states have proceeded to administer the programs, with some notable successes.

Hampered by a lack of funding by the states and seemingly hesitant to exert its authority, the Council has primarily focused on administrative procedures.<sup>35</sup> Since 2008, the Council has adopted by-laws, designated an executive director and a secretariat, and created policies on records retention and public access to records.<sup>36</sup> Among the few substantive actions are adoption of regional conservation and efficiency goals and objectives to guide the states, a protocol for state reporting of water uses, and interim guidance for review of diversion proposals. The Council’s first assessment of state programs in 2009 was an exercise in futility. Instead of taking the opportunity to critically evaluate the progress of the states and offer recommendations on ways to meet the Compact requirements, the Council declared that the states were currently in compliance because the deadlines had not yet passed. More promising is an initiative by the Council’s secretariat to develop scientific tools to measure the resource impacts of water uses.<sup>37</sup>

In the following sections, this report considers state and regional implementation of the Compact in three areas: (1) diversions out of the Basin; (2) water conservation and efficiency; and (3) water withdrawal permitting. Each section provides examples of the good, the bad, and the ugly.

# 1 DIVERSIONS OUT OF THE BASIN

**B**eginning on December 8, 2008, the Compact prohibits new or increased diversions of water out of the Basin.<sup>38</sup> Two types of communities may apply for an exception for public water supply: communities that straddle the Basin line, or “straddling communities;” and communities within counties that straddle the Basin line, or “straddling counties.”<sup>39</sup> Intrabasin transfers between Great Lakes watersheds are also treated as diversions, but the person proposing the transfer may apply for an exception.<sup>40</sup> Each state is obligated to review applications from its jurisdiction to determine if the proposal satisfies the standards in the Compact.<sup>41</sup> In addition, proposed diversions to straddling communities and intrabasin transfers that have consumptive uses greater than five million gallons per day (“mgd”) average must be reviewed by the Regional Body, as must all proposed diversions to communities within straddling counties.<sup>42</sup> These types of intrabasin transfers and all applications by communities within straddling counties must also be approved by the Council.<sup>43</sup> In effect, approval means that any state may veto such proposals.<sup>44</sup>

## THE GOOD

### The Waukesha Diversion Take 1–Wisconsin

The proposal by the city of Waukesha, Wisconsin, to divert water from Lake Michigan is the first high-profile test of the Compact’s requirements governing exceptions to the ban on diversions. Decisions made on the proposal will set a precedent for future diversions, particularly those to communities such as Waukesha that lie entirely outside of the Basin. For better or for worse, the decisions will also affect how the public views the success of the Compact in protecting the Great Lakes from diversions. It is therefore very good news that Wisconsin’s review of the application—at least so far—has been exemplary.

The city of Waukesha faces threats to its public water supply. Waukesha obtains most of its water from deep aquifer wells.<sup>45</sup> Because of years of overpumping, the aquifer level is dropping five to nine feet per year.<sup>46</sup> As the level drops, the quality of the water has decreased, resulting in high levels of total dissolved solids and radium.<sup>47</sup> By 2018, the city must install expensive treatment systems to comply with the federal drinking water standard for radium.<sup>48</sup>

Because the city is located in a county that straddles the Basin line, Waukesha is eligible to apply for a diversion of water

under the “straddling county” exception in the Compact.<sup>49</sup> In May 2010, Waukesha submitted an application to the Wisconsin Department of Natural Resources (“Wisconsin DNR”) to withdraw up to an annual average of 10.9 mgd from Lake Michigan.<sup>50</sup> Among other requirements, Waukesha must demonstrate that it has no reasonable water supply alternative, including conservation of existing water supplies; the amount it seeks is reasonable; the water will be returned to the source watershed less an allowance for consumptive use; and there will be no significant individual or cumulative adverse resource impacts.<sup>51</sup>

In the words of then-Secretary Matthew Frank, the “DNR takes its role as an independent, objective decision-maker seriously. . . . We are committed to ensuring that the review process is done correctly and thoroughly, with transparency in the process and with opportunity for public input.”<sup>52</sup> The Wisconsin DNR has carefully reviewed the application and asked for significant additional information to ensure the application is complete, most recently in December 2010.<sup>53</sup> The DNR has also agreed to analyze the environmental impacts of the proposal under the Wisconsin Environmental Policy Act.<sup>54</sup> This process has already begun with a draft scoping document of possible issues.<sup>55</sup> Finally, the DNR has met with interested stakeholders and has been receptive to their concerns.

The only flaw in what has otherwise been an excellent example of Compact implementation is that the Wisconsin



DNR has not yet drafted a rule on public participation for diversion proposals. On July 1, 2011, the DNR announced that it deems Waukesha's application administratively complete. This began the formal technical review by Wisconsin under the Compact. While the DNR has outlined the procedures it plans to follow, it is past time to have a rule in place to ensure that the process for public input is definite.<sup>56</sup> The DNR should make this a priority.

### THE BAD

## The Waukesha Diversion Take 2—The Region

If Wisconsin determines that the Waukesha proposal complies with Compact requirements, the application will undergo review by the Regional Body. The proposal must also be approved by the Council. Well aware that review of an application for a diversion could come at any time, the region proposed draft guidelines in May 2010 and finalized them a month later.<sup>57</sup> Unfortunately, these guidelines—interim guidance

for the Council and almost identical interim procedures for the Regional Body—are a case of bad implementation, both because there was no thorough public review and because they are not binding on the states.

While the guidelines are a good faith effort to provide a process for consideration of diversion proposals, the opportunity for public comment and deliberation on such an important set of documents was severely limited. The proposed guidance and procedures were posted on the internet with little fanfare, and the opportunity for comment was limited to a few minutes at a formal meeting of the Council and Regional Body.<sup>58</sup> The Council and Regional Body approved the guidelines after a brief discussion and one change to the interim guidance.<sup>59</sup> Only the representative from Michigan—Ken DeBeaussaert—did the right thing and voted against approving the documents given the lack of careful consideration by the public.<sup>60</sup>

Moreover, the documents are interim policies, and the Council and Regional Body need not abide by them if it does not suit their interests. Both the guidance and the procedures contain a disclaimer that the states and provinces do not intend to grant the document the weight or deference of regulations, and the provisions may be ignored “if circumstances warrant.”<sup>61</sup> The Council should have used its authority under the Compact to issue binding rules.<sup>62</sup> The public could then have been given notice of the proposed rule, including the opportunity to provide written comments and make statements at a hearing.<sup>63</sup> Given the importance of diversions to the region, it is essential to the long-term success of the framework that the Council and Regional Body revisit these guidelines and formalize them after a thorough public vetting.

### THE UGLY

## The Lake County Diversion

In January 2011, the Illinois Department of Natural Resources (“Illinois DNR”) approved a diversion of approximately fifteen mgd from Lake Michigan to ten communities outside of the Basin in Lake County, north of Chicago.<sup>64</sup> The \$250 million project proposes a network of fifty-seven miles of pipelines from a treatment center near Lake Michigan to the north and west of the county.<sup>65</sup> Both the Lake County communities and Waukesha are located in counties that straddle the Basin line.<sup>66</sup> But under the Compact, Waukesha is subject to a much stricter standard. While Illinois has no legal obligation to do so, it is unfortunate that the Illinois DNR has not revised its program to more closely match the diversion standard applicable to near Basin communities in other states.

Under the Compact, the terms of a Supreme Court consent decree on the Chicago diversion govern Illinois' transfer of water from the Basin.<sup>67</sup> In practice, this means that Illinois may divert the water it receives from Lake Michigan to any

community in Illinois as long as the diversion does not increase the average total amount of 3200 cubic feet per second, or 2068 mgd, authorized by the consent decree.<sup>68</sup> The Compact also allows Illinois to ask for an increase in the diversion amount from the Supreme Court, although it preserves the rights of other states to object to the increase.<sup>69</sup>

The Illinois DNR allocates the water it receives through the Chicago diversion in its Lake Michigan program.<sup>70</sup> Under this program, the DNR prioritizes diversions for residential, commercial, and industrial uses when Lake Michigan is the most economical source of supply, and after that, when the diversion would reduce regional use of the deep aquifer.<sup>71</sup> While the program requires public water suppliers to implement some conservation practices, such as plumbing efficiency standards and lawn sprinkling limits, these requirements have not been revised since 1990 and do not incorporate current best management practices.<sup>72</sup>

If the Lake County communities were held to the same standard as Waukesha, they would have to demonstrate not

only that they would implement conservation and efficiency measures as a condition of the diversion, but also that efficient use and conservation of existing water supplies is insufficient.<sup>73</sup> In addition, the communities would be required to return unconsumed water to the Lake Michigan watershed.<sup>74</sup>

More Illinois communities are in line to use water from the Chicago diversion. Seventy-seven percent of the population of the northeast region of Illinois—about 200 communities—already relies on Lake Michigan water.<sup>75</sup> But the groundwater resource supporting the remaining communities, already strained, may not satisfy demand in the future.<sup>76</sup> According to a recent review of existing allocations by the Illinois DNR, there are fifty to seventy-five mgd available under the consent decree for further diversion.<sup>77</sup> If the DNR used a standard similar to the one in the Compact, it could potentially provide more communities with water from Lake Michigan while remaining under the cap set by the decree. But if the DNR doesn't, it is always possible that Illinois would have to return to the Supreme Court to ask for more water. And that could be very ugly.



# 2 CONSERVATION AND EFFICIENCY

By December 8, 2010, each state was required to take three actions to improve water conservation and efficiency by users in the Basin.

First, each state must have developed state water conservation and efficiency goals and objectives to guide the state's program.<sup>78</sup> These goals and objectives are to be consistent with the regional goals and objectives, which were adopted by the Council in 2008.<sup>79</sup> One key purpose of the resulting document is to help the state and the public assess the results of the state's initiatives.

Second, each state must have developed—and implemented—a voluntary or mandatory water conservation and efficiency program for all Basin users, including existing users, that is based on the state goals and objectives.<sup>80</sup> The program must adjust to new demands and the potential impacts of cumulative effects and climate.<sup>81</sup>

Third, each state must have committed to promote “environmentally sound and economically feasible water conservation measures.”<sup>82</sup> The Compact defines these measures as ones that are environmentally sound, reflect best practices, are technically and economically feasible, and consider the particular facilities and processes involved.<sup>83</sup> While this action is listed as a separate requirement in the Compact, states could incorporate the commitment into their programs.

## THE GOOD

### Ohio's Promising Start

Of all the states that have sought to implement the Compact's water conservation and efficiency requirements, Ohio made the most promising start in many ways. The state's objectives to guide the program are specific and tailored to the state's needs. The program proposed by the state's advisory board, while voluntary in nature, has several innovative ideas. And perhaps most promisingly, representatives of industry and environmental organizations worked cooperatively to develop the proposed program.

When Ohio adopted the Compact, the state's General Assembly created the Great Lakes Compact Advisory Board to develop recommendations for implementation.<sup>84</sup> The Board was charged with drafting state conservation and efficiency goals and objectives as well as proposing a state program.<sup>85</sup> Composed of state and local government officials, scientific experts and stakeholders, the Board began meeting in March 2009 and submitted its final report in December 2010.<sup>86</sup>

In developing state goals and objectives, Ohio did what every state should do—flesh out the objectives with details that will work for Ohio. As an example, one of the regional objectives promises aid in development and dissemination of sector-based best management practices.<sup>87</sup> Ohio's objectives commit the state to the following specific actions in this area: identifying and promoting supply, demand, and mitigation best management practices by water use category; monitoring the implementation of these practices and sharing the information with the public, while protecting proprietary information; and disseminating information regarding the practices, including evaluation and results.<sup>88</sup>

Key representatives from industry and the environmental community worked together over many months to develop recommendations for a proposed conservation program that would meet the state's objectives and target all users. The final report by the Board incorporates some of these recommendations.<sup>89</sup> One innovative recommendation is to create an annual Ohio Water Conservation Congress that would offer presentations and demonstrations focused on the latest technologies and innovative practices to reduce water use, and would feature

leading experts in water conservation in each water use sector.<sup>90</sup> These technologies and practices would then be captured within a best management practices manual and shared with industry and the public. Other recommendations rely on science to improve conservation, for example by using modeling and forecasting to identify areas where future water shortages are likely and conservation efforts may have the most impact.<sup>91</sup>

If Ohio follows through, the state's program could be a model for other states. Unfortunately, the General Assembly recently passed a bill that does not incorporate these innovative proposals.<sup>92</sup> Worse, the bill takes away the authority of the Ohio Department of Natural Resources ("Ohio DNR") to implement a voluntary conservation and efficiency program by rule.<sup>93</sup> It is now up to the Ohio DNR to move forward with the proposals using its general implementing authority so that the excellent work of the Board does not go to waste.

## THE BAD

### States Stuck to the Floor

The Great Lakes Compact Advisory Board's approach in Ohio is rare. Given the choice between the bare minimum required by the Compact and going above and beyond, on the whole the states have chosen to remain stuck to the floor. The news is equally bad on each of the three conservation and efficiency requirements.

Developing state goals and objectives would seem the least important of the conservation and efficiency requirements in the Compact. But this requirement is actually critical to implementation: it gives the state and the public the opportunity to define the purposes of a program and agree on the best ways to measure success. Of the four states that developed goals and objectives by the December 8, 2010, deadline, only two—Ohio and Wisconsin—have done so through a thoughtful, open planning process.<sup>94</sup> Wisconsin has gone even further and proposed goals and objectives for the entire state.<sup>95</sup> Illinois' goals and objectives were adopted without public review and lack the breadth of the region's.<sup>96</sup> Michigan scraped the bottom: it did not tailor the regional goals and objectives to its needs, but instead simply adopted a document that is almost identical to the regional one.<sup>97</sup>

States may develop either a voluntary or mandatory water conservation and efficiency program. This requirement is separate from—and in addition to—the conservation measures that new or increased users must adopt through the state's permitting program.<sup>98</sup> No state, when faced with the choice, has opted to create a mandatory new program. The legislatures in Indiana, Pennsylvania, and Ohio only gave the state agencies authority to create a voluntary program.<sup>99</sup> Michigan also appears to have opted for a voluntary program; existing users acknowledge in an annual report that they have reviewed a list

of conservation and efficiency practices.<sup>100</sup> At first glance, Wisconsin might appear to be the exception. The Wisconsin Legislature directed the state DNR to create a voluntary statewide program as well as a Great Lakes Basin program that includes voluntary and mandatory measures.<sup>101</sup> But the DNR has in effect chosen to create a voluntary program for Basin users; the only mandatory requirements are those imposed by rule on new or increased users in water withdrawal permits.<sup>102</sup>

Finally, states that have committed to promote conservation and efficiency measures in some manner have generally done so using the least resources possible. For example, Michigan relied on each water use sector to create a list of measures that would comply with the definition in the Compact.<sup>103</sup> Rather than take active steps to review best management practices and educate users, the state asks users to annually review the appropriate list.<sup>104</sup> Even when a proposed withdrawal would create a moderate adverse impact, users of the same source are only required to "review and consider implementing" the applicable measures.<sup>105</sup> Pennsylvania took it one step further and outsourced the work to a water resources technical assistance center run by a new non-profit organization, Save Water PA.<sup>106</sup> A center could form one part of a robust promotion effort by the Pennsylvania Department of Environmental Protection, but it remains the state's responsibility to meet the requirements of the Compact.

## THE UGLY

### Missing the Deadline

As if this news weren't bad enough, it appears that all of the states have failed to meet at least one of the Compact's conservation requirements by the legally binding deadline of December 8, 2010. Four states—Indiana, Minnesota, New York, and Pennsylvania—have failed to develop goals and objectives.<sup>107</sup> This fact is particularly disappointing since the requirement is the easiest for the states to implement using existing resources. But an even bigger problem is that no state—with the probable exception of Minnesota—has implemented by the deadline the type of comprehensive conservation and efficiency program called for in the Compact.

The Compact requires each state's program to be based on state goals and objectives.<sup>108</sup> Because the state goals and objectives must be consistent with the regional goals and objectives, the regional objectives should form the basis for a compliant state program.<sup>109</sup> The regional objectives are:

- Guiding programs toward long-term sustainable water use;
- Adopting and implementing supply and demand management;
- Improving monitoring and standardizing data reporting across the region;

- Developing science, technology, and research; and
- Developing education programs and information sharing for all water users.<sup>110</sup>

Thus, at the very least, each state's program must include elements that address all five of these regional objectives. The Compact also requires that the program include all users, not just those who propose new or increased withdrawals.<sup>111</sup> And the program must be adaptive: it must adjust to new demands and the potential impacts of cumulative effects and climate change.<sup>112</sup>

From the information available, the states have failed to measure up to this standard. Illinois' program, which requires conservation and efficiency measures for all Lake Michigan users, is closer than most to the type of comprehensive program needed.<sup>113</sup> But, in addition to the fact that the state has not updated its measures in more than twenty years, the program currently lacks a solid information and education component. Wisconsin is taking several steps to develop a program that will

meet its state goals and objectives, including funding research on best management practices. While this program has the potential to be excellent, it is unclear at this stage whether the state's initiatives fully address the range of objectives. As discussed above, Michigan and Pennsylvania have only focused on identification and promotion of conservation and efficiency measures. Worse, six months after the deadline, three states have no real program at all. New York and Ohio have just passed legislation, while Indiana has not complied with its General Assembly's directive to implement a program through rules.<sup>114</sup>

The ugly reality is that the failure of implementation in this area is not a problem of a few bad apples, but is widespread across the region. And so far, the Council and Regional Body have not held the states to account. The Council will have another chance in December 2011, when it will receive a report from each state assessing the state's progress on conservation and efficiency.<sup>115</sup> The Council should take this opportunity to scrutinize the states' programs.



# 3 WATER WITHDRAWAL PERMITTING

By December 8, 2013, each state must develop a water management program to regulate new or increased withdrawals and consumptive uses.<sup>116</sup> States may determine the scope of the program by choosing which withdrawals and consumptive uses are required to obtain permits.<sup>117</sup> States may also determine the threshold volume that triggers regulation, but the Compact requires that threshold levels be set through a “considered process” that will “assure an effective and efficient” program.<sup>118</sup> In addition, the program must 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.<sup>119</sup> If a state does not set a threshold for new or increased withdrawals by 2018, it is required to use a threshold of 100,000 gallons per day (“gpd”) average in any ninety-day period.<sup>120</sup>

Proposed withdrawals and consumptive uses must satisfy, at minimum, a “decision-making standard” in the Compact.<sup>121</sup> This standard requires that uses (1) be accompanied by return of the withdrawn water to the source watershed less the amount consumed; (2) not result in individual or cumulative adverse resource impacts; (3) incorporate environmentally sound and economically feasible water conservation measures; (4) comply with other laws and regional agreements; and (5) be reasonable.<sup>122</sup> Reasonableness is based on a number of factors, including whether there will be efficient use of the water; whether efficient use is made of existing supplies; the balance between economic, social and environmental concerns; the supply potential of the water source; the degree or duration of any adverse impacts; and restoration of hydrologic conditions and functions.<sup>123</sup> States may choose to impose more restrictive requirements.<sup>124</sup>

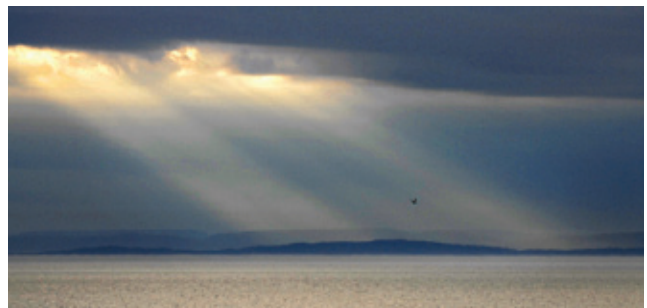
## THE GOOD

### Protecting Streams and Rivers in Michigan

Michigan’s water withdrawal program poses a conundrum. Its groundbreaking online screening test is, without a doubt, a leading example of Compact implementation. 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. Unfortunately, as described in the next section, the state’s permitting system for large withdrawals is not yet in the same class.

In 2006, the Michigan Legislature tasked an advisory council with developing a process to assess the impacts of a withdrawal on water resources.<sup>125</sup> Scientists already knew that

fish populations may suffer when flow decreases in a stream or river.<sup>126</sup> Fish are the aquatic version of canaries in a coal mine; because fish are at the top of the food chain, they indicate whether the entire water ecosystem is healthy.<sup>127</sup> Using data on fish populations and stream flow collected by the state over many years, the scientists developed a model to predict the impact of a withdrawal on fish, and thus by extension, on water resources.<sup>128</sup>



When Michigan adopted the Compact, it used this model to create its water management program. All new or increased large-quantity withdrawals—those new or increased withdrawals of more than 100,000 gpd average—are prohibited from causing an “adverse resource impact.”<sup>129</sup> For river systems, this impact is measured by the percent decrease in the abundance or density of certain fish populations for each type of river or stream.<sup>130</sup>

Property owners that develop the capacity to make new or increased large-quantity withdrawals must register with the Michigan Department of Environmental Quality (“Michigan DEQ”).<sup>131</sup> Before the owner may register, the proposed withdrawal must first be screened by an assessment tool found through the Michigan DEQ’s website.<sup>132</sup> The online tool sorts withdrawals into zones of increasing risk of causing an adverse resource impact.<sup>133</sup> The withdrawals that create little or no risk according to the tool are allowed to register.<sup>134</sup> The withdrawals in the remaining zones must undergo site-specific review by DEQ staff.<sup>135</sup> 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.<sup>136</sup>

During the first year of the tool’s operation in Michigan, very few withdrawals were prohibited.<sup>137</sup> This is a signal that the process helps users to choose withdrawals that have lesser impacts on water resources. That is certainly good news for both users and the environment. Yet the news may not be good for long. The tool is severely underfunded. Larger users are required to pay an annual reporting fee to support the water withdrawal assessment process, but owners of farms who withdraw water for agricultural purposes, a majority of users, are exempt from the fee.<sup>138</sup> And general funding has declined precipitously.<sup>139</sup> The Michigan Legislature must act to ensure the tool remains a leading example of implementation.

## THE BAD

### Letting Michigan Suppliers Off the Hook

For owners who plan to develop new or increased withdrawal capacity of more than two mgd, the registration process for withdrawals in Michigan is replaced with traditional permit review.<sup>140</sup> Michigan uses a permitting standard similar to the Compact’s decision-making standard.<sup>141</sup> Unfortunately, the Michigan DEQ has not applied the standard in a way that is consistent with its obligations under the Compact.

Since Michigan created its permitting program, it has approved three proposals for very large withdrawals by public water suppliers. In 2009, it approved a withdrawal of eighty-five mgd from Lake Huron by the Genesee County Drain Commission and a withdrawal of thirty-two mgd from Lake Michigan by the City of St. Joseph.<sup>142</sup> In 2010, it approved a

withdrawal of twelve mgd from Lake Michigan by Benton Charter Township.<sup>143</sup>

While the Compact’s minimum standard requires that a withdrawal be implemented so as to incorporate conservation measures, Michigan only requires that an applicant has “self-certified” compliance with conservation measures developed by the applicable sector.<sup>144</sup> For public water suppliers, these are guidelines created by the Michigan section of the American Water Works Association.<sup>145</sup> According to the Michigan DEQ, this means that an applicant need only submit a statement “self-certifying” to its preferred measures in the guidelines.<sup>146</sup> The DEQ has not conditioned any of the three permits it has issued on implementation of specific measures, or analyzed in detail whether more could be done by the suppliers to limit the amount of water used. At best, the DEQ has required the supplier to submit an annual report on the status of implementation.<sup>147</sup>

Equally problematic is the way in which Michigan determines whether a use is “reasonable.” Michigan applies the test in the Compact standard, which balances several factors.<sup>148</sup> But under the Michigan DEQ’s approach, the balance is off; a use will almost always be reasonable unless it significantly impacts the environment. This is because the economic and social benefits of the project are weighted more heavily than water efficiency. For example, the DEQ did not seriously question the reasonableness of the eighty-five mgd requested by Genesee County to replace its current supply from Detroit.<sup>149</sup> Rather than critically examine the basis of the County’s demand forecast and the ways in which the County could use water more efficiently, the DEQ accepted the predicted economic benefits of construction dollars and jobs as well as the social benefits of a more reliable supply.<sup>150</sup>

To comply with the Compact, Michigan’s permitting system must be strengthened by the 2013 deadline. The state does not have to look far for inspiration. If Michigan holds its permitting system to the same standard as its own water withdrawal assessment process, the resulting water withdrawal program will be among the best in the region.

## THE UGLY

### Flouting the Compact in Ohio

The Ohio General Assembly recently passed legislation that sinks to a new low in the annals of Compact implementation.<sup>151</sup> The bill, backed by an industry coalition with the support of the Ohio DNR, not only creates the weakest permitting program of all of the Great Lakes states, but it also clearly violates the minimum requirements in the Compact. Despite the efforts of stakeholders to point out the flaws in the bill, as well as the opposition of former state Governors Bob Taft and George Voinovich, Ohio has chosen to flout the Compact.<sup>152</sup>

The permitting program is designed to subject the fewest withdrawals possible to searching review by the Ohio DNR, regardless of the consequences. The legislation sets very high thresholds for regulation. A facility is only required to obtain a permit if it develops new or increased capacity to withdraw at least two mgd from streams, rivers, or groundwater, and at least five mgd from Lake Erie or rivers under the influence of Lake Erie.<sup>153</sup> In practice, the DNR will not be able to prevent impacts to water resources unless the withdrawals are much larger. A withdrawal is deemed to have no adverse resource impact unless its consumptive use exceeds 40 to 50 mgd for most sources and 90 to 100 mgd for Lake Erie or rivers under the influence of Lake Erie.<sup>154</sup> While the legislation creates an exception for withdrawals from a limited number of high-quality streams, the permitting threshold of 300,000 gpd is too high to prevent streams in small watersheds from being decimated.<sup>155</sup>

Contrary to the minimum decision-making standard in the Compact, the Ohio DNR cannot consider individual or cumulative impacts of a proposed withdrawal unless the withdrawal is from a high-quality stream.<sup>156</sup> Nor is the DNR given the authority to evaluate whether a use is reasonable under the factors specified in the Compact.<sup>157</sup> And it appears that permittees will be able to determine which conservation measures to adopt without any determination by the state that the measures comply with the Compact definition.<sup>158</sup>

No other Great Lakes state has exempted as many withdrawals from all regulation. Indiana's program is similar, but the threshold for regulation of withdrawals from streams, rivers, and groundwater is one mgd, and the state protects more high-quality watercourses by a threshold of 100,000 gpd.<sup>159</sup> While Michigan and Wisconsin apply the standard from the

Compact at high thresholds, they also place requirements on new or increased withdrawals starting at 100,000 gpd.<sup>160</sup> Pennsylvania sets the threshold for regulation of proposed withdrawals at 100,000 gpd, as does New York in the statewide water management bill that passed this term.<sup>161</sup> Minnesota is the most progressive: its allocation program regulates all new or increased withdrawals that exceed 10,000 gpd or 1 million gallons per year.<sup>162</sup>

While the industry-backed legislation was rushed through, bills supported by a coalition of conservation and environmental organizations were never granted a hearing. These bills use a science-based assessment tool to determine the thresholds at which withdrawals from streams and rivers must obtain a permit.<sup>163</sup> The Ohio Stream Withdrawal Evaluation Tool, developed by The Nature Conservancy along with the Midwest Biodiversity Institute, is similar to the one employed by Michigan.<sup>164</sup> The thresholds in these bills are much lower. They range from a withdrawal capacity of 10,000 gpd for high-quality streams in small watersheds to one mgd for streams in large watersheds.<sup>165</sup> Until the tool is adapted to assess the impacts of groundwater withdrawals, the bills would regulate these withdrawals at an interim threshold capacity of 500,000 gpd.<sup>166</sup> Withdrawals from Lake Erie would be regulated starting at a capacity of 2.5 mgd.<sup>167</sup> No withdrawal would be permitted unless it met the decision-making standard in the Compact.<sup>168</sup>

Ohio could have had a scientifically based permitting program that is protective of the state's water resources. Instead, the state failed to uphold its obligations under the Compact and broke faith with the other Great Lakes states. That is truly ugly.



# Conclusion

**H**alfway to the five-year mark, it is time for the states to renew their commitments under the Compact to each other, to the public, and to the long-term health of the Great Lakes Basin. And it is time for the Council to demand the resources necessary to oversee the states and to publicly set the states right when they falter. There is no doubt that these actions require more effort than accepting the lowest common denominator. But without these steps, the Compact will be yet another promising framework that is never truly implemented.

Based on the examples in this report, the states, the Council, and the Regional Body should do the following:

## Diversions out of the Basin

- As the Waukesha proposal moves forward to the technical review stage under the Compact, it is more important than ever that the Wisconsin DNR be thorough and responsive to the public. The DNR must also make a public participation rule a priority.
- The Council and Regional Body must subject the guidelines for review of diversion proposals to public scrutiny by holding a comment period and a public hearing. To provide certainty to all involved, the Council must use its authority under the Compact to adopt the interim guidance as binding rules.
- When considering new allocations, the Illinois DNR should apply a standard similar to the Compact standard for diversions to communities in straddling counties. For example, the DNR should require that a community demonstrate efficient use of current supplies and at least partial return of the water to the Lake Michigan watershed.

## Conservation and Efficiency

- Ohio must follow through on the innovative ideas developed by industry and environmental representatives on the state's Advisory Board. The Ohio DNR should use its general implementing authority to put these ideas into practice.
- All of the states must revisit the conservation and efficiency requirements in the Compact and ensure that they are in compliance. The states should provide a detailed and honest assessment of their progress in the reports they are required to submit to the Council and Regional Body this December.
- The Council must assess the states' conservation and efficiency activities as soon as possible. Rather than wait until 2013, the Council must critically review the reports submitted by the states in December and provide a written evaluation of each state's progress. A member of the Council should

request review of the states' conservation and efficiency programs so that the Council can make formal determinations on compliance.

## Water Withdrawal Permitting

- Michigan must adequately fund its groundbreaking water withdrawal assessment process by either restoring general funding or ending the fee exemption for agricultural uses.
- Michigan must revisit its permitting program and ensure that its standard is consistent with the minimum standard in the Compact. An applicant should be required to adopt environmentally sound and economically feasible water conservation measures as a condition of a permit.
- Ohio must create a program that complies with the Compact, is based in science, and is protective of the state's water resources. The General Assembly should reverse course and adopt House Bill 257 (Murray-D) and Senate Bill 186 (Skindell-D), the bills endorsed by the conservation and environmental community, which use a tool similar to Michigan's to measure resource impacts and set thresholds for permitting.

## Governance

- The states must provide dedicated staff and sufficient resources to their environmental agencies to carry out the obligations under the Compact. The states must also step up and fund the Council, and with the provinces the Regional Body, so that these regional entities can fulfill their responsibilities.
- The Council and Regional Body must take their role as regional watchdogs seriously and hold individual states and provinces to account. For the Council, this includes using every opportunity possible to assess the states' progress on compliance with Compact requirements. Letting the states slide does no one any favors if it opens up the governments to legal action for violation of state and federal law.
- The states, the Council, and the Regional Body must ensure that the public is fully involved in decisions made to implement the framework. As one example, each of the jurisdictions and the regional entities should follow Wisconsin's lead and place all important documents on a website for easy public access. As another example, the Council and Regional Body should restructure their semi-annual meetings to allow for more give and take between members of the public and government officials.

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- 4 *Id.* at 56.
- 5 Noah Hall & Bret Stuntz, Climate Change and Great Lakes Water Resources 9 (2007), *available at* <[http://online.nwf.org/site/DocServer/Climate\\_Change\\_and\\_Great\\_Lakes\\_Water\\_Resources\\_Report\\_FI.pdf?docID=2442](http://online.nwf.org/site/DocServer/Climate_Change_and_Great_Lakes_Water_Resources_Report_FI.pdf?docID=2442)>.
- 6 The Agreement and Compact can be found at <<http://www.cglg.org/projects/water/Agreement-Compact.asp>>.
- 7 Agreement, arts. 200-01; Compact §§ 4.8-4.9.
- 8 Agreement, art. 201(2); Compact § 4.9.2.
- 9 Agreement, arts. 202, 304; Compact §§ 4.2, 4.10.
- 10 Agreement, art. 301; Compact § 4.1.
- 11 Agreement, art. 209; Compact § 4.15.
- 12 Agreement, art. 302; Compact § 1.4.
- 13 Agreement, art. 300; Compact § 3.4. The Regional Body, created by the Agreement, is composed of the Governors and Premiers or their delegates. Agreement, art. 400. The Council, created by the Compact, is composed only of the Governors or their delegates. Compact §§ 2.2-2.3.
- 14 Agreement, art. 300; Compact § 3.4.
- 15 Agreement, art. 205; Compact § 4.6.
- 16 Agreement, art. 201; Compact § 4.9.
- 17 Agreement, art. 201; Compact § 4.9.
- 18 While similar requirements are in the Agreement, the timeline is dependent on measures taken by the provinces. The rest of this report will focus on the Compact, both because it is binding on the states and because the timeline for implementation is already set.
- 19 Compact § 3.4.
- 20 *Id.* § 4.8.
- 21 *See id.* § 4.9.
- 22 *See id.*
- 23 *Id.* § 4.12.2.
- 24 *See id.* § 4.10.
- 25 *Id.* § 4.12.2.a.
- 26 *Id.* § 4.2.
- 27 *See id.* § 4.2.2, 4-5.
- 28 *Id.* §§ 4.10-4.11, 4.12.1.
- 29 *See id.*
- 30 *Id.* § 4.1.
- 31 *See* 615 Ill. Comp. Stat. 50/1 *et seq.*; 2007 Ill. Legis. Serv. 95-0238 (West); Minn. Stat. § 103G.001 *et seq.*; 2007 Minn. Laws ch. 2.
- 32 N.Y. Envtl. Conserv. Law § 21-1007; H.B. 416, 127th Gen. Assem., Reg. Sess. § 3 (Ohio 2008).
- 33 2008 Ind. Legis. Serv. P.L. 4-2008 (S.E.A. 45) (West); 2008 Pa. Laws 43.
- 34 2008 Mich. Pub. Acts 179-90; 2007 Wis. Act 227.
- 35 The Council has relied on funding from the Great Lakes Protection Fund, a private, non-profit organization created by the Great Lakes Governors in 1989.
- 36 For a list of actions taken by the Council and the relevant documents, see <<http://www.glscompactcouncil.org/Resolutions.aspx>>.
- 37 For information on the initiative, see <<http://cglg.org/projects/water/WaterResourceManagersInitiative.asp>>.
- 38 Compact § 4.8.
- 39 *Id.* § 4.9.1, .3.
- 40 *Id.* § 4.9.2.
- 41 *Id.* § 4.3.
- 42 *Id.* § 4.9.1.c, .2.c., .3.
- 43 *Id.* § 4.9.2.c, .3.
- 44 *See, e.g., id.* § 4.9.2.c.iv.
- 45 City of Waukesha, Application for Lake Michigan Water Supply iii (2010), *available at* <[http://dnr.wi.gov/org/water/dwg/greatlakes/waukesha/Waukesha\\_LakeMichiganWaterApp\\_May2010.pdf](http://dnr.wi.gov/org/water/dwg/greatlakes/waukesha/Waukesha_LakeMichiganWaterApp_May2010.pdf)>.
- 46 *Id.* at 1-2.
- 47 *Id.*
- 48 *Id.* at 3-5; *see also id.* app. M, Alternative 1 (2010), *available at* <[http://dnr.wi.gov/org/water/dwg/greatlakes/waukesha/Appendix\\_M.pdf](http://dnr.wi.gov/org/water/dwg/greatlakes/waukesha/Appendix_M.pdf)>.
- 49 *See* City of Waukesha, *supra* note 45, at 1-1.
- 50 *Id.* at iii.
- 51 Compact § 4.9.3-4.
- 52 Letter from Matthew Frank, Secretary of the Wisconsin DNR, to Paul Ybarra, Waukesha Common Council President (Sept. 20, 2010), *available at* <<http://dnr.wi.gov/org/water/dwg/WaukeshaDiversionApp.htm>>.
- 53 Letter from Bruce Baker, Administrator of the Water Division, Wisconsin DNR, to Paul Ybarra, Waukesha Common Council President (Dec. 2, 2010), *available at* <[http://dnr.wi.gov/org/water/dwg/greatlakes/Waukesha/Ybarra\\_letter\\_12\\_2\\_10.pdf](http://dnr.wi.gov/org/water/dwg/greatlakes/Waukesha/Ybarra_letter_12_2_10.pdf)>. Waukesha submitted additional information on April 27, 2011. These materials are available under the Proposal tab at <<http://dnr.wi.gov/org/water/dwg/WaukeshaDiversionApp.htm>>.
- 54 For a statement of this commitment, see the description under the EIS Process tab at <<http://dnr.wi.gov/org/water/dwg/WaukeshaDiversionApp.htm>>.
- 55 *See* Wisconsin DNR, Waukesha Water Diversion Project EIS List of Topics (2010), *available at* <<http://dnr.wi.gov/org/water/dwg/greatlakes/Waukesha/EISTopicList.pdf>>.
- 56 The outline of the draft process can be found under the Public Participation tab at <<http://dnr.wi.gov/org/water/dwg/WaukeshaDiversionApp.htm>>.
- 57 *See Adoption of Interim Guidance*, Council Res. 13 (2010), *available at* <[http://www.glscompactcouncil.org/Docs/Resolutions/GLSLRBWRC\\_Resolution\\_13\\_Adoption\\_of\\_Interim\\_Guidance\\_5-10-10.pdf](http://www.glscompactcouncil.org/Docs/Resolutions/GLSLRBWRC_Resolution_13_Adoption_of_Interim_Guidance_5-10-10.pdf)>; *Adoption of Interim Procedures*, Regional Body Res. 16 (2010), *available at* <<http://www.glsregionalbody.org/Docs/Resolutions/>>

GLSLRWRRB\_Resolution\_16\_Interim\_Procedures\_6-10-10.pdf>.

<sup>58</sup> See Agenda for June 10, 2010 Meeting of Council, *available at* <[http://www.gslcompactcouncil.org/Docs/Agendas/2010/6-10-10\\_Compact\\_Council\\_Meeting\\_Agenda.pdf](http://www.gslcompactcouncil.org/Docs/Agendas/2010/6-10-10_Compact_Council_Meeting_Agenda.pdf)>; Agenda for June 10, 2010 Meeting of Regional Body, *available at* <[http://www.gslregionalbody.org/Docs/Agendas/2010/6-10-10\\_Regional\\_Body\\_Meeting\\_Agenda.pdf](http://www.gslregionalbody.org/Docs/Agendas/2010/6-10-10_Regional_Body_Meeting_Agenda.pdf)>.

<sup>59</sup> See Meeting Summary for June 10, 2010 Meeting of Council, at 10-11, *available at* <[http://www.gslcompactcouncil.org/Docs/MeetingSummaries/2010/GLSLRBWRC\\_Meeting\\_Summary\\_6-10-10.pdf](http://www.gslcompactcouncil.org/Docs/MeetingSummaries/2010/GLSLRBWRC_Meeting_Summary_6-10-10.pdf)>; Meeting Summary for June 10, 2010 Meeting of Regional Body, at 10, *available at* <[http://www.gslregionalbody.org/Docs/Minutes/2010/GLSLRWRRB\\_Meeting\\_Summary\\_6-10-10.pdf](http://www.gslregionalbody.org/Docs/Minutes/2010/GLSLRWRRB_Meeting_Summary_6-10-10.pdf)>.

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<sup>61</sup> *Adoption of Interim Guidance*, *supra* note 57, at 1; Adoption of Interim Procedures, *supra* note 57, at 1.

<sup>62</sup> Compact § 3.3.

<sup>63</sup> *Id.*

<sup>64</sup> See Press Release, Lake County, State Approves Lake Michigan Water Allocation for Ten Communities in Northern and Western Lake County (Jan. 21, 2011), *available at* <<http://archive.constantcontact.com/fs040/1102402691740/archive/1104317661447.html>>; Lisa Black, *10 Lake County Communities Can Dip into Lake Michigan Water*, Chi. Trib., Jan. 24, 2011, *available at* <<http://www.chicagotribune.com/news/local/ct-met-lake-michigan-water-tap-20110124,0,6186889.story>>.

<sup>65</sup> See Press Release, *supra* note 64.

<sup>66</sup> See Lake County, System Map, *available at* <<http://www.lakecountyil.gov/PublicWorks/PublicInformation/PublishingImages/System%20Map.pdf>>; Illinois State Water Survey, Major Watersheds of Illinois, *available at* <<http://www.isws.illinois.edu/hilites/images/pcardb.jpg>>.

<sup>67</sup> Compact § 4.14.

<sup>68</sup> *Id.*; *Wisconsin v. Illinois*, 388 U.S. 426 (1967), *modified*, 449 U.S. 48 (1980).

<sup>69</sup> Compact § 4.14.2.

<sup>70</sup> See 615 Ill. Comp. Stat. 50/1 *et seq.*; Ill. Admin. Code tit. 17, § 3730.101 *et seq.*

<sup>71</sup> 615 Ill. Comp. Stat. 50/3; Ill. Admin. Code tit. 17, § 3730.303.

<sup>72</sup> See Ill. Admin. Code tit. 17, § 3730.307.

<sup>73</sup> Compact § 4.9.3.d, 4.a, 4.c.

<sup>74</sup> *Id.* § 4.9.4.c.

<sup>75</sup> Chicago Metropolitan Agency for Planning, Water 2050: Northeastern Illinois Water Supply/Demand Plan xi, 15 (2011), *available at* <<http://www.cmap.illinois.gov/water-2050>>.

<sup>76</sup> *Id.* at 35, 40-43.

<sup>77</sup> *Id.* at 17.

<sup>78</sup> Compact § 4.2.2.

<sup>79</sup> *Id.* § 4.2.1-2; see *Adoption of Basin-Wide Conservation and Efficiency Objectives*, Council Res. 5 (2008), *available at* <[http://www.gslcompactcouncil.org/Docs/Resolutions/GLSLRBWRC\\_Resolution5-BasinWideConservationEfficiencyObjectives.pdf](http://www.gslcompactcouncil.org/Docs/Resolutions/GLSLRBWRC_Resolution5-BasinWideConservationEfficiencyObjectives.pdf)>.

<sup>80</sup> Compact § 4.2.2, .5.

<sup>81</sup> *Id.* § 4.2.5.

<sup>82</sup> *Id.* § 4.2.4.

<sup>83</sup> *Id.* § 1.2.

<sup>84</sup> H.B. 416, 127th Gen. Assem., Reg. Sess. § 3 (Ohio 2008).

<sup>85</sup> *Id.* § 3(B)(4).

<sup>86</sup> *Id.* § 3(A); Ohio Great Lakes Compact Advisory Board, Final Recommendations to the Governor and General Assembly 1, 3, 22-26 (2010), *available at* <[http://ohiodnr.com/portals/7/Compact\\_Advisory\\_Board\\_Final\\_Report\\_12\\_15\\_10.pdf](http://ohiodnr.com/portals/7/Compact_Advisory_Board_Final_Report_12_15_10.pdf)>.

<sup>87</sup> *Adoption of Basin-Wide Conservation and Efficiency Objectives*, *supra* note 79.

<sup>88</sup> Ohio Great Lakes Compact Advisory Board, *supra* note 86, at 10-11.

<sup>89</sup> See *id.* at 11-13.

<sup>90</sup> *Id.* at 12-13.

<sup>91</sup> *Id.* at 12.

<sup>92</sup> H.B. 231, 129th Gen. Assem., Reg. Sess. (Ohio 2011).

<sup>93</sup> See *id.* § 1522.05.

<sup>94</sup> See Ohio Great Lakes Compact Advisory Board, *supra* note 86, at 10-11; Wisconsin DNR, Wisconsin Great Lakes Goals and Objectives (2008), *available at* <[http://dnr.wi.gov/org/water/dwg/greatlakes/WCE\\_Objectives2008.pdf](http://dnr.wi.gov/org/water/dwg/greatlakes/WCE_Objectives2008.pdf)>. It is not clear, however, whether Ohio's goals and objectives have been formally adopted by the state.

<sup>95</sup> Wisconsin DNR, Proposed Wisconsin Statewide Water Conservation and Water Use Efficiency Goals and Objectives (2011), *available at* <[http://dnr.wi.gov/org/water/dwg/greatlakes/WCE\\_Objectives.pdf](http://dnr.wi.gov/org/water/dwg/greatlakes/WCE_Objectives.pdf)>.

<sup>96</sup> See Illinois DNR, Illinois Lake Michigan Water Conservation Goals and Objectives (2010), *available at* <<http://www.dnr.state.il.us/owr/LakeMichiganWaterAllocation.htm>>.

<sup>97</sup> See Michigan Department of Natural Resources and Environment, Michigan Water Conservation and Efficiency Program, app. A (2010).

<sup>98</sup> Compare Compact § 4.2.2, .5, with *id.* § 4.11.3.

<sup>99</sup> Ind. Code § 14-25-15-5(1) to (3); Ohio Rev. Code § 1522.05(B)(1); 2008 Pa. Laws 43, § 5(2).

<sup>100</sup> Mich. Comp. Laws §§ 324.32707(1)(j), 324.32708(1)(h).

<sup>101</sup> Wis. Stat. § 281.346(8)(b).

<sup>102</sup> Wis. Admin. Code NR § 852.01 *et seq.*

<sup>103</sup> Mich. Comp. Laws § 324.32708a.

<sup>104</sup> *Id.* §§ 324.32707(1)(j), 324.32708(1)(h).

<sup>105</sup> *Id.* § 324.32708a(5).

<sup>106</sup> 2008 Pa. Laws 43, § 5(2); 27 Pa. Cons. Stat. § 3120(a)(1). The center's website is at <[www.savewaterpa.org](http://www.savewaterpa.org)>.

<sup>107</sup> Minnesota recently posted on its website a document entitled "Minnesota Water Conservation Goals and Objectives", but there are no objectives listed to guide the state's programs. See Minnesota Department of Natural Resources, Minnesota Water Conservation Goals and Objectives (2010), *available at* <<http://files.dnr.state.mn.us/>

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108 Compact § 4.2.2.

109 *See id.*

110 *Adoption of Basin-Wide Conservation and Efficiency Objectives, supra* note 79.

111 Compact § 4.2.5.

112 *Id.*

113 *See* Ill. Admin. Code tit. 17, § 3730.307.

114 *See* Ind. Code § 14-25-15-5(3).

115 Compact § 4.2.2.

116 *Id.* § 4.10.1.

117 *Id.*

118 *Id.*

119 *Id.*

120 *Id.* § 4.10.2.

121 *Id.* §§ 4.10.1, 4.11, 4.12.1.

122 *Id.* § 4.11.

123 *Id.* § 4.11.5.

124 *Id.* § 4.12.1.

125 2006 Mich. Pub. Acts 34.

126 *See* Groundwater Conservation Advisory Council, Report to the Michigan Legislature 6-7 (2007), *available at* <[http://www.michigan.gov/documents/deq/Groundwater\\_report\\_206809\\_7.pdf](http://www.michigan.gov/documents/deq/Groundwater_report_206809_7.pdf)>.

127 *See* David A. Hamilton & Paul W. Seelbach, *Determining Environmental Limits to Streamflow Depletion Across Michigan*, in *The Book of the States* 534, 535 (2010).

128 *See generally* Groundwater Conservation Advisory Council, *supra* note 126.

129 Mich. Comp. Laws §§ 324.32701(1)(cc), 324.32721(1).

130 *Id.* § 324.32701(1)(a)(ii)-(v).

131 *Id.* § 324.32705(1).

132 *Id.* The tool can be found at <<http://www.miwwat.org/>>.

133 Mich. Comp. Laws § 324.32706b(2). The zones are labeled A, B, C and D. *Id.* § 324.32701(1)(tt)-(ww).

134 *Id.* § 324.32706b(3).

135 *Id.* §§ 324.32706b(4), 324.32706c.

136 *Id.* § 324.32706c(5)-(6).

137 David A. Hamilton, *LQWs First Year* (2010).

138 Mich. Comp. Laws § 324.32707(7)-(8).

139 2008 Mich. Pub. Acts 247; 2010 Mich. Pub. Acts 189.

140 Mich. Comp. Laws §§ 324.32705(2)(c), 324.32723(1)(a)-(b).

141 *Compare id.* § 324.32723(6), *with* Compact § 4.11.

142 Michigan DEQ, Large Quantity Water Withdrawal Permit Issued to Genesee County Drain Commission (Aug. 28, 2009), *available at* <[http://www.michigan.gov/documents/deq/deq-wb-dwehs-wwciu-gcdclqwwpermit\\_290342\\_7.pdf](http://www.michigan.gov/documents/deq/deq-wb-dwehs-wwciu-gcdclqwwpermit_290342_7.pdf)>; Michigan DEQ, Large Quantity Water Withdrawal Permit Issued to City of St. Joseph (Aug. 28, 2009), *available at* <[http://www.michigan.gov/documents/deq/deq-wb-dwehs-wwciu-stjoelqwwpermit\\_290347\\_7.pdf](http://www.michigan.gov/documents/deq/deq-wb-dwehs-wwciu-stjoelqwwpermit_290347_7.pdf)>.

143 Michigan DEQ, Large Quantity Water Withdrawal Permit Issued to Benton Charter Township (Feb. 8, 2010), *available at* <[http://www.michigan.gov/documents/deq/deq-wb-dwehs-wateruse-bctwwpermit2010-001\\_310468\\_7.pdf](http://www.michigan.gov/documents/deq/deq-wb-dwehs-wateruse-bctwwpermit2010-001_310468_7.pdf)>.

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Guidelines for Generally Accepted Water Management Practices for the Public Water Supply Sector (2008), *available at* <[http://www.michigan.gov/documents/deq/deq-wb-dwehs-wu-conservmeas-pwss\\_231927\\_7.pdf](http://www.michigan.gov/documents/deq/deq-wb-dwehs-wu-conservmeas-pwss_231927_7.pdf)>.

146 *See, e.g.*, Michigan DEQ, Permit Decision and Response to Public Comments on Genesee County Drain Commission Application for a Water Withdrawal from Lake Huron 8-9 (2009), *available at* <[http://www.michigan.gov/documents/deq/deq-wb-dwehs-wwciu-gcdclqwwpermitresponsepubliccomment\\_290345\\_7.pdf](http://www.michigan.gov/documents/deq/deq-wb-dwehs-wwciu-gcdclqwwpermitresponsepubliccomment_290345_7.pdf)>.

147 Michigan DEQ, *supra* note 143, at 1.

148 Compact § 4.11.5.

149 *See generally* Michigan DEQ, *supra* note 146.

150 *See id.* at 4-5, 10.

151 H.B. 231, 129th Gen. Assem., Reg. Sess. (Ohio 2011).

152 *See* Alan Johnson, *Former Gov. Voinovich Opposes Great Lakes Drain Plan*, Columbus Dispatch, June 24, 2011, *available at* <[http://www.dispatch.com/live/content/local\\_news/stories/2011/06/24/former-gov-voinovich-opposes-great-lakes-drain-plan.html](http://www.dispatch.com/live/content/local_news/stories/2011/06/24/former-gov-voinovich-opposes-great-lakes-drain-plan.html)>.

153 H.B. 231, 129th Gen. Assem., Reg. Sess. § 1522.11(A)(1)-(2) (Ohio 2011).

154 *Id.* § 1522.12(A)(1)-(2).

155 *See id.* § 1522.12(A)(3); The Great Lakes Compact, Hearing on H.B. 231 Before the House Comm. on Agric., Env't, and Nat. Resources, Reg. Sess. (Ohio 2011) (Testimony of John Stark, The Nature Conservancy).

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157 *Compare* Compact § 4.11.5, *with* H.B. 231, 129th Gen. Assem., Reg. Sess. § 1522.12(D) (Ohio 2011).

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160 Mich. Comp. Laws §§ 324.32701(1)(cc), 324.32705(1), 324.32721(1); Wis. Stat. § 281.346(4s)(d).

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162 Minn. Stat. § 103G.271; Minn. R. 6115.0620.

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164 *See* Ohio Great Lakes Compact Advisory Board, *supra* note 86, at 17-18.

165 *See, e.g.* H.B. 257, 129th Gen. Assem., Reg. Sess. § 1522.14 (Ohio 2011).

166 *Id.*

167 *Id.*

168 *Id.*

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