

Guarding the Great Lakes



The Great Lakes hold 20 percent of the world's supply of fresh water.

Policy-makers in Great Lakes states are considering how to better protect the lakes from threats of water exports, development and environmental contaminants.

BY TIM ANDERSON

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As water levels dropped to near-record lows in parts of the Great Lakes this summer, people around the region were reminded of just how vast and vital the freshwater system is both as a natural and economic resource.

Numerous groups have been affected by changes in the lakes, from the shipping companies that had to adjust cargo amounts to the pleasure boaters who saw their launching docks and piers become unusable.

Since 1997, water levels have plunged by as much as 5 feet in some Great Lakes. While that number may not seem significant, for a freshwater system that holds 6 quadrillion gallons of water, the loss amounts to about 63 trillion gallons of water — enough to cover the continental United States by more than an inch.

Threat of exported water

Shifting water levels are natural and have been occurring for thousands of years. However, experts believe the troubles caused this year could provide an important lesson to policy-makers as they make crucial decisions about the Great Lakes' future.

"Lake levels naturally fluctuate, largely as a function of precipitation patterns and climate," said Michael Donahue, executive director of the Great Lakes Commission, a binational agency that represents the interests of the eight Great Lakes states and two Canadian provinces. "We just happen to be in a down cycle right now where we're edging closer to the all-time lows that we experienced in the 1930s."

"The low levels, though, emphasize the importance of opposing any types of water diversion or withdrawal that could measurably affect lake levels. Once you create a reliance on water diversion or exportation, it would be literally impossible to get that activity to cease when lake levels are low."

The shipping and marina problems caused by naturally low levels of water would be compounded — and maybe economically devastating — if Great Lakes' water is diverted to other parts of the world in future years.

For that reason, limiting the export of Great Lakes' water is considered one of the most critical issues that state lawmakers in the United States and provincial leaders in Canada must resolve.

"The pressures for water diversion and export are going to increase,"

Donahue said. "When you look at the Great Lakes, you're talking about 20 percent of the world's supply of fresh surface water. There have been tens of billions of dollars pumped into the lakes to improve water quality, and we have this tremendous reservoir of high-quality water that I firmly believe will be the subject of diversion or export plans.

"The argument we're making is that even though the Great Lakes have a large quantity of water, it's an intensively used resource, and any diversion or export would leave the Great Lakes' region vulnerable to losing its most vital natural asset."

The issue came to a head a few years ago when the province of Ontario issued a permit allowing a company to withdraw and sell Lake Superior water overseas. Great Lakes' governors found themselves in the unenviable position of being concerned about how such a plan would affect their states' most valuable natural resource, but powerless to do anything about it.

The permit was later revoked, but the incident has intensified efforts on both sides of the border to develop a binding agreement. Governors in the region currently can veto one another's water diversion plans, and they would like the current Great Lakes Charter amended so that Canadian premiers in Ontario and Quebec are included in the pact.

The eight-state Great Lakes Commission recently added Ontario and Quebec as associate members, a move that demonstrates the importance of closer state-provincial relations, said Minnesota Sen. Cal Larson, a Republican from Fergus Falls.

"We've been dialoguing with the provincial folks for a number of years, but they've always been observers; now we've formalized the relationship," said Larson, a member of the commission, who has led efforts to guarantee funding for construction of a new Soo Lock in Sault Ste. Marie, Mich.

An outright ban on exporting water

could violate international trade laws, so government leaders have been developing a plan that is both "scientifically sound" and "legally defensible," Donahue said.

In June, Michigan Republican Gov. John Engler announced a plan he believes will be agreed upon by premiers and governors that would allow a Great Lakes' withdrawal only if the exportation provides an improvement to the waters and water-dependent natural resources. Engler said, "Water projects will be approved only if they do more good than harm."

Antipollution efforts

While water diversion lends itself to regional cooperation, environmental initiatives are often spearheaded on a state-by-state — or even community-by-community — basis.

"It's much more easy for someone to identify with a stream or local watershed than the entire Great Lakes," Donahue said.

Michigan Rep. William Callahan first ran for a seat in the Legislature after, as mayor of the city of St. Clair Shores, he became concerned about e-coli ratings shutting down local beaches. He has since become a leading advocate for water quality in his state.

His and others' attempts to keep the Great Lakes clean are increasingly concentrating on nonpoint-source pollution, contaminants that make their way into waterways through agricultural and urban runoff.

One way to curb the amount of nonpoint-source pollution is to stop urban sprawl, which often eliminates important green space, the Democrat said.

"Sprawl brings with it a lot of problems," said Callahan, a member of the Great Lakes Commission. "Number one, you're clearing off a natural bio-system that has the ability to remove metals from groundwater and soil. In its place, we're bringing in impervious streets and roads and driveways. Plus,

you're putting more of a demand on the existing infrastructure. Right now, in Michigan, we're losing 10 acres per hour of open space to development."

Donahue said: "Attempts to revitalize urban areas and clean up brown-fields are much more environmentally friendly approaches than simply chewing up our open space anytime additional development needs to occur."

The focus on nonpoint-source pollution also will likely impact farmers, who may be asked to better control contaminants from fertilizers and pesticides that make their way into streams, rivers and, eventually, the Great Lakes.

Another area of environmental concern has been the buildup of development along the coasts, one of the most fragile, vital areas of the Great Lakes' region. States have tried to preserve lakeshores through various conservation programs.

In Ohio, for example, the state has partnered with the federal government to conserve 67,000 acres of stream corridors in northwest Ohio. Over 10 years, the program will cost about \$200 million (the U.S. Department of Agriculture will pay for 80 percent of it). The project's goal is to improve water quality in Lake Erie by reducing sediment pollution and field runoff through the installation of filter strips, wetlands, hardwood trees and wildlife habitat.

In Minnesota, state legislators have appropriated money for the purchase of undeveloped shore land from owners with property near the state's lakes and rivers. The agreements would be in effect for at least 20 years.

"The greatest threat or challenge facing the Great Lakes isn't in the water at all; it's on land," Donahue said. "It has to do with land-use management and the need for controlling urban and suburban sprawl, controlling coastal development and putting more responsible land-use practices into play. So many of our water-quality problems are directly attributable to abuses in how we manage the land." ★