Algae blooms a problem in state

Species that poisoned Toledo's water supply also present in Wisconsin
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The thick mats of algae on Lake Erie that poisoned the water supply of Toledo, Ohio, were fed by a type of pollution that's all too familiar in Wisconsin.

Vast quantities of nutrient runoff from streets and farm fields have long been key ingredients in algae blooms. Each summer, they overwhelm countless lakes.

But so far efforts to stem the tide have fallen short, and the fight to control such pollutants has emerged as one of the state's most difficult environmental problems. Today, one quarter of more than 700 water bodies that fail to meet water quality standards do so because of high levels of phosphorus, according to the Wisconsin Department of Natural Resources.

The algae infecting Toledo water was blue-green algae, which contains a toxin called microcystin. City officials warned the public not to drink municipal water early on Aug. 2 and Ohio's governor called in the National Guard to operate purification systems and bring bottled water to residents. On Aug. 4, city water was deemed safe to drink.

Many types of algae are polluting Wisconsin waters, but experts say blue-green algae is of particular concern.

In mid-June, the DNR issued its first warning of the summer, advising people to look for signs of blue-green algae starting to bloom on lakes and ponds.

The agency's advice to adults: If you're standing knee-deep in water and can't see your feet, stay out; and keep children and pets out of the water, too.

The most common reported symptoms are rashes, stomach ailments and respiratory irritation.

Between 2009 and 2011, Dunn County in northwestern Wisconsin reported 26 cases algae-related illnesses from a single, problem-plagued lake, Tainter Lake, according to the DNR and Department of Health Services. In Adams County, there were 20 illnesses reported from exposure on the Petenwell Flowage; 12 illnesses in Dane County at Lakes Mendota and Kegonsa and seven illnesses in Winnebago County on Lake Winnebago.

Last month, the DNR said that bluegreen algae containing microcystin began turning up in Lake Winnebago. The lake is a source of drinking water for Appleton, Neenah, Menasha and Oshkosh.

The discovery of algae containing toxins has increased in the past decade on the lake, according to an ongoing water-quality testing study by the UW-Milwaukee.

"Algae and invasive species are the two biggest issues for us," said Michael Engleson, executive director of the Wisconsin Association of Lakes.

He called the Toledo situation a “bluegreen fire” that could mobilize public opinion the way a fire on Ohio’s Cuyahoga River in 1969 captured national attention and helped to pass the Clean Water Act.

“When you see what happened in Toledo, it’s not something where it’s just icky for boating,” Engleson said. “It’s bad for drinking water, too.”

So far, the four water systems on Lake Winnebago have fended off the toxins, according to state officials.

Milwaukee is not believed to be as vulnerable as Toledo because Milwaukee Water Works made major upgrades to its system after the 1993 cryptosporidium outbreak. Also, Lake Michigan is colder and deeper than Lake Erie, said Steven Elmore, chief of public water supplies at the DNR.

Temperature, wind and wave action can influence the size, shape and severity of the zones. Scientists say, however, that the leading cause of the problem is runoff from phosphorus and other nutrients.

Phosphorus can perk up a lackluster yard and help produce higher yields of corns. But at excessive levels, it turns water green. Even if it’s not of the toxic variety, algae blooms are a sign of unhealthy water and a turnoff for anglers, swimmers and boaters.

“If we don’t manage the nutrient runoff better, we could have a situation like Toledo in the future,” said Todd R. Miller, an assistant professor of environmental and occupational health at UWM. Miller is conducting water quality monitoring of Lake Winnebago under a grant from the National Institute of Environmental Health Sciences.

The Clean Water Act deserves credit for reducing phosphorus from sewage treatment plants, said Lyman Welch, water quality program director at Alliance for the Great Lakes.

“But it hasn’t done much to address non-point pollution that is coming off farm fields,” Welch said.

Indeed, the Achilles heel of federal water regulation is that generally all but the largest farms are under little legal pressure to reduce the nutrients that leave their fields.

In 2009, Democrat Gov. Jim Doyle signed legislation that banned phosphorus from fertilizer. Wisconsin first restricted phosphorus from laundry detergent in 1979, then lifted the ban until it was reinstituted in 1984.

In late 2010, Wisconsin became one of the first states in the country to approve standards to reduce phosphorus pollution.But GOPled lawmakers rewrote the law earlier this year after some.

Municipalities and businesses complained about the cost of complying with the reductions.

This year’s changes allow up to 20 years to comply.