

# Toledo water improving but toxins still a concern for 2nd day

## Utilities director says plan in place to flush system of contaminated water

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After Toledo officials issued warnings not to drink the water and Ohio's governor declared a state of emergency, worried residents descended on stores, quickly clearing shelves of bottled water. On Monday, Toledo's mayor lifted the ban on drinking city water. (John Seewer/Associated Press)

Health authorities tested water for toxins in Toledo, Ohio, on Sunday as some 400,000 people remained without safe drinking water for a second day following the discovery of high toxin levels from algae on Lake Erie.

- [Scientists warn of large, toxic algae bloom on Lake Erie](#)
- [How blue-green algae is taking over Canadian lakes](#)
- [Algae blooms on Lake Erie getting 'difficult to control'](#)
- [Canada, U.S. urged to curb phosphorus runoff into lakes](#)

Toledo Mayor D. Michael Collins said some sampling showed decreased toxin levels but results from further tests would not be known until later in the day. The city is waiting on water samples being analyzed at Environmental Protection Agency labs in Cincinnati.

"All I can tell you is that everything is trending in a very positive direction," Collins told reporters, but he added that he could not predict when water would be safe to drink.

Isaac Miles, of Toledo, Ohio, sells water he purchased in Michigan as people in both states scrambled for bottled water following the ban on drinking tap water. (Andy Morrison/The Blade/Associated Press)

About 500,000 people get water from the contaminated source but about 100,000 residents of some communities have backup water supply systems, said city of Toledo spokeswoman Lisa Ward.

Toledo Public Utilities Director Edward Moore said a plan is in place to swiftly flush the system of contaminated water once the water supply is deemed safe. Residents will be advised how long to run water in their homes to clear pipes of contaminated water.

Health officials sent samples to several laboratories after finding Lake Erie, which provides the bulk of the area's drinking water, may have been affected by a "harmful algal bloom," Ohio Environmental Protection Agency spokeswoman Heidi Griesmer said.

Ohio Governor John Kasich declared a state of emergency on Saturday for the state's fourth-largest city and surrounding counties. The city and other agencies have established sites where bottled water is being distributed free to the public.

"Everybody needs to stay cool and calm," Kasich told a news conference on Sunday. "We're going to learn from this and make improvements."

A spokeswoman for Ontario's Ministry of the Environment and Climate Change said the blue-green algae bloom has not moved into the province's waters and is not affecting municipal drinking water intakes in the lake.

"Ontario's drinking water is among the best protected and tested in North America," Kate Jordan told CBC News. "The local treatment plants in Chatham-Kent and Elgin regularly test for microcystins and none have been detected."

## **Residents seek safe water**

Many residents drove to other states in search of fresh water as stores rapidly sold out of bottled water.

Jeff Hauter of Toledo drove to a Walmart in suburban Detroit where he bought 18 gallons and four cases of water. He said he ran into others from the Toledo area loading up their vehicles.

Algal blooms in Lake Erie are fairly common, typically in the summer, state emergency operations spokesman Chris Abbruzzese said. Potentially dangerous algal blooms, or rapid increases in algae levels, are caused by high amounts of nitrogen and phosphorous.



University of Michigan researchers and their colleagues predict a significant bloom of toxic blue-green algae in Lake Erie late this summer. (National Oceanic Service)

Those nutrients can come from runoff of excessively fertilized fields and lawns or from malfunctioning septic systems or livestock pens, city officials said.

Drinking the contaminated water can affect the liver and cause diarrhea, nausea, numbness or dizziness, officials said. Boiling will not destroy the toxins.

The water should not be used for drinking, making infant formula or ice, brushing teeth or preparing food, the governor's office said. It also should not be given to pets, but hand washing is safe and adults can shower in it, officials said.

In response to the Toledo crisis, Chicago began additional precautionary testing on Lake Michigan water, a city spokeswoman said.

With files from CBC News

## AGRICULTURE

# Algal blooms on Lake Erie. Who's to blame? <sup>3</sup>

By [Dan Taekema](#), Chatham Daily News

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As the algae bloom in Lake Erie continues to grow, so does the debate on who's really to blame.

A report released by Environmental Defence, an environmental and health organization, Wednesday morning suggested a four-point plan to fix the bothersome bloom.

"We are seeing increasing intensity, increasing frequency in algal blooms on the Great Lakes — obviously what we're doing so far is not enough," said Nancy Goucher, water program manager for the organization.

The plan outlines four key points that will "fix" the algae issue, including harnessing market forces to help farmers cut down on nutrient runoff, building water smart cities, improving scientific understanding of the blooms and forming a policy framework that pushes for action.

A press release from the organization stated:

"The Ontario government should evaluate the applicability of market mechanisms such as tax shifting, pollution taxes and nutrient trading to transfer money from undesirable acts like polluting to desirable ones that reward farmers for 'doing the right thing.'"

It's this kind of statement that raises questions from agriculture experts like Ivan O'Halloran, an associate professor at the University of Guelph Ridgetown Campus who studies nutrient use and soil fertility.

"What they're saying is reasonable," he said. "The only concern I have is that when you write it that way they did it sort of implies that farmers are doing the wrong things now and I don't believe that is the case for all farmers."

O'Halloran has been fielding questions about farmers and phosphorous for years.

He's encountered all sorts of explanations and studies and while he admits that farmers play a role in adding phosphorous to Lake Erie he said the issue isn't that simple.

"If there was a simple solution we would have already implemented it," he said. "There is absolutely no doubt that agriculture contributes to phosphorus in the Great Lakes, but there are numerous studies from urban areas that have shown that the actual amount of phosphorus lost per acre of land from urban areas can be several orders of magnitude greater than agricultural land."

According to O'Halloran, "impervious surfaces" such as concrete and asphalt allow phosphorus from lawn fertilizers to run off the land and into the lake, especially after flooding and heavy rainfall like Detroit and Windsor experienced earlier this week.

"Homeowners are spreading phosphorus on their driveways and walkways and some of it gets onto the road and that just washes into the storm drain systems," he said. "If that had been agricultural fields there probably would have been very little to no runoff, but we keep making more and more impervious surfaces and the water has to run off."

Goucher said her organization acknowledges the fact that farmers have taken steps to limit the amount of nutrients entering the lake from their land, but still described agriculture as the number one cause of phosphorus runoff.

"It's happening both in the agricultural sector and in urban communities, however I think it's really important to note that most of the sources of phosphorus is coming from the agricultural community," she said. "Right now there's incentive for farmers to farm right up to the edge of a creek which allows for much more phosphorus to enter those waterways, which eventually makes its way into the Great Lakes."

In the report, Environmental Defence suggests that the solution to the problem is to get the provincial government on board with the fight against algae.

Goucher points out that the Liberal party included a desire to take on algal blooms and limit nutrient runoff in their platform, a sign she takes as promising.

"I have confidence that we will see action from this government," she said "I think no government wants to see the Great Lakes being carpeted in algal blooms every summer so I think it's in their interest to take action."

O'Halloran isn't so sure.

"I've heard this before, it's either a government incentive or pollution tax, but maybe the other way of looking at it is saying maybe we should all be paying a fair value for the food we eat," he said. "It's nice to say yes, we'll give incentives and pay them to do the right thing, and stuff like that, but it's a lot harder to implement than it is just to say."

One thing that both parties can agree upon is that until drastic changes are made to the way people treat the land, algal blooms will continue to appear each summer in the Great Lakes, threatening tourism, industry, agriculture and the people who rely upon them for drinking water.

# A freshwater solution is within our reach: Josh Knights



Birds fly near the city of Toledo water intake crib in Lake Erie, about 2.5 miles offshore from Curtice, Ohio, on Sunday, Aug. 3, a day after Toledo Mayor Michael D. Collins imposed a ban on drinking the water for about 400,000 customers. The ban, imposed after the water was tainted by toxins from algal blooms, was lifted after three days but concerns remain. (*Haraz N. Ghanbari, Associated Press*)

Unlike states in the American Southwest, one of the things that Ohioans can count on is an abundant supply of fresh water. Or can we?

**Toledo's ban on the consumption of water** from Lake Erie has passed, but the plight of 400,000 people without water grabbed national headlines – even though huge **blooms of toxic blue-green algae** have become the norm in western Lake Erie in recent years. And there is more to come. This year's bloom, which will not reach its peak until September, is moving steadily east toward Cleveland.

Unless concerted and consistent action is taken, these annually occurring harmful algae blooms are likely to become more severe. Lake Erie already is the warmest and shallowest of the Great Lakes. High levels of phosphorus from agriculture, combined-sewer overflows and other sources create conditions ripe for the explosive growth of blue-green algae. The situation is further exacerbated by climate change, which has increased water temperatures and led to more violent storms that flush nutrients off of farmlands and into streams leading to the lake.

In the aftermath of Toledo's water shortage, Ohioans need to remember that the situation can be remedied if we are willing to make the commitment.

The first and perhaps most fundamental issue to address is that Lake Erie is receiving too much phosphorus from sources upstream. Any solution must address the root cause.

There are some who will call for responding to the problem by upgrading the water-treatment facilities of the major cities along the lake shore.

The city of Toledo **spent \$4 million** for carbon treatments last year and is likely to increase this expenditure after the recent incident. This is a prudent step but one that only addresses a symptom and not the cause of the problem. What it overlooks is that harmful algal blooms impact Ohioans in many other ways – from the enjoyment of public beaches to recreational boating and sport fishing on the lake, to name a few.

The **Ohio Phosphorus Task Force** in 2013 concluded that a 40 percent reduction in all phosphorus that currently ends up in western Lake Erie is required to curtail the problem. The Nature Conservancy supports this target, which would take phosphorus levels back to their 1990s levels, when Lake Erie enjoyed a well-publicized recovery after decades of being labeled a "dead lake." Importantly, the reduction level cannot be an aspirational goal. It needs to be a hard target with consequences if efforts fall short.

And we need everyone's involvement to fix the problem. No one can afford to sit on the sidelines.

Ohio farmers have been responsive to the issue of harmful algal blooms. In the last two years, the agribusiness community, working with The Nature Conservancy and other partners, has developed a voluntary, third-party certification program to encourage best practices for fertilizer applications.

Nutrient service providers throughout the Lake Erie watershed in Ohio, Michigan and Indiana have been signing up for this program, known as the **4R Nutrient Stewardship** Certification, at a steady pace. The program was announced in March and by the end of June, 49 service providers had applied for certification through the program. These service providers are responsible for the majority of the fertilizers applied to crops in the western

basin. By the end of July, three independent, third-party auditors had been trained and four retailers had completed audits.

Sensible regulations also play a role. The Nature Conservancy advocated in support of the **passage of Ohio Senate Bill 150**, which requires that anyone applying fertilizer on 50 acres of farmland or more be certified by the Ohio Department of Agriculture by 2017.

Additional measure should include:

- Farming – Improve timing, placement and amount of fertilizer and manure application to keep nutrients out of the water and in the fields to grow crops.
- Drainage from farms – Slow water movement from field to streams and keep nutrient-rich surface water from flowing into drainage pipes and ditches.
- Cities – Upgrade old sewer systems as quickly as possible to keep storm water and raw sewage out of streams.
- Natural areas – Restore healthy streams, wetlands and floodplains so that they can act as kidneys of the lake by slowing waters, filtering nutrients and reducing flooding.
- The lake – Continue to explore better uses of dredged dirt and keep additional nonnative species out of the lake.

An important point is figuring out how to pay for the solution. The short answer is that everyone must do their part. There are funding streams through the federal Farm Bill and the Great Lakes Restoration Initiative but they are not as targeted as they could be. Over the last two years, The Nature Conservancy has been conducting research on the effectiveness of different farm practices in reducing phosphorus runoff. Federal funds should go only to those activities proven to provide the most bang for the buck.

At the state level, we will need political leadership to ramp up funding to address the problem. A small down payment was made two years ago



through **a bipartisan effort to create a Healthy Lake Erie Fund**. But much more will be needed. One suggestion is a temporary water fee that would be used for the installation of so-called natural infrastructure that can filter water while at the same time providing green space and habitat for wildlife.

A solution is within our reach but for it to work, every landowner, farmer and business needs to do what they can to keep nutrients on their land and out of the streams that lead ultimately to Lake Erie. Now is the time when we need all hands on deck, not pointing at one another or wondering who will act first. We are all in the same boat and if we do not work together and act now, we will be left with water everywhere and not any drop to drink.

*Josh Knights is executive director of The Nature Conservancy in Ohio.*