

Dry spell should reduce algal bloom in Lake Erie

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This year's spring drought may be bad for Ohio's crops, but it should mean a healthier Lake Erie this summer.

Scientists predict the August-September bloom of harmful algae in the western basin of Lake Erie will be less than 10 percent of what it was last year, when it was

the worst on record, said Jeff Reutter, director of Ohio State University's Ohio Sea Grant office and Stone Laboratory in Put-in-Bay harbor.

The lack of spring storms greatly reduced runoff between March and June and as a result, much less phosphorous from farm operations and sewage overflows entered the lake, Reutter said.

High levels of phosphorous

combine with warm weather to create harmful algal blooms that can produce toxins dangerous to swimmers, boaters and fishermen.

While the low phosphorous level is good news, Reutter said, it doesn't mean the problem is solved. Communities still need to find better ways to control farm runoff and sewage overflows.

If there's a normal or wet spring next year, he said, the high levels

of algal bloom will be back unless improvements are made.

Lake Erie harbors many forms of algae. The blue-green group found in warm water such as in the shallow western basin of Lake Erie is capable of producing a toxin called microcystin, which has been known to kill people in Brazil and pets in Ohio and other parts of the United States.

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It's highly unlikely that a blue-green algae recently reported in the water at Fairport Harbor Lakefront Park is associated with the bloom in the western part of the lake, Reutter said. Any inherent dangers from that bloom are not clear.

While algal blooms can be dangerous, they also can be costly. Toledo spends \$3,000 to \$4,000 a day during algal blooms to remove toxins from its water supply, which comes from Lake Erie, said Tom Bridgeman, assistant professor in the department of environmental sciences at the University of Toledo. He, along with Reutter and others, spoke during a webinar this week about the bloom prediction.

Algal blooms over the past decade increased sharply in 2008 and remained high in 2009 and 2010, Bridgeman said, but in 2011 the bloom was "off



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The harmful algal bloom this summer in western Lake Erie should be less than one-tenth as severe as last year, when it was the worst on record. A satellite image shows the bloom's spread last year.

the charts," spreading well into the lake's central basin.

This year's bloom should most resemble that of 2007, which was mild.

Scientists are not yet capable of determining where the blooms will occur, but generally speaking, milder blooms do not extend as far east from the lake's western basin, where the problem is most severe, said Rick Stumpf an oceanographer with the National Oceanic and

Atmospheric Administration, who also spoke on the webinar.

While great strides were made decades ago to remove phosphorous from Lake Erie, it appears a major reason for the return of large blooms is an increase in the amount of dissolved phosphorous in the lake, said Peter Richards, a senior research scientist at Heidelberg University in Tiffin.

The reason for the increase is not clear, but it could have to do

with changes in the way farmers fertilize their fields, Richards said. Farmers aren't tilling their soil as much, which is a good thing because it reduces erosion and sediment runoff, but they appear to be spreading their fertilizer on the surface, which makes it more likely to run off into the lake.

This year's bloom prediction for western Lake Erie, produced by NOAA with help from other organizations, does not apply to smaller inland lakes, Stumpf said.

A Heidelberg study showed the amount of phosphorous that entered the lake during the April-through-June period was about 2.5 percent of last year's amount for the same period.

Meanwhile, a study by the University of Toledo detected concentrations of phosphorous in Maumee Bay at less than 10 percent of last year's levels, Reutter said, while further studies by the Ohio Sea Grant office and NOAA show similar concentrations in the open waters of Lake Erie.

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