

U.S. EPA should reject Ohio's flawed plan to fix Lake Erie's toxic algae crisis: Jeff Reutter

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In this Sept. 15, 2017, file photo, algae floats on the surface of Lake Erie's Maumee Bay in Oregon, Ohio. Ohio's latest plan for reducing the phosphorus runoff into western Lake Erie that feeds toxic algal blooms is inadequate and should be rejected by the U.S. EPA, writes guest columnist Jeff Reutter today. Reutter is the Ohio scientist who co-chaired the U.S.-Canadian task force that in 2015 recommended the state cut phosphorus runoff by 40%. Ohio is now under a consent decree requiring an action plan to reduce phosphorus runoff in the state. (AP Photo/Paul Sancya, File)AP

WESTERVILLE, Ohio -- Ohio, we have a problem. Year after year, the western basin of Lake Erie is plagued by toxic algae. Scientists – myself included – know what causes the problem and we know the solutions.

Right now, I believe the biggest problem is that the state of Ohio is not committed to preventing the overapplication of phosphorus on agricultural fields.

The green scum carpeting the Lake Erie water sometimes contains microcystin, a dangerous toxin that can cause liver damage and neurological impairments in humans, poison fish, and kill dogs and other animals that drink it.

Ohio [has been forced to develop a plan](#) to restrict the level of nutrient pollution entering the waterways that flow into Lake Erie and fuel the horrible algae blooms that have become far too common every summer.

Unfortunately, the pollution diet plan, or Total Maximum Daily Load (TMDL), that the Ohio Environmental Protection Agency submitted to the U.S. Environmental Protection Agency fails to address the main culprit feeding these toxic blooms: dissolved reactive phosphorus, or DRP. For that reason, I believe the plan is doomed to fail, and I urge the U.S. EPA to reject Ohio's plan and either tell the state to revise it or come up with a stronger one of its own that can fix this perennial crisis once and for all.

We know that a major source of DRP pollution is industrial factory farms in the Maumee River watershed that pack thousands of cows or hogs into small spaces. Those animals produce millions of gallons of feces and urine, and that untreated sewage is liquified and sprayed onto nearby crop fields as fertilizer. The land and crops can't absorb nearly enough of this sewage, and the excess flows off of fields or into underground drains that eventually make their way into the Maumee River and other tributaries that all flow into Lake Erie.

This isn't the first time algal blooms have blanketed Lake Erie. It happened in the 1970s, but government acted to improve sewage treatment and remove phosphorus from laundry detergent, and solved the problems.

But algal blooms, and DRP loads, started rising again in the mid-1990s, right around the time that factory farms and their liquid manure systems started popping up in the watershed.

Ohio created a Phosphorus Task Force to address the problem. I [co-chaired the team of scientists, who determined that we need to reduce DRP \(as well as total phosphorus\) by 40%](#) from 2008 levels to curb the blooms. And Ohio EPA studies showed that the DRP (and nitrogen) driving the blooms was coming from agriculture, not septic tanks, combined sewer overflows or lawn fertilizer.

But Ohio's current TMDL plan does not target DRP, does not attempt to identify problem fields with high concentrations of phosphorus, and does nothing to prevent manure application on fields that already have too much phosphorus.

Jeff Reutter, a longtime Ohio State University scientist, retired after many years leading OSU's Ohio Sea Grant and Stone Lab.

Without a focus on DRP reduction, prevention of the overapplication of manure, and identification of problem fields, I expect the plan to fail. In fact, the continued overapplication of manure, coupled with the addition of more animals to the watershed, should guarantee that the problem will get worse, not better.

Ohioans deserve a safe, clean Lake Erie. It is my hope that U.S. EPA rejects Ohio's plan and develops a better plan that addresses these shortfalls.

Jeff Reutter, Ph.D., worked at the Ohio State University for 47 years and was the director of Ohio Sea Grant and Stone Lab for 30 years, before retiring in 2017. He was the co-chair of the US and Canadian team of scientists that established the 40% phosphorus reduction targets for Lake Erie to address harmful algal blooms.