

Legal Tools for Addressing Harmful Algal Blooms

According to Ohio EPA's 2018 Nutrient Mass Balance Study, phosphorus loads from non-point sources (NPS) are the driving force behind western Lake Erie's harmful algal blooms. Recent studies have indicated that non-point sources are 88% of phosphorus load in the Maumee River, 89% in the Portage River, and 93% in the Sandusky River. Most of these NPS phosphorus inputs are agricultural in nature. While the Agenda for Lake Erie touches on the broad issues of water quality – from public drinking water to riparian setbacks – this section focuses on the legal and regulatory tools that are available to address the issue of harmful algal blooms, more specifically NPS, phosphorus, and agricultural pollution. Much of this short summary was taken from the report prepared by Jack Tuholske and Ken Kilbert and commissioned by the Lucas County Board of Commissioners.

The Clean Water Act

In 1972, Congress passed the Clean Water Act (CWA) with the goal to “restore and maintain the chemical, physical, and biological integrity of the Nation's waters”. The Act establishes the basic structure for regulating point source discharges of pollutants into the waters of the United States through the National Pollutant Discharge Elimination System (NPDES). This permitting program can be credited with the significant reductions in polluted discharges from industry, wastewater, and other pollution sources that enter water resources via a discrete point source. The NPDES program sets pollutant discharge limitations based on state and federal pollutant limits and water quality standards set by the state. Responsibility for implementation of the NPDES program is delegated to the state agencies, namely the Ohio EPA and Michigan DEQ in the TMACOG region.

While the CWA has been an effective tool for regulating point sources, it employs a less regulatory approach for addressing non-point source (NPS) pollution. While the CWA does not specifically define NPS, the term encompasses the wide-ranging sources of pollutants that do not fall under the definition of a point source. NPS is pollution that enters waterways by precipitation runoff over or through the ground and includes stormwater discharges associated with construction, industry, municipal separate storm sewer systems (MS4s), and agriculture. Amendments to the CWA in 1987 brought sweeping regulation of many types of stormwater through the NPDES program. However, stormwater discharges from crop production have been explicitly exempted from these stormwater regulations.

The Clean Water Act addresses agricultural NPS primarily through voluntary incentive programs, grants, technical support, and watershed planning and leaves the issue of compulsory regulation of non-point sources up to the states. As with the other CWA programs, state agencies are responsible for the implementation of much of the CWA NPS program. In Ohio these agencies are the Ohio Environmental Protection Agency (Ohio EPA), Ohio Department of Natural Resources (ODNR), Ohio Department of Agriculture (ODA) and Ohio Department of Health (ODH).

“The term ‘point source’ means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture”
– Clean Water Act Section 502



<https://www.epa.gov/cwa-404/clean-water-act-section-502-general-definitions>

Impairment and TMDLs

The Clean Water Act requires states to define water quality standards and compile data and information to assess the conditions of waterways within their borders. States need to report the status of waterbodies and identify waterbodies that do not meet water quality standards set by the state. Through an “Integrated Report” produced every two years, each state reports to U.S. EPA its Section 303(d) list of waterbodies it has designated as “impaired.” States then must conduct additional detailed assessments on impaired waterbodies to determine current levels of pollutant loads and determine the total maximum daily load (TMDL) for each such waterbody. A TMDL is the total amount of a pollutant that a waterbody can receive while still meeting water quality standards. Ultimately, a TMDL determines the pollutant load allocations for point sources and non-point sources and can serve as a planning tool for efforts to reduce pollution from both point sources and non-point sources. While TMDLs can be used by states as a justification to regulate non-point sources, the CWA does not give the federal government authority to regulate NPS and states are not required by the CWA to regulate NPS through enforcement of TMDLs.

Addressing Non-point Sources with the CWA

The CWA addresses NPS through incentives and voluntary programs administered by the states. Amendments to the CWA in 1987 established the Section 319 Non-point Source Management Program Section. This program provides federal leadership, funding, incentives, and technical assistance for state and local non-point source efforts. Since its inception, Section 319 has provided more than \$4 billion in federal funds and technical assistance to address issues of non-point source pollution. However, Section 319 lacks any type of regulatory mechanism and relies solely on voluntary participation. For states to receive 319 funding, they must compile a comprehensive strategy for implementing non-point source projects targeted at the causes and sources of watershed impairment. In Ohio, these plans are called Non-point Source Implementation Strategies (NPS-IS) or 9-element plans.

Legal Tools in the State of Ohio

	Impaired	Distressed
Law	CWA 303(d)	Ohio Administrative Code 901:13-1-20
Pollutants addressed	Pollutants determined to cause the impairment	Manure, nutrients, and sediments
Triggered action	Development of TMDL	Implementation of nutrient management plans
Regulatory authority	Ohio EPA, MDEQ	Ohio Department of Agriculture
Industries impacted	Any point source discharger to waters of the U.S. and many types of stormwater discharge	Agricultural operations in distressed watersheds



Water Quality Standards

Ohio EPA has defined “uses” that apply to waterbodies in Ohio and has applied criteria to determine if a waterbody is able to support those uses. If the waterbody cannot support its designated uses, it is considered “impaired.” These designated uses include:

- **Aquatic Life:** measured by a water body’s ability to support healthy fish and macroinvertebrate communities;
- **Human Health:** measured by the level of contaminants found in the tissues of fish that people use for food;
- **Recreation:** measured by a water body’s safety for swimming, boating and other recreation involving contact with water;
- **Public Drinking Water:** measured by a waterbody’s ability to provide safe drinking water with conventional treatment methods.

Distressed Watersheds

Although an impairment designation and a subsequent TMDL does not require states to regulate NPS, a State of Ohio “Distressed Watersheds Designation” can support state-level regulation over agricultural nutrient sources. The Distressed Watershed administrative rules developed in 2010 give the Director of Agriculture the authority to designate a watershed “in distress” based on several criteria including an Ohio EPA impairment designation due to nutrients, evidence that a waterway is a threat to public health, evidence of algal blooms, threats to public water supplies, evidence of contaminants in bathing waters, or nuisance conditions that impact aquatic life. A distressed designation triggers requirements for the storage, handling, and land application of manure, the control of sediments, and the development of nutrient management plans for agricultural operations within a designated watershed. The Ohio Soil and Water Conservation Commission (OSWCC), appointed by the governor, is the approving body for “Watershed in Distress” designations.

Below is a brief description of the role of state agencies in overseeing regulation and enforcement of the diverse activities that influence nutrient pollution.

Ohio Department of Agriculture

The Ohio Department of Agriculture Division of Soil and Water Conservation (DSWC) is charged with overseeing many of the agricultural activities that impact water quality in Lake Erie. In 2016, DSWC was transferred from the Department of Natural Resources (ODNR) to the Ohio Department of Agriculture (ODA) as directed by the 131st General Assembly in HB 64. At the same time, the powers and duties of the chief of the Division of Soil and Water Resources were delegated to the director of Agriculture. Through the Division of Soil and Water Conservation, the ODA also oversees the administration of the county Soil and Water Conservation Districts. However, decision-making and rulemaking is largely delegated to the seven-member Ohio Soil and Water Conservation Commission (OSWCC). The OSWCC is also the approving body for “Watershed in Distress” designations.

Among other regulatory programs, the ODA is responsible for regulation and enforcement of manure application to farm fields and the management of other residual farm products as defined in Chapter 939 of the Ohio Revised Code. Regulatory authority for concentrated animal feeding facilities (CAFFs) falls to the ODA. However, ODA does not regulate large concentrated feeding operations CAFOs that discharge to waters of the United States; those are regulated under an Ohio EPA NPDES permit. ODA, through the Soil and Water Conservation Districts, is also in charge of implementing the rules under “watersheds in distress” designations. Currently, only the Grand Lake St. Mary’s watershed falls under these rules, but a 2018 Executive Order by Governor John Kasich, if approved by a majority vote of the OSWCC, would also apply these rules to eight western Lake Erie basin watersheds.

ODA is responsible for the implementation of Senate Bill 1, passed by the Ohio General Assembly in 2015. This legislation places additional restrictions on nutrient applications in the western Lake Erie basin including restrictions on frozen or saturated soils, when rain is forecasted, or during winter months.

Ohio Environmental Protection Agency

The Ohio Environmental Protection Agency (Ohio EPA) is in charge of issuing and enforcing NPDES permits for wastewater, industry, stormwater, and other discharges to waters of the U.S. The agency also investigates and enforces rules related to illicit discharges and spills into waterways. Although Ohio EPA has very limited authority over most agricultural operations, the agency does hold permitting authority for some activities related to the operation of animal feeding operations. Concentrated Animal Feeding Operations (CAFOs)—that meet certain size thresholds—are required to obtain a NPDES permit through Ohio EPA if they discharge to waters of the U.S. Additionally, Ohio EPA holds regulatory authority over the use, storage, and land application of biosolids from wastewater treatment. While Ohio permits the land application of biosolids as a fertilizer, the standards are more stringent than the federal standards for biosolids and more stringent than Ohio’s standards for the land application of manure.

Ohio Department of Health

Home sewage treatment systems (HSTS) that discharge to surface waters are subject to regulation by the Ohio Department of Health (ODH) and the County Health Districts. Rules became effective in 2015 that prohibit the discharge of newly constructed HSTS to streams, rivers, ditches, ponds, lakes, tile drain, or other waterways. Under these rules, HSTS must also meet design and siting requirements to prevent surface and groundwater pollution and must be reviewed by local health districts. HSTS built prior to 2010 that do not create public health nuisances are exempted from these rules. While local health districts are charged with inspections of HSTS, ensuring operations and maintenance of existing systems, and reviewing site plans for new installations, Ohio EPA issues NPDES permits for newly installed systems.

Ohio Department of Natural Resources

Following the reassignment of the Division of Soil and Water Conservation to the ODA, the Ohio Department of Natural Resources (ODNR) was relieved of its responsibility for overseeing many aspects of agricultural activity impacting water quality and oversight of soil and water conservation districts. While ODNR no longer has the ability to assess penalties for manure application violations, the agency can assess penalties in the event that a release of pollutants kills fish or aquatic wildlife. In 2017, three separate manure applications before rain events killed 67,000 fish. After an investigation, ODNR assessed the offenders \$30,000 in fines.

Annex 4 of the Great Lakes Water Quality Agreement (GLWQA)

The Great Lakes Water Quality Agreement first signed in 1972 is a commitment between the United States and Canada to restore and protect shared water resources – the Great Lakes. The GLWQA is a binding agreement, but implementation of the agreement through legislation and rulemaking is up to each country and in the U.S. this responsibility falls heavily on Great Lakes states. The GLWQA includes ten annexes, which each focus on specific issues. The 2012 Annex 4 solidifies each country's commitment to reducing nutrient loadings into the Great Lakes, setting a target of a 40% reduction of phosphorus in Lake Erie by 2025. The state of Ohio's Domestic Action Plan lays out a strategy for meeting this target that involves the state agencies of Ohio EPA, ODNR, ODA, ODH, and coordinated by the Ohio Lake Erie Commission. The states of Michigan and Indiana have also developed their own state domestic action plans, which have been included along with Ohio's plan into a U.S. Action Plan for Lake Erie. These plans detail how existing regulatory programs can be used to work toward the 40% reduction goal. However, the plans themselves do not grant any additional regulatory authority to the states.

Resources

State of Ohio's Domestic Action Plan 1.1, August 2018

Tuholske, Jack and Kilbert, Kenneth, Moving Forward: Legal Solutions to Lake Erie's Harmful Algal Blooms (April 15, 2015).

