IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

THE BOARD OF LUCAS COUNTY COMMISSIONERS, et al., Plaintiffs, and LAKE ERIE WATERKEEPER, FOOD & WATER WATCH, AND WATERKEEPER ALLIANCE, INC. Plaintiff-Intervenors, vs. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Defendants, and OHIO ENVIRONMENTAL PROTECTION AGENCY Defendant-Intervenor.	Case No. 3:24-cv-00779 Judge Jeffrey J. Helmick

COMPLAINT

Introduction

1. Proposed Plaintiff-Intervenors Lake Erie Waterkeeper, Food & Water Watch ("FWW"), and Waterkeeper Alliance, Inc. ("Waterkeeper Alliance") bring this case to remedy Defendant United States Environmental Protection Agency's ("U.S. EPA") failure to comply with its mandatory legal duties under the Clean Water Act, 33 U.S.C. § 1251 *et seq*., to establish a Total

Maximum Daily Load ("TMDL") sufficient to remediate the phosphorus pollution impairing Ohio's Western Lake Erie Water Basin. The TMDL issued by Ohio Environmental Protection Agency ("Ohio EPA") and approved by U.S. EPA fails to meet the requirements of section 303(d) of the Clean Water Act, 33 U.S.C. § 1313(d), and applicable regulations, and most glaringly fails to meaningfully address the point source discharges of the watershed's many concentrated animal feeding operations ("CAFOs") as required by law. As such, the TMDL will not remove water quality impairments to drinking water, aquatic life, and recreation, nor prevent the severe and persistent harmful algal blooms ("HABs") plaguing western Lake Erie.

2. Lake Erie is an extremely important resource for the region, including for the people living in Indiana, Michigan, New York, Ohio, Pennsylvania, and Ontario and those who depend on clean water from the Niagara River, Lake Ontario, and the St. Lawrence River. Lake Erie itself provides drinking water for over 12.5 million people across the United States and Canada, and it is home to more consumable fish than all the other Great Lakes combined. The lake is also an economic engine, attracting visitors from around the world who use it for sailing, swimming, kayaking, and other recreational activities, as well as for shipping.

3. HABs are groups of cyanobacteria that produce cyanotoxins that present a risk to people, animals, aquatic ecosystems, the economy, drinking water supplies, property values, commercial and industrial fishing, and recreational activities like swimming. This includes serious threats to human health, such as illness, gastrointestinal distress (nausea), neurologic problems (dizziness), skin rashes, and other severe diseases that can result in neuro-, nephro- and hepatotoxicity depending on the cyanotoxin. *See Learn about Harmful Algae, Cyanobacteria and Cyanotoxins,* EPA (last visited November 25, 2024).[1]

[1] Available at https://www.epa.gov/habs/learn-about-harmful-algae-cyanobacteria-and-cyanotoxins.

4. Despite earlier success in reducing phosphorus pollution in Lake Erie, large HABs in western Lake Erie began to reappear in the mid-1990s and expand in the early 2000s, with dangerous production of cyanotoxins, due to high phosphorus loading caused primarily by manure and fertilizer management throughout the upland watershed that drains into the lake. The primary form of phosphorus causing Lake Erie's HABs is dissolved reactive phosphorus ("DRP").

5. Although significant HABs began to occur annually in the early 2000s, including a bloom that caused the 2014 Toledo water crisis where nearly 500,000 people lost access to drinking water, Ohio EPA and U.S. EPA have consistently failed to take actions necessary to control the sources of phosphorus pollution and prevent HABs, including actions mandated by the Clean Water Act. Water sampling data indicate that there has been no consistent reduction in DRP loading to western Lake Erie.

6. In 2015, the State of Ohio committed to reduce total phosphorus and DRP loads to Lake Erie by 40 percent from 2008 levels by 2025. WESTERN BASIN OF LAKE ERIE COLLABORATIVE AGREEMENT (2015) ("Collaborative Agreement"). Pursuant to Annex 4 of the Great Lakes Water Quality Agreement, in 2016, the U.S. and Canada called for a 40 percent reduction in total phosphorus loading to the Western Lake Erie Basin and a 40 percent reduction in spring total phosphorus and DRP loads from the Maumee River. *About the Nutrients Annex (Annex 4)*, EPA (last visited Dec. 3, 2024).[2] However, Ohio EPA did not list western Lake Erie as impaired under section 303(d) of the Clean Water Act—the first step toward initiating the Clean Water Act process reducing pollution loading and restoring water quality—until compelled by

[2] Available at https://www.epa.gov/glwqa/about-nutrients-annex-annex-4#:~:text=Under%20the%20Nutrients%20Annex%20(Annex,phosphorus%20reductions%20in%20each%20country.

litigation on May 4, 2018. *See* Letter from Tiffani Kavalec, Ohio EPA Div. of Surface Water Chief, to Peter Swenson, U.S. EPA Region 5 Watersheds and Wetlands Branch Chief (May 4, 2018).

7. As a result of this listing of the lake as impaired, the Clean Water Act requires Ohio to develop a TMDL for the Western Lake Erie Basin, which U.S. EPA must approve or disapprove. If U.S. EPA disapproves a TMDL, it must prepare the TMDL. *See* 33 U.S.C. § 1313.

8. Ohio EPA finally prepared a TMDL for western Lake Erie, known as the Maumee Watershed Nutrient TMDL ("Maumee TMDL"), to address the impairments and HABs in the Western Lake Erie Basin in June 2023. The stated goal of the Maumee TMDL is to restore beneficial uses of drinking water, aquatic life, and recreation in the following western Lake Erie assessment units: Lake Erie Shoreline, Open Water, and Islands of the Western Basin, through reductions in phosphorus loads delivered from the Maumee River watershed.

9. The Maumee River is the lake's largest direct tributary, drains a total of 5,024 square miles of land in Ohio, and contributes nearly 50 percent of the phosphorus loading to the lake. OHIO EPA, MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5 2 (2023). The Maumee TMDL only establishes targets and allocations for total phosphorus loading entering the lake from the Maumee River, not DRP.

10. Under the Clean Water Act, the TMDL must calculate the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will achieve and continue to meet water quality standards for that particular pollutant. Once a TMDL determines a pollutant reduction target necessary to meet water quality standards, it then allocates portions of the allowable load to all contributing point sources and nonpoint sources so that the appropriate pollution control actions can be taken to reduce the pollution load and achieve compliance with

the water quality standards. *See Overview of Total Maximum Daily Loads*, EPA (last visited November 22, 2024).[3]

11. The TMDL must characterize pollutant sources as either point sources that receive a mandatory wasteload allocation ("WLA") or nonpoint sources that receive a load allocation ("LA") achieved primarily through voluntary means. "For purposes of assigning WLAs, point sources include all sources subject to regulation under the National Pollutant Discharge Elimination System (NPDES) program, e.g. wastewater treatment facilities, some stormwater discharges and concentrated animal feeding operations (CAFOs)." *Id.*

12. A TMDL that sets a cap on the amount of total phosphorus and DRP loading to Lake Erie, and allocates a WLA for CAFOs that would serve as a basis for binding and enforceable limits on manure disposal practices and discharges, is key to restoring water quality of the lake. In 2022, U.S. EPA informed the Ohio EPA that it must establish WLAs for CAFOs, including their discharges through artificial subsurface drainage and groundwater where they are the functional equivalent of a direct discharge. *See* OHIO EPA, MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD (TMDL) PRELIMINARY MODELING – RESPONSE TO COMMENTS 5 (2022). Reversing course, U.S. EPA approved the Maumee TMDL on September 28, 2023, even though it treats all CAFOs as nonpoint sources and, as a result, does not require them to reduce their loading of phosphorus into the Maumee River and Lake Erie.

13. Ohio EPA has determined that 92 percent of the phosphorus discharged into the Maumee River annually comes from what it has deemed "nonpoint sources," primarily from

[3] Available at https://www.epa.gov/tmdl/overview-total-maximum-daily-loads-tmdls#:~:text=The%20objective%20of%20a%20TMDL%20is%20to%20determine,can%20be%20taken%20and%20water%20quality%20standards%20achieved.

agricultural sources including CAFOs and AFOs. MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 27.

14. The reappearance of large HABs in the Lake Erie Basin coincides with the emergence of CAFOs and AFOs in the watershed, which caused a dramatic increase in the number of livestock—an estimated 88 percent increase in animal units from 2002 to 2017—and a dramatic increase in the amount of manure applied to the land surface. Ohio EPA reports that, as manure phosphorus production increased in the watershed, commercial fertilizer use has decreased proportionally, and that "the proportion of total phosphorus load that is in the dissolved form has significantly increased" since the late 1990s. *Id*. at 3, 34.

15. CAFOs and AFOs apply manure on fields located throughout the watershed, often in excessive amounts well beyond crop nutrient requirements, resulting in discharges of phosphorus and other pollutants into the Maumee River, and ultimately Lake Erie, via runoff and and through groundwater, ditches, and artificial surface and subsurface tile drainage. To combat high seasonal water tables and poor natural soil drainage, artificial drainage is used throughout the agricultural lands that comprise at least 70 percent of the Maumee watershed, which includes 16,000 miles of drainage ditches used to drain the Great Black Swamp. MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 4, 7.

16. These artificial drainage structures are discrete conveyances that channel water, and any associated pollutants from CAFOs, into adjoining surface water bodies by design.

17. The TMDL will not adequately address CAFO discharges or ensure water quality standards are attained and maintained. This is, in large part, because it fails to establish a load limit and allocations for DRP, lacks an adequate Implementation Plan assuring the LAs and WLAs will

be achieved, and it fails to establish any WLAs for CAFOs that would actually require CAFOs to do anything to control or reduce their pollution.

18. In fact, Ohio EPA concluded in the TMDL that nearly all CAFO and AFO phosphorus pollution is "agricultural stormwater" exempt from NPDES regulation and thus "existing requirements regarding the management of CAFOs" would continue and "the majority of nonpoint source reductions remain voluntary." *Id.* at xxi. Attempting to justify this indefensible outcome, Ohio EPA employs the following circular logic: No CAFOs in the Maumee watershed are discharging pollutants that require a NPDES permit because no CAFOs in the Maumee watershed have NPDES permits that authorize the discharge of pollutants. *Id*.

19. There is no evidence in the administrative record to support Ohio EPA's conclusion that CAFOs' phosphorus discharges into the Maumee River are exempt from regulation under the Clean Water Act. The fact that no CAFO has obtained a NPDES permit just means their pollution discharges are illegal, not that their discharges do not exist or are exempt from permitting requirements. The Maumee TMDL misconstrues and misapplies the Clean Water Act agricultural stormwater exemption, ignores all discharges that are not "precipitation-related," disregards discharges through artificial drainage systems and groundwater, and provides no evidence that any CAFO pollution in the watershed qualifies for EPA's agricultural stormwater exemption. *See* 40 C.F.R. §§ 122.23(e), 122.42(e)(1)(vi)-(ix).

20. Under 40 C.F.R. § 130.2(i) and U.S. EPA Guidance, a TMDL must also include "reasonable assurances" demonstrating that planned efforts will sufficiently reduce phosphorus pollution to meet the overall phosphorus cap for western Lake Erie. The Maumee TMDL Implementation Plan is inadequate to provide "reasonable assurances" that target pollution loads necessary to attain and maintain water quality standards will be achieved as required by the Clean

Water Act and Ohio law. In essence, with regard to CAFOs and AFOs, the Implementation Plan is largely a recitation of existing and ongoing actions that have failed to achieve the needed phosphorus loading reductions and water quality outcomes for years. It does not provide any reasonable assurance that the LAs and WLAs will be achieved, that water quality standards will be attained and maintained, or that CAFO and AFOs phosphorus loadings will be reduced at all, let alone, to the level needed to restore and protect the Western Lake Erie Basin.

21. As explained in further detail below, the Maumee TMDL is inconsistent with the requirements of the Clean Water Act, Ohio law, and applicable regulations. As a result, the TMDL will not restore the beneficial uses of drinking water, aquatic life, and recreation or adequately control HABs in western Lake Erie. Among other deficiencies, the Maumee TMDL:

a. Improperly fails to address the largest sources of DRP and lacks loading limits for DRP that are necessary to adequately reduce the pollutant to the level required to attain and maintain water quality standards in western Lake Erie as required by 33 U.S.C. § 1313(d)(1)(C) and 40 C.F.R. § 130.7(c)(1)(ii);

b. Improperly categorizes all CAFO discharges, including discharges through discernible, confined and discrete conveyances, which are point sources under 33 U.S.C. § 1362(14), as nonpoint sources subject to LAs; fails to assign any mandatory WLAs to CAFOs that require reduction of their pollutant loading to the Maumee River and western Lake Erie through NPDES permits; and fails to adopt a load limit adequate to implement, attain, and maintain water quality standards as required by 33 U.S.C. §§ 1313(d)(1)(C) and 1342, 40 C.F.R. § 130.2(g)-(i), and 40 C.F.R. § 130.7(d)(2); and

c. Lacks an implementation plan adequate to provide "reasonable assurances" that target pollution loads necessary to attain water quality standards will be achieved as required by 33 U.S.C. § 1313(d)(1)(C), 40 C.F.R. § 130.2(i), and Ohio Admin. Code 3745-2-12(A)(2)(a)(iv)(f) and 3745-2-12(E)(3). According to U.S. EPA Guidance, this information is necessary for EPA to determine that the TMDL, including the LAs and WLAs, has been established at a level necessary to implement water quality standards. *See generally* U.S. EPA, GUIDANCE FOR THE IMPLEMENTATION OF WATER QUALITY-BASED DECISIONS: THE TMDL PROCESS 15 (1991); Memorandum from Robert Perciasepe, Assistant Adm'r, EPA, to Reg'l Adm'rs and Reg'l Water Div. Dirs. (Aug. 8, 1997); EPA, GUIDELINES FOR REVIEWING TMDLS UNDER EXISTING REGULATIONS ISSUED IN 1992 (2002) ("U.S. EPA Guidance").

22. Because the Maumee TMDL violates these and other legal requirements and, as a result, will not remediate Lake Erie's HABs, U.S. EPA's approval of the TMDL was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" in violation of the Administrative Procedure Act, 5 U.S.C. § 706(2)(A), and the Clean Water Act and its implementing regulations. 33 U.S.C. § 1313(d)(1)(C).

23. Plaintiff-Intervenors accordingly ask the Court to set aside U.S. EPA's approval of the Maumee TMDL and order Defendants to prepare a TMDL that both complies with the Clean Water Act and will assure that phosphorus loads, including from discharging CAFOs, are reduced to levels sufficient to attain and maintain water quality standards and remediate HABs in western Lake Erie.

Jurisdiction and Venue

24. This Court has jurisdiction because Plaintiffs-Intervenors are aggrieved by a final agency action subject to judicial review under the Administrative Procedure Act, 5 U.S.C. § 701, *et. seq.*

25. U.S. EPA's approval of the TMDL is a "final agency action" subject to judicial review under 5 U.S.C. § 704 because it: (1) is the consummation of U.S. EPA's decision-making process on the TMDL under 40 C.F.R. § 130.7; and (2) determines rights and obligations of the parties or causes legal consequences.

26. Plaintiff-Intervenors claim that U.S. EPA's approval of the TMDL was unlawful and should be set aside under 5 U.S.C. § 706(2)(A) because it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law." Specifically, Plaintiff-Intervenors claim that approval of the TMDL was contrary to law because the TMDL violated requirements in 33 U.S.C. §§ 1313(d)(1)(C) and 1342, 40 C.F.R. § 130.2(g)-(i), 40 C.F.R. § 130.7(c)-(d), Ohio Admin. Code 3745-2-12(C), Ohio Admin. Code 3745-2-12(A)(2)(a)(iv)(f) and 3745-2-12(E)(3), and U.S. EPA Guidance.

27. This court also has jurisdiction pursuant to 28 U.S.C. § 1331 because this is a civil action arising under laws of the United States.

28. A substantial part of the events or omissions giving rise to this case occurred on or near western Lake Erie, which is located in the Northern District of Ohio, making venue proper under 28 U.S.C. § 1391(e).

Parties

29. Plaintiff Lucas County Board is a body politic that, under Ohio Revised Code Section 305.12, can sue in its own name.

30. Plaintiff City of Toledo is a chartered municipal corporation located in Lucas County, Ohio, which operates under home-rule authority pursuant to Section 3, Article XVIII of the Ohio Constitution. The Charter of the City of Toledo, Chapter II, Section 8(b), provides the authority for the City to sue and be sued.

31. Plaintiff Environmental Law & Policy Center ("ELPC") is a Midwest-based not-for-profit public interest environmental advocacy organization dedicated to improving environmental quality and public health, including protecting the Great Lakes and other Midwest natural resources. ELPC's headquarters is in Chicago, Illinois, and ELPC has additional offices in Ohio, Iowa, Wisconsin, and Washington, D.C. ELPC members live, work, and play in and near Lake Erie and the other Great Lakes. They depend on clean water from Lake Erie as a source of drinking water, and they use and enjoy Lake Erie for its aesthetic and recreational value.

32. Plaintiff-Intervenor Lake Erie Waterkeeper is an Ohio non-profit corporation with approximately 200 members in Ohio, Michigan, Indiana, Pennsylvania, and Ontario, Canada, including members who live, work, own businesses and homes, farm, fish, and/or recreate in, on, or near the Maumee River and Lake Erie. Lake Erie Waterkeeper advocates for fishable, swimmable, drinkable water for Lake Erie and its watershed, with a focus on the reduction of phosphorus pollution in Lake Erie's tributaries and the prevention of nearshore algal blooms in Lake Erie, both of which harm Lake Erie Waterkeeper's members. Among other activities, Lake Erie Waterkeeper educates the public, litigates, and advocates to U.S. EPA, Ohio EPA, and other governmental entities about issues affecting water quality in the Lake Erie watershed, including advocating for the listing of Lake Erie on the Clean Water Act Section 303(d) list, commenting on the Maumee River TMDL, and addressing phosphorus pollution, algal blooms, and the inadequate regulation of pollution discharges from AFOs and CAFOs. Lake Erie Waterkeeper also helped to

coordinate local government efforts to advocate for the reduction of phosphorus loading in the Western Lake Erie Basin, including with the Toledo Metropolitan Area Council of Governments and eleven (11) local governments in the Lake Erie Watershed that each passed a resolution requesting that the Biden Administration issue a Lake Erie Executive Order to manage and account for progress in needed phosphorus reductions. Lake Erie Waterkeeper, Sandy Bihn, also served as an International Joint Commission ("IJC") Water Quality Board ("WQB") Member for nine years, and in that capacity, served as Project Lead for a 2019 Report to the IJC entitled *Oversight of Animal Feeding Operations for Manure Management in the Great Lakes Basin* that provided the WQB's recommendations on manure management for confined animal feeding operation practices and policies in the state and provincial jurisdictions in the Great Lakes, including priority actions for strengthening the governmental manure management/regulatory frameworks.

33. Plaintiff-Intervenor Food & Water Watch ("FWW") is a national nonprofit organization that mobilizes regular people to build political power to advance bold and uncompromised solutions to the most pressing food, water, and climate problems of our time. FWW uses grassroots organizing, media outreach, public education, research, policy analysis, and litigation to protect public health, the environment, and democracy from the destructive power of polluting, extractive industries. Addressing water quality impacts from CAFOs is central to FWW's mission and one of the organization's primary areas of focus. Since its founding in 2005, FWW has advocated for more stringent regulation of CAFO pollution at the state and national levels, campaigned for moratoria against new CAFOs, worked with sustainable and family-scale farmers to secure needed protections against anti-competitive consolidation and industrialization of livestock production, and compiled educational resources about pollution and other social harms associated with industrial agriculture and specifically the CAFO model of livestock production.

This work regularly involves engaging with state and federal agencies and communicating with FWW members about opportunities to get involved in administrative processes. FWW has more than one million members and supporters nationwide, including approximately 81,000 members and supporters residing in Ohio.

34. Plaintiff-Intervenor Waterkeeper Alliance, Inc. is a 501(c)(3) not-for-profit corporation organized under the laws of the State of New York dedicated to protecting and restoring water quality to ensure that the world's waters are drinkable, fishable, and swimmable. Waterkeeper Alliance unites and supports more than 15,000 individual supporting members, including 1,434 individual supporting members in Ohio, and 300 community-based Waterkeeper member and affiliate organizations around the world, including more than 150 member organizations in the United States (one of which is Co-Plaintiff-Intervenor Lake Erie Waterkeeper) that cumulatively have tens of thousands of individual members, many of which live, work and recreate on waterways and in watersheds across the country that are adversely impacted by pollution from AFOs and CAFOs. For the last two decades, Waterkeeper Alliance has advocated for implementation and enforcement of state and federal laws to control pollution from AFOs and CAFOs, and frequently engages in public education, trainings, advocacy, administrative proceedings, and litigation to support the many Waterkeeper member and affiliate organizations, our respective individual members, and their communities that are adversely impacted by AFO and CAFO pollution and the governments' failure to regulate and control that pollution as required by law.

35. Defendant U.S. EPA is an agency of the United States government. Among other responsibilities, U.S. EPA is responsible for overseeing and administering the development of TMDLs under 33 U.S.C. § 1313.

36. Defendant Lee Zeldin is the Administrator of U.S. EPA and is being sued in his official capacity. The U.S. EPA Administrator is responsible for overseeing the agency, including its implementation of the Clean Water Act and its decisions to approve or disapprove state TMDLs submitted under 33 U.S.C. § 1313. Plaintiff-Intervenors name Administrator Zeldin as a Defendant pursuant to 5 U.S.C. § 702 because they seek injunctive relief.

37. Defendant Anne Vogel is the Regional Administrator of U.S. EPA Region 5 (which includes Ohio, Michigan, Indiana, Illinois, Wisconsin, and Minnesota) and is being sued in her official capacity. The U.S. EPA Regional Administrator is responsible for overseeing Region 5 of the agency, including its implementation of the Clean Water Act and its decisions to approve or disapprove state TMDLs submitted under 33 U.S.C. § 1313. Plaintiff-Intervenors name Regional Administrator Vogel as a Defendant pursuant to 5 U.S.C. § 702 because they seek injunctive relief.

38. Defendant-Intervenor Ohio EPA is an agency of the Ohio government. Among other responsibilities, Ohio EPA is responsible for establishing and implementing TMDLs for waters the State has listed as impaired under 33 U.S.C. § 1313(d), including the Maumee TMDL.

The Clean Water Act

39. Congress enacted the Clean Water Act in 1972 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The statute aimed to make Americans' waters drinkable, fishable, and swimmable by 1983. 33 U.S.C. § 1251(a)(2). The Clean Water Act and its implementing regulations create a system of cooperative federalism under which U.S. EPA and the states share responsibility for achieving the law's statutory objectives, requirements, and goals.

NPDES Permits

40. The Clean Water Act prohibits any point source from discharging pollutants into waters of the United States without a National Pollutant Discharge Elimination System ("NPDES") permit. 33 U.S.C. § 1311(a).

41. The definition of "pollutant" includes "solid waste, . . . sewage, . . . biological materials, . . . and agricultural waste discharged into water." 33 U.S.C. § 1362(6).

42. "Discharge of a pollutant" means "any addition of any pollutant to" waters of the United States "from any point source." 33 U.S.C. § 1362(12).

43. "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." 33 U.S.C. § 1362(14) (emphasis added).

44. While the Clean Water Act gives U.S. EPA lead responsibility for the NPDES program, it allows most administrative functions to be delegated to states, subject to supervision by U.S. EPA. *See, e.g.*, 33 U.S.C. § 1342. Ohio is one of 47 states that administers its NPDES program pursuant to delegation from U.S. EPA. Ohio EPA is the Ohio agency charged with that administration.

Impaired Waters

45. The Clean Water Act requires states to establish "water quality standards" for all waters in its jurisdiction. 33 U.S.C. § 1313(c). Water quality standards consist of the designated uses of the water body (e.g., public water supply, recreation, habitat), criteria to protect those uses,

and an antidegradation policy. *See* 33 U.S.C. § 1313(c)(2); 40 C.F.R. §§ 131.6, 131.11, 131.12. The criteria can be expressed as numerical limits on the concentration of a pollutant, as narrative statements, or biomonitoring methods.

46. Every two years, states must identify waterbodies within their jurisdiction in which technology-based regulations and other required Clean Water Act controls are not stringent enough to meet the water quality standards. 33 U.S.C. § 1313(d); 40 C.F.R. § 130.7(b). These waters are known as impaired waters and the resulting list is referred to as the Clean Water Act Section 303(d) List of Impaired Waters ("303(d) List").

47. States must also prepare a "priority ranking" for impaired waters on the 303(d) List "taking into account the severity of the pollution and the uses to be made of such waters." 33 U.S.C. § 1313(d)(1)(A). The list must also "identify the pollutants causing or expected to cause violations of the applicable water quality standards" 40 C.F.R. § 130.7(b)(4).

48. Every two years, states must submit their 303(d) List, priority rankings for waters to receive TMDLs, and supporting documentation for approval to U.S. EPA. 40 C.F.R. § 130.7(b)(6). U.S. EPA may approve the 303(d) List "only if it meets the requirements of § 130.7(b)," including the requirement for the state to "assemble and evaluate all existing and readily available water quality-related data" to develop its impaired waters list. 40 C.F.R. § 130.7(b)(5).

TMDLs

49. TMDLs are the Clean Water Act's tool for reducing pollution into impaired water bodies so that they are no longer impaired and represent the maximum amount of a pollutant allowed to enter a waterbody so that it will meet and continue to meet water quality standards for a particular pollutant. TMDLs must determine a pollutant reduction target and then allocate load reductions necessary to the source(s) of that pollutant.

50. The Clean Water Act requires each state to establish a TMDL for the waters identified on its 303(d) List in accordance with the state's priority ranking, where the EPA Administrator has identified the pollutants under section 1314(a)(2) of the Clean Water Act as suitable for such calculation. 33 U.S.C. § 1313(d)(1)(C).

51. The Clean Water Act requires each TMDL to "be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." 33 U.S.C. § 1313(d)(1)(C).

52. According to U.S. EPA regulations, TMDLs must be established "for all pollutants preventing or expected to prevent attainment of water quality standards" identified on the 303(d) List. 40 C.F.R. § 130.7(c)(1)(ii). Additionally, "[f]or pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters." 40 C.F.R. § 130.7(c)(1).

53. TMDLs must also allocate the target pollution load between point sources and nonpoint sources. U.S. EPA regulations define a TMDL as "[t]he sum of the individual WLAs [wasteload allocations] for point sources and LAs [load allocations] for nonpoint sources and natural background." 40 C.F.R. § 130.2(i).

54. A "wasteload allocation" ("WLA") is "[t]he portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation." 40 C.F.R. § 130.2(h). Any NPDES permit for a

point source must include effluent limits "consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7." 40 C.F.R. § 122.44(d)(1)(vii)(B).

55. A TMDL's nonpoint source pollution targets are called load allocations ("LAs"), defined as "[t]he portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources." 40 C.F.R. § 130.2(g).

56. According to U.S. EPA regulations, "[i]f Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs." 40 C.F.R. § 130.2(i). However, in the absence of such a demonstration, TMDL cannot simply assign all or most of load reductions to nonpoint sources in the form of a LA. For example, dating back to 1991, U.S. EPA has issued public guidance documents regarding the implementation of the Clean Water Act, including CWA section 303, 33 U.S.C. § 1313, 40 C.F.R. § 130.2(i), and 40 C.F.R. § 130.7.

57. U.S. EPA Guidance requires each TMDL to include an implementation plan that provides "reasonable assurances that nonpoint source reduction will in fact be achieved;" otherwise, "the entire load reduction must be assigned to point sources." *See, e.g.*, GUIDANCE FOR THE IMPLEMENTATION OF WATER QUALITY-BASED DECISIONS: THE TMDL PROCESS, *supra*, at 15. U.S. EPA Guidance also states that, "before approving a TMDL in which some of the load reductions are allocated to nonpoint sources in lieu of additional load reductions allocated to point sources, there must be specific assurances that the nonpoint source reductions will in fact occur." *Id.* at 2.

58. U.S. EPA's 1999 *Protocol for Developing Nutrient TMDLs* requires that minimum submittal information for a nutrient TMDL include a detailed "implementation plan" if "necessary to provide reasonable assurance that the load allocations contained in the TMDL will be achieved." EPA, PROTOCOL FOR DEVELOPING NUTRIENT TMDLS 9-2 (1999). The same document describes "reasonable assurance" as "a high degree of confidence that wasteload allocations and /or load allocations in TMDLs will be implemented by Federal, State or local authorities and /or voluntary action. . . . For nonpoint sources, reasonable assurance means that nonpoint source controls are specific to the pollutant of concern, implemented according to an expeditious schedule and supported by reliable delivery mechanisms and adequate funding." *Id.* at 7-5.

59. According to U.S. EPA's 1992 Guidance, "[t]his information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards" as required by 33 U.S.C. § 1313(d)(1)(C). *See, e.g.*, GUIDELINES FOR REVIEWING TMDLS UNDER EXISTING REGULATIONS ISSUED IN 1992, *supra*, at 4.

60. Ohio regulations also require TMDLs to include an "implementation plan establishing specific actions, schedules and monitoring proposed to effectuate a TMDL." OHIO ADMIN. CODE 3745-2-12(A)(2)(a)(iv)(f) (2019). Ohio likewise requires the final implementation plan to include "reasonable assurances that water quality standards will be attained in a reasonable period of time." OHIO ADMIN. CODE 3745-2-12(E)(3) (2019).

61. States must submit all TMDLs to U.S. EPA for review. 33 U.S.C. § 1313(d)(2). U.S. EPA "shall either approve or disapprove" a TMDL "not later than thirty days after the date of submission." 33 U.S.C. § 1313(d)(2); 40 C.F.R. § 130.7(d)(2).

62. If U.S. EPA approves a TMDL, the state must incorporate its WLAs into point sources' NPDES permits. *See* 33 U.S.C. § 1313(d)(2), (4); 40 C.F.R. § 130.7(d)(2); 40 C.F.R. § 122.44(d)(1)(vii)(B).

63. If U.S. EPA disapproves a TMDL, the administrator "shall not later than thirty days after the date of such disapproval . . . establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such . . . establishment the State shall incorporate them into its current [water quality management] plan under subsection (e) of this section." 33 U.S.C. § 1313(d)(2); 40 C.F.R. § 130.7(d)(2).

Factual Background

Lake Erie Impairment

64. Western Lake Erie has suffered from recurring annual HABs for years. The current spate of large Lake Erie HABs began in the mid-1990s. HABs occur when waters become overloaded with nutrients, particularly nitrogen and phosphorus. The magnitude of the phosphorus loads determine the size and severity of HABs.

65. The "limiting nutrient" for cyanobacteria growth in Lake Erie is phosphorus, particularly DRP. Phosphorus is fully "bioavailable" to cyanobacteria in its dissolved form, known as DRP. Consequently, DRP loads drive HAB formation.

66. HABs are excessive growths of cyanobacteria (blue-green algae) that can coat surface waters in thick, odiferous scum, create taste and odor problems in drinking water, and produce powerful hepatotoxins, neurotoxins, cytotoxins, irritants, and gastrointestinal toxins, such as microcystins, saxitoxins, anatoxin-a and cylindrospermopsin. *See, e.g.*, Melissa Y. Cheung et al., *Toxin-Producing Cyanobacteria in Freshwater: A Review of the Problems, Impact on Drinking*

Water Safety, and Efforts for Protecting Public Health, 51 J. MICROBIOLOGY 1, 2 (2013). Several of these toxins "are among the most potent toxins known." *Id*. at 3 (internal citation omitted).

67. HABs also deplete dissolved oxygen levels and fuel the growth of toxic organisms, which can cause fish kills and mortality for aquatic life and wildlife. *Id*. HABs can also create significant negative economic impacts. *Id*. HABs also threaten the safety of drinking water supplies, animal welfare, and recreational waters. *See, e.g.*, *EPA Drinking Water Health Advisories for Cyanotoxins*, EPA (last visited Dec. 6, 2024).[4]

68. Lake Erie was plagued by annual HABs associated with municipal and industrial discharges, particularly phosphates from laundry detergents prior to the current crisis, but it was largely resolved subsequent to the passage of the Clean Water Act in 1972 and after the United States and Canada also entered into the Great Lakes Water Quality Agreement ("GLWQA").

69. In 1978, the United States and Canada agreed to reduce total phosphorus loading to 11,000 metric tons annually (a 60 percent reduction) in order to clean up Lake Erie. The target was met for the first time in 1981, largely through reducing pollution from wastewater treatment plants (which, in the United States, had to comply with NPDES permits), phasing out phosphates in laundry detergent and implementing BMPs on agricultural lands. HABs declined, Lake Erie's ecosystems began to recover, and the lake became known as the "walleye capital of the world."

70. In the mid to late 1990s, despite continuing these efforts, large toxic and nuisance HABs began reappearing in western Lake Erie. A particularly large HAB formed in 2003 and, since then, large HABs have occurred every year, typically forming in late spring/early summer but recently persisting into the fall. This HAB resurgence coincided with a major shift in livestock production to the CAFO model, which brought with it a dramatic increase in animal units located

[4] Available at https://www.epa.gov/habs/epa-drinking-water-health-advisories-cyanotoxins.

in the watershed and associated manure generated by the industry and applied to lands in the watershed.

71. The 2014 HAB was particularly costly and dangerous. The algal toxin microcystin got into one of Toledo's drinking water intakes, causing the City to issue a drinking water advisory. Nearly 500,000 people lost access to safe drinking water for more than two days. The governor declared a state of emergency and deployed the National Guard to truck in bottled water for residents to drink and cook with.

72. Western Lake Erie's HABs are enormous and persistent. In 2023, for example, Lake Erie suffered a "moderately severe" microcystin bloom, which covered 312 square miles and lasted from July 4th until mid-October. *See 2023 Lake Erie Algal Bloom More Severe than Predicted by Seasonal Forecast*, NAT'L CTRS. FOR COASTAL OCEAN SCI. (Nov. 2, 2023). HABs in the Western Basin of Lake Erie can also flow east to the Central Basin and this process depletes dissolved oxygen levels, creating an annual hypoxic "dead zone" in the Central Basin.

73. Of all tributaries flowing into western Lake Erie, the Maumee River contributes the most phosphorus by far. Although it contributes only around 5 percent of the water flowing into western Lake Erie, the Maumee River contributes nearly 50 percent of the total phosphorus load. The Maumee River forms at the confluence of two rivers in Fort Wayne, Indiana and then flows through agricultural land in northwest Ohio before entering metropolitan Toledo and discharging to Lake Erie through Maumee Bay. Roughly 73 percent of the Maumee watershed is in Ohio.

74. According to Ohio EPA, 92 percent of the phosphorus loads into the Maumee River come from nonpoint sources, primarily agriculture. This pollution happens when manure and other livestock waste, or synthetic fertilizer, are discharged to surface waters by running off of crop fields or through ditches and other artificial drainage pathways, such as surface and subsurface tile

drainage systems, most significantly where AFOs and CAFOs have applied or are continuing to apply manure in excess of crop nutrient requirements for phosphorus.

75. HABs continue to occur annually in the Western Lake Erie Basin during the spring, summer, and fall seasons, in large part because Ohio has continued to allow the number of AFOs and CAFOs, and thus land application untreated manure, to increase in the watershed, and its largely voluntary actions to control pollution discharges from AFOs and CAFOs, which form the primary basis of the Maumee TMDL's Implementation Plan, are not controlling or preventing those discharges.

Great Lakes Water Quality Agreement, Annex 4

76. In 2012, the United States and Canada tried to address the HAB resurgence by amending the Great Lakes Water Quality Agreement to include Annex 4, which addresses nutrient pollution.

77. Annex 4 created an "Objectives and Targets Task Team" ("Task Team") to set new phosphorus loading targets for Lake Erie to control HABs. The Task Team co-chair was Dr. Jeffrey Reutter, then Director of Ohio Sea Grant (a research program within Ohio State University ("OSU") focused on the health of Lake Erie) and OSU's Stone Lab.

78. The Task Team released a report titled *Recommended Phosphorus Loading Targets for Lake Erie* on May 11, 2015 ("Task Team Report"). The Task Team Report set loading targets equivalent to a 40 percent reduction from 2008 load levels in metric tons from the Maumee River for two types of phosphorus: DRP and total phosphorus.

79. DRP refers to dissolved reactive phosphorus. Total phosphorus refers to DRP plus phosphorus attached to sediment or soil particles, known as particulate phosphorus ("PP"). DRP typically comprises 10-30 percent of the total phosphorus in the Maumee River, but, as explained

below, it is the primary driver of HABs. *See* Nate Manning & Laura Johnson, *Phosphorus Loads and Concentrations from the Maumee River*, U. WINDSOR (last visited Dec. 4, 2024).[5]

80. Because phosphorus load levels can vary widely based on the volume of water entering Lake Erie (which is heavily driven by precipitation), the Task Team also identified target concentrations for DRP and total phosphorus that adjust for flow (flow-weighted mean concentration or "FWMC") and correspond with the metric ton reduction targets. The Task Team recommended that FWMC be used to track progress toward achieving the Task Team's targets.

81. The Task Team Report repeatedly emphasized the need for separate loading targets for total phosphorus and DRP. It explained that DRP is "the most important target for reduction" because it is 100 percent bioavailable to cyanobacteria, while PP is only 25-50 percent bioavailable. OBJECTIVES AND TARGETS TASK TEAM, ANNEX 4, RECOMMENDED PHOSPHORUS LOADING TARGETS FOR LAKE ERIE 2 (2015).

82. The Task Team Report recognized that total phosphorus loads declined before HABs re-emerged in the mid-1990s and had since shown "no clear trends in total phosphorus concentrations or loads;" by contrast, the Task Team report DRP concentrations and loads rose sharply (by approximately 150 percent) beginning in the mid-1990s through 2015. RECOMMENDED PHOSPHORUS LOADING TARGETS FOR LAKE ERIE, *supra*, at 16.

83. Total phosphorus reductions can be driven entirely by reductions in PP, but those will not, on their own, reduce HABs; DRP loads must also come down. The divergent trends in total phosphorus and DRP loading reflect the fact that measures for reducing PP often do not work, or are even counterproductive, in reducing DRP. For instance, reducing or eliminating agricultural

[5] Available at https://www.uwindsor.ca/glier/422/phosphorus-loads-and-concentrations-maumee-river.

tillage can minimize erosion and PP loss, but the same practice increases the accumulation of phosphorus in the uppermost layers of soil and can accelerate DRP loss.

84. Shortly after release of the Task Team Report in June 2015, the Governors of Michigan and Ohio and the Premier of Ontario signed the Collaborative Agreement committing to achieve the Task Team's 40 percent reduction targets for total phosphorus and DRP by 2025, with an interim goal of a 20 percent reduction by 2020. The United States and Canada adopted the Task Team targets in February 2016. And, in June 2019, Ohio Governor Mike DeWine re-committed the State of Ohio to reducing its phosphorus loads into Lake Erie by 40 percent by 2025.

Failure to Meet Annex 4 Targets

85. The State of Ohio has made virtually no progress toward meeting its Annex 4 commitments.

86. The U.S. Geological Survey has a gauging station in the Maumee River at Waterville, Ohio, just upstream of metropolitan Toledo. Pollutant levels at Waterville identify phosphorus loads coming from the Maumee River. Waterville monitoring station data demonstrate yearly fluctuations but no trending decrease in the flow-weighted mean concentration of DRP. Ohio still has not met its interim goal of a 20 percent phosphorus reduction (which it was supposed to do in 2020) and is far from meeting its commitment to reduce phosphorus loads by 40 percent by 2025.

87. Ohio's failure to reduce phosphorus loads has not resulted from a failure to spend money. Ohio established the H2Ohio program in 2019. Since 2020, H2Ohio has been allotted over $400 million, a significant portion of which has been spent or targeted for unaccountable voluntary conservation efforts in the western Lake Erie watershed — purportedly to reduce agricultural phosphorus pollution, however, there is no documentation of the effectiveness of these practices

in reducing phosphorus loading to western Lake Erie. *See Annual Reports*, H2OHIO (last visited Dec. 4, 2024).[6]

88. These voluntary conservation efforts largely rely on paying farmers to adopt so-called "best management practices" or "BMPs," but the practices are not specifically targeting the largest sources of DRP and have not effectively reduced DRP. Ohio also fails to measure BMP effectiveness by testing the soils and water; instead, the state relies on unsupported formulas that presume phosphorus loss reduction without measuring if any reductions are achieved.

89. With pollution from upstream agriculture continuing unabated, downstream communities—especially the City of Toledo—have been forced to both live with annual HABs and spend enormous sums of public funds trying to address their consequences. Since 2014, the City of Toledo has spent $490.4 million to upgrade its drinking water treatment plant in part to improve its treatment of HAB toxins. The City has also incurred substantial additional costs to upgrade other systems to address the HAB crisis.

Animal Feeding Operations

90. The resurgence of HABs in Lake Erie coincided with a major change in livestock agriculture. For generations, livestock were raised on traditional, diversified farms with relatively small numbers of animals. These farms kept animals on pasture and balanced nutrient intake (grazing) with output (manure).

91. In the 1990s, these diversified farms began to be replaced by a smaller number of much larger, industrial-scale confined feeding operations. These operations generate far more nutrients in manure and other waste than is needed for crop fertilization on surrounding lands.

[6] Available at https://h2.ohio.gov/track-our-progress/annual-reports.

92. As the United States Department of Agriculture ("USDA") recognizes, these are not farms in the traditional sense—they are "large industrialized livestock operations." *See* JAMES M. MACDONALD & WILLIAM D. MCBRIDE, USDA, THE TRANSFORMATION OF U.S. LIVESTOCK AGRICULTURE: SCALE, EFFICIENCY, AND RISKS 36 (2009).

93. Most AFOs and CAFOs in the Lake Erie watershed are located in the western portion of the watershed, in Indiana, Michigan, and Ohio. There are now more than 2,500 animal feeding operations in the Western Lake Erie watershed, which together confine about 400,000 cows, 1.8 million pigs, and nearly 24 million chickens and turkeys. *See* Ethan Bahe et al., *EWG Analysis: In the Western Lake Erie Basin, Newly Identified Animal Feeding Operation Hot Spots Produce Excess Manure, Threatening Waterways and Human Health*, ENV'T WORKING GRP. (July 28, 2022).[7] It is estimated that over 2,200 of the animal feeding operations in the Western Lake Erie Basin are completely unpermitted, either through federal or state permitting systems. *Id*.

94. The Ohio Department of Agriculture estimates that between 2002 and 2017, the number of animal units in the Maumee watershed, which makes up just part of the western Lake Erie watershed, increased by 88 percent. MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 33. Between 2005 and 2018, the number of CAFOs and AFOs increased from 545 to 775—a 42 percent increase—and it is estimated that the amount of manure produced and applied to farmland in the watershed swelled from 3.9 million tons each year to 5.5 million tons—increasing the amount of phosphorus added to the watershed from manure by 67 percent. *See Explosion of Unregulated Factory Farms in Maumee Watershed Fuels Lake Erie's Toxic Blooms*, ENV'T WORKING GRP. (April 2019).

[7] Available at https://www.ewg.org/research/ewg-analysis-western-lake-erie-basin-newly-identified-animal-feeding-operation-hot-spots.

95. According to the Maumee TMDL, there are only 73 CAFOs—what Ohio refers to as concentrated animal feeding facilities, or "CAFFs"—that have obtained state law Permits to Install and Permits to Operate from the Ohio Department of Agriculture. Not a single CAFO in the Ohio portion of the Maumee River watershed has obtained a Clean Water Act NPDES permit. The Maumee TMDL lacks any significant, meaningful information about the more than 700 other CAFOs and AFOs in the watershed.

96. Under the Clean Water Act, industrial livestock operations are known as Animal Feeding Operations or "AFOs." U.S. EPA regulations define AFOs as facilities where animals are confined for more than 45 days per year and where crops are not grown on site. 40 C.F.R. § 122.23(b)(1).

97. The largest and/or most polluting AFOs are defined as Concentrated Animal Feeding Operations or "CAFOs." "Large CAFOs" are AFOs with the equivalent of at least 700 mature dairy cows, 2,500 swine, or 125,000 chickens. 40 C.F.R. § 122.23(b)(2), (4). Smaller AFOs can be regulated as "CAFOs" in certain circumstances related to their pollution discharges. 40 C.F.R. § 122.23(b)(6), (9). The Clean Water Act's definition of "point source" expressly includes "concentrated animal feeding operations." 33 U.S.C. § 1362(14).

98. Because AFOs concentrate so many animals in a relatively small space, they also concentrate enormous amounts of manure and other waste, including urine and wastewater from cleaning animal confinement areas. As of 2012, Large CAFOs in the United States produced more than 20 times the volume of fecal wet mass produced by all of the country's humans. Livestock concentration—with fewer farms raising more animals—has increased since 2012, both in Ohio and nationwide.

99. Unlike diversified family-scale farms, which typically manage sustainable amounts of manure in its natural form, AFOs and CAFOs produce large volumes of manure in a more concentrated geographical area typically in proximity to other similar facilities leading to an overabundance of waste in relation to available land. Dairy and swine AFOs and CAFOs in the western Lake Erie watershed generate vast quantities of liquefied manure and other waste, which they store in concrete pits or in open cesspits called "lagoons." AFOs, CAFOs, or third-party transferees dispose of this waste by applying it to crop fields, ostensibly as fertilizer.

100. While manure nutrients can help fertilize crops, they become pollutants if they leave the field and get into surface waters. Other components of AFO and CAFO waste, such as cleaning chemicals, antibiotics, and *E. coli*, can likewise contaminate surface waters.

101. When AFOs and CAFOs land apply untreated manure in the western Lake Erie watershed, pollutants, including phosphorus, are discharged into the surface waters, including the Maumee River and its tributaries.

102. First, AFO manure routinely gets overapplied. Transporting waste is costly and hauling costs can exceed fertilizer value when the waste is required to be hauled to another location. As a result, agricultural fields near AFOs typically receive far more nutrients than crops need. This is particularly true for phosphorus, which accumulates in soil, and is then more likely to run off field edges, be conveyed through ditches, or escape through tile drains.

103. The largest total phosphorus source contribution identified in the Maumee TMDL is from soil sources. *See* MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 39, 42. Ceasing land application of phosphorus on fields with excessive soil phosphorus levels and reducing soil phosphorus content through crop removal is central to significantly reducing phosphorus discharges from these fields.

Indeed, even Ohio EPA found in 2019 that reducing land application quickly caused a dramatic 29 percent reduction in DRP loads—after excessively wet conditions resulted in unplanted and unfertilized row crops. *See id.* at 42.

104. Second, pollutants from land-applied liquid AFO and CAFO waste get directly discharged to surface waters through the human-made conveyance systems that provide artificial drainage for agricultural fields, including the extensive network of ditches and subsurface or "tile" drainage systems that pervade the western Lake Erie watershed—even when waste is applied according to crop recommendations.

105. Much of the Maumee/western Lake Erie watershed was originally a swamp and, to make the land dry enough for agriculture, now has over 16,000 miles of ditches (which drained the Great Black Swamp starting in the 1850s) and an extensive number of surface and subsurface tile-drained fields. Tile drainage covers at least 86 percent of the agricultural lands in the Maumee River watershed, including subsurface drains that are estimated to underlie more than 50–80 percent of agricultural lands. These artificial drainage systems intentionally channel water away from agricultural fields and discharge it, along with any pollutants added to it by an AFO or CAFO, into the Maumee River and its tributaries. According to the Maumee TMDL, an increase in tile drain coverage coincides with increases in DRP loading to the Maumee River that started in the mid-1990s. *See* MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 42.

106. Tile drainage is particularly effective in the western Lake Erie watershed because the soils are pervasively cracked and fractured. These cracks and fractures, as well as earthworm burrows, create "preferential flow paths" for liquid to quickly flow down into tile systems.

107. When applied to tiled fields, liquid AFO and CAFO waste behaves exactly like water: some portion of it, including DRP and other dissolved contaminants, travels quickly through preferential flow paths down into tile systems, which discharge into surface waters.

108. Standard best management practices—which are designed to address overland flow—do not prevent discharges of dissolved contaminants through ditches and tile systems in the western Lake Erie watershed. For example, buffer strips—vegetated areas at the edge of crop fields—can slow overland runoff but do not stop pollutants from infiltrating the soil and getting into tile systems.

109. These ditch and tile drainage systems help to explain why DRP loads into western Lake Erie began spiking in the 1990s, which was the same time that AFOs and CAFOs began proliferating in the watershed and applying liquid waste to tiled fields. Extensive additional evidence links AFOs and CAFOs to DRP pollution in the watershed, including water testing data and upstream-downstream studies.

Failure to Comply with Clean Water Act Requirements to Reduce Lake Erie HABs

110. U.S. EPA and Ohio EPA have consistently failed to take the necessary steps to clean up HABs in western Lake Erie as the Clean Water Act requires, prompting a series of lawsuits and decisions from this Court forcing the agencies to take required actions.

111. The Clean Water Act requires states to submit Integrated Reports to U.S. EPA every two years. These documents assess water bodies for impairment and rank impaired waters for receipt of TMDLs based on "the severity of the pollution and the uses to be made of such waters." 40 C.F.R. § 130.7(b)(4)-(5).

112. Notwithstanding this statutory requirement and U.S. EPA's specific direction to do so, Ohio refused to assess the open waters of Lake Erie for impairment in its 2012, 2014, and 2016

Integrated Reports. U.S. EPA nonetheless approved Ohio's 2012 and 2014 Integrated Reports and then failed to approve or disapprove Ohio's 2016 Report within the statutory time period. That failure prompted Plaintiff ELPC to file its first lawsuit against the agency (3:17-cv-01032) on May 17, 2017, to require U.S. EPA to act. Two days later, U.S. EPA formally approved Ohio's 2016 Integrated Report.

113. On July 18, 2017, Plaintiff ELPC filed its second case, *ELPC v. U.S. EPA* (N.D. Ohio) (No. 3:17-cv-01514). ELPC claimed that U.S. EPA's approval of Ohio's 2016 Integrated Report was arbitrary and capricious and contrary to law in violation of the Administrative Procedure Act because Ohio had refused to assess Lake Erie for impairment as required by 40 C.F.R. § 130.7(b)(5). Judge Carr issued an Opinion and Order in that case carefully describing "Ohio's Noncompliance [w]ith the CWA" between 2012 and 2016. *See ELPC v. U.S. EPA*, No. 3:17CV01514, 2018 WL 1740146, at *5-7 ECF No. 29 (N.D. Ohio Apr. 11, 2018) ("2018 Opinion"). The 2018 Opinion further describes both Ohio EPA and U.S. EPA's response to the case as "legal maneuvering," including conduct by U.S. EPA that Judge Carr said created a "whiff of bad faith." 2018 Opinion at 22, 16 n.8. After Judge Carr called out the agencies' misconduct, Ohio finally assessed western Lake Erie as impaired in an "amended" 2016 Integrated Report, which U.S. EPA approved.

114. Having been effectively forced to list Lake Erie as impaired, the agencies began resisting the next steps required by the Clean Water Act to remediate the impairment: properly ranking Lake Erie for receipt of a TMDL and then establishing the TMDL.

115. Ohio's 2018 Integrated Report designated multiple Lake Erie assessment units as impaired and gave them high priority scores. At the same time, the 2018 Integrated Report gave Lake Erie a "low" priority ranking for developing a TMDL. Ohio EPA said that instead of a

TMDL, it would pursue vaguely defined alternative approaches to restoring Lake Erie and refused to commit to establishing a TMDL even if the alternatives failed. U.S. EPA nonetheless approved Ohio EPA's 2018 Integrated Report.

116. Plaintiff ELPC filed its third case on February 7, 2019, *ELPC v. U.S. EPA* (N.D. Ohio) (No. 3:19-cv-00295). Plaintiff Board of Lucas County Commissioners then filed a parallel case with identical claims (No. 3:19-cv-00873), and Judge Carr consolidated the two cases.

117. U.S. EPA moved to dismiss Plaintiffs' claims. In an Opinion and Order dated November 13, 2019, Judge Carr denied the motion, holding that "Ohio EPA is essentially delaying, and intends to continue to delay indefinitely, a TMDL for Western Lake Erie in favor of alleged half measures [and] does not have a plan to change course should those measures fail to remediate Lake Erie." *ELPC v. U.S. EPA*, 415 F. Supp. 3d 775, 793, ECF No. 34 (N.D. Ohio 2019).

118. At Judge Carr's encouragement, the parties mediated their dispute before Judge Dan Polster of the Eastern Division of this Court. The parties ultimately agreed to a consent decree setting a schedule for completion of a western Lake Erie TMDL: Ohio was to release a draft TMDL for public comment by December 31, 2022, and submit a final TMDL to U.S. EPA by June 30, 2023. U.S. EPA would then have 90 days to approve or disapprove Ohio's submission, and a total of six months from submission to establish its own TMDL in the event of disapproval.

119. Judge Carr entered the consent decree on May 4, 2023.

Maumee Watershed Nutrient TMDL

120. As the Consent Decree was being finalized, Ohio EPA worked to complete the Maumee TMDL. Ohio EPA released several preliminary documents for public comment—including a "Loading Analysis Plan"—leading up to release of the full Draft TMDL for public comment on December 30, 2022. In addition to commenting on other TMDL-related actions, Lake

Erie Waterkeeper filed comments on the Draft TMDL on March 8, 2023, and identified, among other things, the lack of adequate reasonable assurances and margin of safety required by the Clean Water Act, failure to place load limits on DRP separate from total phosphorus, and failure to establish WLAs for livestock manure. Ohio EPA submitted its final Maumee TMDL to U.S. EPA on June 30, 2023, without addressing those concerns.

121. The Maumee TMDL aims to reduce phosphorus loading from the 2008 baseline of roughly 2.5 million pounds per year (1,128 metric tons) by roughly 1.0 million pounds per year (463 metric tons including a margin of safety). Ohio EPA allocated 98.92 percent of the load reductions, roughly 458 metric tons, to nonpoint sources, including CAFOs and AFOs. *See* MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 121–122. To achieve that reduction, Ohio EPA provided nothing more than descriptions of its plans to continue existing and ongoing actions that have not only failed to reduce phosphorus loading, but have actually contributed to the ongoing HABs in western Lake Erie.

122. With regard to AFOs and CAFOs, rather than establishing WLAs and reasonable assurances to reduce these facilities' phosphorus discharges, the Maumee TMDL utterly failed to move beyond the half measures Judge Carr rejected in the November 13, 2019 Opinion and Order. As when Ohio EPA attempted to rely on its existing, ineffective efforts to address CAFO and AFO pollution to evade its obligation to adopt a TMDL, under the Maumee TMDL, Ohio EPA simply describes its existing programs and activities that apply to AFOs and CAFOs, claims that none of these facilities discharge pollution that requires a NPDES permit, and lumps all the AFOs, CAFOs, and actual nonpoint sources together under a largely voluntary LA that simply continues the

"existing requirements regarding the management of CAFOs." MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at xxi.

123. The Maumee TMDL contains three critical defects that both violate the Clean Water Act and ensure that the TMDL will not sufficiently reduce phosphorus to remediate western Lake Erie's impairment.

1) The Maumee TMDL Fails to Target Reduction of the Largest Sources of Phosphorus Loading and Fails to Establish DRP Loading Limits Necessary to Implement, Attain, and Maintain Water Quality Standards and Remediate HABs

124. The Maumee TMDL acknowledges that DRP is "the main driver of Western Basin of Lake Erie HABs" and that reducing DRP loads by at least 40 percent is necessary to remediate Lake Erie. MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 71.

125. The Maumee TMDL does not, however, set limits for DRP. Instead, it sets a limit only for total phosphorus, equivalent to a 40 percent reduction from 2008 levels.

126. Additionally, in the Maumee River watershed, the presence of upstream AFOs has been determined to significantly increase instream DRP levels, and stream reaches with relatively larger increases in upstream livestock concentration and intensity (higher number of animal units and more manure production) experience significantly higher concentrations of DRP. *See* Andrew Meyer et al., *Remotely Sensed Imagery Reveals Animal Feeding Operations Increase Downstream Dissolved Reactive Phosphorus*, 60 J. AM. WATER RES. ASS'N 1, 1 (2023). For example, the average upstream animal feeding operation in the watershed increases downstream DRP concentrations by between 10 percent and 15 percent. *Id*.

127. Based on these findings, researchers concluded that permitting and identifying these AFOs, including AFOs that meet the definition of a CAFO under the Clean Water Act, is important for controlling runoff and "correctly attributing the causes of excess nutrients in surface

water bodies." *Id*. Despite this, the TMDL does not establish any loading limits that will ensure any reductions in the DRP loading from AFOs and CAFOs, and it does not target the areas with significantly higher DRP concentrations.

128. That failure to set DRP limits and to address the largest sources of DRP violates the Clean Water Act. TMDLs must "be established at a level necessary to implement the applicable water quality standards," 33 U.S.C. § 1313(d)(1)(C), and "at levels necessary to attain and maintain the applicable narrative and numerical WQS." 40 C.F.R. § 130.7(c)(1). As the TMDL document recognizes, "implementing applicable water quality standards" in Lake Erie requires a 40 percent reduction in DRP loads. That means the TMDL must be "established at a level necessary" to achieve a 40 percent DRP reduction.

129. The Maumee TMDL violates that requirement because it sets no limit at all for DRP, which is the pollutant driving HAB formation, and it fails to address the largest sources of DRP loading. Instead, it requires only a 40 percent reduction in total phosphorus and allows the DRP loading from AFOs and CAFOs to continue unabated.

130. Additionally, reducing total phosphorus by 40 percent will not reduce DRP loads by that amount. Because DRP comprises only between 10–30 percent of total phosphorus with PP making up the rest, Ohio could reduce total phosphorus loads by 40 percent solely by reducing PP. Such a total phosphorus reduction would leave DRP loads (and therefore the extent of HABs) unchanged.

131. Because the Maumee TMDL sets no DRP limits, it is not "established at a level necessary" to clean up the HABs, attain and maintain water quality standards, and comply with the Clean Water Act. 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.7(c)(1).

132. Because total phosphorus and DRP are different pollutants, the TMDL's failure to set DRP limits also violates U.S. EPA regulations, which state that "TMDLs shall be established for *all* pollutants preventing or expected to prevent attainment of water quality standards." 40 C.F.R. § 130.7(c)(1)(ii) (emphasis added).

133. Dr. Jeffrey Reutter, who co-led the Task Team that set the 40 percent reduction targets, filed extensive comments during the Maumee TMDL development process explaining why it was necessary for Ohio EPA to set DRP limits.

134. In his comments on the Loading Analysis Plan (submitted on October 21, 2021), Dr. Reutter said that setting a limit only for total phosphorus would be a "huge mistake." He emphasized that there was "complete agreement [among the Task Team] that DRP was by far the most important component, and increases in DRP loading were driving HABs" and that "[a]chieving only the [total phosphorus] goal will not" remediate Lake Erie.

135. Dr. Reutter's later comments on the Draft TMDL, dated March 5, 2023, were even more pointed. He said that if Ohio EPA insisted on setting targets only for total phosphorus, "the TMDL is doomed to failure, and we should not even waste the money to do it." Dr. Reutter explained that "[o]ur efforts to only monitor and control TP loading had allowed DRP to surge and cause the crisis."

2) The Maumee TMDL Fails to Assign Wasteload Allocations to Discharging CAFOs

136. A TMDL must assign WLAs to all discharging point sources. 40 C.F.R. § 130.2(h). CAFOs are included in the Clean Water Act's definition of "point source." 33 U.S.C. § 1362(14). Consequently, if CAFOs discharge pollutants to waters of the United States, they must receive WLAs in a TMDL.

137. The Maumee TMDL recognizes that there are at least 73 Large CAFOs in the Maumee River watershed in Ohio, and it is estimated that there are more than 700 other AFOs and

CAFOs in the watershed. The Maumee TMDL does not, however, assign WLAs to any of these CAFO or AFOs. Instead, the Maumee TMDL improperly treats all CAFOs and AFOs as nonpoint sources subject to a single "landscape" LA for nonpoint sources. The Maumee TMDL defends this approach by insisting that no CAFOs in the watershed are discharging point sources under the Clean Water Act on two equally unsupportable grounds: (1) that no CAFOs in the Maumee River watershed require NPDES permits simply because Ohio EPA has not thus far issued them permits; and (2) that the majority of CAFO phosphorus discharges are "agricultural stormwater" that is exempt from Clean Water Act regulation.

138. First, the Maumee TMDL incorrectly states "[n]o CAFOs in the Ohio portion of the Maumee watershed discharge wastes that require NPDES permit coverage. No CAFOs in the Ohio portion of the Maumee watershed have NPDES permits allowing discharges of treated wastewater. Therefore, the TMDL provides no CAFO point source allocations." MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at xxi.

139. The fact that no CAFOs are authorized to discharge pursuant to NPDES permits does not demonstrate that no CAFOs are discharging pollutants that require NPDES permits and, thus, WLAs. Ohio EPA provided no evidence to support its assertion that no CAFOs in the Maumee watershed discharge waste and require NPDES permit coverage, and there is substantial evidence to the contrary.

140. Second, the Maumee TMDL incorrectly asserts that CAFO pollution is exempt agricultural stormwater. Ohio acknowledges that manure is contributing to phosphorus pollution of the Maumee River watershed and western Lake Erie but, to avoid controlling that pollution through a WLA, the agency simply makes conclusory statements, such as that manure pollution is

"generally precipitation-induced and inadvertent" and "typically consistent with the definition of agricultural stormwater." *Id*. at 35. In reality, these discharges occur via runoff from land application fields, through artificial drain systems such as ditches and tile drains, and through groundwater that is the functional equivalent of a direct discharge.

141. Ohio EPA further admits that pollution from manure is released from farms and fields in a manner inconsistent with the definition of agricultural stormwater, rendering those discharges illegal in the absence of a NPDES permit. Yet Ohio EPA then proceeds to ignore its finding based on unsupported assertions that such CAFO and AFO discharges represent only a "small proportion" of the manure applied in the watershed and are "irregular and infrequent." *Id*. at 35–36.

142. Lacking evidence, Ohio EPA nevertheless insists in the Maumee TMDL that all CAFO discharges in the area qualify as agricultural stormwater exempt from Clean Water Act NPDES permitting requirements, and therefore do not require WLAs. This is the same flawed rationale that Ohio uses to excuse its failure to require CAFOs to get NPDES permits in the first place. Instead, the agency merely requires some CAFOs obtain state-based "no discharge" permits from the Ohio Department of Agriculture. This circular logic has substantially contributed to the very conditions giving rise to the need for a TMDL, and U.S. EPA's approval of Ohio EPA's decision to perpetuate this flawed reasoning once more in the TMDL ensures that the uncontrolled discharges and pollution will continue.

143. The Clean Water Act NPDES regulations for CAFOs state that a discharge "as a result of" land application of CAFO waste "is a discharge from that CAFO subject to NPDES permit requirements" unless it amounts to "agricultural stormwater." 40 C.F.R. § 122.23(e). U.S. EPA defines agricultural stormwater as a "precipitation-related discharge . . . from land areas under

the control of a CAFO" where such waste "has been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, as specified in § 122.42(e)(1)(vi)-(ix)." *Id.* Section 122.42(e)(1)(vi)-(ix) of EPA's NPDES CAFO regulations contains detailed requirements for Nutrient Management Plans.

144. There is no evidence in the record to indicate, let alone demonstrate, that any AFO or CAFO in the Maumee River watershed possesses or complies with a Nutrient Management Plan that meets the requirements of EPA's NPDES CAFO regulations. To the contrary, since none of the AFOs or CAFOs in the Maumee River watershed have obtained a Clean Water Act NPDES permit, it is highly likely that none of them possess and operate in compliance with a Nutrient Management Plan meeting those Clean Water Act requirements. Accordingly, there is no basis for Ohio EPA's determination that the pollution running off and being discharged from CAFO land application fields in the Maumee River watershed is exempt from the Clean Water Act as agricultural stormwater.

145. Additionally, many, if not most, CAFOs cannot satisfy the "agricultural utilization" requirement to qualify their discharges as exempt agricultural stormwater under the Clean Water Act because they spread waste on fields that are already overloaded with phosphorus.

146. According to the Tri-State Fertilizer Recommendations applicable in Ohio, there is "no agronomic reason to apply fertilizer" when soil test phosphorus levels exceed crop "maintenance limits," which for corn and soybeans is equivalent to 30 ppm on the Bray-P1 scale (emphasis added). STEVE CULMAN ET AL., TRI-STATE FERTILIZER RECOMMENDATIONS FOR CORN, SOYBEAN, WHEAT, AND ALFALFA 25, 27-28 (2020).

147. CAFOs routinely apply manure when soil test phosphorus levels exceed these "maintenance limits." Ohio state regulations allow manure application until soil test phosphorus levels reach 100 ppm Bray-P1 (more than three times the Tri-State recommended levels), even while barring application of synthetic fertilizer when levels exceed 40 ppm Bray-P1. *See* OHIO ADMIN. CODE 901:10-2-14 app. E at table 2 (2021).

148. In the Maumee TMDL, Ohio EPA recognized that overapplication causes soil phosphorus buildup that increases discharges of phosphorus and that "improving fertilization rate, timing, and placement of phosphorus could quickly reduce DRP loads." MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD, OHIO EPA TECHNICAL REPORT AMS/2020-MWN-5, *supra*, at 42. Despite this, the TMDL does not address the discharges or establish requirements that would reduce DRP loads because the agency improperly classified CAFO discharges as exempt agricultural stormwater without any evidence supporting that determination. *Id.* at 42-48.

149. In sum, the Maumee TMDL states that "addressing elevated soil phosphorus in the most elevated fields will result in the greatest reduction of total phosphorus and DRP export concentrations." *Id*. at 45. Yet, instead of adopting a WLA that would lead to that result, Ohio EPA improperly defaulted to the status quo, whereby the practice of overapplication will continue and pollution will increase as soil test phosphorus levels continue to increase—all under the guise that CAFO pollution is exempt from regulation as agricultural stormwater.

150. Moreover, all dairy and most swine CAFOs in the watershed are discharging point sources because, among other reasons, they use liquid waste systems, and nearly all fields in the Ohio portion of the Maumee watershed have pervasive artificial drainage systems—including ditches and tile drains that are discernible, confined and discrete conveyances—that are encompassed within the definition of point source under 33 U.S.C. § 1362(14).

151. For example, when liquid manure and other CAFO waste is applied on tile-drained fields, at least some portion of it quickly flows down through the fractures and other preferential flow paths into tile systems. Those systems then discharge the liquid, including dissolved contaminants like DRP, to surface waters.

152. Discharges to surface water through ditches and tile drains are not agricultural stormwater under the state or federal regulations. Ohio regulations define "agricultural stormwater discharge" in a manner similar to the federal definition. Specifically, they state that

> [a]gricultural stormwater discharge means ***runoff generated by precipitation that drains over terrain*** used for agriculture as defined in section 1.61 of the Revised Code that conveys manure to waters of the state, provided that the manure has been applied in accordance with site specific nutrient management practices that ***ensure appropriate agricultural utilization of nutrients in manur***e in compliance with the best management practices set forth in Chapter 901:10-2 of the Administrative Code.
>
> OHIO ADMIN. CODE 901:10-1-01(D) (2017) (emphasis added).

153. Discharges resulting from application of liquid CAFO waste to ditches and tile-drained fields do not meet the definition of "agricultural stormwater discharge" for three independent reasons.

154. First, such discharges are not "***runoff generated by precipitation that drains over***" agricultural terrain; instead, they result from the pollutants in animal manure flowing straight into a ditch or the tile drain lines, even during dry weather, which then inevitably discharge into Ohio's waters. Discharge of liquid waste through ditches and tile systems is not "runoff" as commonly understood—an accidental discharge caused by precipitation that can occur despite a CAFO's implementation of a Clean Water Act compliant Nutrient Management Plan—but rather the outcome of a human-engineered industrial system operating as designed.

155. Second, pollutants in CAFO manure that flow directly into ditch and tile drain systems cannot support crop growth and, therefore, are not subject to any, let alone "appropriate," "agricultural utilization." If a field is significantly tiled, following "site specific nutrient management practices that ***ensure*** appropriate agricultural utilization of the nutrients" it could mean that liquid waste could not be applied to it.

156. Third, as explained above, many if not most CAFOs are overapplying manure to fields that are already overloaded with phosphorus. This practice generates increased transport of phosphorus that moves into ditches and tile drains, which then function as intended, thereby channeling and conveying those pollutants into the Maumee River and its tributaries.

157. Because the agricultural stormwater runoff exemption does not apply to discharges of liquid CAFO waste through ditches and tile drainage systems, CAFOs applying liquid waste to ditches and tile-drained fields are discharging point sources that require WLAs. The Maumee TMDL's failure to assign such WLAs violates 40 C.F.R. § 130.2(h).

158. The Maumee TMDL also should have assigned WLAs to all medium AFOs (equivalent to 200-699 mature dairy cows or 750-2,499 swine weighing more than 55 lbs) that meet the definition of "Medium CAFO." *See* 40 C.F.R. § 122.23(a), (b)(6), (d)(1); OHIO ADMIN. CODE 3745-33-02(A) (2018).

159. A medium AFO meets the definition of a "Medium CAFO" if it "[d]ischarges pollutants into waters of the United States through a ditch . . . , a flushing system . . . , or another similar device constructed by humans." OHIO ADMIN. CODE 903.01(Q)(2)(a) (2016). *See also* 40 C.F.R. § 122.23(6)(ii)(A).

160. Many dairy and swine AFOs in the Maumee River watershed likely also meet the "Medium CAFO" definition. Just as with Large CAFOs, these medium AFOs apply liquid waste

to ditches and tile-drained fields. At least some of that waste flows directly into ditches and tile drain lines and are not "agricultural stormwater" for the reasons explained above. The tile lines discharge into ditches (which flow into streams) or streams themselves, many of which would qualify as "waters of the United States." Both the tile drainage systems and ditches are "constructed by humans." OHIO ADMIN. CODE 903.01(Q)(2)(a) (2016). Therefore, the Maumee TMDL's failure to assign WLAs to discharging Medium CAFOs violates 33 U.S.C. §§ 1313(d)(1)(C) and 1342, 40 C.F.R. § 130.2(g)-(i), and 40 C.F.R. § 130.7(d)(2).

161. U.S. EPA is aware that discharging CAFOs must be assigned WLAs and that a CAFO's tile drain discharges qualify as point source discharges.

162. In the early stages of Ohio EPA's TMDL development, U.S. EPA raised concerns with Ohio EPA about the TMDL's lack of WLAs for CAFOs within the watershed. Commenting on Ohio's preliminary TMDL modeling, which asserted "[t]here are no NPDES permitted CAFO facilities within the Maumee Watershed" but otherwise failed to discuss CAFOs or assign WLAs, EPA directed Ohio EPA to establish WLAs for *all* CAFOs within the watershed—even those without permits. *See* MAUMEE WATERSHED NUTRIENT TOTAL MAXIMUM DAILY LOAD (TMDL) PRELIMINARY MODELING – RESPONSE TO COMMENTS, *supra*, at 5, 6. U.S. EPA further advised Ohio EPA that while exempt agricultural stormwater could be considered in the non-point source load allocation, production area and land application area discharges, including discharges through artificial subsurface drainage (i.e. tile drainage) and through groundwater where it is the functional equivalent of a direct discharge, should be placed in the WLAs. *See id.* at 5.

163. These directions were consistent with U.S. EPA's long-held understanding that the vast majority of CAFOs discharge point source pollution yet lack the requisite NPDES permits. By U.S. EPA's own estimate, 75 percent of CAFOs discharge non-agricultural stormwater due to

their standard operational profiles. *See* Revised NPDES Permit Regulation and ELGs for CAFOs in Response to the Waterkeeper Decision, 73 Fed. Reg. 70,418, 70,469 (Nov. 20, 2008). Yet less than 30 percent of Large CAFOs nationwide have NPDES permits. *See* U.S. EPA, NPDES CAFO PERMITTING STATUS REPORT: NATIONAL SUMMARY, ENDYEAR 2023, COMPLETED 14 MAY 2024 (2024). This under-permitting problem is even worse in Ohio, where only 10 percent of Large CAFOs have NPDES permits, *see id.*, and zero CAFOs possess NPDES permits in the Maumee watershed.

164. U.S. EPA explicitly acknowledged this under-permitting problem in a 2022 report it issued prior to commenting on Ohio's preliminary TMDL modeling. In this report, U.S. EPA found "[m]any CAFOs are not regulated and continue to discharge without NPDES permits." U.S. EPA, EPA LEGAL TOOLS TO ADVANCE ENVIRONMENTAL JUSTICE 75 (2022). It further concluded that "[w]hile many waters are affected by pollutants from CAFOs, many CAFOs often claim that they do not discharge, and EPA and state permitting agencies lack the resources to regularly inspect these facilities to assess these claims." *Id.*

165. The failure of U.S. EPA and state permitting agencies to ensure all discharging CAFOs have NPDES permits can be attributed in large part to an over-reliance on and misuse of the agricultural stormwater exemption, as U.S. EPA well knows. When U.S. EPA promulgated its agricultural stormwater rule, it anticipated the exemption could enable CAFOs discharging point source pollution to escape permitting requirements. *See* NPDES Permit Regulation and ELGs and Standards for CAFOs, 66 Fed. Reg. 2960, 3031 (Jan 12, 2001). U.S. EPA data indicate this is exactly what has happened. Since the agency promulgated its agricultural stormwater rule and began tracking state permitting inventories in 2011, the number of Large CAFOs in Ohio has grown by 54 percent, yet the number of permitted CAFOs in the State has *declined* by 37 percent.

See U.S. EPA, NPDES CAFO PERMITTING STATUS REPORT: NATIONAL SUMMARY, ENDYEAR 2011, COMPLETED 12/31/11 (2011).

166. Ohio EPA's reliance on the agricultural stormwater exemption to avoid establishment of WLAs for all CAFOs and its failure to address discharges through ditches, tile drains and groundwater, as well as U.S. EPA's approval of this approach in the Maumee TMDL, are not supported by the evidence, and U.S. EPA's determinations are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

167. The failure of Ohio EPA to establish WLAs for CAFOs in the Maumee TMDL, and U.S. EPA's approval of the TMDL without those WLAs, violates the requirement that the TMDL adopt a load limit adequate to implement, attain, and maintain water quality standards. 33 U.S.C. §§ 1313(d)(1)(C), 1342, 40 C.F.R. § 130.2(g)-(i), 40 C.F.R. § 130.7(d)(2).

3) The Maumee TMDL's Inadequate Implementation Plan Fails to Provide Reasonable Assurances

168. TMDLs must include a "[p]reliminary TMDL implementation plan establishing specific actions, schedules and monitoring proposed to effectuate a TMDL." OHIO ADMIN. CODE 3745-2-12(A)(2)(a)(iv)(f) (2019). In cases where "a TMDL implementation plan will not immediately attain water quality standards, the TMDL implementation plan shall reflect reasonable assurances that water quality standards will be attained in a reasonable period of time." OHIO ADMIN. CODE 3745-2-12(E)(3) (2019); *see also* OHIO REV. CODE 6111.562(B)(5) (2017).

169. The Consent Decree also required the TMDL to include an "implementation plan as required by Ohio Administrative Code § 3745-2-12(E)."

170. 40 C.F.R. § 130.2(i) allows for balancing of point source WLAs and nonpoint source LAs, but where BMPs or other nonpoint source pollution controls are proposed as they are

here, the state must demonstrate that such controls will actually be implemented and adequate to ensure water quality standards are attained and maintained when combined with the WLAs.

171. U.S. EPA Guidance explains that, prior to approval by U.S. EPA, TMDLs must provide "specific assurances that the nonpoint source reductions will in fact occur" and "reasonable assurances that nonpoint source reduction will in fact be achieved" to be consistent with 33 U.S.C. § 1313(d)(1)(C). GUIDANCE FOR THE IMPLEMENTATION OF WATER QUALITY-BASED DECISIONS: THE TMDL PROCESS, *supra*, at 2, 15.

172. U.S. EPA Guidance further states that "[t]his information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards" as required by 33 U.S.C. § 1313(d)(1)(C). *See, e.g.*, GUIDELINES FOR REVIEWING TMDLS UNDER EXISTING REGULATIONS ISSUED IN 1992, *supra*, at 4.

173. The Maumee TMDL's implementation plan does not comply with these "reasonable assurances" requirements.

174. First, the Maumee TMDL does not provide "reasonable assurances that water quality standards will be attained in a reasonable period of time," OHIO ADMIN. CODE 3745-2-12(E)(3) (2019), because it does not require reductions in DRP, which is the pollutant causing Lake Erie's impairment.

175. Second, even with respect to total phosphorus, the Maumee TMDL does not provide "specific actions, schedules and monitoring," OHIO ADMIN. CODE 3745-2-12(A)(2)(a)(iv)(f) (2019), needed to provide "reasonable assurances that water quality standards will be attained in a reasonable period of time." OHIO ADMIN. CODE 3745-2-12(E)(3) (2019).

176. Third, the Maumee TMDL does not provide "specific assurances that the nonpoint source reductions will in fact occur" or "reasonable assurances that nonpoint source reduction will in fact be achieved." GUIDANCE FOR THE IMPLEMENTATION OF WATER QUALITY-BASED DECISIONS: THE TMDL PROCESS, *supra*, at 2, 15.

177. The Maumee TMDL does not set any schedule for reducing total phosphorus loads. It contains no interim target loads for total phosphorus, even though loads and concentrations of that pollutant, as well as DRP, are already routinely measured across the watershed. The Maumee TMDL does not even set a date for achieving its final goal of a 40 percent total phosphorus reduction.

178. The Maumee TMDL Implementation Plan does not provide "a high degree of confidence" that WLAs and LAs will be implemented, nor does it demonstrate that "nonpoint source controls are specific to the pollutant of concern, implemented according to an expeditious schedule and supported by reliable delivery mechanisms and adequate funding." *See* PROTOCOL FOR DEVELOPING NUTRIENT TMDLS, *supra* at 7-5.

179. Instead, it is nothing more than a laundry list of existing and ongoing BMP programs, most of which have been failing for years. The Implementation Plan does not identify anything that Ohio will do differently to make these programs effective or explain why Ohio EPA believes they will suddenly start working, let alone how they will achieve a 40 percent reduction in phosphorus loads. The Maumee TMDL does not propose any schedule for imposing backstop measures if, as there is every reason to expect, the current programs continue to fail.

180. The Implementation Plan also fails to propose numerous steps to reduce phosphorus pollution that Ohio EPA and the Ohio Department of Agriculture can, and in some cases must, take under current law, including:

a. requiring CAFOs that discharge pollutants into the Maumee River and its tributaries directly, and through ditches and tile drains, to obtain NPDES permits;

b. targeting land application restrictions, best management practices, and other pollution reductions to areas where they can be more effective and measuring their impact; thus, focusing on pollution reduction instead of "money spent" and "acres enrolled";

c. improving enforcement of existing CAFF permits for non-discharging CAFOs and AFOs;

d. taking pollution abatement actions;

e. improving manure management and conservation standards to abate pollution;

f. improving data collection and analysis; and

g. implementing Ohio's "Watershed in Distress" program under Ohio Rev. Code 901:13-1-20.

181. Accordingly, EPA lacked a reasonable basis to determine that the TMDL, including WLAs and LAs, was established at a level necessary to implement water quality standards as required by 33 U.S.C. § 1313(d)(1)(C) and 40 C.F.R. § 130.2(i). *See, e.g.*, GUIDELINES FOR REVIEWING TMDLS UNDER EXISTING REGULATIONS ISSUED IN 1992, *supra*, at 4.

182. Furthermore, U.S. EPA's approval of the Maumee TMDL implementation plan and its handling of CAFOs is inconsistent with how it has approached CAFOs without NPDES permits in other TMDLs, where it still found it necessary to assign aggregate WLAs as a backstop reasonable assurance measure.

183. For instance, in the Chesapeake Bay TMDL, EPA shifted 75 percent of then-unpermitted AFOs/CAFOs in West Virginia from the non-point source LA into the WLA,

describing the shift as a signal that "substantially more of these discharges and operations could potentially be subject to NPDES permits as necessary to protect water quality." U.S. EPA, CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD FOR NITROGEN, PHOSPHORUS AND SEDIMENT 8-11 (2010); *see also id.* at 8–28 (referencing with approval Virginia's decision to shift the entire AFO load into the WLA). Not only did EPA find this move to be consistent with its own TMDL Guidance, but the agency also concluded that load-shifting allocation adjustments were "a reasonable way of supplementing reasonable assurance that the allocation targets will be met" and a "signal that EPA and the jurisdictions will be tracking load reductions in these sectors with a heightened degree of scrutiny and are prepared to take action to increase the extent to which these loads are regulated as necessary." *Id.* at 8-12.

184. By contrast, the Maumee TMDL does not include an implementation plan that provides "reasonable assurances" of pollution reductions as required by law.

Final Maumee TMDL and U.S. EPA Approval

185. Ohio EPA submitted its final Maumee TMDL to U.S. EPA on June 30, 2023. The final TMDL did not correct the CAFO defects in the Draft that Lake Erie Waterkeeper and others identified. The draft and final TMDLs were nearly identical, except for a perfunctory response-to-comments section that purported, but failed, to address commenters' concerns.

186. On September 28, 2023, U.S. EPA nonetheless approved the Maumee TMDL, finding that it "satisf[ied] all elements for approvable TMDLs." U.S. EPA, DECISION DOCUMENT FOR THE MAUMEE WATERSHED NUTRIENT TMDL, IN ALL OR PARTS OF 18 COUNTIES IN NORTHWESTERN OHIO 69 (2023).

187. U.S. EPA issued several documents related to the approval, including a primary "Decision Document" and attachments addressing "EPA Review of" CAFOs. These documents

completely deferred to Ohio EPA and found that commenters' objections did not preclude approval of the TMDL. In the process, these documents ignored or mischaracterized scientific evidence, misapplied the law, and contradicted U.S. EPA's own findings. U.S. EPA allowed Ohio to violate the state's Clean Water Act obligations, and in doing so, violate its own.

COUNT I

Violation of 5 U.S.C. § 706

188. Plaintiffs reallege paragraphs 1-187 above and incorporate them by reference in this Count I.

189. The Administrative Procedure Act requires courts to "hold unlawful and set aside" any final agency action found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. §§ 704 and 706.

190. U.S. EPA's Approval of Ohio EPA's TMDL was a final agency action because it: (1) was the consummation of U.S. EPA's decision-making process on the TMDL under 40 C.F.R. § 130.7; and (2) determined rights and obligations of the parties or caused legal consequences.

191. The State of Ohio failed to fulfill its statutory obligations, and U.S. EPA excused Ohio's noncompliance, violating its own Clean Water Act obligations by approving Ohio's improper actions.

192. U.S. EPA's approval of Ohio EPA's TMDL was "arbitrary, capricious, an abuse of discretion [and] otherwise not in accordance with law" because the TMDL failed to comply with the Clean Water Act and applicable regulations and will not lead to the remediation of Lake Erie's impairment. The Maumee TMDL's primary defects include:

a. Improperly failing to address the largest sources of DRP and the lack of loading limits for DRP that are necessary to adequately reduce the pollutant to the level

required to attain and maintain water quality standards in western Lake Erie as required by 33 U.S.C. § 1313(d)(1)(C) and 40 C.F.R. § 130.7(c)(1)(ii);

b. Improperly categorizing all CAFO discharges, including discharges through discernible, confined and discrete conveyances, which are point sources under 33 U.S.C. § 1362(14), as nonpoint sources subject to LAs; failing to assign any mandatory WLAs to CAFOs that require reduction of their pollutant loading to the Maumee River and western Lake Erie through NPDES permits; and failing to adopt a load limit adequate to implement, attain, and maintain water quality standards as required by 33 U.S.C. §§ 1313(d)(1)(C) and 1342, 40 C.F.R. § 130.2(g)-(i), and 40 C.F.R. § 130.7(d)(2); and

c. The lack of an implementation plan adequate to provide "reasonable assurances" that target pollution loads necessary to attain water quality standards will be achieved as required by 33 U.S.C. § 1313(d)(1)(C), 40 C.F.R. § 130.2(i), and Ohio Admin. Code 3745-2-12(A)(2)(a)(iv)(f) and 3745-2-12(E)(3).

193. U.S. EPA's approval of Ohio EPA's TMDL was not only inconsistent with its own position on and findings regarding the extent to which unpermitted CAFOs discharge point source pollution, but also relied on factual assertions that are unsupported by the record.

194. Plaintiff-Intervenors respectfully request that the Court hold unlawful and set aside U.S. EPA's approval of the Maumee TMDL and require U.S. EPA to prepare a TMDL as required by 33 U.S.C. § 1313(d)(2) and 40 C.F.R. § 130.7(d)(2).

RELIEF REQUESTED

WHEREFORE, Plaintiff-Intervenors respectfully request an Order from this Court:

A. Declaring that U.S. EPA's approval of the Maumee TMDL violated the Clean Water Act and applicable regulations because the TMDL suffers from each of the defects identified above;

B. Vacating and setting aside U.S. EPA's approval of the Maumee TMDL as arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law under the Administrative Procedure Act;

C. Directing Defendants to disapprove the TMDL for the reasons identified above;

D. Directing Defendants to promulgate a new TMDL for western Lake Erie that complies with the Clean Water Act and remedies the defects identified above;

E. Retaining jurisdiction of this case to ensure compliance with Clean Water Act requirements applicable to a new TMDL for western Lake Erie;

F. Awarding Plaintiff-Intervenors reasonable attorneys' fees and costs for bringing this action;

G. Issuing such other relief as this Court deems just and proper.

Respectfully Submitted,

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