



Ohio EPA, Division of Surface Water
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Attn: 303(d) Comments
via email EPATMDL@epa.ohio.gov

May 4, 2018

Dear Sirs and Mesdames:

The Ohio Corn and Wheat Growers Association (OCW), the Ohio Soybean Association (OSA), and the Ohio AgriBusiness Association appreciate the opportunity to provide comments on the draft Ohio's 2018 Integrated Water Quality Monitoring and Assessment Report, which includes the Clean Water Act Section 303(d) list of impaired waters. Together, OCW and OSA represent the interests of over 25,000 farmers across Ohio. These mostly small businesses are a critical component of Ohio's economy and create one out of eight jobs in the state. The Ohio AgriBusiness Association represents more than 225 companies that make up Ohio's fertilizer industry along with the grain, feed, seed, and crop protection industries serving Ohio agriculture.

We believe that to restore and maintain Lake Erie's water quality, that Ohio's top priority and primary area of emphasis must be the adoption of sound, practical measures and systems that, to the best of our knowledge and understanding, will make a positive contribution to the health of the lake. This should be the approach taken by all the stakeholders whose activities may be contributing to the lake's water quality problems, including but not limited to agriculture. Ohio agriculture is committed to this proactive approach, expanding on the strong and sustained history of actions we have taken that demonstrate this commitment, as explained below. We will do this independent of whether the lake receives an official Clean Water Act impairment designation or not, and we will do this despite the significant procedural, substantive and scientific concerns that we articulate below about the accuracy, validity, and therefore practical usefulness, of the 2018 report's proposed impairment designations. We respectfully request that you consider these comments, including the request of extending the comment period, while at the same time remain a full partner with us in support of our own ongoing and on-the-ground efforts to improve Lake Erie's water quality.

PROGRESS AND OUR ONGOING COMMITMENT

Water quality is, and has been, a top priority for Ohio's grain farmers. OCW and Ohio Soybean Council (OSC) fund research to increase the understanding of the relationships between agricultural practices and impacts on water quality, including algae blooms in Lake Erie. On an ongoing basis, we evaluate and recommend to our members throughout the state actions they can take to cost-effectively improve water quality, remain profitable, and continue to contribute to Ohio's economy.

The best basin-wide analysis that we are aware of reporting on how these and the many other efforts of farmers have expanded over time is from the USDA Natural Resources Conservation Service's (NRCS) 2016 Western Lake Erie Basin (WLEB) special study looking at the changes in conservation practice adoption on

cultivated cropland acres between the 2003-2006 and 2012 periods and issued in 2016¹. We are confident that the conservation practice adoption progress that farmers made over period has continued and likely grown considerably. That report found, for example, that:

- Cropland acres managed with one or more structural practice controlling erosion increased from 34 to 54 percent of acres.
- Cropland acres managed with an edge-of-field trapping practice, such as a filter or buffer, increased from 18 to 31 percent of acres.
- Nitrogen and phosphorus application methods improved. Acres on which all nutrient applications were incorporated in some manner (knifed, injected, tilled, or banded) increased. The percent of cropped acres on which nitrogen was incorporated at every application increased from 29 to 43 percent and on which phosphorus was incorporated at every application increased from 45 to 60 percent.
- About 71 percent of acres had a soil test within the last 5 years in the 2012 conservation condition.
- Use of precision agriculture techniques increased. Acres on which GPS was used to map soil properties increased from 8 percent to 36 percent of cropland acres. The use of variable rate technology increased from 4 to 14 percent of cropland acres.

Ohio agriculture, working in partnership with many stakeholders and the State of Ohio, have been aggressively engaged in efforts that are almost certainly building on and expanding this progress documented in the NRCS report. Since 2011, the Ohio Corn Marketing Program (OCMP), the Ohio Small Grains Marketing Program (OSGMP), and the OSC have invested more than \$3.5 million of farmer dollars in research and education to help mitigate nutrient-related problems in Ohio. These programs provide significant resources to research initiatives being conducted by The Ohio State University to better understand and improve nutrient-related conditions in Ohio. These include:

- Participating in edge of field research to identify how phosphorus leaves Ohio fields and evaluate management practices to determine the best management practices (BMPs) that will effectively limit phosphorus transport from farmers' fields to streams.
- Supporting fertilizer placement research.
- Funding updates to the Ohio portion of the Tri-State Fertilizer recommendations which will be updated this year.
- Providing nutrient management plan (NMP) development assistance to Western Lake Erie Basin (WLEB) farmers.
- Revising the Best Management Practices Manual.
- Identifying the economics associated with BMPs to help encourage adoption of cost-effective BMPs.

We also provide financial and other support to the 4RTomorrow awareness campaign led by the Ohio Federation of Soil and Water Conservation Districts, which provides education to Ohio farmers on nutrient

¹ U.S. Department of Agriculture, Natural Resources Conservation Service. 2016. Effects of Conservation Practice Adoption on Cultivated Cropland Acres in Western Lake Erie Basin, 2003-06 and 2012. 120 pp.
<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/ceap/pub/?cid=nrcseprd949606>

stewardship. We support the voluntary 4R Nutrient Stewardship Program's fertilizer retailer certification program led by the Ohio AgriBusiness Association and The Nature Conservancy. This program has certified 37 branch facilities, covers 1.9 million acres and serves 3,580 clients in the WLEB as well as additional facilities, clients, and acres throughout the state.

Additionally, our organizations continue to support our members located in the WLEB in their efforts to comply with the Ohio Domestic Action Plan, the Ohio Clean Lakes Initiative, Ohio Senate Bill 1, Ohio Senate Bill 150, and other nutrient reduction efforts.

COMMENTS ON THE DRAFT REPORT

As we support our members in these nutrient reduction efforts, we are concerned with Ohio EPA's sudden about-face regarding inclusion of the open waters of the WLEB on the 2018 Draft Ohio 303(d) list, based on a review of satellite imagery. We are concerned that this change in direction will divert attention from the collaborative efforts of the United States and Canada to meet the goals of Annex 4 of the Great Lakes Water Quality Agreement (GLWQA) to restore and protect the waters of the Great Lakes. Annex 4 has already established a phosphorus "diet" based on multiple lines of scientific investigations. Efforts need to be directed at implementation of nutrient reduction efforts to meet this "diet". With the Draft Integrated Report, Ohio has proposed a novel (and as far as we know, not yet peer reviewed) approach to link estimates of bloom size and frequency to impairment. We recognize that many stakeholders believe that the next step after the impairment listing should be development of a TMDL. A TMDL will require additional time and will slow nutrient reduction progress and likely increase the cost to all sources to achieve the desired outcome.

We are requesting an extension of the comment period so that we can obtain additional information to better understand the approach that Ohio EPA used to make the impairment listing and whether there are additional data that should be considered as part of this listing. **We also offer the following technical and procedural comments** on the Draft 2018 Integrated Report for your consideration. Given the scientific and policy concerns associated with this document, we believe that **additional stakeholder outreach** is warranted. We also believe that the open waters of WLEB, if they are to be declared "impaired" in the final report, should be placed in **Category 5-alt to reflect the ongoing efforts to restore WLEB and reduce phosphorus loads in the tributaries.**

[Relationship of New Targets to Annex 4 of the Great Lakes Water Quality Agreement](#)

The U.S. EPA's Great Lake National Program office coordinates the effort to comply with the GLWQA. The most recent update to the GLWQA included Annex 4, which required, among other things, updates to the phosphorus loading targets for the open waters of each of the Great Lakes and a determination of appropriate loading allocations (by country) to achieve the Lake Ecosystem Objectives. For the nearshore waters, load reductions targets are required for priority watersheds. The revised Lake Erie loading targets and objectives were finalized in 2015. The result is a commitment from the U.S. to reduce phosphorus loading to the western and central portions of the lake by 40 percent, from 2008 levels (to meet the 2012 threshold for algae bloom severity at a frequency of nine out of ten years).

In response to the update to the GLWQA, a U.S. Action Plan for Lake Erie was developed, with input from each impacted state, including Ohio. Each entity developed a Domestic Action Plan that includes specific actions to meet the Annex 4 reduction goals.

The 2018 Draft Integrated Report states that Ohio EPA requested input from various researchers regarding metrics to be used to provide a “scientifically relevant determination of impairment” using targets to meet these Annex 4 goals. Ohio EPA appears to have concluded that this can be achieved by assuring that the algae bloom is not greater than what occurred in 2004 and 2012. As discussed below, Ohio EPA’s methodology used to support the nutrient impairment designation has not been made available to the public for review and comment. No data or technical justification was provided in the Draft 2018 Integrated Report. Nor did the report provide the linkage between this new methodology and the Annex 4 bloom severity target. We believe it is critical for stakeholders to have the opportunity to review the data and technical justification before the open waters of the lake are declared impaired. This is particularly important because the same target (and linkage) will need to be used to assess when the lake is no longer impaired and is meeting the Annex 4 goal. A peer review process that includes researchers that informed the GLWQA 2012 threshold for algae bloom severity seems to be in order.

Procedural Concerns

OEPA’s Proposed Nutrient Impairment Designation of the Open Waters of the Western Basin of Lake Erie is Missing Several U.S. EPA Procedural Requirements.

Ohio EPA’s Draft Integrated Report does not indicate that the designated uses of the open waters of the WLEB are not being met or are otherwise threatened. Although the report provides a summary of events reflecting recurring water quality problems (algal blooms) in the open waters: there is no indication that the Agency substantiated the conclusion that water quality standards are either not being attained or are threatened or prepared a Section 301 nonpoint source assessment identifying impairment or threats to water quality standards attainment from nonpoint source pollution. In addition, there appears to be no explanation in the report for the decision to base the impairment determination exclusively on limited satellite imaging data, particularly when that data collection/analysis process has not been *demonstrated* to satisfy the level 3 credible data standard required by RC 6111.52(C).

U.S. EPA’s rules require that Ohio EPA consider “all existing and readily available water quality-related data and information” when making impairment listing determinations and submit with all final impairment listings to U.S. EPA, a rationale for any decision not to consider such data and information. Table D-3, Description of the data used in the 2018 IR from sources other than Ohio EPA, appears to be incomplete, as it does not include the satellite image data.

In addition, under R.C. 6111.56(B), Ohio EPA is prohibited from listing waters of the State as impaired without first demonstrating that the failure to meet applicable water quality standards is not due to the existence of naturally occurring conditions in the open waters of the Western Basin. Ohio EPA has not addressed the complicated issues of climate change or global warming in the Draft Integrated Report. Even if the phosphorus load reduction targets anticipated under Annex 4 were to be realized, some consideration of these factors in the Integrated Report is warranted and these factors may lend themselves to a Category 5-alt determination.

Ohio EPA's Methodology Used to Support the Nutrient Impairment Designation of the Open Waters of the Western Basin has not been Made Available to the Public for Review and Comment.

The proposed impairment designation is based on Ohio EPA's finding that algal cell count/density in the open waters of the Western Basin frequently exceeded a level (20,000 cells/ml) established as a "nominal floor" by the National Oceanic and Atmospheric Administration (NOAA) to control the generation of cyanotoxins.² Using satellite imaging data collected by NOAA for the open waters on certain (clear) days from July through October between 2012 and 2017, Ohio EPA calculated the number of 10-day time frames when the algal cell count level exceeded 20,000 cells/ml over 30% or more of the open waters.³ All of the open waters of the Western Basin were then declared impaired because *some* areas had more than three 10-day periods where they exceeded this standard in each of the past six years.⁴ There is no explanation in the report showing how Ohio EPA developed this methodology.

This methodology, which Ohio EPA has not used previously to support any nutrient-based impairment listing of Ohio's waters, has not been subjected to meaningful notice and opportunity for engagement by interested stakeholders. 40 CFR 25.5(b)(2), which prescribes the overarching public involvement requirements for state environmental agencies, requires that agencies provide the public with the relevant information "at the earliest practical time," and states that fact sheets and other data summaries "shall not be a substitute for public access to the full documents."

Ohio EPA's process for listing impaired waters, including the public engagement aspect, has unfortunately lagged behind its TMDL process. Whereas HB 49 and OAC 3745-2-12 prescribe detailed procedures for the development of TMDLs, Ohio EPA does not have a rule that defines the procedures the Agency must follow when developing a listing of impaired waters under Section 303(d) of the Clean Water Act. Nor does Ohio EPA have a rule setting forth the data and information that must be reviewed and shared with the public to support determinations of potential impairment.

Ohio EPA does not have a methodology to comply with 40 CFR 130.7(a), which requires that "the process for developing section 303(d) lists **and public participation** be described in the state's continuing planning process under section 303(e)." *Guidance for 1994 303(d) Lists*, November 26, 1993. (Emphasis added). U.S. EPA's guidance regarding the need to timely and fully engage the public in impairment decision-making was updated as recently as January 23, 2018, where the Agency reaffirmed the mandate that "EPA and the states actively engage the public...as demonstrated by documented, inclusive, transparent, and consistent communication."⁵

Ohio EPA's engagement with the public on the proposed impairment designation of the open waters of the Western Lake Erie Basin is insufficient. The Draft 2018 Integrated Report itself acknowledges that only "**much** of the data used in the report have been presented to the public." It does not say "all," or even "most." The report does not provide any of the NOAA satellite data (or indicate where it is available), does not indicate Ohio EPA's basis for concluding that the (post-2012) data meets level 3 credible data

² Draft Integrated Report, Section F.4, page F-34

³ Draft Integrated Report, Section F.4, page F-36

⁴ *Id.*

⁵ Impaired Waters and TMDLs: Working with Partners and Stakeholders. January 23, 2018.

standards, and does not describe the basis for the Agency's adoption of the 20,000 cells/ml, 30% coverage for 10 days metric. The lack of communication on these (and other) critical components of Ohio EPA's decision-making compromises the ability of the public to meaningfully participate in the process.

Developing Satellite-Based Numeric Water Quality Standards to Define Nutrient Impairment in the Open Waters of the Western Basin of Lake Erie Should be Preceded by Rulemaking.

Developing a new numeric 10-day algal cell count/density metric as the standard to define nutrient impairment for the open waters of Lake Erie constitutes the *de facto* establishment of a new nutrient-based, numeric water quality standard for the Lake. Yet this standard has not undergone notice and comment rulemaking, as required by RC 6111.041 and RC Chapter 119.

RC 6111.56(C) states that narrative standards are to be established when numeric standards *cannot* be established or to *supplement* existing numeric standards. U.S. EPA's rules provide the same limitation. 40 CFR 131.11(b). Ohio EPA's existing narrative "free from" standards (OAC 3745-1-04) do not shield the Agency from the requirement to develop numeric standards when possible, using proper notice and comment procedures for rulemaking. Were the law otherwise, Ohio (and other states) could circumvent the protections of notice and comment rulemaking for numeric standards by relying solely upon vague narrative standards, implemented using numeric water quality criteria documents as "guidance" or "interpretation."

The development of a new, satellite-based, algal cell count/density numeric standard for defining impairment in the Lake Erie open waters constitutes the establishment of a new standard. However, under Ohio law (R.C. 6111.56(B)), such impairment decisions must be based on actual or threatened nonattainment of *existing* water quality standards, not on actual or threatened nonattainment of *new, unpromulgated* standards that are an "interpretation" of narrative standards promulgated many decades ago before scientific improvements enabled numeric standards to be developed.

Ohio EPA's new satellite-based, algal cell count/density numeric standard should undergo the rulemaking procedures set forth in RC Chapter 119 before the standard is used to assess the impairment status of the open waters of the Western Basin. That is the rule of law established by the Ohio Supreme Court in *Fairfield Cty. Bd. of Comrs. v. Nally*, 143 Ohio St.3d 93 (2015). That case involved the same enigmatic narrative water quality standard — "waters shall be free from nutrients...in concentration that create nuisance growths of [algae]" (OAC 3745-1-04) — that is putatively being used as the basis for the Agency's proposed Lake Erie open water impairment designation. In that case, Ohio EPA asserted that non-rule derived numeric standards for phosphorus, taken from a 1999 guidance document, were a lawful basis for regulatory decisions.

It is important to note that the Court's holding in *Fairfield County* had two independent bases: the establishment of a numeric nutrient standard triggers Ohio EPA's obligation to promulgate a rule under *both* R.C. Chapter 119 *and* R.C. 6111.041. As regards Chapter 119, there can be no dispute that the proposed Lake Erie designation has a far broader application than the phosphorus standard at issue in *Fairfield County*—which applied only to point sources in the Big Walnut Creek watershed— but which the Court nevertheless found to have the general and uniform effect of a rule. Furthermore, just as in *Fairfield County*, Ohio EPA's new 10-day algal cell count/density metric "does more than simply aid in the interpretation of existing rules and statutes. Instead, it prescribes a legal standard that did not previously

exist.” Also, as in *Fairfield County*, this new standard has a general and uniform effect even though it will not be implemented until a TMDL and NPDES permit, nutrient management plan, or other regulatory steps are taken.

The parallels of the proposed Lake Erie open waters designation with the second basis of the Supreme Court’s holding in *Fairfield County*—R.C. 6111.041 requires Ohio EPA to promulgate water quality standards as rules—are even closer. Acknowledging that it had never promulgated a numeric standard for phosphorus, Ohio EPA nevertheless utilized a number taken from a technical guidance document (*Association Between Nutrients, Habitat, and the Aquatic Biota in Ohio Rivers and Streams* (Ohio EPA, 1999) to develop a *de facto* phosphorus WQS (0.11 mg/L) that it applied to the Big Walnut Creek watershed. The Supreme Court held that such a “target value” for all water bodies in the Big Walnut Creek watershed “clearly constitutes a standard of water quality” for ‘waters of the state of Ohio’ within the meaning of R.C. 6111.041,” and was, therefore, first required to be promulgated as a rule.

The 10-day algal cell count/density metric utilized in the Draft 2018 Integrated Report is a water quality standard, just as was the phosphorus target value of 0.11 mg/l taken from the 1999 Association Report. Unless and until it is formally promulgated by Ohio EPA as a rule, it is not appropriate or lawful for the Agency to use it as such. As the Supreme Court held in *Fairfield County*, when state agencies bypass formal rulemaking “affected persons are denied access to the process that the General Assembly intended them to have, *i.e.*, the early, informed, and meaningful opportunity to challenge the legality of the standards...and the underlying assumptions, data, logic, and policy choices that Ohio EPA made in developing the standard.

Total Maximum Daily Load (TMDL) Categories

The Draft 2018 Integrated Report discusses EPA’s new 303(d) vision. This vision resulted from U.S. EPA’s and states’ frustration over perpetual litigation (“deadline suits”) that were focused on churning out TMDLs at the expense of really assessing whether those TMDLs were the most effective way to achieve actual water quality improvements.⁶ One particularly important aspect of U.S. EPA’s new vision is the “Alternatives Goal.” It states that “By 2018, States [should] use alternative approaches, in addition to TMDLs, that incorporate adaptive management and are tailored to specific circumstances where such approaches are better suited to implement priority watershed or water actions that achieve the water quality goals of each state, including identifying and reducing nonpoint sources of pollution.”⁷ According to U.S. EPA, because so many TMDLs have been litigation-driven, “States and EPA have not always had the opportunity to objectively evaluate whether a TMDL would be the most effective tool to promote and expedite attainment of State water quality standards.”⁸ This admirable goal thus envisions that States may give certain impaired waters a lower priority ranking for TMDL development so that alternatives designed to achieve water quality standards may be pursued in the near term. The waterbodies would remain on the 303(d) list and may ultimately require a TMDL if alternative approaches do not fully attain water quality standards.⁹ But in the near term, the waterbodies would receive a “5-alternative” or “5-alt”

⁶ See Draft Integrated Report at C-28.

⁷ US EPA, A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program, at 9 (Dec. 2013).

⁸ *Id.*

⁹ See *id.*

designation and a lower priority ranking while the State pursues alternative approaches for restoring water quality.¹⁰

In furtherance of U.S. EPA's new vision, Ohio EPA prepared a 303(d) Vision Implementation Plan and submitted it to U.S. EPA for final concurrence in August 2015. Ohio's plan states that Ohio EPA plans to use alternative approaches to TMDLs "designed to address specific impairments caused by pollutants such as phosphorus[.]"¹¹ Potential alternative approaches include Nine Element Watershed Plans, National Pollutant Discharge Elimination System (NPDES) permit revisions, funding installation of BMPs, and supporting implementation of new rules.¹² Despite Ohio EPA's stated intent to use alternative approaches to address nutrients, the Draft 2018 Ohio Integrated Report admits that "Ohio does not have any [Assessment Units] listed under 5-alt in this report but anticipates using this subcategory in the future."¹³ Ohio EPA's decision not to give a "5-alternative" designation to the open waters of Lake Erie is especially puzzling given that the State is already pursuing just the sorts of alternative approaches that it indicated it would pursue in its 2015 303(d) Vision Implementation Plan.

Specifically, the Draft 2018 Ohio Integrated Report explains that the State is addressing nutrient problems in Lake Erie using a variety of mechanisms, including nutrient TMDLs for tributaries; state initiatives to reduce nutrient loads in accordance with the Domestic Action Plan; and active participation in Annex 4 and other GLWQA efforts.¹⁴ As the State recognizes, several "parallel planning and management efforts" are underway at the state, federal, and bi-national levels.¹⁵ For the open waters in particular, "respecting and working through the bi-national governance framework is the appropriate process," and under that framework, "whole lake management plans are developed, implemented and tracked."¹⁶

Multi-state and bi-national efforts are not limited to the GLWQA. Recognizing that Annex 4 does not specify timeframes for implementation and restoration goals, Ohio entered into the Lake Erie Collaborative Agreement with Michigan and Ontario in 2015.¹⁷ This important development allows the signatories to "get a head start on the Annex 4 process and hasten efforts to improve water quality in Lake Erie."¹⁸ To that end, Ohio is striving to meet the Collaborative Agreement's phosphorus reduction goals of 20 percent and 40 percent by 2020 and 2025 respectively.¹⁹ Finally, Ohio EPA has already completed TMDLs for 22 of the 32 watersheds that feed into Lake Erie, and TMDLs for the remaining 10 watersheds are under development.

The Draft 2018 Integrated Report also catalogs the various State-based nutrient reduction efforts, which include implementation of the Statewide Nutrient Reduction Strategy; nutrient reduction projects utilizing \$13.9 million in grants; three separate pieces of legislation aimed at POTWs, fertilizer and manure application and education, sewage sludge application, and reporting of nutrient loadings; and various workgroup and task force efforts.

¹⁰ See Draft Integrated Report at J-1.

¹¹ Plan at 11.

¹² See *id.*

¹³ Draft Integrated Report at J-1.

¹⁴ See *id.* at J-10.

¹⁵ See *id.*

¹⁶ *Id.* at J-10 to J-11.

¹⁷ See *id.* at J-11.

¹⁸ *Id.*

¹⁹ *Id.*

In light of these extensive approaches to addressing impairments caused by phosphorus, the State should consider designating the open waters of Lake Erie as “5-alternative” and assigning a lower priority ranking for those waters. While there is more work to be done to restore water quality, the State should employ an adaptive management approach and allow these alternative approaches a chance to achieve water quality goals. It should not reflexively head straight down the TMDL path.

We believe that Ohio EPA should provide additional information to the public prior to using the new satellite data – based methodology to determine that the open lake waters are impaired. We request that the data and associated analysis used in this determination be made publicly available for all interested stakeholders. We also request a technical analysis of the interconnectedness between this new method and the state’s obligation under Annex 4 of the GLWQA. Ohio EPA’s engagement with the public on the proposed impairment needs additional time prior to the finalization of the Draft 2018 Integrated Report.

Thank you for your consideration of these comments.



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