January 16, 2026

Ohio Environmental Protection Agency
Attention: Division of Surface Water Permits and Compliance Section
P.O. Box 1049 Columbus, Ohio 43216-1049
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Cc: Fong.Tera@epa.gov

**RE: Draft Wastewater General Permit for Data Centers**
**NPDES Permit No. OHD000001**

Dear Ohio Environmental Protection Agency Officials,

The Environmental Law & Policy Center, Alliance for the Great Lakes, Ohio Environmental Council, Mississippi River Collaborative and the undersigned organizations listed at the end of this letter hereby object to and comment on the draft NPDES General Permit for Discharges from Data Centers to State Waters ("Proposed General Permit"). The Proposed General Permit does not meet the requirements of 40 CFR 122.28, Ohio Rev. Code § 6111.035, or Ohio Admin. Code § 3745-38-02, see also, 40 CFR 122.28, and a decision to issue the permit as a final action would be unreasonable and unlawful.

Moreover, the record is totally inadequate to allow the public to know the types and quantities that may be allowed by the permit. To be able to properly review a draft permit of any type, the public must be informed of what is to be allowed under the permit and the agency's rationale for granting the permit. See, 40 CFR 124.8.

## I. Issuing a general NPDES permit for data center discharges is unreasonable and unlawful.

Under Ohio law, the Ohio Environmental Protection Agency ("OEPA") director may issue general NPDES permits under certain limited circumstances. "A general permit shall not be issued unless the discharges authorized by the permit **will have only minimal cumulative adverse effects on the environment when the discharges are considered collectively. . . ."**[1] Moreover, general permits may only be issued if the category of point sources "[i]nvolve the same or substantially similar types of operations," "[r]equire the same operating conditions for sewage sludge use or disposal," and "[r]equire the same or similar monitoring."[2]

A general permit for discharges from data centers cannot be legally issued because OEPA has not demonstrated that the Proposed General Permit meets these requirements of Ohio law. In particular:

[1] R.C. 6111.035(A)(2).
[2] O.A.C. 3745-38-02(B)(2).

A. OEPA has not established that data center water pollution, "will have only minimal cumulative adverse effects on the environment."

Ohio currently is fifth in the nation with nearly 200 data centers constructed and more hyperscale data center facilities planned.[3] Yet OEPA has not provided any information indicating that wastewater from existing data centers and those planned and currently under construction will have only minimal cumulative adverse effects on the environment. Nor is there any reason to assume that is the case given: (a) the pace of data center development[4]

B. Data centers vary widely in size, design, and site characteristics, and utilize a variety of cooling methods. All data centers are not alike in the quantity and nature of their water pollution.

Data centers are not all the same in size, design, and site characteristics. First, there are a wide variety of types of data centers:

- Telecommunications data centers are managed by telecommunications providers and are often integrated with network hubs and communications infrastructure. They may be more than 20,000 square feet (about the size of a high school basketball court) and utilize less than 1 MW of installed capacity;
- Retail data centers offer space, power, and services to multiple clients. They may be more than 56,000 square feet (about the size of a mid-size store in a mall) and utilize 2 MW of installed capacity;
- Crypto data centers are designed primarily for cryptocurrency mining, need low latency, and can require as much as 50 MW of installed energy capacity and as much as 200,000 square feet (about the size of three and a half football fields);
- Wholesale data centers use large blocks of space and power and lease them to a single tenant (or very few) often on long-term contracts. They may be more than 270,000 square feet and use 13 MW of installed capacity; and
- Hyperscale data centers are large scale facilities built to service large technology providers, such as Google or Amazon, and are optimized for scalability and efficiency. They may be more than 325,000 square feet in size and require 46 MW or more of installed capacity.[5]

Second, data centers may use a wide variety of cooling methods, meaning they likewise vary widely in terms of what and how much they discharge as wastewater. In evaporative cooling, water is pushed through a membrane to bring down the server room air temperature. This method requires very high consumptive use because more than half of withdrawn water is evaporated. The remaining water may be recirculated once it has cooled, or it can be discharged as wastewater. As discussed in further detail below, because evaporative cooling evaporates more than half of this water, it can concentrate contaminants in the water that is discharged. This may

[3] https://www.datacentermap.com/usa/
[4] R.C. 6111.035(A)(2).
[5] João-Pedro Ferreira, Economic, Fiscal, and Energy-related Impacts of Data Centers in the Great Lakes (Nov. 6, 2025), p. 15-16 available at: https://assets.joycefdn.org/content/uploads/Joao-Pedro-Ferreira-UVA_Data-Centers-webinar_Nov-2025.pdf

include contaminants which municipal wastewater plants do not typically treat, such as total dissolved solids and chloride, and amplify existing contaminants, such as nitrate.[6]

Other cooling methods such as liquid immersion, or direct-to-chip cooling, directly expose equipment to water, and may introduce contaminants into the wastewater produced by that process. Finally, closed loop systems use a mixture of water and a coolant such as glycol to directly cool server racks rather than alter air temperatures. Closed loop systems may need to occasionally discharge and refresh this water. A closed loop system's discharges will look vastly different from an evaporative cooling system or immersive cooling system.

Thus, data centers are not "the same or substantially similar types of operations" and cannot legally be treated as such under a general permit.

C. Data center technology is sufficiently new that data center operators themselves may not know what pollution is likely to be created, amplified, and discharged by their facilities.

Though data centers have existed since the early 2010's, the size, scale, and types of cooling technology and equipment deployed within them is rapidly changing and evolving, such that data center owners and operators may not be sufficiently knowledgeable about the types of contaminants they may be discharging. OEPA has not provided information regarding how data center wastewater discharge is currently being regulated. In our review of OEPA's individual NPDES permits, we were unable to locate a single individual NPDES permit specifically issued to a data center. At the hearing on December 17, 2025, an OEPA representative stated that data centers in Ohio currently discharge to wastewater treatment plants, and that discharges are regulated under the wastewater treatment plant's NPDES permit. This would mean that data center discharges currently subject to pretreatment standards and reporting requirements, as well as treatment and reporting by the receiving wastewater treatment plant, could instead be made to waters of the state without any such treatment. In addition, OEPA has not explained what pollutants are likely to be discharged from data centers. Instead, the discharge limitations that have been included in the proposed general permit appear to be a truncated set of effluent characteristics commonly discharged from wastewater treatment plants. This set of limitations does not include any restriction on contaminants known to be discharged from data centers, as further discussed below.

D. Ohio's antidegradation rule (OAC 3745-1-05) applies to the Proposed General Permit and OEPA did not follow applicable antidegradation requirements.

OEPA stated at the hearing on December 17, 2025 and in the Proposed General Permit factsheet that:

[6] Ahmad, Rasheed, "Engineers often need a lot of water to keep data centers cool," American Society of Civil Engineers (March 4, 2024), *available at*: https://www. asce.org/publications-and-news/civil-engineering-source/civil-engineering-magazine/issues/magazine-issue/article/2024/03/engineers-often-need-a-lotof-water-to-keep-data-centers-cool noting that recycled water concentrates pollutants such as total dissolved solids and chloride.

> The general permit **will go through the antidegradation procedure** because the permit will authorize new discharges. This general permit is going to public notice as a degradation under the public notice provisions of the Antidegradation Rule [OAC Rule 3745-1- 05(C)(3)]

It is unclear whether this "antidegradation procedure" and public notice process has already occurred and/or is reflected by the factsheet and Proposed General Permit. If, as appears to be the case, the antidegradation procedure OEPA conducted consists only of the hearing held on December 17, 2025 (which was specific to the Proposed General Permit itself), the factsheet, and the Proposed General Permit, this antidegradation procedure does not comply with OAC 3745-1-05 because the rule imposes extensive requirements that OEPA must comply with including:

1. (B)(3)(a) through (h), which requires, among other items, an alternatives analysis, mitigation alternatives, and social and economic analyses specified in (e) through (h);
2. (C)(2), which requires pollution controls to be implemented through demonstrated control technology;
3. (C)(5), which requires an examination of non-degradation, minimal degradation and mitigative technique alternatives, a review of the social and economic issues related to the activity, a public participation process and appropriate intergovernmental coordination, and a determination that the lower water quality is necessary to accommodate important social or economic development in the area in which the water body is located;
4. (F), which requires a separate and alternate review for significant increases in discharges of bioaccumulative chemicals of concern (BCCs) to Lake Erie.

OEPA did not satisfy any of these requirements. First. OEPA's analysis under (B)(3)(d) consists of two sentences in the factsheet regarding discharges to publicly owned treatment works and centralized waste treatment facilities, discussed in further detail below. No effort appears to have been made to conduct the analyses specified in (B)(3)(e) and (f) or the similar review process required by (C)(5) and (F) for Lake Erie. OEPA also failed to require demonstrated control technology, as specified in (C)(2). Indeed, as discussed in further detail below, the Proposed General Permit contains no effluent limits at all for many pollutants.

OEPA claims they were not required to analyze factors specified in (B)(3)(e) through (h) because there is an exception from this requirement for general permits in (D)(1)(j). First of all, this same analysis is required by (C)(5), so this exception does not matter. However, even if it did, this exception is not automatic, and OEPA does not explain **why** it applies. (D)(1) states that:

> In determining the applicability of ... the exclusion[s], the evaluation shall not only consider potential effects or impacts to the receiving waters, but also to any subsequent waters potentially affected by the discharge or activity.

Thus, OEPA is required to evaluate and consider not only potential effects or impacts to receiving waters, but also to any subsequent waters potentially affected by the discharge or activity. No such evaluation and consideration was provided here, thus the alternatives analysis and social and economic justification portions of the antidegradation rule applies. Finally, to the

extent the Proposed General Permit authorizes significant discharges of BCCs to Lake Erie, (F)(3) of the rule requires completion of a full (B)(3) analysis.

The bottom line is that the antidegradation rule applies and OEPA did not fulfill its requirements under the rule, including critical alternatives analyses and the social and economic impacts analysis.

E. The Proposed General Permit violates the antidegradation rule, which, as outlined above, requires OEPA to consider alternatives to new discharges and to formally determine if new pollution is necessary to accommodate important social or economic development. OEPA did neither of those things in connection with the Proposed General Permit.

OEPA does not even claim to have considered alternatives to authorizing new discharges. The **only** alternative being considered, as noted in the Proposed General Permit factsheet, is central treatment at a publicly owned treatment works or centralized waste treatment facility, allowing "discharge and site-specific conditions related to the economics of installation, operation, and discharge drive the alternative selection." This is inappropriate as OEPA has not actually conducted any alternative analysis; it is simply allowing the discharger to dictate the alternative based on perceived "economic" costs. However, these are not economic costs; these are costs of doing business in compliance with the law and other regulated industries in Ohio are not given such latitude. Allowing only these costs to be considered while neglecting to consider the costs borne by the public fails to consider the costs of externalities like harmful algal blooms (HABs) – the costs of which have always been placed on the public. Environmental and community externalities have routinely been shown to carry significantly higher costs to the public than to private entities. For example, drinking water ratepayers ultimately bear the costs of additional HAB monitoring and treatment.[7] If operational costs to dischargers are considered here, then the costs borne by those directly impacted by new discharges authorized under the Proposed General Permit must also be considered.

OEPA also has not justified or even explained its determination that new pollution is "necessary to accommodate important social or economic development." Data center proponents paint a very rosy picture of the jobs and economic activity generated by data centers. However, most job creation attributable to data centers is associated with the construction sector, which is short term. Recent economic analysis of the economic impacts of data centers in the Great Lakes region shows that for every five jobs generated, four are associated with construction and only one with data center operations.[8] While construction happens locally, capital expenditures for the IT equipment and materials used inside the data center are bought outside the region and even

[7] Alliance for the Great Lakes, Western Lake Erie Basin Drinking Water Systems: Harmful Algal Bloom Cost of Intervention (May 2022) *available at:* https://greatlakes.org/wp-content/uploads/2022/05/FINAL-COI-Report-051622.pdf.

[8] João Ferreria, https://assets.joycefdn.org/content/uploads/Joao-Pedro-Ferreira-UVA_Data-Centers-webinar_Nov-2025.pdf (slide 47) (Nov. 6, 2025).

outside the United States.[9] In reality, the number of jobs created by data center growth in the region will represent less than .3% of the jobs in the region (.21% due to capital expenditures and .07% due to operational activities.)[10] Likewise, Ohio data centers made up only .36% if state employment in 2024 and are projected to make up only .5% by 2030.[11] Thus, it is not at all clear that data centers will generate important economic development.

It is also unclear what positive important social development data centers will provide. However, it is well known that data centers may cause numerous negative social impacts including:

- Adverse water resource impacts, including increased water stress and groundwater depletion, potentially exacerbating existing groundwater conflicts;[12]
- Rising electric,[13] water, and wastewater utility rates for ratepayers;
- Increased local dependency on one employer that reduces the availability of land, water, and energy resources to attract other diverse types of economic development;[14]
- Noise pollution from associated HVAC systems and backup generators. Inside a data center, noise levels can reach 96 A-weighted decibels (dBA). This is well above the threshold of 85 dBA considered harmful to human hearing. This constant noise can impact data center employees, nearby communities, and local wildlife;[15]
- Air pollution from backup generators that release NOx and fine particulate matter, known to increase the risk of asthma, heart disease, and cancer. According to one national study, by 2030, air pollution linked to data centers in the United States could contribute to nearly 1,300 deaths each year, a public health cost of more than $20 billion;[16]
- Generation of electronic waste that may strain capacity of local landfills, as server equipment must be replaced every 3 to 5 years;[17]
- Risk of fire and strain on emergency services. For example, two Ohio data centers have made 84 emergency service calls since 2021, including a two-alarm blaze at one

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[9] *Id.* (slide 40).
[10] *Id.* (slide 49).
[11] Economic, Fiscal and Energy-Related Impacts of Data Centers in Ohio, University of Virginia, WEldon Cooper Center for Public Service, https://virginia.app.box.com/s/6s01i0fgmv2ipl02dflc3zzrfx99g596.
[12] Volzer, Helena, "A Finite Resource: Managing the Growing Water Needs of Data Centers, Critical Minerals Mining, and Agriculture in the Great Lakes Region," Alliance for the Great Lakes (Aug. 2025), *available at* https://greatlakes.org/wp-content/uploads/2025/08/AGL_WaterUse_Report_Aug2025_Final.pdf.
[13] Jacobs, Mike "Connection Costs: Loophole Costs Customers Over $4 Billion to Connect Data Centers to Power Grid" Union of Concerned Scientists (Sept. 2025) available at: https://www.ucs.org/sites/default/files/2025-09/PJM%20Data%20Center%20Issue%20Brief%20-%20Sep%202025.pdf *and Evans, Nick, "Energy market watchers see Ohio electric bills rising as data center demand continues," Ohio Capital Journal,* (Dec. 11, 2025) https://ohiocapitaljournal.com/2025/12/11/energy-market-watchers-see-ohio-electric-bills-rising-as-data-center-demand-continues/.
[14] Gorey, Jon, "Data Drain: The Land and Water Impacts of the AI Boom," (Oct. 17, 2025) available at: https://www.lincolninst.edu/publications/land-lines-magazine/articles/land-water-impacts-data-centers/.
[15] Yu Tao, Peng Gao, "Global data center expansion and human health: A call for empirical research, Eco-Environment & Health, Vol. 4, Iss. 3, (2025), https://doi.org/10.1016/j.eehl.2025.100157 .
[16] Han, Yuelin, Zhifeng Wu, Pengfei Li, Adam Wierman, and Shaolei Ren. "The unpaid toll: Quantifying the public health impact of ai.," (2024) https://doi.org/10.48550/arXiv.2412.06288.
[17] Maguire, Natasha, "How Long Do Data Center Servers Last?" Procurri (Apr. 24, 2025) https://www.procurri.com/2025/04/24/how-long-do-data-center-servers-last/.

data center that occupied firefighters for nearly 30 hours and caused an estimated $50 million in damages.[18]

F. Even if *some* data centers are necessary to accommodate important social or economic development, that does not mean *all* data centers will accommodate important social or economic development. There is no basis for such a categorical assumption. A general permit, therefore, is not necessary to accommodate important social or economic development.

G. The public deserves to learn fully about the potential environmental harm to individual communities posed by individual data center projects and to have an opportunity to comment on the proposed data center that would impact their community. The Proposed General Permit would create an unwarranted shortcut for approving data center wastewater discharges without site-specific review or the opportunity for a hearing on individual permits.

H. OEPA currently regulates discharges from nearly 200 data centers in Ohio, and there is no evidence that the current regime is not functioning efficiently or effectively to protect water quality. OEPA has made no showing that would justify a shift to a general permitting approach.

## II. If OEPA nevertheless issues a general NPDES permit, it should exclude sensitive water bodies and prohibit use of the general permit for many classes of dischargers.

We reiterate that OEPA has not demonstrated that a general NPDES permit for data centers meets the basic requirements for general permits or is warranted, as outlined in section I above. However, if OEPA nevertheless issues a general permit for data center wastewater discharges, it should be narrowly tailored to protect Ohio's water quality. The Proposed General Permit already excludes certain types of discharges (including certain discharges directly to the Ohio River or to lakes other than Lake Erie) and that list should be expanded to exclude all of the following:

A. Discharges from data centers into the Lake Erie watershed

Discharges of BCCs into the Lake Erie basin are prohibited without conducting an anti-degradation analysis, which OEPA has not done.[19] Further, the Great Lakes Water Quality Initiative prohibits new mixing zones for many chemicals in the Great Lakes Basin. 40 CFR 132 App. F Procedure 3 (C) specifically states, "there shall be no mixing zones for new discharges of bioaccumulative chemicals of concern to the Great Lakes System." Furthermore, the Great Lakes Water Quality Initiative allows for only very limited zones of initial dilution and mixing zones

[18] Butler, Georgia, "Amazon data centers in Jerome Twonship, Ohio, called emergency services 84 times since 2021" Data Center Dynamics (Sept. 29, 2025) *available at:* https://www.datacenterdynamics.com/en/news/amazon-data-centers-in-jerome-township-ohio-called-emergency-services-84-times-since-2021/ .
[19] 40 CFR 132 App. E section I.B.

for other substances.[20] Accordingly, any general permit should not allow discharges to Lake Erie or its tributaries because there is no way to comply with federal law regarding discharges to Lake Erie on a general permit basis.

B. Hyperscale data centers

Discharges from hyperscale data centers pose a larger risk to water quality as they will discharge larger quantities of wastewater. However, the Proposed General Permit poses no limitation on the size of a hyperscale data center that may obtain coverage under the general permit and it should do so.

C. Discharges from data centers into drinking water sources

Data centers that may affect the quality or quantity of drinking water source water are certainly not in the public interest and cannot on balance have net positive social or economic utility, let alone be necessary to accommodate growth. Though the permit specifies discharges located within five-hundred yards upstream of a public water supply surface water intake and that cannot meet Ohio's public water supply standards are not authorized under the Proposed General Permit, the permit contains such limited monitoring and effluent limitations that OEPA will not be able to determine whether those public water supply standards have been violated. This undermines Ohio's Source Water Protection Program established under the Safe Drinking Water Act and the source water protection plans that have been adopted by water systems under Ohio law.[21]

D. Waters with nitrogen or phosphorus levels that are higher than the levels suggested by the U.S. EPA ecoregion criteria

Given the known relationship between nutrient pollution, HABs, and thermal pollution, waters where nitrogen or phosphorous levels exceed USEPA ecoregion criteria should be excluded from the permit.[22] Discharges that might increase water temperatures in nutrient-enriched waters must be considered on an individual basis, rather than under a "one-size-fits-all" general NPDES permit to prevent, inter alia, HABs.

E. Discharges into impaired waters

Under the federal Clean Water Act, OEPA is prohibited from issuing any permit that would cause or contribute to a violation of a water quality standard.[23] Thus, any general permit should not authorize discharges into already impaired waters of the pollutants by which the water body is impaired. The Proposed General Permit generically states that it doesn't authorize these

[20] 40 CFR 132 App. F Procedure 3 (E) and (F).
[21] O.A.C. 3745-91-10.
[22] USEPA, Ecoregional Nutrient Criteria for Rivers and Streams, https://www.epa.gov/nutrientpollution/ecoregional-nutrient-criteria-rivers-and-streams; Hans W. Paerl, Jef Huisman ,Blooms Like It Hot, Science 320,57-58(2008), https://www.science.org/doi/10.1126/science.1155398; Kaeding, Danielle, "While harmful algal blooms like it hot, a new study finds they can handle the cold" WPR (Feb. 20, 2023), https://www.wpr.org/environment/algal-blooms-hot-cold-temperatures-cyanobacteria-new-study-lakes.
[23] 40 CFR 122.44(d)

discharges, but given the lack of monitoring requirements and effluent limitations in the Proposed General Permit, it is unclear how OEPA will determine this.

## III. If OEPA nevertheless issues a general NPDES permit for data center wastewater discharges, the Proposed General Permit is deficient and must be substantially revised

We reiterate that OEPA has not demonstrated that a general NPDES permit for data centers is warranted, as outlined in section I above. However, if OEPA nevertheless issues the general permit, it must include at least all of the following:

### A. Effluent limitations for all discharges

The federal Clean Water Act requires permits to include effluent limits for conventional, toxic, and nonconventional pollutants. 33 U.S.C. §§ 1311(b)(2). Additionally, each NPDES permit must include any requirements necessary to "[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality." 40 CFR § 122.44(d)(1); *see also* 40 CFR § 123.25 (applying the regulation to states). Moreover, as noted above, Ohio's antidegradation rule requires new source discharges to, at "a minimum, be controlled through best available demonstrated control technology relative to the specific regulated pollutant" and any "[m]ore stringent treatment . . . required . . . to meet water quality standards."[24] The Proposed General Permit, however, authorizes extensive discharges without proper effluent limitations.

The Proposed General Permit is ambiguous about what discharges it authorizes. Part III contains a table listing ten authorized effluent parameters, including temperature, total suspended solids, phosphorus, etc. Condition I.C.1.o, states that the permit does not authorize discharges of numerous listed volatile organic compounds (VOCs) greater than 100 ug/l (monthly average), suggesting that VOC discharges below that threshold are allowed. None of the VOCs listed in Condition I.C.1.o are in the table of authorized discharges in Part III.

Similarly, Condition II.B. of the Proposed General Permit requires that a Notice of Intent to be covered under the Proposed General Permit include data or best professional estimates of numerous other pollutants that are neither listed in the table in Part III nor contained in the list of VOCs, including arsenic, barium, cadmium and lead. To the extent such data shows such discharges, it is unclear if the Proposed General Permit is authorizing them to continue. The Proposed General Permit must be revised to clearly identify all authorized discharges.

OEPA must also revise the Proposed General Permit to include effluent limitations and associated monitoring, etc. for all pollutants associated with data center discharges. The table in Part III includes discharge limitations for only five of the ten authorized effluent parameters. It includes "benchmark" levels for total suspended solids and oil & grease but does not impose them as limits. Moreover, the Proposed General Permit does not impose explicit effluent limitations on the VOCs listed in Condition I.C.1.o or the metals and other pollutants required

[24] O.A.C. 3745-1-05(C)(2).

for the NOI. A proper permit must include effluent limitations for all pollutants known to potentially be in data center discharge. The Proposed General Permit violates this fundamental requirement with respect to dozens of pollutants.

Many of these pollutants without effluent limitations pose serious threats to water quality. Thermal pollution, for instance, can significantly impact aquatic ecosystems, water quality, habitat loss, and biodiversity loss. Elevated water temperatures also contribute to the growth of HABs, which plague western Lake Erie, among other Ohio waterbodies.[25] Sudden temperature changes can also cause cold stress and cold shock, killing fish and aquatic life.[26] Thermal limits should be set to meet standards at the end of the pipe, as many of these facilities will be discharging into low flow streams. Additionally, any discharges into Lake Erie cannot exceed the temperature limits in Ohio Admin. Code 3745-1-31.

The Proposed General Permit also authorizes total phosphorus discharges without any effluent limitations, **including into Lake Erie**. *See* Cond. I.C.1.g (excluding discharges into lakes except Lake Erie). As OEPA knows, Ohio agreed to reduce nutrient pollution entering Lake Erie by 40% in 2025.[27] Ohio has failed to meet this goal, and HABs have become the new normal, causing utilities to increase water rates in order to monitor and treat for cyanotoxins that cause HABs,[28] impacting commercial and recreational fishing, and causing respiratory problems for residents. To meet this goal and to comply with basic NPDES permitting requirements, the Proposed General Permit must be revised to include effluent limitations for phosphorus and all other contaminants in data center discharges. This list should also include dissolved orthophosphate, which Ohio researchers have unequivocally linked to harmful algal blooms.[29]

We also note that for all discharges into impaired waters, applicable effluent limitations must include water-quality based effluent limitations ("WQBELs"). 33 U.S.C. § 1312; *see also* 40 CFR 122.44(d)(1)(vii). Such WQBELs must be consistent with wasteload allocations established by total maximum daily loads (such as the Maumee Watershed Nutrient TMDL). 40 CFR 122.44(d)(1)(vii)(B).

B. Adequate monitoring, recordkeeping, and reporting for discharges

The Clean Water Act requires point source permittees to "(i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents . . . and

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[25] Agboola, Chimamanda, *The Effects of Thermal Pollution on Aquatic Ecosystems*, Journal of Industrial Pollution Control, (Dec. 28, 2023) *available at:* https://www.icontrolpollution.com/articles/the-effects-of-thermal-pollution-on-aquatic-ecosystems.php?aid=93966.

[26] Reid, Connor, et. al, An updated review of cold shock and cold stress in fish, (Mar. 14 2022), https://doi.org/10.1111/jfb.15037; Ash, G. & Chymko, N. & Gallup, D.. (2011). Fish Kill Due to "Cold Shock" in Lake Wabamun, Alberta. Journal of the Fisheries Research Board of Canada. 31. 1822-1824. 10.1139/f74-235.

[27] Great Lakes Water Quality Agreement, Annex 4, https://ijc.org/en/who/mission/glwqa/annex4.

28 Alliance for the Great Lakes, Western Lake Erie Basin Drinking Water Systems: Harmful Algal Bloom Cost of Intervention (May 2022) *available at:* https://greatlakes.org/wp-content/uploads/2022/05/FINAL-COI-Report-051622.pdf.

[29] Developing Low-Cost Sensors to Detect Key Nutrients | Ohio Sea Grant ("The severity and extent of harmful algal blooms in the Western Lake Erie Basin is closely linked to dissolved reactive phosphorus (DRP), and bloom toxicity is often associated with the availability of reduced forms of nitrogen, especially ammonium ($NH_4$)").

(v) provide such other information as he may reasonably require." 33 U.S.C. § 1318(a)(A). U.S. EPA regulations require that "[a]ll permits shall specify . . . [r]equired monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity." 40 C.F.R. § 122.48; see also 40 CFR § 123.25 (applying the regulation to states.)

The Proposed General Permit violates these monitoring, recordkeeping and reporting requirements. First, to the extent the Proposed General Permit fails to establish effluent limitations, it has by definition failed to include adequate monitoring, etc. to assure compliance with those limitations.

Second, the monitoring requirements are otherwise vague, contradictory and deficient. For example:

- The monitoring frequency of oil and grease is contradictory in the notes for Table 001
    - Note c states that oil and grease monitoring is "required once every two weeks regardless of if the discharge is commingled with stormwater" whereas note e states that "monitoring is required during a storm sampling event at a frequency of 1/quarter. This also applies to oil and grease."
- Stormwater outfalls can be completely unmonitored if the discharge is "believe[d]" to be "substantially identical" to another monitored stormwater outfall. ; *see also* Table 002 note a.
- Part IV.K.1 allows a permittee to only monitor one stormwater outfall if they "believe [the other stormwater outfalls] discharge substantially identical effluents." Part IV.K.1; *see also* Table 002 note a.
- Part V.P acknowledges that "the Clean Water Act and ORC 6111.05 state that effluent data and receiving water quality data shall not be considered confidential" yet Part V.L.5 allows permittees to *not report* "[a]nalyses of pollutants not required by this permit." Part V.L.5.
- Part V.R.1 allows any bypass for essential maintenance to *assure efficient operation* which do not exceed effluent limitations whereas Part V.R.3 prohibits bypass unless "unavoidable to prevent loss of life, personal injury or severe property damage" and "[t]here were no feasible alternatives . . . [including] maintenance during normal periods of equipment downtime."
    - Does Part V.R.3 only apply to bypasses that exceed effluent limitations? If so, how are such determinations made if there are no corresponding monitoring or reporting provisions in place?
- Part V.R.1 also states that such "bypasses are not subject to the provisions of Part V.R.2 and R.3 which require notice under Parts V.S.3 and V.S.5 for unanticipated and anticipated bypasses, respectively, implying that bypasses under the effluent limitations are not required to be reported. However, Part V.S.3 explicitly contradicts this by stating that "an unanticipated bypass that does not result in exceedance of a discharge limit shall be reported at the time monitoring reports are submitted."

Such contradictory and unclear monitoring and reporting provisions thwart public and regulatory oversight of Clean Water Act compliance.

C. Effluent limitations and monitoring requirements for nitrate

Data centers do not exist in a vacuum, and OEPA should consider the potential for data centers to amplify Ohio's pre-existing nutrient-related water quality issues. In the Proposed General Permit, OEPA has set neither an effluent limitation nor a monitoring requirement for nitrate. However, recent reporting indicates that evaporative cooling data centers can and do concentrate pre-existing contaminants such as nitrate. For example, in Oregon, an Amazon data center which intakes water that is already beyond the federal drinking water standard for nitrate due to agricultural pollution is reported to have concentrated that contaminant even further.[30]

The dangers of nitrate pollution to human health have been recognized for decades and include not only methemoglobinemia (blue baby syndrome) which can be deadly to infants and increase risks for pregnant women. Numerous human epidemiological studies illustrate that chronic exposure to nitrate levels between 3 and 5 mg/L (well below the Ohio and federal 10 mg/L standard) causes a statistically significant increase in the risk of colorectal cancer,[31] thyroid cancer,[32] ovarian cancer,[33] and pregnancy and birth complications.[34] In children, evidence also suggests a correlation between nitrate exposure and diabetes.[35]

Nitrate is already an issue for hundreds of public drinking water systems in Ohio, impacting millions of residents.[36] These impacts come at a considerable cost. The city of Columbus, for example, has spent nearly $35 million to address nitrate in its system.[37] Large rivers in the Western Lake Erie Basin (WLEB) are significantly impaired by nitrate from agricultural pollution, but even in other surface waters outside the WLEB, such as the Upper

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[30] Cooper, Sean Patrick, "The Precedent is Flint: How Oregon's Data Center Boom Is Supercharging a Water Crisis" Rolling Stone, (Nov. 24, 2025) *available at:* https://www.rollingstone.com/culture/culture-features/data-center-water-pollution-amazon-oregon-1235466613/.

[31] Nadia Espejo-Herrera et al., Colorectal cancer risk and nitrate exposure through drinking water and diet, 139 Intl. J. of Cancer 334-346 (2016) (Ex. 2); Jorg Schullehner et al., Nitrate in drinking water and colorectal cancer risk: A nationwide population-based cohort study, 143 Intl. J. of Cancer, 73-79 (2018).

[32] Mary H. Ward et al., Drinking Water Nitrate and Human Health: An Updated Review, Intl. J. Envtl. Research and Public Health (2018).

[33] Maki Inoue-Choi et al., Nitrate and nitrite ingestion and risk of ovarian cancer among postmenopausal women in Iowa, 137 Intl. J. of Cancer, 173-182 (2015).

[34] Ward MH, Jones RR, Brender JD, de Kok TM, Weyer PJ, Nolan BT, Villanueva CM, van Breda SG. Drinking Water Nitrate and Human Health: An Updated Review. Int J Environ Res Public Health. 2018 Jul 23;15(7):1557.

[35] Moltchanova E., M. Rytkonen, A. Kousa, O. Taskinen, J. Tuomilehto, M. Kavonen. 2004. Zinc and nitrate in the ground water and the incidence of Tye 1 diabetes in Finland. Diabetic Medicine, 21(3):256-261. *See also* Parslow, R.C., P.A. McKinney, G.R. Law, A. Staines, R. Williams, H.J. Bodansky. 1997. Incidence of childhood diabetes mellitus in Yorkshire, northern England, is associated with nitrate in drinking water: an ecological analysis. Diabetologia 40(5):550-556.

[36] Environmental Working Group Tap Water Database, "Ohio"

[37] City of Columbus Nitrate Drinking Water Advisory for Certain Populations in the Columbus Dublin Road Water Plant Service Area *available at:* https://www.ic.ohio.gov/icon/pdf/Columbus%20Water%20Nitrate%20Advisory%20FAQ.pdf.

Great Miami River, nitrate regularly exceeds the OEPA's threshold for biological over-enrichment.[38] Any general permit must include effluent limitations and monitoring requirements on nitrate discharges.

D. Monitoring requirements for potential contaminants

EPA regulations state that NPDES permits are to include monitoring at "type, intervals, and frequency sufficient to yield data which are representative of the monitored activity." 40 CFR § 122.48(b); see also 40 CFR § 123.25 (applying the regulation to states). Comprehensive monitoring of the data center's effluent is also needed in order for OEPA and the public to understand what pollutants data centers are discharging. This monitoring must also be at a frequency that will generate meaningful information given the effluent's variability. Among other parameters, the Permit should require monitoring for biocides, corrosion inhibitors, and surfactants such as PFAS or PFOAs, all of which are utilized in data center cooling equipment.[39]

E. Revisions to particular provisions

Part I.B. "Applicability":

> The permit should make clear that no discharge is legal until the Director gives notice under I.D.2.

Part I.C.1.b. "Eligibility":

> If the permit is only to allow "low volume wastewater discharges" then it must include a maximum volume (e.g. 0.1 MGD) in the definition of "low volume."
>
> It is unclear if the general permit is intended to cover discharges from a data center's backup generators, but a general permit should not apply to discharges caused by data center backup generators.

Part I.C.2. "Eligibility":

> The limitations stated in 'a' through 'f' are clearly necessary. It is unclear, however, how the party seeking to operate a data center or the Director will determine whether the proposed discharge may cause or contribute to a violation of a TMDL, a water quality standard or a public water supply standard on a general basis. At minimum, this determination cannot be left to the best guess of the operator. OEPA must revise the Proposed General Permit to explain how OEPA will make such determinations.

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[38] The Miami Conservancy District, https://www.mcdwater.org/blog/nutrients/allaboutnutrients (last accessed Dec. 11, 2025).

[39] Tozzi, Christopher, "4 Strategies for Eliminating Data Center Water Pollution" Data Center Knowledge (Nov. 11, 2025) *available at:* https://www.datacenterknowledge.com/sustainability/4-strategies-for-eliminating-data-center-water-pollution; Hegde, Ganesh, "Discharge from AI Data centers and How to Mitigate Contamination," Ketos, (Jul. 24, 2024) *available at:* https://ketos.co/discharge-from-ai-data-centers-and-how-to-mitigate-contamination#:~:text=Increased%20Contaminant%20Discharge,%2C%20respiratory%20system%2C%20and%20kidneys; KETOS, "Water Quality Preparedness in the Age of AI," p.17.

Part I.C.2.f. should also specify that a discharge to a receiving water with a "coldwater" habitat use designation is not eligible for a general permit;

As to 'g,' it is proper to deny coverage for discharges to lakes other than Lake Erie, but the general permit should prohibit thermal discharges to Lake Erie because, as noted above, higher water temperatures can promote HABs and make them more toxic.

'n' – It is unclear when or how the Director can make this determination under a general permit.

The permit should include provisions that ensure compliance with the Endangered Species Act.

Part I.D. "Authorization":

Ohio EPA should provide the public with at least 45 days' advance notice to comment on proposed NOIs, including on whether the discharge qualifies for a general permit. The agency should amend I.D.3 to clarify how interested persons will petition and to make clear that all contents of an NOI, including the pollution data identified in Part II.B., shall be publicly available.

Part V.B. "Continuation of the Expired General Permit":

As currently written, the Proposed General Permit would allow a facility to submit an NOI up to 45 *after* its general permit expired and the expired general permit would continue "in force and effect until a new general permit is issued." Neither the public nor the regulatory agencies should have to wait 45 days after a permit expires to deem the permit expired. This provision should be revised to require submission of the NOI no later than 45 days prior to the expiration of the general permit.

We look forward to continuing to work with OEPA to restore and maintain the chemical, biological, and physical integrity of Ohio's waters.

Sincerely,

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