

## ATTACHMENT #3: EPA Consideration of CAFOs during its review of the Maumee Watershed Nutrient Total Maximum Daily Load

### NPDES Requirements and Land Application:

Concentrated Animal Feeding Operation (CAFOs) are point sources subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements under the regulations at 40 C.F.R. 122.23(a). Any permit issued to a CAFO must include the permit requirements in 40 C.F.R. 122.42(e)(1)-(6). CAFOs have the potential to discharge in two ways. First, the discharge of wastewater from the production areas (e.g., animal confinement area, manure storage area, etc.) is regulated as a point source consistent with the Clean Water Act (CWA) and 40 C.F.R. 122.23, and subject to an NPDES permit. Second, manure and process wastewater generated at the CAFO's production area is often land applied as a fertilizer and spread onto agricultural fields. The discharge of CAFO-derived manure and process wastewater to waters as a result of land application is a discharge subject to NPDES permit requirements, except where it is an agricultural storm water discharge. To qualify as an agricultural storm water discharge, the land application of manure and process wastewater from a CAFO must be applied in accordance with site specific nutrient practices that ensure appropriate agricultural utilization of the nutrients (40 C.F.R. 122.23(e)).

CAFO-derived manure and process wastewater spread onto agricultural fields may be transported to surface waters in runoff during precipitation events across all seasons. Stormwater runoff from agricultural lands contributes loading of phosphorus and other nutrients, as well as organic material and organic-rich sediment, to surface waters in the Maumee River Watershed (MRW). Fields underlain by tile drainage lines, which cover at least 86% of the cropland in the MRW, can channelize precipitation to drainage ditches and/or small streams and exacerbate the transport of nutrients to surface waters (MWN TMDL, Section 4.1.1.1)

### Comments Received by Ohio EPA During the State's Comment Periods:

Numerous comments were received by Ohio EPA (and by EPA after the close of the State's comment period on the draft MWN TMDL) regarding contributions from CAFOs to phosphorus loadings in the MRW. Many of the comments urge Ohio EPA and EPA to regulate these sources under NPDES permits as point sources and to regulate discharges from land application of manure to farm fields in the MRW. The MWN TMDL describes how CAFOs and the land application of manure to farm fields was considered in the development of the MWN TMDL (MWN TMDL, Executive Summary; Sections 4.1.1.1; 5.3.4; 5.6; and 8.4.7).

EPA has reviewed the comments submitted, Ohio EPA's response to comments, and the detailed explanation in the MWN TMDL on how the loads from these sources are accounted for in the TMDL to ensure the designated uses and TMDL endpoints will be achieved. EPA finds that Ohio EPA properly considered and responded to the comments. EPA also finds Ohio EPA provided a reasonable explanation, based on the state and federal laws and regulations, for why it assigned precipitation-related discharges from land application of manure to the Load Allocation portion of the TMDL assigned to non-point sources as "agricultural stormwater discharge" not subject to NPDES permit requirements.

A concern expressed by commenters focused on the lack of permitting for CAFOs in Ohio, and the lack of regulation over the application of manure as fertilizer. As noted by Ohio EPA in Section 4.1.1.1 of the MWN TMDL, manure contributes approximately 8% of the total phosphorus load in the MRW. Ohio EPA noted that studies indicate that the complete removal of manure in the watershed would reduce total phosphorus loads by 5% to 10% (Kast et. al, 2021; Martin et. al, 2021). Contributions from soil sources (i.e., legacy or soil phosphorus) and commercial fertilizers have been found to be the two largest sources of total phosphorus to the MRW. (MWN TMDL, Section 4.1.1.1, pg. 39.)

The MWN TMDL discusses the contribution of fertilizer application to phosphorus loadings in the MRW and how it is regulated in Ohio:

Fertilizers, both commercial and manure, enter stream networks and contribute to phosphorus pollution. Fertilizer movement is generally precipitation-induced and inadvertent. These phosphorus losses are typically consistent with the definition of agricultural stormwater; thus, they are exempt from Clean Water Act regulation (CWA Section 502 (14): 40 CFR 122.23). (MWN TMDL, Section 4.1.1.1, pg. 35)

Fertilizer, both commercial and manure, is at times lost from farms and fields in a way that is inconsistent with the definition of agricultural stormwater. These discharges are illicit according to federal and state regulations (see ORC Section 6111.04 and OAC 901:13-1, OAC 901:5, and OAC 901:10-1-10). When livestock operations are found to have a discharge of manure or other waste products, they are required to eliminate the discharge. They also may be required to pay a penalty and to obtain a permit from Ohio EPA and/or ODA to ensure that future discharges do not occur. (MWN TMDL, Section 4.1.1.1, pg. 35.)

As noted by Ohio EPA in Section 5.3.4 of the MWN TMDL, two court decisions (*Waterkeeper Alliance, Inc. v. U.S. EPA*, 399 F.3d 486, 506 (2nd Cir. 2005); *National Pork Producers Council v. U.S. EPA*, 635 F. 3d 738 (5th Circuit 2011)) both found that the CWA does not require a CAFO to obtain an NPDES permit unless a discharge has occurred. This does not preclude the State of Ohio from requiring permits under any applicable State authority. Where discharges do occur, this is addressed through the NPDES permit process.

The MWN TMDL notes that:

Manure fertilizer form and application methods play a role in phosphorus loss. Surface broadcasting of liquid manure with no soil incorporation has been found to have higher total phosphorus and DRP export rates than other methods (Veith et al., 2011; Wang et al., 2022). Several studies have shown that the greater amount of water soluble phosphorus content in manure fertilizer, the greater the amount of DRP export (summarized in LimnoTech, 2017 and Wang et al., 2022) (MWN TMDL, Section 4.1.1.1, pg. 36.)

## Tile Drains:

With regard to phosphorus loadings from land application areas, the CWA specifically defines point source as:

“[P]oint 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 19 irrigated agriculture.

33 U.S.C. § 1362(14) (emphasis added). In 2008, EPA promulgated new regulations regarding CAFOs (“2008 rule”). The 2008 rule was challenged and portions of the rule were vacated (*Natl. Pork Producers Council, 2011*). In 2012, EPA issued the Compiled CAFO Final Rule (<https://www.epa.gov/npdes/npdes-cafos-regulatory-documents>) which is the consolidation of the 2003 and 2008 rule promulgations and related court decisions.

The current CAFO regulations, 40 C.F.R. 122.23(e) state:

(e) Land application discharges from a CAFO are subject to NPDES requirements. The discharge of manure, litter or process wastewater to waters of the United States from a CAFO as a result of the application of that manure, litter or process wastewater by the CAFO to land areas under its control is a discharge from that CAFO subject to NPDES permit requirements, except where it is an agricultural storm water discharge as provided in 33 U.S.C. 1362(14). For purposes of this paragraph, where the manure, litter or process wastewater 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), a precipitation-related discharge of manure, litter or process wastewater from land areas under the control of a CAFO is an agricultural stormwater discharge.

The CAFO rules from 2003 and 2008 were the subject of litigation. As noted in court decisions (See *Waterkeeper Alliance, Inc.*, 399 F.3d 486 (2<sup>nd</sup> Cir. 2005); *National Pork Producers Council*, (5<sup>th</sup> Cir. 2011); *Food & Water Watch v. U.S. Env’t Prot. Agency*, 13 F.4<sup>th</sup> 896 (9<sup>th</sup> Cir. 2021)), discharges defined as “agricultural stormwater” are exempt from regulation under NPDES. As noted in the *Waterkeeper Alliance* decision:

With respect to legislative purpose, we believe it reasonable to conclude that when Congress added the agricultural stormwater exemption to the Clean Water Act, it was affirming the impropriety of imposing, on “any person,” liability for agriculture-related discharges triggered not by negligence or malfeasance, but by the weather – even when those discharges came from what would otherwise be point sources. There is no authoritative legislative history to the contrary. *Waterkeeper Alliance*, 399 F.3d 486 at 507.

These court decisions did not distinguish between overland runoff and tile drainage. As noted in these decisions, under the CWA and EPA regulations, agricultural stormwater is exempt from regulation, subject to the requirements and definitions in the CWA and EPA regulations.

Several commenters have claimed that Ohio EPA has improperly used “legacy phosphorus” as a separate source in the MRW. Numerous studies in the MRW have noted that legacy phosphorus is a major source of phosphorus to the Western Basin of Lake Erie (Yuan and Koropecj-Cox, L. 2022; Muenich et. al, 2016; Williams et. al, 2016; Sharpley et. al, 2013; Han et. al, 2012; Kleinman et. al, 2011).<sup>1</sup> Ohio EPA does not use the term “legacy phosphorus” to avoid addressing a phosphorus source; rather, Ohio EPA employs this term to denote the historical, aggregate loading of phosphorus to soils in the MRW over time (MWN TMDL, Section 4.1.1.2). Legacy phosphorus loading to soils in the MRW can occur via a variety of different land use practices, e.g., use of chemical fertilizers, use of manure as a fertilizer, etc.

### MWN TMDL IMPLICATIONS

Numerous commenters have stated that Ohio EPA (and EPA) must consider tile drains as regulated point sources as liquid manure applied to farm fields in the MRW enters the tile drains via preferential pathways and discharges to local water bodies and eventually the Western Basin of Lake Erie. EPA notes that this is already considered in Section 5.3.4 of the MWN TMDL, as Ohio EPA explained that there are currently no CAFOs in the Ohio portion of the MRW that discharge or propose to discharge non-agricultural stormwater under an NPDES permit.

As noted in Section 5.3.4 of the MWN TMDL, Ohio EPA determined that the WLA for CAFOs is zero (WLA = 0), meaning that CAFOs are not authorized to discharge any non-agricultural stormwater. As noted by the court in *Natl. Pork Producers Council*, “[i]f a CAFO discharges without a permit, it is strictly liable for discharging without a permit and subject to severe civil and criminal penalties. 33 U.S.C. § 1319.”

During the TMDL review process, Ohio EPA provided information on the regulatory and enforcement programs that oversee CAFOs in Ohio (MWN TMDL, Section 8.4.7), to ensure that discharges are meeting the applicable CWA requirements. Determining or approving allocations for illicit or unauthorized sources would be counter-intuitive to determining the allocations needed to attain and maintain WQS.

The TMDL is a planning tool that does trigger certain regulatory outcomes, but it is not the mechanism used to determine whether the discharge of non-agricultural stormwater is occurring from particular CAFOs. As noted by Ohio EPA in the Executive Summary, TMDLs are informational tools that identify sources of pollutants and quantify the amount of a pollutant that can enter a water body to attain and maintain water quality standards (*City of Arcadia v. EPA*, 265 F. Supp. 2d 1142, 1144 (N.D. Cal. 2003); *American Farm Bureau Federation, et. al. v. EPA, et. al.*, No. 1:11-CV-0067, 2013 (“the *Chesapeake Bay* decision”)). As noted in the *Chesapeake Bay* decision, “TMDLs are not self-implementing, but rather are informational tools utilized by EPA and the states to coordinate necessary responses to excessive pollution in order to meet applicable water quality standards.” TMDLs are not a substitute for appropriate

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<sup>1</sup> EPA notes that some of these studies pre-date the start of MWN TMDL development efforts which began in 2020.

enforcement and compliance activities relating to other federal and state statutory and regulatory requirements.

In Section 8.4.7 of the MWN TMDL, Ohio EPA includes a discussion of Ohio programs that regulate CAFOs. EPA reviewed the information submitted by Ohio EPA as part of the MWN TMDL, but is not making a determination of the adequacy of these state programs and their administration by state agencies tasked to carry out these programs. Ohio EPA's Biennial Report on progress and implementation measures should include a review of state efforts to ensure that land application of CAFO-derived manure and process wastewater within the MWR is done consistent with site specific nutrient management practices to ensure appropriate agricultural utilization of the nutrients in the manure or the land application is a discharge subject to NPDES permit requirements as described in 40 C.F.R. 122.23.

EPA notes that Ohio EPA explains that the MWN TMDL can be revised as new data or information is developed.<sup>2</sup> Additionally, the MWN TMDL can be revised, as appropriate, if there are additional court decisions or legislative actions regarding the regulation of CAFOs that would affect the assumptions underpinning the TMDL. EPA notes that the information discussed in this Attachment #3 does not preclude Ohio EPA from revising the MWN TMDL as new data or information is developed.

#### CONCLUSION:

EPA has reviewed Ohio EPA's discussion of contributions of total phosphorus from CAFOs and land application of manure within the MRW and Ohio EPA's approach for assigning and calculating loads to the WLA and LA in the MWN TMDL. EPA has determined that Ohio EPA identified phosphorus from CAFOs and the land application of manure in the MWN TMDL and reasonably accounted for loadings of total phosphorus from these sources in the MWN TMDL.

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<sup>2</sup> EPA notes that Ohio EPA explains that "*As new data becomes available, the TMDL could be revised to address changes in loads or allocations.*" (MWN, TMDL, Section 4.1.1.6).

## REFERENCES:

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