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FOR LOVE OF WATER

Ensuring the Waters of the Great Lakes Basin
Are Healthy, Public, and Protected for All

January 16, 2024

FLOW Comments opposing Rathmourne Dairy Hudson-CAFO new site application
Submission ID HQ0-038P-BCV1B
Contact: Carrie La Seur, FLOW Legal Director, carrie@flowforwater.org, (231) 944-1568

To Whom It May Concern:

Thank you for the opportunity to submit comments in opposition to the December 18, 2023 application by Rathmourne Dairy Hudson-CAFO for an amendment to its Comprehensive Nutrient Management Plan to include an additional Lenawee County site for land application of manure. FLOW takes the position that additional manure application in this ecologically sensitive area, part of the headwaters of a watershed identified as a key contributor to Lake Erie's algal bloom, is contrary to law, science, and common sense.

For Love of Water is a Michigan nonprofit organization, founded in 2011, located on the shores of Lake Michigan's Grand Traverse Bay. Our mission is to ensure that the waters of the Great Lakes Basin are healthy, public, and protected for all.

Our concerns about this application are the following:

Ecologically Sensitive Location
The proposed application site, just north of Lime Creek in the Maumee River watershed, includes tile outlets and surface drains, where the risk of phosphorus flowing to surface waters is elevated. The Dewey Lake 146 surface drain bisects the proposed application area, carrying runoff directly to Lime Creek, an impaired waterway newly listed in 2024 for its inability to support a warm water fishery due to low dissolved oxygen concentrations, a condition related to nutrient pollution.[1] Lime Creek flows to Bean Creek, which is in nonattainment for total body recreation due to E.coli contamination, linked to manure discharges.[2]

Bean Creek flows to Ohio's impaired Tiffin River, then to the Maumee River. Both rivers have long stretches in nonattainment status for uses including primary contact recreation, public

[1] Michigan EGLE Water Resources Division, Water Quality and Pollution Control in Michigan, 2024 Sections 303(d), 305(b), and 314 Integrated Report, Appendix C. https://www.michigan.gov/egle/about/organization/water-resources/assessment-michigan-waters/integrated-report
[2] *Id.*

drinking water supply, modified warmwater habitat, and fish consumption.[3] The Maumee is a major contributor to phosphorus loading and resulting algal blooms in Lake Erie's shallow western basin.[4] The resulting damage to property values runs over $40 million annually.[5]

According to a 2020 study commissioned by EGLE,

> (w)hile harmful algae blooms were mostly absent in Lake Erie from the 1980s until the mid-late 1990s, the Western Lake Erie Basin has frequently experienced persistent and intense cyanobacteria blooms in recent years (State of Michigan, 2018; Wilson et al., 2019; National Oceanic and Atmospheric Administration-Great Lakes Environmental Research Laboratory [NOAA-GLERL], 2019). The Maumee River system, which drains southern Michigan, northeastern Indiana, and northwestern Ohio (Greeman, 1994), is one of the largest contributors of nutrients (e.g., total phosphorus [TP] and dissolved reactive phosphorus [DRP]) that feed algae blooms and anoxic regions within Lake Erie (Annex 4 Objectives and Targets Task Team [Annex 4 OTTT], 2015; Maccoux et al., 2016; Muenich et al., 2016).[6]

This is a national trend with severe local impacts. Manure phosphorus production rose 92% nationwide from 1930 to 2012, and CAFO-produced phosphorus in the Maumee River watershed has grown significantly in the past twenty to thirty years.[7] USEPA has warned about tile drains in particular as a threat to Lake Erie:

> (A) significant portion of the phosphorus that is contributing to the harmful algal blooms in Lake Erie originates from surface and subsurface losses of commercial and organic fertilizer applied to cropland. According to USDA researchers, soluble phosphorus loss is the greatest treatment need in the Western Basin, and

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[3] Ohio 2022 Integrated Water Quality Monitoring and Assessment Report https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/ohio-integrated-water-quality-monitoring-and-assessment-report

[4] Yang, Q., H. Tian, X. Li, W. Ren, B. Zhang, X. Zhang, and J. Wolf. 2016. "Spatiotemporal Patterns of Livestock Manure Nutrient Production in the Conterminous United States from 1930 to 2012." The Science of the Total Environment 541: 1592–602. https://doi.org/10.1016/j.scitotenv.2015.10.044.

[5] Wolf, D., S. Gopalakrishnan, and H.A. Klaiber. 2022. "Staying Afloat: The Effect of Algae Contamination on Lake Erie Housing Prices." American Journal of Agricultural Economics 104: 1701–23. https://doi.org/10.1111/ajae.12285.

[6] "Nutrient Chemistry of Michigan's Maumee River Tributaries, Bean Creek and St. Joseph River Watersheds, Hillsdale and Lenawee Counties, 2016-2018", May 2020, Michigan Department of Environment, Great Lakes, and Energy, and Limnotech, at 4. https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Programs/WRD/SWAS/Monitoring-Watershed/Biosurvey/report-2016-2018-nutrient-chemistry-maumee-bean-stjoseph.pdf?rev=239da8c23cf744f7aa29d42f3755a17d

[7] *Id.*

> the majority of soluble phosphorus losses occur through subsurface tile drains (King et al., 2014 and Smith et al., 2014, USDA NRCS, 2016).[8]

In summary, increasing the flow of pollutants from this watershed to Lake Erie is unjustifiable, and manure application adjacent to tile drains is a big part of the problem.

No Agronomic Justification

Aside from the inappropriateness of this sensitive site for expanded manure application, the soil profile submitted by the applicant indicates that there is no agronomic need for increased application. The proposed site already has elevated P levels in excess of Tri-State Fertilizer Recommendations and does not require additional phosphorus for the projected corn yield levels.[9] According to Nutrien Ag Solutions' November 2023 soil testing, submitted with the application, phosphorus levels on all five fields are at least "optimum" to high, and on 800-056E, P levels are "very high". This distribution is particularly concerning because the field with the greatest excess of phosphorus is also the highest in elevation and most steeply sloped (8%) – and therefore the most likely to drain nutrients down to the Dewey Lake 146 Drain and onward to Lake Erie.

FLOW is also concerned that Rathmourne Dairy Hudson-CAFO's new site application does not include updated information about the nutrient profile of the waste stream, or the quantities to be applied. Without this information, EGLE cannot evaluate the agronomic value of the proposed manure application or the potential water quality impact if the soil is unable to absorb excess phosphorus.

Finally, the fields described in the application appear to be part of Hudson-CAFO's existing list of designated manure application fields, raising the question of whether this application represents an *additional* waste stream to be applied to the same fields.

Adjacent, Co-Applying Operations Under Common Ownership Permitted Separately

Despite EGLE's finding that the Rathmourne Medina and Hudson CAFOs are separate operations subject to separate permit limits for animal numbers, they are within three sections of each other, owned and operated by the same company, and applying manure to many of the same fields according to EGLE's records, as demonstrated by EGLE GIS mapping that shows manure applications from both CAFOs to the same fields. There is no justification for regulating these operations separately. Their impact to the watershed is cumulative and must be permitted accordingly.

Recent Rathmourne NPDES Violations

Rathmourne Dairies, operating at least fifteen CAFOs across six Michigan counties, violate NPDES permit terms regularly, according to EGLE records. In just the past year, the following violations at Rathmourne CAFOs led to escalated enforcement actions:

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[8] USEPA-GLNPO, 2018. "U.S. Action Plan for Lake Erie: 2018-2023 Commitments and Strategy for Phosphorus Reduction". United States Environmental Protection Agency, Great Lakes National Program Office, February 2018. Last visited on December 22, 2023, at epa.gov/glwqa/us-action-plan-lake-erie.

[9] Culman, et al., 2020 Tri-State Fertilizer Recommendations for Corn, Soybean, Wheat, and Alfalfa, Bulletin 974, extensionpubs.osu.edu.

Date	CAFO	Nature of Violations
Jul 14, 2023	Rathmourne Dairy 9-CAFO 5301 Dodge Rd Cass City MI 48726	Unpermitted discharge, two types of failure to inspect, failure to complete daily application logs, failure to keep updated production area map
Jul 28, 2023	Rathmourne Dairy 10-CAFO 3157 Decker Road Decker MI 48426	Failure to notify EGLE and reduce waste volume timely when waste storage structure exceeds the operational volume, unpermitted discharge, failure to collect CAFO waste, failure to maintain land application logs, failure to update CNMP to reflect actual operating conditions, failure to evaluate integrity of waste storage structure liners
Sep 15, 2023	Rathmourne Dairy 8-CAFO 3657 Parisville Road Ruth, MI 48470	Unpermitted discharge, failure to report
Dec 21, 2023	Rathmourne Dairy LLC - Pewamo- CAFO 3844 N Hubbardston Rd Pewamo MI 48873	Failure to inspect and record weekly inspections of all Waste Storage Structures

A number of these violations are egregious, including uncollected CAFO waste and waste running directly to surface waters. EGLE's online records offer no evidence that any of the recent violations have been resolved. An operator that does not manage CAFO waste in full compliance with the law as standard practice throughout its operations should not be rewarded with authorization to spread additional waste, let alone in ecologically sensitive areas like tiled fields in the Maumee watershed.

Conclusion

For the reasons outlined above, this application should be denied. Lake Erie cannot afford additional manure application in excess of agronomic needs, in a watershed likely to aggravate existing phosphorus exceedances. FLOW respectfully asks EGLE to deny the requested CNMP amendment and direct the operator to find a less damaging alternative for waste disposal.

Sincerely,

Carrie La Seur

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Legal Director
For Love of Water