



Fact Sheet: Preliminary Modeling Results – Maumee Watershed Nutrient TMDL

The Ohio Environmental Protection Agency (Ohio EPA) is developing a Total Maximum Daily Load (TMDL) report for the Maumee Watershed to address shoreline and open water impairments in the Western Basin of Lake Erie caused by cyanobacteria harmful algal blooms (HABs). The Preliminary Modeling Results report is the fourth step in Ohio's TMDL development process.

What are the preliminary modeling results?

The preliminary modeling results (PMR) report documents the analytical methods used to develop the TMDLs and associated proposed implementation. Ohio law requires the following to be included in the preliminary modeling results:

- Any management choices – the decisions made to develop the following items
- Load allocations – the amount of pollutant allowed from nonpoint sources
- Wasteload allocations – the amount of pollutant allowed from point sources
- Margin of safety – the amount of pollutant load reserved due to various uncertainties
- Allowances for future growth – the amount of pollutant load reserved for development
- Necessary permit limits – pollutant reductions required for permitted entities
- A preliminary TMDL implementation plan – further explained below.

This PMR proposes total phosphorus TMDL allocations for the Maumee watershed to address impairments to recreation use (due to algae), public drinking water supply use, and aquatic life use impairments, as well as the proposed implementation strategies. Figure 1 depicts the assessment units included in this project and shows the Maumee watershed.

Source Assessment

The PMR includes an in-depth discussion of the sources of phosphorus in the Maumee watershed. The source assessment leverages an extensive amount of water quality observations and studies that have taken place in the Maumee watershed. It is intended to be a robust examination that provides a strong basis for pollutant reduction implementation recommendations. While the project allocations are for total phosphorus, the source assessment includes additional emphasis on the most bioavailable portion of total phosphorus, characterized by the parameter dissolved reactive phosphorus (DRP).

Analysis Methods and Results

The PMR describes the methods for evaluating existing loads and allocations using an empirical mass balance method. There is also an evaluation of the method's ability to account for heterogeneity in the Maumee watershed. The methods detail the

Stakeholder Input

The Agency is releasing the PMR for the Maumee Watershed Nutrient TMDL for review and comment. We will accept feedback on any aspect of the plan. The PMR is the fourth step in Ohio's TMDL development process. The next step will be the official draft TMDL report, which will also be available for review and comment.

Providing Feedback

Comments can be submitted by email to EPATMDL@epa.ohio.gov, faxed to (614) 644-2745 or sent by postal mail to:

TMDL Program
Ohio EPA, Division of Surface Water
P.O. Box 1049
Columbus, Ohio 43216-1049

All comments must be submitted to the Agency **no later than 5:00 p.m. on August 1, 2022.**

Stay Involved

Subscribe to updates on TMDL projects at: https://ohioepa.custhelp.com/app/utills/login_form/re_direct/account%252Fprofile.

Contact Information

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information considered for allocating load to different sources, the margin of safety, and the allowance for future growth. The results present the proposed wasteload and load allocations needed to achieve the TMDL.

Preliminary Implementation Strategy

The PMR report includes a preliminary implementation strategy that provides a framework for how Ohio EPA is proposing to implement wasteload allocations and achieve nonpoint source load reductions. For developing and implementing this TMDL, an adaptive management approach will be used, allowing for new science to be incorporated as time progresses. The implementation plan highlights the following steps for TMDL implementation:

- **Develop the strategy:** The initial plan is developed as part of the TMDL process and considers where and how implementation activities are targeted.
- **Establish milestones:** To ensure progress is made to meeting the TMDL, narrative planning and development and measurable implementation milestones are considered.
- **Implement the strategy:** Details about specific actions proposed to meet the TMDL wasteload and load allocations.
- **Monitor environmental outcomes:** A monitoring strategy that relates implementation measures to environmental outcomes is proposed. This involves monitoring implementation actions and environmental responses at different levels across the landscape.
- **Evaluate progress:** Specific metrics are considered that will allow the monitoring data to be evaluated objectively for progress.
- **Adjust the strategy:** This section explains how the implementation strategy can be adjusted as new information becomes available.

The preliminary implementation framework in the PMR lays the groundwork for the final implementation plan. The final plan will be proposed with the draft TMDL report in the next step of the TMDL process.

What input is the Agency seeking?

The Agency welcomes any feedback on the Maumee Watershed Nutrient PMR; however, we highlight our interest in the following areas:

- Additional information not considered in the source assessment
- Additional information on management practices that would improve management of DRP
- Additional information or feedback on opportunities to achieve reductions
- Feedback on the proposal to use a total phosphorus Watershed General Permit to implement wasteload allocations.

Where can I learn more?

- [***Preliminary Modeling Results \(PMR\)***](#)
- [***Loading analysis plan \(LAP\)***](#)
- [***Maumee Watershed Nutrient TMDL Project webpage***](#)

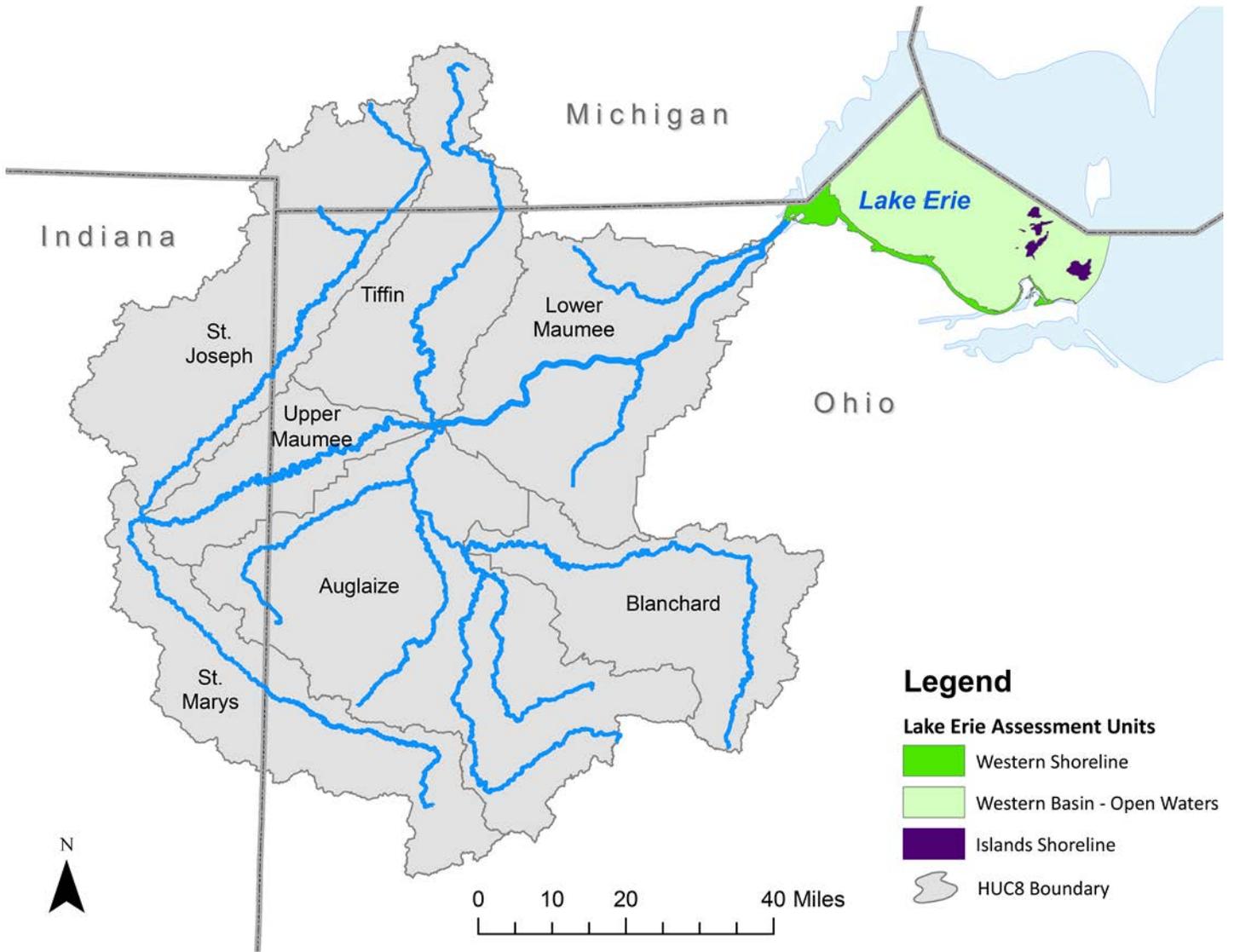


Figure 1 — Map of Ohio's Western Basin of Lake Erie assessment units and the Maume River watershed.