



Minnesota Center for Environmental Advocacy

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BY ELECTRONIC MAIL

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**Re: Draft Osakis Lake Area Excess Nutrient TMDL
Comments of Minnesota Center for Environmental Advocacy**

Thank you for the opportunity to submit these comments on behalf of the Minnesota Center for Environmental Advocacy on the draft TMDL for Osakis, Faille, and Smith Lakes.

MCEA is a Minnesota non-profit environmental organization whose mission is to use law, science and research to preserve and protect Minnesota's wildlife, natural resources and the health of its people. MCEA has statewide membership. MCEA has been concerned about impairment of Minnesota's waters from point and nonpoint source discharges for a number of years, has made impaired waters a significant component of its work, and has participated in a number of related policy and legal matters.

The draft TMDL cannot be approved in its current form because it fails to assign a wasteload allocation to a point source, provides an inadequate basis for the margin of safety and relies on assumptions that do not provide a margin of safety, has an insufficient monitoring plan, and lacks reasonable assurance of nonpoint source reductions.

Source Assessment Ignores Point Source

Source assessment is a component required by EPA in its review of TMDLs. EPA's Protocol for Developing Nutrient TMDLs¹ is clear on the importance of source assessment in supporting the allocations for a TMDL, and provides detail on how to conduct the assessment:

The source assessment is needed to evaluate the type, magnitude, timing, and location of loading to an impaired waterbody. It further describes the sources initially identified during the problem identification. The source assessment determines nutrient inputs, measured as loads or concentrations, that will support the formulation of the load allocation and the wasteload allocation of the TMDL. ...Once the sources within the watershed have been inventoried and mapped, each activity should be evaluated to determine its individual pollutant generating mechanisms, processes, and potential magnitude.

¹ *Protocol for Developing Nutrient TMDLs*, First Edition, USEPA, 1999, Chapter 5—Source Assessment, p. 5-2.

In its source assessment, the draft TMDL lists potential categories of nonpoint sources and estimates the nonpoint source loading by watershed.² It also estimates loading by land use, accounting for cultivated agriculture, feedlots, and septic systems.³ Nowhere in the source assessment does it mention any contributions from point sources.

The TMDL later identifies the Osakis Wastewater Treatment Facility as the sole point source wastewater discharge in the watershed.⁴ The facility discharges into Clifford Lake, which is impaired for excess nutrients. Clifford Lake is upstream from Faille and Osakis lakes, both of which are included in the draft TMDL. Instead of assigning a wasteload allocation to the facility, the draft TMDL concludes that “A TMDL for Clifford Lake will be written once more lake and watershed data is collected. Osakis WWTF allocations will be included in the Clifford Lake TMDL.”⁵ This approach avoids assignment of a wasteload allocation, even though the facility may be causing or contributing to the impairment of two lakes addressed in the TMDL.

The failure to assign a wasteload allocation to a point source is impermissible under federal law.⁶ Such failure further renders it impossible to determine the accuracy of the wasteload allocation or load allocation, and prevents efficient implementation of restoration activities. The final TMDL should account for point source loadings in the wasteload allocation, which in turn will change the load allocation. MCEA requests that the MPCA review data to develop a wasteload allocation for the Osakis WWTF, and then revise the load allocation and implementation framework as necessary.

Insufficient Margin of Safety

The Clean Water Act requires TMDLs to contain a margin of safety to account for uncertainty.⁷ The draft TMDL included an explicit margin of safety of five percent as well as a series of conservative assumptions to provide an additional implicit margin of safety.⁸ It is not clear that these assumptions provide an additional margin of safety or that the explicit five percent by itself is sufficient.

The draft TMDL does not discuss the degree of uncertainty introduced by the monitoring and modeling process used. It is impossible for a reader to determine the margin of safety that is needed to protect against such uncertainty. The TMDL claims that the conservative assumptions in the development of the TMDL minimize the margin required, but these assumptions do not clearly provide a margin of safety.

² Draft TMDL at 3-4.

³ *Id.* at 3-5.

⁴ Draft TMDL at 4-2.

⁵ *Id.*

⁶ *See* 33 U.S.C. § 1313(d); 40 C.F.R. §§ 130.2, 130.7.

⁷ 33 U.S.C. § 1313(d)(1)(C).

⁸ Draft TMDL at 4-3.

First, the TMDL assumes that soluble reactive phosphorus will be reduced more than total phosphorus due to reductions in fertilizer, septic, and wetland discharges.⁹ The TMDL does not evaluate the relative soluble reactive phosphorus fraction from any of these sources. In addition, it does not identify the current level of loading and reductions required from each of these sources, making it impossible to assess whether they will be reduced more than insoluble phosphorus sources.

Second, the TMDL states that best management practices (BMPs) for implementation could be conservatively designed.¹⁰ This does not provide a margin of safety in the TMDL because the implementation is not part of the TMDL. Moreover, the TMDL cannot control the inherent assumptions in BMPs implemented in the future.

Third, the TMDL states that the target phosphorus concentration is at the lower end of the range developed in 2005 for shallow lakes, so it provides a margin of safety for beneficial uses.¹¹ The margin of safety must provide for a margin *beyond* the water quality standard to account for uncertainty. The approved water quality criteria are the targets used in this TMDL.¹² Calculating the TMDL to meet that criterion cannot itself be considered a margin of safety.

Finally, phosphorus inputs were calculated as annual loads, but the modeled period was based on the growing season, which is the critical season.¹³ The TMDL states that this should ensure the lakes meet standards year-round. Meeting the water quality standard under critical conditions is required for the TMDL calculation,¹⁴ not part of the margin of safety.

The final TMDL must provide a margin of safety that is demonstrated to account for uncertainties, and that is above and beyond the reductions needed to meet the approved phosphorus and either chlorophyll-a or Secchi depth criteria.

Inadequate Monitoring Plan

EPA and MPCA provide guidance for monitoring plans, describing three elements for a lake TMDL monitoring plan as resource monitoring for impairment, implementation adoption, and implementation effectiveness.¹⁵

The draft TMDL identifies the local watershed district and SWCDs as the responsible parties for implementation monitoring.¹⁶ The watershed district is further assigned responsibility for watershed monitoring.¹⁷ No information is provided about the methods of tracking

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² Draft TMDL at 2-10, 4-1.

¹³ *Id.* at 4-3.

¹⁴ 40 C.F.R. § 130.7(c)(1).

¹⁵ *Protocol for Developing Sediment TMDLs*, U.S. EPA at 7-7 (1999); *Lake Nutrient TMDL Protocols and Submittal Requirements*, MPCA, Mar. 2007, at 49.

¹⁶ Draft TMDL at 7-3.

¹⁷ *Id.*

implementation, evaluation of progress toward achieving the TMDL, or coordination between entities. Without more complete monitoring information and review of progress, it will be impossible to determine whether implementation resources are being used effectively. The TMDL provides no assurance of correction if the responsible parties do not take implementation actions or if actions fail to achieve the target load.

The final TMDL should contain a monitoring plan that describes coordination of implementation monitoring and details the implementation effectiveness evaluation.

Lack of Reasonable Assurance of Nonpoint Source Reductions

Reasonable assurance is a required element when wasteload allocations depend on successful implementation of nonpoint source load reductions.¹⁸ The TMDL assigns a wasteload to construction and industrial stormwater based on potential discharges and assumes reductions from nonpoint sources.¹⁹ MPCA recommends that “some additional provision in the TMDL, such as a schedule and description of the implementation mechanisms for nonpoint source control measures, is needed to provide reasonable assurance that the nonpoint source measures will achieve the expected load reductions.”²⁰ EPA states that the measures must not only be met, but “will be implemented and maintained.”²¹ Such delivery systems should have adequate funding.²²

The draft TMDL asserts that reasonable assurance is provided by identifying local water plans that have been in place for many years, the presence of local government entities interested in implementing BMPs, and success of strategies in the past. It also notes potential state and federal funding sources. Ultimately, the plan relies on local landowners implementing BMPs to reduce watershed loading.

EPA Region 1 recently described why a similar plan in the Lake Champlain TMDL was not sufficient to convey reasonable assurance of nonpoint source reductions:²³

Its weakness (in the reasonable assurance context) is that nearly all of the recommendations are just that – recommendations. Nearly all elements of the plan depend on both additional funding and entities’ willingness to participate or cooperate voluntarily with the intent of the program. . . . In short, the plan provides very little, if any, assurance that the recommended actions will occur, and provides no indication of the magnitude of phosphorus reductions expected from these actions.

¹⁸ *Guidance for Water Quality-Based Decisions: The TMDL Process*, U.S. EPA, 1991.

¹⁹ Draft TMDL at 42 (“external sources of phosphorus will need to be reduced to attain long-term improvements to Crystal Lake water quality”).

²⁰ *Lake Nutrient TMDL Protocols and Submittal Requirements*, MPCA, March 2007, at 46.

²¹ *Protocol for Developing Nutrient TMDLs*, U.S. EPA, Nov. 1999, at 7-3.

²² *Reasonable Assurance for Sources for Which an NPDES Permit is Not Required*, 65 Fed Reg. 43599-43600 (July 13, 2000).

²³ “Reconsideration of EPA’s Approval of Vermont’s 2002 Lake Champlain Phosphorus Total Maximum Daily Load (“TMDL”) and Determination to Disapprove the TMDL,” U.S. EPA Region 1, Jan. 24, 2011, at 11.

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The draft TMDL has the same deficiencies as described above. Landowners could choose not to participate, preventing any significant reduction in phosphorus loading. It does not provide regulatory or nonregulatory programs that ensure nonpoint source reductions and lacks a schedule for nonpoint source reductions. It does not provide assurance that BMPs will be implemented on a scale necessary to achieve the TMDL.

MCEA recommends that the TMDL include additional detail of necessary steps and assurances of reductions from nonpoint sources to ensure that the reductions necessary to meet water quality standards will be achieved.

Conclusion

MCEA urges the MPCA to carefully review the issues above and make any necessary additions and changes to the draft TMDLs before adopting and submitting them to the EPA for final approval. Please feel free to contact us should you have any questions with respect to MCEA's comments. Thank you for the opportunity to comment.

Sincerely,



Kris Sigford
Water Quality Director



Michael Schmidt
Water Quality Associate