

Subject: Comments on Maumee TMDL Modules 1 & 2
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From: Jeff Reutter
To: epatmdl@epa.ohio.gov
CC: Jeff Reutter

Comments on Maumee TMDL Modules 1 & 2

By

Jeffrey M. Reutter, Ph.D.

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Thank you for the opportunity to comment on the proposed design for the Maumee River TMDL. I will keep my comments very brief and to the point, but I will make myself available to discuss any of this in more detail, if desired.

I believe it is a big mistake to focus only on TP loading. I was the US Co-Chair of the Objectives and Targets Task Team for Annex 4 of the Great Lakes Water Quality Agreement. We submitted our final report in May 2015, and it was formally approved by the US and Canadian governments in February 2016. Our report set target spring loads for both TP and DRP (TP = 860 MT and DRP = 186 MT) and stated that our progress in meeting the targets (a 40% reduction in the base load as measured in 2008) should be tracked by measuring flow-weighted mean concentrations (FWMC) of both TP and DRP, and we established FWMC targets for each (TP = 0.23 mg/l and DRP = 0.05 mg/l). We spent a great deal of time trying to decide whether we could do it only with DRP reductions, and never even considered trying to do it with only TP reductions.

The models and targets of the 1970s were based only on TP loading. They told us we needed to reduce our loads by over 60% down to 11,000 MTA. We first achieved our target load in 1981 and soon afterwards the lake became the Walleye Capital of the World. Decision makers and elected officials felt that the problem was solved and monitoring dollars disappeared. USEPA continued to periodically track TP loading and TP concentrations in the lake, but at insufficient frequencies. As a result, were it not for some great work by Dave Baker at Heidelberg, we would have totally missed what was happening to DRP. Dr. Baker felt that it was also important to measure DRP loading, and he did. While TP loading was not changing, DRP loading was going up by almost 150%. In fact, by the time our Annex 4 Task Team had completed our work and submitted our report, the TP load to the lake was still at our 11,000 MTA target.

Today, the annual HAB forecast focuses on bioavailable phosphorus (BP). They define BP as being equal to 100% of DRP and 8% of particulate phosphorus. This means that while DRP is only about 20% of TP, it really matters, i.e., all 186 tons of DRP target cause the HAB while only about 53 tons of the particulate phosphorus are of concern.

If you focus only on TP, you run the risk of reducing primarily particulate phosphorus (it is much easier to reduce than DRP), achieving a 40% reduction in TP, and not coming close to solving the problem. Our Annex 4 report says that DRP is much more important than TP, it is the increase in DRP loading that is causing the problem, but it urges a focus on both TP and DRP. Please do it.

One final point. After 11 years of trying (our first report to the 3 state agencies outlining the actions that were needed was in February 2010 at the University of Toledo's Lake Erie Laboratory), we have seen no reduction in the FWMC. Module 2 seems to leave the actions required by the TMDL to results from H2Ohio. The H2Ohio approach to wetland creation is strong, but could be greatly strengthened if the TMDL results could pinpoint the really problematic fields (fields with very high STP—usually where manure has been spread). Note that voluntary approaches have produced no measurable change in FWMC and that the incentives incorporated into H2Ohio are not coupled with equally strong disincentives. As a result, we have only carrots and no sticks. If your intent with the actions proposed by the TMDL is to really solve the HAB problem, then you must consider regulations and disincentives.