Ohio EPA Response to Comments
Draft Loading Analysis Plan – Lower Great Miami River
May 2021

The Draft Lower Great Miami River Loading Analysis Plan (LAP) was made available for stakeholder review and comment from February 25, 2021 to March 22, 2021. The Agency received comments from Ohio Manufacturer’s Association (OMA), City of Fairfield, City of Dayton, City of Hamilton, City of Mason, City of Middletown, City of Miamisburg, Franklin Regional Wastewater Treatment Plant, Montgomery County Environmental Services, and Tri-Cities North Regional Wastewater Authority (POTW).

Overall/General Comments

Comment 1: OMA supports the adaptive management approach to the Lower GMR that provides a methodical process for monitoring the improvements that result from the ongoing phosphorus load reductions by the two large publicly-owned treatment works (Dayton and Montgomery County) (POTWs). Once the POTWs complete the ongoing upgrades (expected to be summer 2022), the adaptive management approach must allow time for the river to experience the full benefits of this reduced nutrient enrichment before Ohio EPA performs further monitoring for purposes of evaluating attainment of water quality standards.

On this point, while we agree with Ohio EPA’s general approach, we believe the LAP should be revised to clarify that these river improvements will likely continue for many years beyond the completion of the POTW upgrades in 2022 – and that follow-up sampling should not occur until a reasonable window has been afforded for improvements in the receiving water. As drafted, the LAP appears to suggest that the benefits will be measurable in 2021 (which we gather is an error because it falls before the upgrades are even completed). In summary, we request that the LAP be updated to reflect that reassessment of the Lower GMR for aquatic life use will not occur until after the river has had sufficient time (in years) to allow the full benefits of the POTW load reductions to be reflected in the river conditions. (See LAP at 11.) As noted in the LAP, a TMDL will only be developed if necessary, after this period of improvement and the new round of sampling and after development of a new LAP for the Lower GMR. (OMA)

Response 1: As the LAP noted, Montgomery County has already received a permit to install for phosphorus treatment and it is expected that 2021 summer concentration reductions will be noticeable in the river. Ohio EPA has provided language clarifying that results of the full nutrient reduction from both plants will not be observable until 2022.

Ohio EPA will return after 2022 to determine the status of the upgrades and their impacts to the river. Any study for follow-up work will be released for stakeholder input prior to monitoring.

Comment 2: If, after adequate time for recovery, the Lower GMR still has segments exhibiting impairments, any future TMDL must be narrowly and carefully tailored as necessary to address only those specific impairments. The Lower GMR is a very large watershed
that includes many segments that are already in full attainment of water quality standards, especially in the downstream reaches, and furthermore these reaches show signs of continued improvement in water quality. It would be arbitrary and unnecessary for any future TMDL to impose load reductions or other restrictions on dischargers to waters in the Lower GMR that are attaining the applicable water quality standards. Furthermore, any TMDL requirements in impaired segments must address the primary cause of the impairment before imposing load reductions on the small dischargers.

We appreciate that Ohio EPA will develop a new LAP in the future if impairments remain after the POTW upgrades are complete and the river has time to recover. We look forward to the opportunity to review and comment on future drafts of the LAP for the Lower GMR and reserve all rights to provide further comment at that time. (OMA)

Response 2: Ohio EPA acknowledges these concerns. Technical considerations for any future TMDL development will be discussed if/when that work occurs.

Comment 3: Please advise how recent data from the Nutrient Mass Balance Study for Ohio’s Major Rivers (2020) will be incorporated into and integrated with the LGMR LAP, and ultimately the development of a potential LGMR Total Maximum Daily Load (TMDL). Please also advise how the significant percentages of non-point source nutrient pollutants entering the Great Miami River watershed (estimated at 76% TP; 88% TN (wy19)) will be measured and otherwise accounted for within the LAP when evaluating sampling needs and assessments for impaired sites. For example, will sampling in the middle segments of the GMR, which are predominantly devoted to agriculture, be done simultaneously with sampling in the lower segments, so that Ohio EPA can measure and compare short term and seasonal nutrient contributions from point sources and non-point sources? (POTW)

Response 3: Since no TMDL is being developed at this time, the LAP has no need for further consideration of the sources of nutrients delivered to the lower Great Miami River. Follow-up monitoring will occur after 2022 and the study plan will be released for stakeholder input prior to monitoring.

If future assessment of the river determines beneficial use impairment, a new LAP will be published that explains how that impairment will be addressed. If it is determined that TMDL should be developed in that future LAP, it will include a detailed linkage discussion connecting the impairment to the TMDL pollutant(s). In that documentation, there will be careful consideration of the importance of various sources of those pollutants with regards to the specific impairments. Regardless of the content of that future LAP, it too will be released for stakeholder input.

Comment 4: Regarding Table 3 in the LAP - Summary of ALU Impairments and Potential Modeling Approaches- please advise which water quality parameters will be sampled in addition to those directly associated with biological attainment status (i.e., 181; Miwb; ICI; QHEI). Given that (a) the biological and water quality data utilized to classify certain
sites as attaining or non-attaining is now over a decade old, and (b) many changes have occurred along the LGMR in the interval that are likely to have measurably improved water quality, this group strongly recommends a full-scale resampling effort for all sampling stations, including analysis of both sestonic and benthic algae population dynamics, as well as instantaneous and diurnal DO readings. Because Ohio EPA believes that BOD is also a contributor to enrichment, the group recommends that it be included in the sampling regime. In addition, because of the shallow average depth of the GMR, will more elaborate physical measurements be taken so that Ohio EPA can determine whether sestonic or benthic chlorophyll is the dominant enrichment contributor at each segment of the LGMR? Finally, are there other physical habitat parameters that should be measured so that the Agency can better determine the potential impact of the LGMR's physical characteristics on its response to nutrient loadings? (POTW)

Response 4: As noted in Response 1, follow-up sampling will not occur until after 2022. The parameters noted in this comment will most likely be included in this work; however, these determinations have not yet been made. Ohio EPA will make available for comment a Quality Assurance Project Plan document outlining the type and location that sampling will occur prior to any of this follow-up being carried out. We encourage the commenters to be active in the review of that future document.

Comment 5: Appendix A in the LAP Table of Contents is ‘Expert Opinion on the Lower Great Miami River total phosphorus effluent limits for major wastewater treatment plants’. This group was unable to locate this appendix, or the author of the expert opinion. Please provide a copy of the Appendix for review or a link where it can be located. (POTW)

Response 5: The author of Appendix A is Paul Gledhill, an environmental specialist with the Division of Surface Water at Ohio EPA. The listing of both appendices in the LAP’s Table of Contents was an error as the LAP does not reference the documents’ material. Ohio EPA has removed the listing of the appendices in the Table of Contents. However, both appendices have been made available to the commenters and all other parties who have requested to view them.

Comment 6: Appendix B in the LAP Table of Contents is ‘Potential effects of seasonal phosphorus removal at the Dayton WWTP and the Western Regional WRF on ambient water quality in the Lower Great Miami River’. The link provided on page 11 of the LAP is to the 'Lower Great Miami River - Total Phosphorus effluent limits for major wastewater treatment plants - factsheet addendum'. Is Ohio EPA considering these documents one in the same? If not, please provide a copy of Appendix B for review or a link where it can be located. (POTW)

Response 6: The author of Appendix B is the late Dr. David Baker, founder and long-time Director/Director Emeritus of the National Center for Water Quality Research at Heidelberg University. The listing of both appendices in the LAP’s Table of Contents was an error as the LAP does not reference the documents’ material. Ohio EPA has removed the listing of the appendices in the Table of Contents. However, both appendices have
been made available to the commenters and all other parties who have requested to view them.

**Comment 7:** Please recall that owners and operators of wastewater treatment facilities on the LGMR, in partnership with the Miami Conservancy District, funded the development of a refined water quality model of the Lower Great Miami River. The model work and findings were summarized in a report called 'Lower Great Miami River Nutrient Management Project', prepared by LimnoTech (February 28, 2017). This report has a significant amount of data and other information that is more current than the data reflected in Ohio EPA's last biological/chemical water quality report for the LGMR. Thus, the group recommends incorporation of the report's data and findings into the pending LAP and any future TMDL, as appropriate. (POTW)

**Response 7:** Ohio EPA is not developing a TMDL at this time. In addition to future monitoring data that Ohio EPA collects, all relevant information will be considered if a TMDL is developed in the future.

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**End of Response to Comments**