

Statewide *E. coli* Total Maximum Daily Load (TMDL) 2018 Addendum

Comments and Responses

Public Notice Period: June 28-July 29, 2019

The Statewide *E. coli* TMDL 2018 Addendum was open for public comment and available from June 28-July 29, 2019. During the public notice comment period, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) received comments via six e-mails, which are summarized and addressed here. The comments are paraphrased in some cases, and endnotes indicate the origin of the comments.

Only comments pertaining directly to the TMDL Addendum are addressed here.

1. **Comment (MRWA¹ and Granger²):** Comments regarding the basis of *E. coli* as a TMDL parameter and the Statewide *E. coli* TMDL document were received.

EGLE Response: EGLE appreciates the interest these commenters show in understanding *E. coli* results in relation to environmental parameters, as well as the offers of assistance in future data analysis efforts. The comment period for the TMDL was held in 2017 and all comments related to the specifics of the TMDL were addressed at that time. As stated in Enclosure 2 (request for public comment), EGLE was seeking comments on the 2018 Addendum, which contains the updated list of *E. coli*-impaired waters.

2. **Comment (MRWA¹ and Granger²):** The commenters have concerns and questions about the implementation of industrial storm water National Pollutant Discharge Elimination System (NPDES) permit requirements in approved *E. coli* TMDL areas.

EGLE Response: EGLE appreciates these concerns; however, comments regarding NPDES permit-specific requirements cannot be addressed through the 2018 TMDL Addendum process. These comments should be submitted and addressed (where appropriate) during the Storm Water Discharge general permit comment period, and questions on these requirements should be directed to [EGLE District Industrial Storm Water Staff \(Michigan.gov/EGLEstormwater\)](http://Michigan.gov/EGLEstormwater).

3. **Comment (Granger²):** Granger requested more information on the quality control procedures followed by the Shiawassee County Conservation District (SCCD). Specifically: “additional information related to these 97 sampling events including what was submitted by the third parties and a summary of EGLE’s review and their conclusions as it relates to quality assurance, site location and sample collection, and handling procedures.”

EGLE Response: The SCCD collected *E. coli* data at 17 sites on the Upper Looking Glass River watershed (15 of the sites were on tributaries). The SCCD collected *E. coli* data 5-6 times over a period of about 30 days, including 3 samples per site per event as required by Rule 62 of the Part 4 Rules, Water Quality Standards, promulgated pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended and the 2018 Integrated Report Assessment Methodology. This work was part of a Stormwater, Asset Management, and Wastewater (SAW) Program grant to SCCD. EGLE assisted the SCCD with site selection to ensure the locations were suitable for sampling and would adequately characterize and represent water quality. For the Looking Glass River *E. coli* investigation, the SCCD

followed a quality assurance project plan (QAPP), which was reviewed by EGLE staff (since it was a SAW grant, EGLE was not required to sign the QAPP). The SCCD collected 34 field blanks and all had non-detectable levels of *E. coli*. The purpose of field blanks is to demonstrate that samples are not being contaminated by dirty gloves, airborne dust, and that sterile techniques were being followed. Samples were transported on ice to the laboratory within the 6-hour hold time, maintaining a chain-of-custody record. The analysis was done by the EGLE Drinking Water Laboratory, which follows United States Environmental Protection Agency (USEPA) approved methods and includes internal lab duplicates, matrix spikes, and blanks. In the best professional judgment of EGLE staff, the quality assurance and control for this project met the goals set forth in the QAPP.

4. **Comment (Granger²):** “Notably, the only subwatershed in the Looking Glass River that has been sampled by EGLE is the Remy Chandler Drain, which has the lowest geometric mean value of all the subwatersheds in the Looking Glass River watershed. Please explain EGLE’s understanding in the variance of the data and how they resulted in the same conclusions.”

EGLE Response: The water body (Remy Chandler Drain, Assessment Unit 040500040608-) that EGLE sampled had lower *E. coli* than the SCCD sampled water bodies (the remainder of the Looking Glass River). The reason could be due to many factors. The Remy Chandler Drain is unique among the other Looking Glass River sites. It is an urban stream that receives storm water from storm sewers as well as likely groundwater inputs, while the remainder of the Looking Glass River sites were rural. Land use differences, surficial geology, and groundwater inputs, as well as annual variation (which can be significant, see Appendix 4.3 of the [Statewide *E. coli* TMDL](#)) could account for differences in *E. coli* among sites. The EGLE study of the Remy Chandler Drain was conducted in a different year (2017) than the SCCD sampling (2016). Regardless, all sites in the Looking Glass River watershed failed to meet the Total Body Contact designated use according to the 2018 Assessment Methodology.

5. **Comment (Granger²):** “Please provide the justification of how the current data (for Remy Chandler Drain and the Looking Glass River) is adequate for making an impairment determination.” Specifically, Granger expressed a desire to have data collected during the months of October through April, more sampling events in general, more sites on the main stem river (including downstream sites) and more than one 30-day geometric mean (preferably during October through April).

EGLE Response: The data for the Remy Chandler Drain meet the minimum data requirements specified in the 2018 Assessment Methodology. The minimum requirements include a sample number of 5 events. Five events are also required for an evaluation of the 30-day geometric mean water quality standard; however, a 30-day geometric mean need not be exceeded for a water to be impaired by *E. coli* (see Section 3.7.1. of the 2018 Draft Integrated Report). Regarding seasonality, the 2018 Assessment Methodology states that “It is acceptable to sample during a critical 30-day period that may be driving *E. coli* concentrations (e.g., summer low flow, wet weather conditions) as long as they are distributed representatively over that time frame.” A draft version of Chapter 3 of the draft 2018 Integrated Report, the assessment methodology, was made available on EGLE’s Web site for public and USEPA review and comment. Public comments to be considered in the development of the Integrated Report assessment methodology were due July 14, 2017. One public comment on the draft assessment methodology was received and will be addressed as part of the 2018 Integrated Report submittal to the USEPA (the comment did not result in changes to the

methodology for *E. coli* assessment). If the commenter would like EGLE to collect additional data under specific conditions or at a particular location, we recommend that they submit a targeted water quality monitoring request for future consideration. The Looking Glass River is scheduled to be a monitoring priority in 2022, but monitoring requests may be submitted via the [request form](#) at any time (visit Michigan.gov/WaterQuality and look under the “Information” heading).

6. **Comment (Granger²):** Granger is seeking clarification on EGLE monitoring data, specifically differences in monitoring location between 2009 and 2017 in Remey-Chandler Drain, and the EGLE conclusion that water level appears related to *E. coli* concentration in that water body

EGLE Response: The 2009 monitoring was part of a separate project. That site (Howe Road) was randomly selected as part of the Water Chemistry Monitoring Program in order to make statewide conclusions based on statistical methods. For the Water Chemistry Monitoring Program, monitoring took place quarterly. The 2017 site location was not randomly selected and was deliberately placed at Webb Road for the purpose of assessing the designated uses and representing water quality in the Remey-Chandler Drain. The 2017 monitoring study targeted the mid-summer critical period for *E. coli*, per the 2018 Assessment Methodology.

Flow and water level measurements are not necessary to develop the loading capacity for a concentration-based TMDL, where the goal is the same (equal to the water quality standard) regardless of flow condition. Specifically regarding Remey-Chandler Drain, the basis of EGLE’s conclusion that *E. coli* increases as water levels rise can be found on page B-37 of Appendix B of the 2017 Bacterial Monitoring Report (found on Michigan.gov/EGLEecoli). The report contains a graph of relative water levels at the time of sampling plotted against *E. coli* results for each sampling event.

7. **Comment (multiple³):** Multiple commenters asked EGLE to consider the 2018 study of Flower Creek (Oceana and Muskegon Counties) in the 2018 Integrated Report and for inclusion in the 2018 TMDL Addendum.

EGLE Response: Per EGLE practice, data collected from January 1, 2015, to December 31, 2016, were considered for 2018 Integrated Report development. This allows time for EGLE staff to review data thoroughly when assessing attainment status of each water body. The Flower Creek study, referenced by the commenters, was conducted outside of this time frame (in 2018). When developing the 2020 Integrated Report, EGLE will consider all available data collected or reported from January 1, 2017, to December 31, 2018, including the Flower Creek results.

¹ Richard S. Paajanen, Michigan Waste and Recycling Association (MWRA), via e-mail dated July 29, 2019.

² Serenity Skillman and Timothy Krause, on behalf of Granger, via e-mail dated July 26, 2019.

³ Doris Graham, Michael Graham, Bruce Froelich, and Frederick Kwant, representing residents of Flower Creek watershed (Oceana and Muskegon Counties), via e-mails dated July 26-29, 2019.