

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

Comments and Responses

Public Notice Period: April 17th to May 19th, 2017

The Statewide *E. coli* TMDL was open for public comment on two drafts, available from February 2nd to March 17th (first draft) and from April 17th to May 19th, 2017 (public notice version). Comments from the 1st public comment period were addressed and incorporated into the public notice draft, as appropriate. During the public notice comment period, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) received 7 letters and 1 comment via e-mail, which are summarized and addressed here. These comments are paraphrased in some cases, and footnotes indicate the origin of the comments. A public meeting was held May 9, 2017. Comments with a “***” resulted in a change to the TMDL document.

1. **Comment (Granger¹ and MWRA²):** Both commenters are concerned about the conflict between permit requirements to reduce *E. coli*, and wildlife enhancement projects. Certain types of operations which hold industrial storm water (ISW) permits may attract wildlife either incidentally (because open space with water is desirable to wildlife and waterfowl) or on purpose through wildlife management projects funded by agencies other than EGLE.

EGLE Response: EGLE acknowledges that wildlife has the potential to contribute *E. coli* to surface waters depending on site characteristics. The general permit for ISW discharges requires that the Storm Water Pollution Prevention Plan (SWPPP) identify sources, including an evaluation of the reasonable potential for contribution of significant materials to runoff from areas where animals (wild or domestic) congregate and deposit wastes. The permit specifies that the SWPPP must identify structural and nonstructural controls to minimize pollution for all sources where the reasonable potential exists. This permit requirement predates the draft statewide *E. coli* TMDL. However, during compliance inspections and when reviewing permit submittals (such as the SWPPP), EGLE encourages prioritization of permittee actions based on the potential for the site to discharge pollutants to surface waters. Priority actions emphasized by EGLE vary at the program and site level, because permit coverage inherently differs in scope and nature; e.g., ISW permits regulate industrial sites whereas Municipal Separate Storm Sewer System (MS4) permits regulate entire storm sewer systems which intertwine with other MS4s. The MS4 Program places elevated priority on actions related to illicit discharge elimination. Accordingly, the ISW program currently emphasizes pollution reduction from sources directly related to industrial activities. Nonpoint source wildlife issues are also being addressed by communities throughout the state. A prime example of a success story is Chrysler Beach (St. Clair River) where *E. coli* contamination by geese has been significantly reduced by relocation of geese, planting tall vegetation to discourage the geese from loitering, and grading the site to reroute runoff (see Michigan.gov/EcoliTMDL for success stories). This collaborative effort included illicit discharge investigation and elimination at nearby MS4 regulated storm sewers. Additionally, universities and

¹ Comments from Mr. Tim Krause, on behalf of Granger, Lansing, MI.

² Comments from Mr. Steve Essling, on behalf of Michigan Waste and Recycling Association (MWRA), Lansing, MI.

organizations throughout the state are working on creative means of solving wildlife issues, including the ongoing development of reliable DNA microbial source tracking markers. *No changes to the TMDL were made based on this comment.*

2. **Comment (Granger, paraphrased):** *E. coli* sources and their relationship with flow and hydrology are too unknown for the TMDL to proceed. These unknowns unfairly shift the burden of proof of non-impact to the permittee, and hold the permittee responsible for wildlife sources without providing a means of resolution.

EGLE Response: EGLE agrees that there are many unknowns with respect to the response of *E. coli* to hydrology under different source and land use scenarios. This is why EGLE uses a concentration-based approach to *E. coli* TMDLs, where the waste load allocation and the load allocation are equal to the water quality standard. EGLE believes that allocating the same concentration-based target to all sources under all flow conditions, regardless of industry type or point/nonpoint source status, is the most fair and reasonable approach. From there, the permit requirements must be consistent with the TMDL, but the effluent limitations do not need to be identical to the target. This allows EGLE flexibility to tailor the permit to the type of facility or discharge, and the feasibility and cost of controlling the pollutant. For a discussion on wildlife as a potential source, please see comment number 1, above. *No changes to the TMDL were made based on this comment.*

3. **Comment (Granger and MWRA, paraphrased):** The commenters are concerned with EGLE's use of data collected by outside agencies or volunteer groups for making impairment decisions.

EGLE Response: It is EGLE's current policy (Assessment Methodology of the Clean Water Act Sections 303(d), 305(b), and 314 Integrated Report) to use all data submitted to us for consideration after conducting a review of the quality assurance protocols, site locations, sample collection, and handling procedures. As indicated during the May 9, 2017, TMDL public meeting and Webinar, a quality assurance project plan detailing quality assurance is the best way to document that protocols are in compliance with scientific standards. If data meet acceptable quality control, and the monitoring locations suitably represent overall water quality, then EGLE typically will use it to assess designated use attainment. The use of this externally collected data allows EGLE to make good use of our resources, and the resources of local agencies such as conservation districts, our water quality monitoring grantees, health departments, and watershed councils. In doing so, the process also increases public engagement in solving problems to which everyone contributes to some degree. *No changes to the TMDL were made based on this comment.*

4. **Comment (Granger):** As an ISW permittee, we are concerned that pretreatment of industrial stormwater, or *E. coli* monitoring of discharges will eventually be required as a condition of the ISW permit.

EGLE Response: The following serves to clarify the relationship between the ISW permit requirements and the TMDL, and also current permit requirements. The TMDL summarizes permit requirements but does not establish them; the TMDL is equal to the water quality standard and permits are already designed to meet that standard as required by federal and state regulations. The ISW permit currently requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), irrespective of the nature of the industry, and regardless of whether the facility discharges to an approved

TMDL or impaired water. The existing permit requirements to develop a SWPPP have been part of the ISW general permit for many years and are discussed during Certified Operator trainings. All ISW permits already prohibit the facility from contributing or causing an exceedance of the water quality standard.

By federal requirement, all NPDES permits must be consistent with the goals of all applicable TMDLs. By nature of their purpose and operations, ISW systems are inherently different from other types of NPDES permits (biosolids programs, concentrated animal feeding operations, MS4s, and wastewater treatment plant discharges). As described in Section 7 of the draft statewide *E. coli* TMDL, each of these potential sources must meet NPDES permit requirements, which are tailored to the type of facility, and are designed to be consistent with the goal of the TMDL and waste load allocation. For the ISW permit, analytical monitoring of the outfall for *E. coli* is not currently a requirement that is generally applied. Analytical sampling would be applied in situations where facilities fail to implement an acceptable storm water management program which results in water quality concerns. To be clear, EGLE is not mandating analytical monitoring at ISW outfalls by issuance of this TMDL. At permit reissuance, the presence of an approved TMDL to address *E. coli* will direct the permittee to give attention to that pollutant in the SWPPP and design structural or nonstructural controls to control the pollutant, if needed. In addition, the permit requirement for a SWPPP to address a TMDL pollutant predates the draft statewide *E. coli* TMDL and this language is present in all recent *E. coli* TMDLs, so this TMDL does not constitute a shift in department policy (Please see “Understanding Total Maximum Daily Load [TMDL] Requirements as they relate to the Industrial Storm Water Permit,” dated 2013, on the [ISW Web site](#)).

Through the SWPPP development process, a permittee may find that there is no cause to believe that the facility is a source of *E. coli*. If EGLE agrees, then no actions may be needed beyond the development and implementation of the SWPPP. This provides the facility an opportunity to demonstrate that its direct operations are not the cause of, or contributing to, the elevated levels of *E. coli* in the receiving TMDL water body. *No changes to the TMDL were made based on this comment.*

5. **Comment (Granger):** The TMDL approach taken with agriculture (voluntary reductions) should be extended to industrial stormwater.

EGLE Response: Industrial stormwater is a point source, whereas pollution from agriculture is a nonpoint source (if not originating from an NPDES permitted farm facility). Federal and state regulations (not this TMDL) determine whether a source is point or nonpoint. EGLE has limited authority on nonpoint sources, unless a law or rule is violated. EGLE does have clear regulatory authority over point sources. EGLE can exercise authority on nonpoint sources if they are found to significantly contribute to a water quality standard violation. For example, when a farm has a discharge to waters of the state that violates water quality standards, EGLE may respond by requiring the responsible farm to apply for an NPDES permit, thus becoming a potential point source rather than a nonpoint source. A TMDL cannot create new regulatory authority over nonpoint sources. *No changes to the TMDL were made based on this comment.*

6. **Comment (MWRA):** The name “Statewide *E. coli* TMDL” is misleading and implies the entire state, or most of the state, has a dangerous *E. coli* problem.

EGLE Response: The statewide *E. coli* TMDL is a framework that can apply statewide, as new waters are listed as impaired in the future. Although the majority of our waters are

not currently listed as impaired by *E. coli*, we estimate using a statistical analysis of random sites on rivers, that the total body contact designated use is impaired by *E. coli* in about 50 percent of our river miles (see Section 1.3 “Problem Statement” and Section 5.1 of the draft TMDL document). This is a significant portion of the state’s rivers.

Additionally, nonpoint source issues are common throughout the areas of the state that are developed for residential and agricultural uses (e.g., failing septic systems and livestock agriculture), and these areas do impact much of the state’s land area. Because the term “statewide TMDL” has been used for our mercury and PCB TMDL efforts (both in draft), and in similar efforts for other states, it was chosen for consistency. *No changes to the TMDL were made based on this comment.*

7. **Comment (MWRA):** The current Draft plan states that the Department will post future Integrated Reports on MiWaters which shall serve as the 30-day public notice. In order to reach more stakeholders, consider in addition to the suggested general posting, a notice through MiWaters directly to affected permit holders or even better to all permit holders.

EGLE Response: To clarify and summarize the TMDL update procedure and public notice, EGLE will place the Draft TMDL Addenda on Michigan.gov/EcoliTMDL and the Integrated Report Web site (both accessible from Michigan.gov/WaterQuality). This update of the statewide *E. coli* TMDL is planned to coincide with the submittal of the biennial Integrated Report, which generally goes on public notice in the spring of even numbered years. The first TMDL Addenda was posted for comments on June 28, 2019 and contains a list of proposed impaired waters proposed for inclusion. Additionally, a Geographic Information System shapefile will be added to the interactive mapping system at Michigan.gov/EcoliTMDL and to the MiWaters Site Explorer. Although this addition to the MiWaters mapping system is important for permittees to visually verify their location in relation to the proposed TMDL addenda area, it is not the primary way permittees will be notified. In January 2016, EGLE used the e-mail addresses from MiWaters to send mass notification to all permittees in categories relevant to the TMDL (storm water, concentrated animal feeding operations, wastewater treatment plants, etc.) that had provided valid e-mail addresses (about 1,900 addresses). Since then, we have moved away from this approach and now send our notification through an e-mail subscription service (currently called “GovDelivery”). GovDelivery is a public notification service for subscribers interested in receiving updates on a topic. Interested persons may subscribe themselves, or EGLE may add permittees to the subscription service, but the subscriber may remove or add themselves or change preferences at any time. To subscribe to a GovDelivery topic, please visit Michigan.gov/EGLE and click on the red envelope icon (✉) in the “stay connected” section. The EGLE Calendar also has a GovDelivery service available that notifies subscribers weekly of the calendar postings.. EGLE hopes that you will pass this information along to your membership to ensure that everyone has an opportunity to comment whenever public input is sought.

To notify permittees and the public, EGLE will publish a 30-day public comment period notice in EGLE Environmental Calendar, and use all available electronic routes of communication available to us (e-mail list serves derived from MiWaters, GovDelivery bulletins to the “Industrial Storm Water” and “TMDLs and Integrated Reporting...” topics, etc). *No changes to the TMDL were made based on this comment.*

8. **Comment (MWRA):** Once an area has been identified as impacted and placed into the TMDL Program it is unclear as to what the Department’s expectations are of the various sources as new certificate of coverage/permits are issued. Will SWPPPs need to be

updated with certain Best Management Practices? If so, can the department provide clarification of what those should look like or contain?

EGLE Response: The ISW permit requires the development and implementation of a SWPPP regardless of whether the facility discharges to an approved TMDL or impaired water. Regarding your question on timing of SWPPP revision due to approval of the proposed statewide TMDL, EGLE will not open “in effect” permits at the time the draft TMDL, or future draft TMDL addenda, are approved by the United States Environmental Protection Agency. At the normally scheduled time for permit reissuance, EGLE will identify applicable TMDLs on the draft certificate of coverage (COC) and the permittee will have a chance to comment if they believe this is an erroneous determination (e.g., the TMDL does not apply because the discharge is to a water body not impacting an impairment). Once the permit or COC is issued, the permittee will develop or update the SWPPP according to their normal schedule, to address the pollutant as necessary based on the unique situation of each facility. Through the SWPPP development process, a permittee may find that there is no cause to believe that the facility is a source of *E. coli*, and if EGLE agrees, then no actions may be needed beyond the development and approval of the SWPPP; this provides the facility an opportunity to demonstrate that its direct operations are not the cause of or contributing to the elevated levels of *E. coli* in the receiving TMDL water body. *No changes to the TMDL were made based on this comment.*

9. **Comment (MWRA):** The Future Monitoring in section 8, “Demonstration of restoration success or progress” does not provide any detail as to the removal of an area once it is placed under the TMDL. If the Department is putting forth this level of effort to identify impacted areas, it should consider a more robust program to monitor its effects and results. This section needs further consideration.

EGLE Response: The process of demonstrating restoration success is briefly described in the TMDL document in the “Adding or Removing Impaired Waters” section (1.2.A), but that section of the TMDL essentially will refer you to the thresholds established in the most recently approved Integrated Report Assessment Methodology. EGLE took this strategy to allow future flexibility in assessment of waters as meeting or not meeting the *E. coli* water quality standard. While some requirements may change, the TMDL establishes the goal equal to the water quality standard. Currently, the 2016 threshold of exceedance is 10 percent of representative samples, meaning that if less than 10 percent of samples exceed the standard, the water body is meeting the designated use. Section 1.2.A describes some caveats to this, including ensuring that flow and weather conditions are similar to the pre-restoration study, and that known sources be remedied. *No changes to the TMDL were made based on this comment.*

10. **Comment (MWRA):** The commenter notes that not all potential sources (e.g. facilities) are participating in the NPDES program, as required.

EGLE Response: EGLE recognizes that there are some facilities and entities that may be required to have a National Pollutant Discharge Elimination System permit, but do not have one. They may not even be aware that they need one, and we appreciate the efforts of your organization’s members who perform third-party review in asking these questions. We agree that all facilities that qualify should apply for a permit, as our regulations require. We encourage facilities to willingly obtain necessary permits and we address unpermitted

facilities as we become aware of them. *No changes to the TMDL were made based on this comment.*

11. **Comment (ARC³):** If the Rouge River TMDL is replaced by the Statewide TMDL, what happens to the actual TMDL document? We find the data and analyses in the Rouge TMDL document very valuable and would prefer it be preserved somehow.

EGLE Response: EGLE agrees that the 2007 Rouge TMDL document and its contents are valuable reference resources. However, to avoid confusion, it will be removed from the “Approved TMDL” section of our website. EGLE plans to convert the TMDL to a report, and provide the document to the public upon request (similar to how EGLE Water Resources Division currently distributes all reports). *No changes to the TMDL were made based on this comment.*

12. **Comment (ARC):** The loading capacities of 130, 300, and 1,000 cfu/100 mL are overly conservative because they assume that the waterbodies have no capacity to assimilate discharges. How does EGLE justify this?

EGLE Response: In a water body that is already exceeding the water quality standard, which is generally true of all impaired water bodies included in a TMDL (and specifically true in the Rouge when last monitored by EGLE), there is no assimilative capacity for because the standard is already being exceeded. As stated in the Margin of Safety section of the draft TMDL (section 4.4, page 15), the use of the total body contact water quality standard is appropriately conservative and accounts for uncertainty in the relationship between pollutant loading and water quality, including uncertainty of *E. coli* organism mortality, growth, settling-out, or resuspension in the water column. *No changes to the TMDL were made based on this comment.*

13. **Comment (ARC - paraphrased):** It would seem that NPDES permittees who have total control over their site (ex: some industries) could achieve lower *E. coli* levels with little effort than those that do not have the same level of control (such as municipalities). Although it is easy to treat all permittees the same, it is not realistic for permittees to control *E. coli* to the same levels.

EGLE Response: The waste load allocation is equal to the water quality standard for all NPDES discharges. The MS4 permit includes a requirement to reduce the discharge of *E. coli* to make progress towards meeting the water quality standard. Recognizing that the MS4 program is focused at the system level, MS4 permittees are afforded the opportunity to develop an individualized TMDL implementation plan to reflect the size and complexity of the MS4. *No changes to the TMDL were made based on this comment.*

14. **Comment (ARC):** The partial body contact standard is not a target in the current Rouge River TMDL? Why is the Rouge now subject to this target?

EGLE Response: All waters in Michigan are subject to the target of 1,000 *E. coli* per 100 milliliter year-round. This is the partial body contact standard that applies regardless of

³ Comments from Mr. Jim Ridgway, P.E., on behalf of the Alliance for Rouge Communities (ARC).

whether there is an approved TMDL. *No changes to the TMDL were made based on this comment.*

15. **Comment (ARC):** Can EGLE list the MS4 communities (or all communities) subject to the Statewide TMDL? This would be helpful when NPDES permits are issued and when interpreting data for removing certain stream segments from the impaired waters list. For instance, we can foresee a time when upstream segments of the Rouge River will be meeting water quality standards. As a result, they would be removed from the impaired waters list and the associated MS4s would not be subject to TMDL requirements. Having the MS4 entities listed in the TMDL would allow this transition to be clearer for permit writers and permittees.

EGLE Response: Whether an MS4 community is part of a TMDL is defined on a case-by-case basis after working with the permittee to determine actual receiving waters. This is done at the time of permit issuance or reissuance. EGLE provides municipal boundaries and the TMDL watershed boundaries on its interactive mapping system (available at Michigan.gov/EcoliTMDL) and will make those mapping datasets available outside the mapping system upon request. As for reassessing stream segments, EGLE will evaluate any data collected using acceptable quality assurance controls and appropriate methodology. If the data meet the specifications noted in the TMDL (Section 1.2.A) and in the assessment methodology of the Integrated Report, a change from Category 4a (impaired-TMDL completed) to Category 2 (meeting designated use) will be proposed, in the next submittal of the Section 305(b) list to the US Environmental Protection Agency (USEPA). *No changes to the TMDL were made based on this comment.*

16. **Comment (ARC):** The water quality goals of 130 cfu/100 mL and 300 cfu/100 mL for stormwater discharges are unrealistic as no urbanized area across the country can meet them, especially during wet weather conditions.

EGLE Response: The water quality standard is measured instream. Permitted storm water discharges are required to make progress towards meeting the water quality standard. The ARC indicates in their comment (15, above) that the goal of meeting the water quality standard is getting closer to being realized in the upper reaches of the Rouge. Therefore we believe that the goal is achievable in many areas. Lowering the overall *E. coli* in the river will reduce the risk to human health during total and partial body contact recreation. If goals were to be set higher than the water quality standard, which is based on a set-level of acceptable risk to human health, this TMDL would not be in compliance with federal regulations and guidance. *No changes to the TMDL were made based on this comment.*

17. ****Comment (ARC):** For industrial stormwater dischargers, the TMDL states (page 34) “The MDEQ[now EGLE]’s assessment of whether the TMDL requirements are being met shall focus on the effectiveness, adequacy, and implementation of the permittee’s SWPPP controls.” It is our understanding that this is also true for MS4 permittees? If so, please add to page 31.

EGLE Response: The MS4 and ISW permit coverages inherently differ in scope and nature; e.g. ISW permits regulate industrial sites whereas MS4 permits regulate entire storm sewer systems which intertwine with other MS4s. EGLE cannot add identical language to the MS4 section, but has added the following language to the TMDL (page 31, Section 7.3.A.ii): “EGLE will evaluate the implementation status of the permittee’s

approved TMDL Implementation Plan and progress towards meeting the water quality standard (TMDL goal) as part of the approved SWMP [Storm Water Management Plan].”

18. ****Comment (ARC)**:** Note that the Ecorse and Detroit rivers both have load-based TMDLs, contrary to what is indicated (page 2).

EGLE Response: The commenter is correct; EGLE has made this correction on page 2 and in Table 8 (Appendix 2).

19. **Comment (ARC):** It seems that unallowable sources would receive a load and waste load allocations of zero, not a loading capacity of zero (page 15).

EGLE Response: EGLE and USEPA have discussed this previously, and the conclusion was that a source that is not allowable is neither a point source nor a nonpoint source, fitting into neither category completely. In either case, illegal sources are not allowable and therefore cannot receive higher than a 0 allocation. The waste load allocation and load allocation are both part of the overall loading capacity.

No changes to the TMDL were made based on this comment.

20. ****Comment (ARC):** Are the third, fourth and fifth bullets on page 17 a fact, or are they describing the data set? If the latter, suggest using ‘had’ and not ‘has’ as was done with the other bullets.

EGLE Response: These are the conclusions from the statistical analysis of our probabilistic monitoring dataset, therefore they are “results”. EGLE has modified the text on page 17 to ensure that this is clear.

21. ****Comment (ARC):** What is the justification for stating that MDOT [Michigan Department of Transportation] drains are not expected to be *E. coli* sources (page 31)? In urban areas MDOT drainage networks are intertwined with community/county-owned MS4s. Are there certain community/county-owned drains that EGLE also considers not to be an *E. coli* source?

EGLE Response: EGLE agrees that this language is not appropriate and has removed it from the TMDL. If MDOT’s system is conveying a source of *E. coli* through an intertwined drainage network, they should be notified to coordinate with the upstream discharger under MDOT’s Illicit Discharge Elimination Plan. MDOT is proposing to implement a TMDL Implementation Plan with a focus on dry-weather screening in areas with impaired waterbodies.

22. **Comment (ARC):** Although there are some *E. coli* sources that municipalities can control, wildlife is a large contributor of the *E. coli* found in some streams. Wildlife management is outside the purview of municipal staff. We hope that the state can provide their expertise in leading wildlife management activities where needed regardless of whether or not the watershed is within an urbanized area.

EGLE Response: EGLE also recognizes that as a system, an MS4 may offer greater opportunity for wildlife to potentially contribute *E. coli*, versus on a specific industrial site (as in the ISW program). EGLE allows permittees the option to identify and prioritize best management practices to make progress towards reducing sources of *E. coli* as part of implementing an MS4 program. Currently, MS4 permittees are prioritizing efforts to

reduce illicit discharges of sewage from direct connections to a storm sewer. Wildlife management continues to be an area where EGLE staff are learning alongside municipalities throughout the state. More recently, EGLE staff have facilitated partnerships with universities and health departments to provide a rapid method for tracking sources of *E. coli* from wildlife (e.g., geese or birds). EGLE looks forward to sharing new tools and approaches to wildlife management as they emerge. *No changes to the TMDL were made based on this comment.*

23. **Comment (MEC⁴, paraphrased):** The recreation season is identified as May 1 through October 31 under the Natural Resources and Environmental Protection Act (NREPA). Our concern is that this timeframe is not restrictive enough given the diverse springtime recreational opportunities involving total body contact (TBC) and partial body contact (PBC).

EGLE Response: EGLE appreciates and understands your concerns regarding public health outside of the summer months. The TMDL target is identical to the water quality standard (WQS) in Michigan. Bodily contact is protected year-round in Michigan. Rule 62 of the Part 4 Rules, Water Quality Standards, promulgated under Part 31, Water Resources Protection, of the NREPA, 1994 PA 451, as amended, establishes the *E. coli* standard to protect the PBC designated use. The less restrictive standard in the winter months is based on the premise that people are less likely to submerge their heads under water in the colder portion of the year. It should be noted that EGLE does not have authority to change its Part 4 rules at this time, due to a prohibition on rulemaking by the legislature. The TMDL relies on these rules as the basis of its target. *No changes to the TMDL were made based on this comment.*

24. **Comment (MEC, paraphrased):** The draft TMDL employs an implicit margin of safety (MOS) by not recognizing natural bacterial decay. The United States Environmental Protection Agency (USEPA) notes that this assumption is a sufficiently conservative approach for an implicit MOS and we agree this is a valid MOS standard. However, we are hesitant that a single MOS factor for a statewide TMDL - which covers diverse watershed/water body characteristics and pollutant loading scenarios - is conservative enough to reach the WQS identified by the draft TMDL. We encourage EGLE to consider additional implicit and explicit MOS factors.

EGLE Response: The statutes and regulations require that a TMDL include a MOS to account for any lack of knowledge concerning the relationship between load allocations (LA) and waste load allocations (WLA) and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). In this draft statewide *E. coli* TMDL, the WLAs and LAs are set to the WQS, which applies to all waters throughout the state. EGLE has a firm justification for setting the WLA and LA equal to the WQS. In a load-based TMDL, setting an explicit MOS is the appropriate and conservative approach. If adding a numeric implicit MOS, the WLA and LA would need to be adjusted downward to accommodate the MOS in the TMDL. Since the implicit MOS is acceptable to the USEPA for concentration-based TMDLs and meets applicable guidance and regulations, we do not have adequate justification to add an additional explicit MOS, nor any basis with which to calculate a

⁴ Comment from Mr. Tom Zimnicki, Agricultural Policy Director, on behalf of Michigan Environmental Council (MEC).

meaningful explicit MOS that would be acceptable to the USEPA and the regulated community. *No changes to the TMDL were made based on this comment.*

25. **Comment (MEC, paraphrased):** The draft TMDL is unclear as to how WLAs and LAs will be determined for entities in an impaired water body/watershed. Assuming all point sources are achieving *E. coli* standards in an impaired water body, what enforcement hooks does this TMDL offer for nonpoint sources?

EGLE Response: The WLAs and LAs of the TMDL are equal to the WQS. The National Pollutant Discharge Elimination System (NPDES) permits must be consistent with the goal and target of the TMDL; but effluent limitations need not be a numeric limit identical to the WLA. For example, effluent limitations for storm water sources are expressed as planning and implementation of best management practices, and structural and nonstructural controls (if needed). The TMDL does not create any new regulations for nonpoint sources. As stated in the draft TMDL and related Webinars, Michigan has little regulatory authority over nonpoint sources directly, unless they are illegal (illegal sources receive a TMDL allocation of 0). Additionally, as summarized in Section 7.4.A.ii (Solutions to Livestock/Agricultural Nonpoint Sources), livestock operations that do not have an NPDES permit may be required to apply for one (Rule 2196, Part 21, of the NREPA) under certain circumstances; for example, if a farm has a direct discharge to surface waters causing a WQS exceedance. The owners of identified failing septic systems may also be compelled by the local health department to correct the problem, and if the septic system is demonstrated to be discharging to surface or groundwater resources, EGLE may compel correction through enforcement action. *No changes to the TMDL were made based on this comment.*

26. **Comment (MEC, paraphrased):** We are unclear how this TMDL will result in new, more robust accountability for Concentrated Animal Feeding Operations (CAFO). As it relates to CAFOs, and nonpoint sources in general, this TMDL offers little more than a menu of best management practices and voluntary conservation programs.

EGLE Response: The TMDL summarizes permit requirements but does not establish them; the TMDL is equal to the WQS and permits are already designed to meet that standard as required by federal and state regulations. By federal requirement, all NPDES permits must also be consistent with the goals of all applicable TMDLs. CAFOs are point sources and must meet their permit requirements, whereas the rest of livestock facilities (farms) in Michigan are nonpoint sources. The CAFO General Permit (Section B of the WQS Section) refers to EGLE issuing guidance in the future for CAFOs with facilities or land-application areas in approved *E. coli* TMDL watersheds. The guidance is still in development. Once developed, CAFOs in TMDL areas will have some additional permit requirements relative to those in other areas of the state. For the livestock nonpoint sources, much of this TMDL is voluntary, with the exception of compliance with applicable existing laws. A TMDL cannot create new regulatory authority over nonpoint sources, so the TMDL provides and promotes a menu of existing regulations, best management practices and voluntary programs for educational purposes. Additionally, waters listed as impaired, with or without TMDLs, have elevated priority in Michigan's Nonpoint Source Section 319 grant program as well as some other state and federal funding opportunities. *No changes to the TMDL were made based on this comment.*

27. **Comment (MEC, paraphrased):** The draft TMDL would be improved through the introduction of narrative standards in addition to the current numeric target. For example,

EGLE currently recommends livestock exclusion from surface water but does not expressly prohibit livestock access. A logical narrative standard would be to prohibit livestock access in TMDL areas until WQS are met.

EGLE Response: As stated above, a TMDL cannot create new regulatory authority over nonpoint sources and EGLE has little regulatory authority over nonpoint sources, unless they are illegal. The addition of a narrative standard as you describe it, without the implication that the practice is voluntary, would have the effect of a new regulation and therefore cannot be added to this TMDL. Likewise, EGLE does not have the authority to create or modify rules at this time. *No changes to the TMDL were made based on this comment.*

28. **Comment (Saginaw Chippewa Indian Tribe⁵):** The commenter supports the development of the TMDL to benefit water quality, public health, and local economies.

EGLE Response: EGLE is pleased to receive written support the development of this TMDL. Additionally, we agree that the TMDL is a necessary first step on a long path of progress and success is only possible through collaboration. *No changes to the TMDL were made based on this comment.*

29. **Comment (MACD⁶):** The commenter supports the development of the TMDL to further their goal of a statewide sanitary code to assist in minimizing and eliminating the problem of failing septic systems contaminating surface and ground water.

EGLE Response: EGLE is pleased to receive written support for the development of this TMDL and agrees with your assessment that failing septic systems and illicit sanitary connections are a major contributor to *E. coli* exceedances in rural areas, particularly where exceedances of the water quality standard are found during dry weather. EGLE is finding that this is a widespread issue. A uniform statewide sanitary code should provide a mechanism for periodic inspections, required maintenance, and/or uniform standards. The creation and adoption of a statewide sanitary code is a priority for EGLE, but EGLE does not make laws, so this task cannot be accomplished without the support of legislators and groups like the Michigan Association of Conservation Districts. *No changes to the TMDL were made based on this comment.*

30. **Comment (Dr. Daniels⁷):** The commenter has concerns about mapping aspects of the Crystal Lake Beach portion of the statewide *E. coli* TMDL, including; the listed size of the water body on the interactive *E. coli* Pollution and Solution Mapper and the inclusion of the outlet of Crystal Lake in the statewide *E. coli* TMDL area (see Figure 1).

EGLE Response: EGLE uses Hydrologic Unit Code (HUC) Identifiers as provided by the Watershed Boundary Dataset, compiled by the United States Geological Survey (USGS) and the Natural Resources Conservation Service, which includes the watershed and subwatershed name, size, and delineation information. We also use the National Hydrography Dataset information on river segment catchments, lake area, flowpaths, length and naming for our assessment of designated uses and tracking of water bodies

⁵ Comment from Mr. Frank Cloutier, Tribal Chief, on behalf of the Saginaw Chippewa Indian Tribe

⁶ Comment from Mr. Miller, on behalf of the Michigan Association of Conservation Districts (MACD)

⁷ Comment from Dr. Stacy Daniels, P.E.

(assessment unit identifiers, or AUIDs). Previous to the use of these shapefiles, EGLE used only verbal location descriptions of impaired waters (e.g., A 3-mile stretch of the Big River upstream of the confluence with Little Creek) and provided no mapping aspect to the Integrated Report and assessment unit process. EGLE does not have the direct ability to make changes to these Geographic Information System (GIS) datasets and we suggest that you contact the USGS to request changes to them. It is also important to note that size information calculated in GIS is different depending on which geographic projection or transformations are used. Michigan agencies use a projected coordinate system called "Michigan Georef," while the USGS and other federal agencies may not.

With regards to the concern about the shape of the Crystal Lake watershed, the watershed polygons are provided to give users a visual of the area that contributes to the impaired waterbody (in this case, a beach and several streams). The boundaries of TMDL watersheds are derived from existing catchment and HUC boundaries. In the Crystal Lake watershed, the sources are mainly nonpoint and therefore not directly regulated by EGLE or affected by the TMDL. The determination of whether a facility (point source) or a piece of land (possible nonpoint source) is contributing to an identified impaired water body (such as Beulah Beach), is made at the time of permit issuance or on a case-by-case basis in the implementation of the TMDL. *No changes to the TMDL were made based on this comment.*

31. **Comment (Dr. Daniels):** The commenter has concerns about the justification for including beaches and tributaries in and around Crystal Lake (Benzie County) in the statewide *E. coli* TMDL and 2016 303(d) List, and also the use of the lake in Table 11 of Appendix 3, which shows example calculations for converting the *E. coli* concentration WQS into loads for hypothetical beaches.

EGLE Response: The designated use impairment decisions made by EGLE regarding Crystal Lake, follow the methods outlined in the assessment methodology of the Integrated Report. Crystal Lake has three Assessment Units that are currently listed as impaired by *E. coli*; Beulah Beach, Cold Creek, and a small tributary just west of Bellows Beach. Bellows Beach is not currently listed as impaired by *E. coli*, but has been in the past. Based upon these impairments, and because in lakes with a slow retention time water does circulate according to wind velocity and direction, EGLE determined that the entirety of HUC 040601040305 had the reasonable potential to contribute to *E. coli* issues seen currently (and in the past) at Bellows and Beulah Beaches.

With regards to the use of this lake in Appendix 3 example calculations, EGLE saw value in using real Michigan lakes to add interest and context to this otherwise mathematical example. EGLE chose a variety of lakes along a gradient of size, where we had the estimates of retention time and volume easily accessible. Crystal Lake was a good candidate because it is a rather large inland lake, where the retention rate has been estimated for watershed management planning efforts. The hypothetical beach is intended to be a public access point (defined area), not the entirety of the shoreline, and is provided for example purposes only. It has no bearing on the actual implementation of the draft TMDL. *No changes to the TMDL were made based on this comment.*

32. **Comment (ECT⁸):** ECT requests that the Lake St. Clair Metropolitan and Memorial Beach TMDL, approved by the USEPA in 2007, be revoked and reissued to exclude the city of Grosse Pointe (hereafter, “the city”) based on the justification that the city is 15 miles downstream of the nearest beach named in that TMDL. See Figure 2 for reference.

EGLE Response: The approved TMDL watershed, or the area included in the waste load and load allocations, encompassed the entire Lake St. Clair Watershed up to the boundary of Wayne County. Since the TMDL was approved, another nearby beach (Pier Park) has been listed as impaired by *E. coli* in Lake St. Clair. Pier Park is about 1.7 miles north of the city, and is also within the USEPA-approved Lake St. Clair TMDL watershed. EGLE does not have adequate justification to revoke and reissue this TMDL to exclude the city, given the following:

- Public notice and comment opportunity were offered at the appropriate time (June 25 - July 25, 2007) and no comments were received regarding the extent of the TMDL watershed or inclusion of the city.
- The USEPA approved the 2007 TMDL with a watershed that protected the entirety of the Lake St. Clair shoreline, and it is evident that in addition to the original two beaches included in the TMDL, additional beaches on Lake St. Clair are impaired by *E. coli*. It’s important to note that as part of TMDL development the watershed contributing to the impairment is defined. The TMDL includes all the point sources within and discharging to the TMDL watershed and is developed to protect all impaired waterbodies within the defined area for perpetuity.
- New data would be needed as justification for the requested change, followed by public notice/discussion and approval by the USEPA.

It is important for all municipalities to note, however, that the MS4 process allows for the submittal of a demonstration as part of the TMDL Implementation Plan to determine compliance with the *E. coli* water quality standard and consistency with the TMDL. This demonstration could include providing up-to-date information and data demonstrating the criteria are met and will be met in the future. If the city demonstrates compliance with the *E. coli* Water Quality Standard and consistency with the TMDL, then no further action is required as part of implementing the permit. *No changes to the TMDL were made based on this comment.*

⁸ Comment from Ms. Annette DeMaria, P.E., Environmental Consulting & Technologies (ECT)

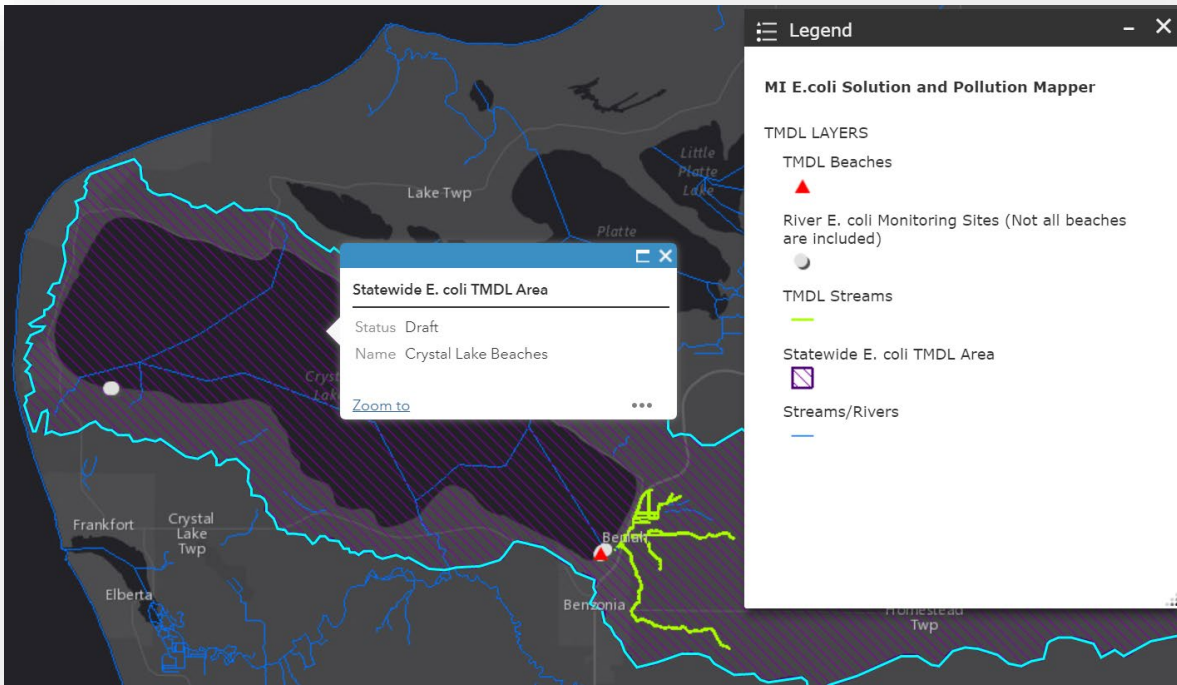


Figure 1. Image of Crystal Lake, Benzie County, from the interactive E. coli Pollution and Solution Mapper, pertaining to comment #30.

Map of Lake St. Clair shoreline showing the proximity of the City of Gross Pointe to two impaired beaches (Pier Park Beach and Blossom Heath Beach).

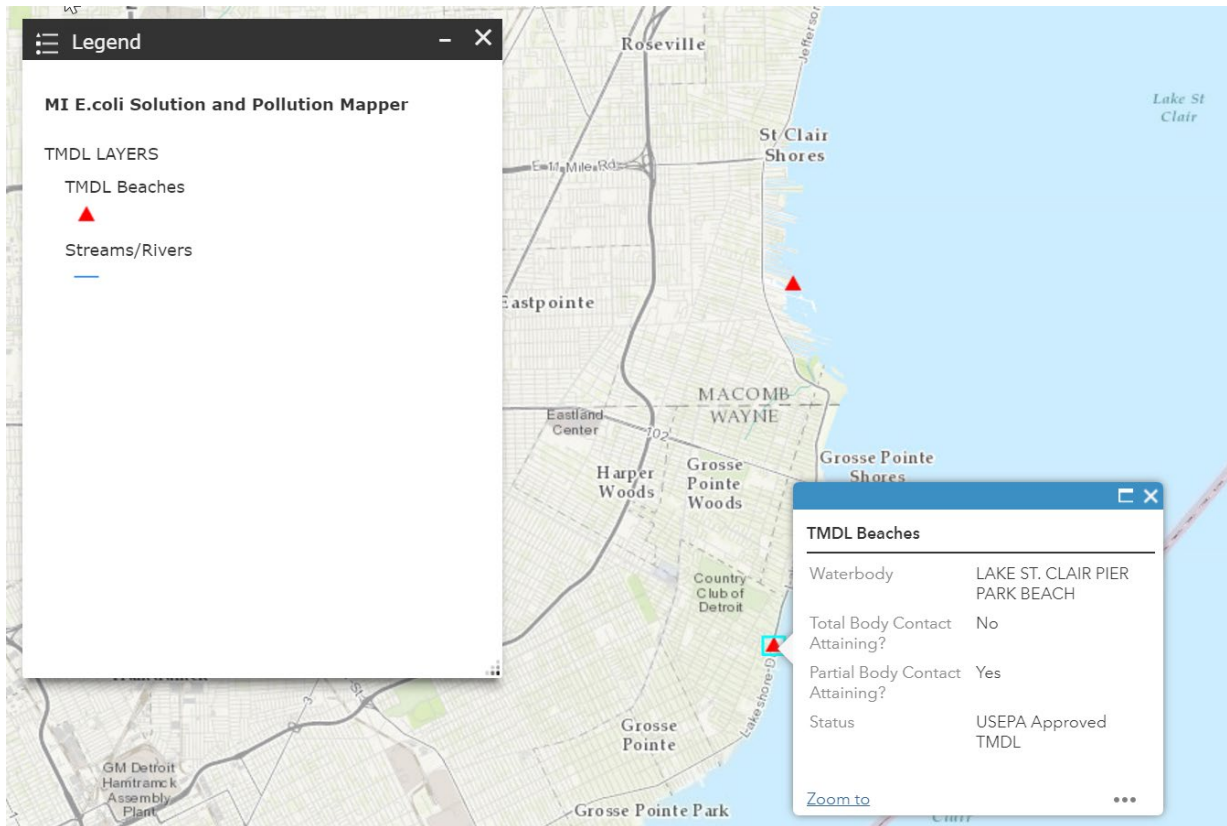


Figure 2. Image of the Lake St. Clair area in the vicinity of Grosse Pointe, Grosse Pointe Farms and Grosse Pointe Shores, pertaining to comment #32. Pier Park beach, which is designated as impaired by E. coli in the 2016 Integrated Report, is within the Lake St. Clair Metro and Memorial Beach E. coli TMDL (USEPA approved).