

# MICHIGAN'S STATEWIDE *E. COLI* TOTAL MAXIMUM DAILY LOAD (TMDL) FACT SHEET

## A STATEWIDE APPROACH TO A STATEWIDE PROBLEM

Routine testing has shown *E. coli* levels in many areas are above the water quality standard (WQS). *E. coli* is used as an indicator for fecal contamination and the WQS is designed to protect human health during recreation. When the WQS is exceeded, the federal Clean Water Act requires that Michigan develop a TMDL to provide a framework for restoration of water quality. Sources of *E. coli* are ever present due to human occupation, and include livestock, improper or incomplete sewage treatment (failing septic systems, leaking sewer systems, combined and sanitary sewer overflows, and illicit connections), pets, and nuisance levels of wildlife. Given the extent of this problem and the multitude of potential sources, a statewide approach is more effective and efficient at addressing this issue. The Statewide *E. coli* TMDL, approved by the U.S. Environmental Protection Agency (U.S. EPA) in 2019, provides a general legal framework for reducing pollutant loads in areas where the [E. coli WQS](#) is exceeded.



Children swimming in the Manistee River.

### WHAT IS *E. COLI*?

*Escherichia coli*, or *E. coli*, is a type of bacteria found in the digestive systems of mammals and birds. Michigan uses the presence of *E. coli* in surface water as an indicator of pollution by feces. *E. coli* can be dangerous, but it also indicates the potential for other pathogens that can make people sick, such as giardia and cholera.

### WHY IS *E. COLI* IMPORTANT?

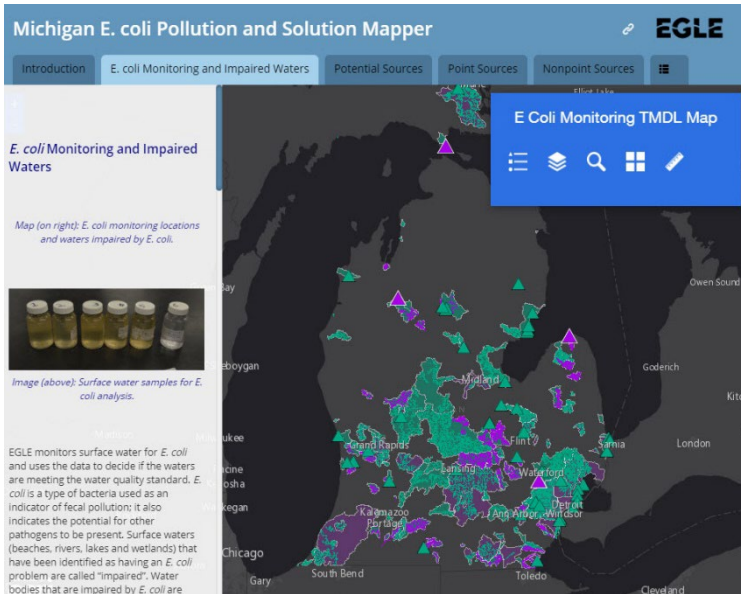
The safety of Michigan's people and visitors is a Department of Environment, Great Lakes, and Energy (EGLE) priority. *E. coli*, and associated pathogens, can make you sick if ingested.

## WHAT IS THE GOAL OF THE TMDL?

The goal is to meet the *E. coli* WQS and the total and partial body contact designated uses in each water body. Therefore, the numeric targets for all potential sources are equal to the total body and partial body contact WQS. The daily targets are 300 *E. coli* per 100 milliliters (mL) from May-October and 1,000 *E. coli* per 100 mL the remainder of the year. An additional target is 130 *E. coli* per 100 mL as a 30-day geometric mean from May-October.

### WHAT IS A TMDL?

The federal Clean Water Act requires that Michigan monitor surface water to determine if the WQS are being met. If *E. coli* levels in a water body exceed the WQS, then Michigan must develop a plan to limit pollution with a goal of meeting the WQS. This plan is a document known as a Total Maximum Daily Load (TMDL). TMDLs are the necessary first step in solving *E. coli* pollution problems.



## HOW DO YOU KNOW IF YOUR AREA IS PART OF THE TMDL?

The TMDL only applies to waters that are identified in Appendix 1 of the TMDL or in an Addendum to the TMDL. The [Pollution and Solution TMDL Mapper](#) (left) is an interactive mapping system that contains up-to-date information about areas either included in the TMDL or proposed for inclusion. The mapper also contains *E. coli* monitoring data and potential point and nonpoint sources of *E. coli* throughout the state. If you are a National Pollutant Discharge Elimination System (NPDES) permittee and have questions about whether the TMDL applies to you, please contact appropriate district NPDES staff ([Michigan.gov/EGLENPDES](http://Michigan.gov/EGLENPDES)).

## HOW IS THE TMDL UPDATED?

As new impaired waters are found, they will be proposed as new additions along with each biennial version of the federal Clean Water Act Section 303(d) List. The new additions will be listed and described in TMDL Addenda and will be open for public review and comment concurrent with [Michigan's Integrated Report](#). Once the TMDL Addenda are approved by the USEPA, the water bodies will be covered under the TMDL.

## HOW WILL THE GOAL OF THE TMDL BE ACHIEVED?

The goal can be achieved by reducing point and nonpoint sources of *E. coli* contamination. For point sources, NPDES permits contain requirements designed to prevent *E. coli* from entering surface water. For nonpoint sources, much of the solution is voluntarily achieved by federal, state, and local agencies working together with the public to find sources, pass local ordinances, promote and implement best management practices, and educate residents. Much of the voluntary work begins with Watershed Management Planning (for more information, see [Michigan.gov/NPS](http://Michigan.gov/NPS)).

## MORE INFORMATION

Visit the Statewide *E. coli* TMDL web site at [Michigan.gov/EcoliTMDL](http://Michigan.gov/EcoliTMDL) for more information on the TMDL. For general *E. coli* information, visit [Michigan.gov/EGLEecoli](http://Michigan.gov/EGLEecoli).