

BEACH MONITORING IN MICHIGAN

RECREATIONAL WATER MONITORING FOR *E. COLI* AND OTHER CONTAMINANTS



Escherichia coli (*E. coli*) is a native gut microbe in most warm blooded mammals.

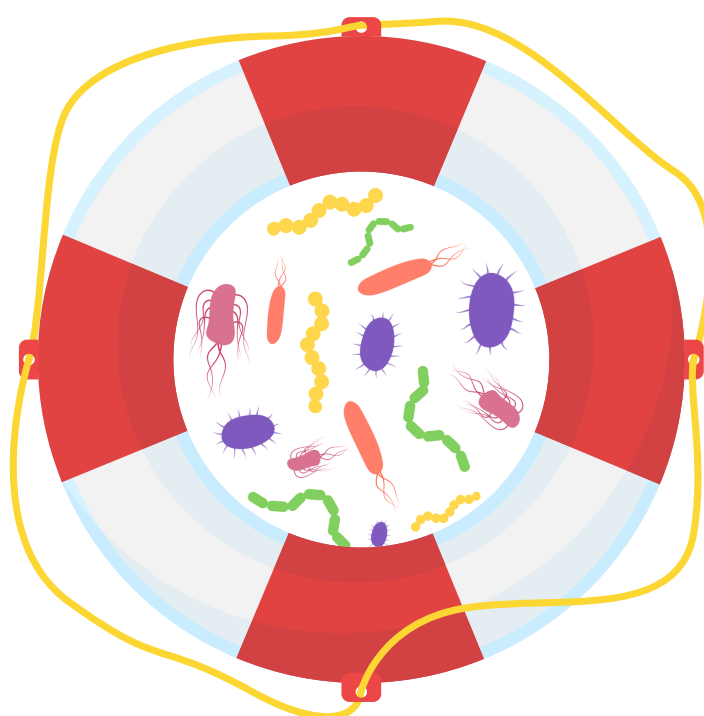
The Michigan Network for Environmental Health and Technology (MiNET) collaborates with the State of Michigan to assess recreational waters for *E. coli*, while developing technology to improve public and environmental health efforts.

The Details

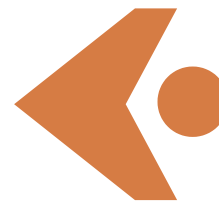
Beaches provide recreational opportunities for the community along with a unique habitat for plants and animals. Pollutants at beaches can result in swimmers getting sick or temporary closures that harm the local economy. Beach status is determined by the State of Michigan advisory limit (300 *E. coli* per 100 mL). Water must be below 300 *E. coli* per 100 mL to be considered safe for swimming.

Why *E. coli*?

- Most strains of *E. coli* are not harmful, but they can indicate presence of other disease-causing pathogens
- Sources of *E. coli* can be storm sewers, septic systems, storm runoff, animal waste, and agricultural runoff



HOW TO MONITOR A BEACH



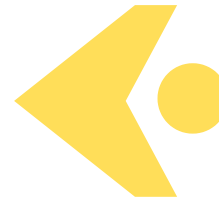
COLLECT WATER SAMPLES

Beach water samples are collected per EPA guidance for sample collection. Survey data is collected on beach metrics via Survey123.



ANALYZE FOR *E. COLI*

E. coli is analyzed with Colilert-18, a culture-based media, and left to grow for 18 hours. Molecular analysis following the EPA's Draft Method C can be used for same-day results.



REPORT RESULTS

E. coli and survey results are posted to BeachGuard and shared with local health departments. Beach open/close status is updated based on these results.

Goals

- Monitor beaches for public safety
- Advance technology for recreational water monitoring
- Identify pollutant sources and work to remediate effects
- Public communication and knowledge

Heading to the beach?
Scan here.



Interested in learning more about your community beaches?

www.gvsu.edu/wri/otter/