

Beach Closings

Significance in Michigan's Areas of Concern

Originally eleven of Michigan's AOCs were listed as impaired due to beach closings from bacterial contaminants, including: River Raisin, Detroit River, Rouge River, Clinton River, St. Clair River, Saginaw River/Bay, St. Marys River, Kalamazoo River, Menominee River, Muskegon Lake, and Manistique River. The AOC program tracking table with current information about which BUIs have been restored in each AOC can be found at: www.michigan.gov/deqaocprogram.

Michigan Restoration Criteria and Assessment

This BUI will be considered restored when:

1. No waterbodies within the AOC are included on the list of non-attaining waters due to human pathogens in the most recent Clean Water Act *Water Quality and Pollution Control in Michigan: Section 303(d) and 305(b) Integrated Report* (Integrated Report), which is submitted to U.S. EPA every two years.
2. OR, in cases where waterbodies within the AOC are on the list of non-attaining waters due to human pathogens, this BUI will be considered restored when human sources of pathogens regulated under the National Pollutant Discharge Elimination System (NPDES) are on schedule to be controlled through implementation of permit requirements.

Rationale

Practical Application in Michigan

These restoration criteria are based on Michigan's WQS for bacterial contamination. Rule 323.1062 of Michigan's WQS sets the maximum concentrations of *E. coli* that are acceptable for waters of the state to meet total- and partial-body contact recreation uses. The AOCs with a Beach Closing BUI have historically found persistent elevation of bacteria levels in their recreation waters, often due to the existence of sanitary sewer overflows and CSOs. This BUI does not address wide-spread, low level contamination from diffuse human sources of pathogens such as failing septic systems.

In accordance with Public Health Code (Act 368 of 1978), county health departments have the authority to monitor and evaluate public beaches to determine if the water is safe for bathing, swimming, or partial body contact

recreation. While beach monitoring is a voluntary program, those county health departments that participate must monitor in accordance with Michigan's WQS.

County health departments which monitor public beaches must submit their sampling data to the MDEQ, which tracks monitoring results and uses the data to determine whether water bodies are identified as impaired in the *Water Quality and Pollution Control in Michigan: Section 303(d) and 305(b) Integrated Report* to the U.S. EPA on Clean Water Act compliance.

Point source discharges from combined sewer overflows can be a source of pathogens to AOC waters. Requirements to eliminate the discharges under NPDES permits are the primary source control tool available to restore the BUIs. When source control is assured under regulatory programs, this BUI is considered restored.

Sources of pathogens from failing on-site septic systems regulated under county health departments can be an issue state-wide and are not included in the AOC program.

1991 IJC General Delisting Guideline

When waters, commonly used for total-body contact or partial body-contact recreation, do not exceed standards, objectives, or guidelines for such use.

The IJC general delisting guideline for the BUI is presented here for reference. The Practical Application in Michigan subsection above describes application of specific criteria for restoration based on existing Michigan programs and authorities.

State of Michigan Programs/Authorities for Evaluating Restoration

Michigan assesses water bodies throughout the state on a 5-year basin rotation cycle according to the MDEQ's "Strategic Environmental Quality Monitoring Program for Michigan's Surface Waters" (MDEQ, 1997) and "Michigan Water Quality Strategy Update" (MDEQ, 2005). Each year, a set of targeted watersheds are sampled at selected sites for conventional and toxic pollutants, and biological and physical habitat/morphology indicators. The set of watersheds sampled rotates each year, with each major watershed in the state revisited every 5 years (see Appendix 1 for maps of the basin rotations). One element of the strategy is improved support for public beach monitoring.

The specific objectives of the beach monitoring element are to:

1. Support county health departments in determining whether waters of the state are safe for total body contact recreation.

2. Evaluate the effectiveness of MDEQ programs in protecting waters of the state from bacteria/*E. coli* contamination.
3. Develop and maintain a database into which counties can enter their beach monitoring data, and which the public can access for the latest information.

The beach monitoring element consists of two components that, in combination, provide data necessary to achieve these objectives. These include annual grants awarded to local governments/county health departments each year to monitor public beaches through a grant application package, and development and maintenance of a statewide beach database, which is available on the MDEQ web site (www.michigan.gov/deq - click on "Water," then "Water Quality Monitoring," and then "Beach Monitoring"). Counties enter data directly into the database.

The NPDES program is administered by the MDEQ Water Division. It is applicable to discharges to waters of the state for the control of all forms of water pollution.