

PROTECTING ERIE

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Blue-green algae are a type of naturally occurring, photosynthetic bacteria. When a particular type of blue-green algae called *Microcystis* dies, it releases a toxin called microcystin.



SYSTEM

About 300 of Michigan's 1,400 public water systems rely on the Great Lakes or inland rivers and lakes to serve 5.8 million residents.

Only two systems – the city of Monroe and Frenchtown Township – draw from Lake Erie. They share two water intakes in two different locations in the lake, providing a level of flexibility from the conditions at either intake. Both have real-time monitoring equipment to check for blue-green algae in the water.

Combined, these two systems serve about 65,000 Michiganders. An additional 30,000 Michigan residents are served by Toledo.



CONTROL

Reducing the incidence of harmful algal blooms requires a holistic approach. Preventing excess phosphorus is one important key, but there is no single solution. Some of Michigan's existing control measures include:

- Banning phosphorus in laundry and dishwasher detergents as well as lawn fertilizers
- Writing phosphorus discharge limits into 670 NPDES permits statewide
- Reducing the allowable phosphorus discharges by 40 percent in a 2013 permit for the Detroit Wastewater Treatment Plant
- Combating invasive mussels to restore the natural food chain and phosphorus cycling



SHORT-TERM GOALS

- Create a national standard for microcystin based on the World Health Organization's 1 part per billion drinking water recommendation.
- Provide more technical assistance on farms to reduce total phosphorus
- Understand the effects of open water disposal of dredged Toledo Harbor sediments
- Look to USGS and NOAA for more weather monitoring data



LONG-TERM PREVENTION

DEQ is focused on five actions, in partnership with other states in the watershed:

- Optimize total phosphorus removal at five key wastewater treatment plants in the Lake Erie watershed – Detroit, Wayne County-Downriver, Ypsilanti Community Utilities Authority, Fort Wayne and Toledo.
- Reduce agricultural and nonpoint source total phosphorus into Maumee River watershed.
- Cease the open water disposal of dredged Toledo Harbor sediments.
- Implement the Phosphorus Control Activities Checklist.
- Understand the role of invasive zebra and quagga mussels in phosphorus cycling, and support the evaluation of emerging technologies to control invasive mussels.