Reducing *E. coli* Contamination of Beaches, Rivers and Lakes
A Guide for Homeowners

DEQ

The State of Michigan is largely defined by water. It is surrounded by four Great Lakes, is crisscrossed by 75,000 thousand miles of streams and rivers, and contains thousands of inland lakes and wetlands. Michigan's residents want and deserve clean water to enjoy for swimming, fishing, paddling and playing. Routine testing recently has shown *E. coli* levels in many areas are above the established standards. *E. coli* is used as an indicator for fecal contamination and the water quality standard is designed to protect human health during recreation. These levels increase the risk of illness upon contact or incidental ingestion of the water. Sources of *E. coli* can include untreated human sewage, failing septic tanks, livestock agriculture, pets, wildlife, and illegal connections from home sewer systems to surface water.

What is a watershed?

A watershed is an area of land that feeds all the water running under it and draining off of it into a body of water. It combines with other watersheds to form a network of rivers and streams that progressively drain into larger water areas. All land in Michigan is part of a watershed, so protecting the land keeps the water clean.

What is *E. coli?*

Escherichia coli, or *E. coli*, is a 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 DEQ priority. *E. coli*, and associated pathogens, can make you sick if ingested and can also infect wounds during skin contact.
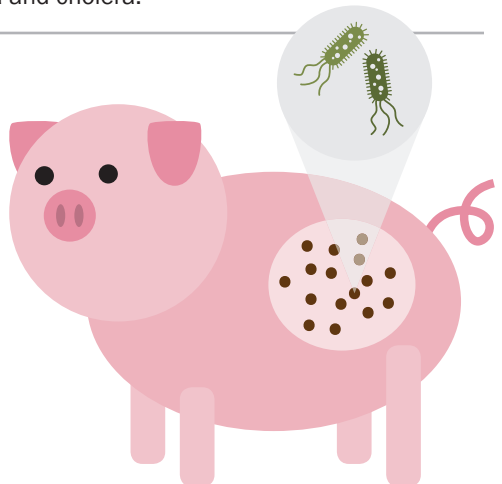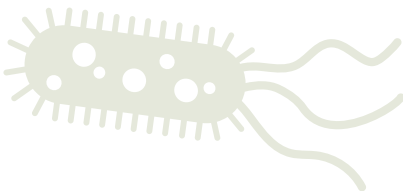
Is *E. coli* high in my area?

Michigan residents can access information about the presence of *E. coli* in their waterways through the following mapping applications:

- The MDEQ has launched a new mapping tool to educate residents about *E. coli* in rivers, beaches, and lakes and the potential sources of the bacteria in their watersheds. The tool is available at *www.michigan.gov/ecolitmdl*.

- Beach closures and conditions can be found on Beach Guard (*www.deq.state. mi.us/beach*) or with the Beach Cast mobile application (*www.glin.net/beachcast*).

What can you do to help?

- Join a watershed group. Through a watershed group you can participate in watershed planning, educate yourself and neighbors, and help out with monitoring water quality, conservation activities, and river clean-ups. Find a watershed group using the mapping tool at *www.michigan.gov/ecolitmdl*.

- Clean up pet waste in your yard and dispose of it in the trash or by composting. Visit Michigan State University Extension (*msue.anr.msu.edu*) for tips on proper composting.

- If you have a septic system, get the tank pumped out by a licensed hauler about every 3 years. Ask them to do a cursory inspection while they are there. Visit *www. epa.gov/septic* for more information.

- Do not feed wildlife, including geese and seagulls at parks and beaches.

- If you own a pet with an outdoor run, pasture, or kennel (dogs, chickens, horses, etc.) try to keep a well vegetated buffer between the pet area and nearby surface waters.

- Discourage raccoons by keeping trash in proper storage and shoring-up outbuildings.

- If you own a horse or other large pet that requires manure storage: store in a flat area as far away from surface water as you can manage (check with your municipality for applicable ordinances), ideally the waste would be covered to keep rain off (a tarp works).

- Report illicit connections using the anonymous reporting tool at *miwaters.deq. state.mi.us/miwaters*. Illicit connections are raw human sewage that is being discharged to surface waters.

For more information, contact Molly Rippke, Aquatic Biologist Specialist, at *rippkem@michigan.gov* or 517-284-5547.