

Coliform Bacteria in Drinking Water for Well Owners

What are coliform bacteria?

Coliform bacteria are found in soil, surface water, on plants, and in the intestines of warm-blooded animals and people. One type of coliform bacteria called *Escherichia coli* (*E. coli*) is a sign that fecal waste is in the water. Some types of *E. coli* in drinking water can make you sick.

What health problems can coliform bacteria cause?

Most coliform bacteria are not harmful. However, some can make you sick. A person that has been exposed to these bacteria may have an upset stomach, vomiting, fever, or diarrhea. Children and the elderly are more at risk from these bacteria.

Take *E. coli* bacteria seriously when found in drinking water. Some *E. coli* can make you sick or even cause death.

Vomiting

Upset
Stomach

Fever

Diarrhea

How does coliform bacteria get into your well water?

When coliform bacteria are washed into the ground by rain, melting snow, or irrigation, it can get into drinking water. Coliform bacteria can be from:

- Woodlands, pastures, or feedlot runoff
- Wild or domestic animal waste
- Poorly maintained septic systems

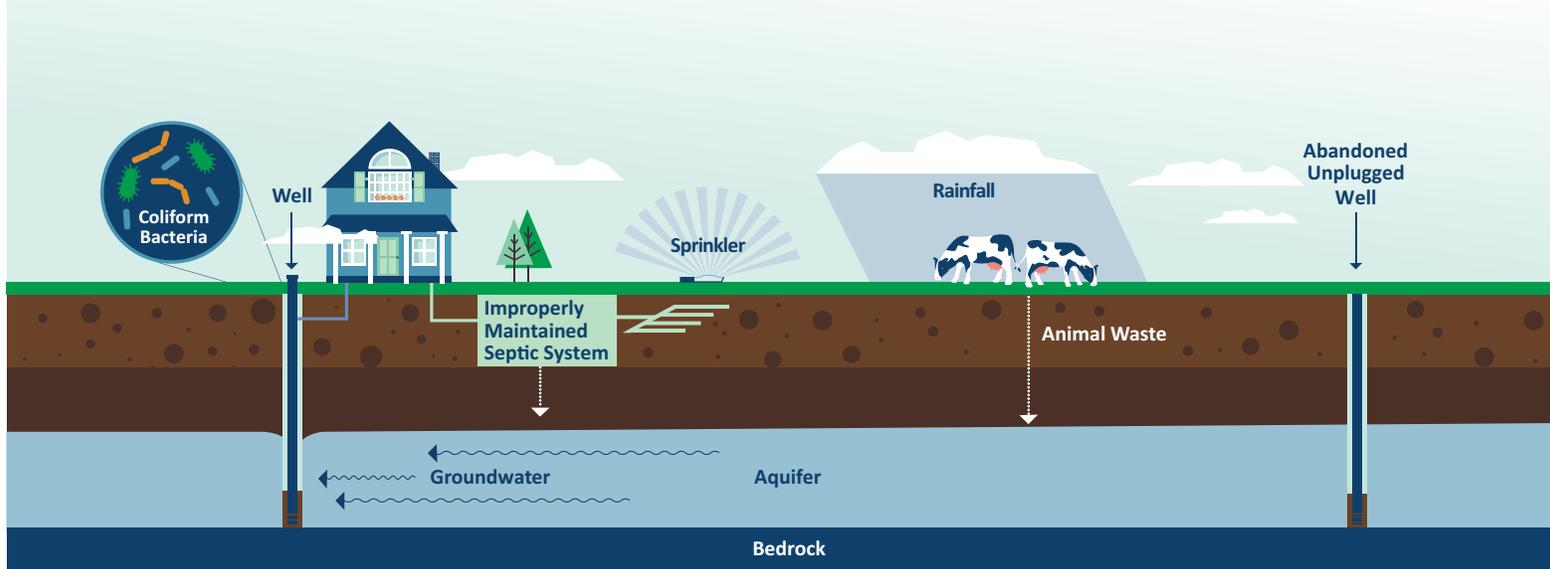
Coliform bacteria can enter your water if you have:

- A damaged wellhead (the part of the well that's above ground) including the casing and/or well caps
- An unplugged or abandoned well in the area
- A new well not properly disinfected
- Drinking water pipes connected to non-drinking water sources such as waste water, laundry sinks, or garden hoses



Damaged wellhead with cracked well cap and exposed wires

Photo provided by Barry-Eaton District Health Department



How do you know if you should test your well for coliform bacteria?

The Michigan Department of Health and Human Services (MDHHS) recommends testing your water for coliform bacteria (test includes *E. coli*) every year. Bacteria can appear randomly and, sometimes, seasonally. Test your water if:

- Your water’s taste, color, or odor changes suddenly
- The water turns cloudy after it rains or flooding happens near the wellhead
- People drinking the water experience an upset stomach, vomiting, fever, or diarrhea
- A source (septic system or barnyard) is within 50 feet of your well.

Testing your water

- Call your local health department or a certified drinking water laboratory to get a test kit. To learn more about test kit availability, fees, and instructions, see the “For More Information” section below.
- Carefully follow the test kit instructions. Mishandling the test kit bottle can show bacteria when there is none in your water. For example, bacteria on your hands could get into the water bottle.
- Send your water sample to a certified drinking water laboratory.

Below are examples of laboratory water test results and a description of what the results mean.

Result Examples	Result Descriptions
Not detected/Negative/Absent/0	Coliform bacteria and <i>E. coli</i> were not found
Positive/Present/Any number from 1 to 200	Coliform bacteria was found and <i>E. coli</i> was not found
EC Positive/ <i>E. coli</i> detected/fecal coliform positive	Coliform bacteria and <i>E. coli</i> were found

Recommendations

MDHHS recommends testing your water every year for coliform bacteria (test includes *E. coli*).

When coliform bacteria and *E. coli* are **not** found in the water, you can use your water for drinking, cooking, bathing and all other water-related activities.

When coliform bacteria, *E. coli*, or both are found in the water, talk to your local health department to identify and fix the problem.

- Until the problem is fixed, use another source of water such as bottled water for drinking, cooking, preparing baby formula or food, washing produce, brushing your teeth or any other use where you may swallow the water.
- If you are unable to use another source of water, you can bring your water to a full rolling boil (a boil that does not stop bubbling when stirred) for 1 minute to kill the coliform bacteria and *E. coli*. You can save and use the water for drinking and cooking once boiled.
- Your local health department may suggest getting your well disinfected. Work with a registered well driller to inspect the well before disinfection. Repairs to the well may be needed. Disinfecting may take several times to be free of coliform bacteria and *E. coli*.



For More Information

Michigan Department of Health and Human Services

800-648-6942

ask for the Drinking Water Investigation Unit

List of Michigan Local Health Departments

Malph.org/Resources/Directory

Michigan Department of Environment, Great Lakes, and Energy

Michigan.gov/DrinkingWater

Michigan.gov/WaterWellConstruction

Laboratory Services

Michigan.gov/EGLElab and choose “Certifications”