

# It's **YOUR** Health!



VDH's Office of Environmental Health Services has developed the "It's YOUR Health" information program to help private system owners with the educational, emergency, and service provider information needed to safeguard wells and septic systems so that they remain protective of human health and the environment. Because it's YOUR health!

Private well owners are responsible for all water quality sampling before and after the well is approved. Please keep the following in mind when determining whether you should test your private well water supply for bacteria.

## **Sources**

Coliforms are bacteria naturally present in the environment and used as an indicator that other, potentially harmful, bacteria may be present. Fecal coliform and E. coli are bacteria whose presence indicates that water may be contaminated by human or animal wastes and harmful to human health.

*E. coli* O157:H7 (Ee KOE-lye) is one of the hundreds of strains of the bacterium *Escherichia coli*. Most strains are harmless and live in the intestines of healthy humans and animals. However, this strain, O157:H7, produces a powerful toxin that can cause severe illness. The bacteria can be found on a small number of cattle farms and can live in the intestines of healthy cattle.

*E. coli* O157:H7 is most commonly found on a small number of cattle farms where the bacteria can live in the intestines of healthy cattle. Millions of germs can be released in a bowel movement from an infected human or animal. *E. coli* O157:H7 may be found in water sources, such as private wells, that have been contaminated with feces from infected humans or animals.

Bacteria can enter wells through different ways, including sewage overflows, sewage systems that are not working properly, polluted storm water runoff, and agricultural runoff. Wells may be more vulnerable to such contamination after flooding, particularly if the wells are shallow, have been dug or bored, or have been submerged by floodwater for long periods of time.

Source: CDC and NGWA

### **Health Risks Associated with Bacteria**

While most coliforms are not pathogens, they serve as indicators of the microbial quality of water. Pathogens—the bacteria, protozoa, and viruses that make people sick—can be rare and difficult to detect even if they are present in the water. Total coliforms are indicators and are more common and easy to grow. Testing for them provides a margin of safety.

Pathogens may not be present if coliforms are, but some strains of *E. coli* have been lethal, so their presence should be taken very seriously. Other health effects from pathogenic bacteria can include diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

People become accustomed to the natural bacteria in their water while guests may experience some discomfort or diarrhea.

Source: NGWA

### **What Can You Do If You Find Bacteria in Your Private Well Supply**

To kill or inactivate *E. coli* O157:H7, bring your water to a rolling boil for one minute (at elevations above 6,500 feet, boil for three minutes) Water should then be allowed to cool, stored in a clean sanitized container with a tight cover, and refrigerated. Currently, there is no filter certified to remove bacteria from water. This issue is being studied.

[You may also disinfect your well](#)

Sources: CDC, NGWA, Virginia Tech

**LINKS for Further Information**

[National Groundwater Association](#)

[Virginia Household Water Quality Program](#)

[Center for Disease Control: E. Coli and Drinking Water from Private Wells](#)